Letter of Offer
Dated December 16, 2024
For Eligible Unitholders Only

IRB INFRASTRUCTURE TRUST

(An irrevocable trust set up under the Indian Trusts Act, 1882 and registered as an infrastructure investment trust with the Securities and Exchange Board of India)
Principal place of business: Off No-11th Floor/1101, Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India
SEBI Registration Number: IN/InvIT/19-20/0012; **Tel**: +91 22 6733 6400 | **Website:** www.irbinfratrust.co.in |
Compliance Officer: Mr. Kaustubh Shevade; **E-mail**: kaustubh.shevade@irb.co.in

Sponsor	Investment Manager	Trustee
IRB Infrastructure Developers Limited	**MMK Toll Road Private Limited**	**IDBI Trusteeship Services Limited**

FOR PRIVATE CIRCULATION TO THE ELIGIBLE UNITHOLDERS OF THE IRB INFRASTRUCTURE TRUST ONLY

Issue of up to 58,400,000 units (the "**Units**") representing an undivided beneficial interest in IRB Infrastructure Trust (the "**Trust**") at a price of ₹293.65* per Unit (the "**Issue Price**") aggregating up to ₹17,149.23 million on a rights basis to Eligible Unitholders in the ratio of one Unit for every 19.07** Units held by them on the Record Date (the "**Issue**"). The Record Date is December 13, 2024.

**The Issue Price is ₹293.6511986. For presentation purposes only, the Issue Price has been presented as rounded-off to two decimal places.*
***The Rights Entitlement Ratio is one Unit for every 19.0700901541096 Units held by Eligible Unitholders on the Record Date. For presentation purposes only, the Rights Entitlement Ratio has been presented as rounded-off to two decimal places.*

THE ISSUE IS BEING MADE ONLY TO ELIGIBLE UNITHOLDERS IN RELIANCE UPON CHAPTER 9 OF THE MASTER CIRCULAR FOR INFRASTRUCTURE INVESTMENT TRUSTS (INVITS) DATED MAY 15, 2024 ISSUED BY THE SECURITIES AND EXCHANGE BOARD OF INDIA ("SEBI MASTER CIRCULAR") AND THE SECURITIES AND EXCHANGE BOARD OF INDIA (INFRASTRUCTURE INVESTMENT TRUSTS) REGULATIONS, 2014, EACH AS AMENDED.

This Letter of Offer relates to the Issue to existing Eligible Unitholders as on the Record Date under the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 and the SEBI Master Circular.

Each of the Investment Manager and the Lead Manager, having made all reasonable inquiries, accepts responsibility for and confirms that this Letter of Offer contains all information with regard to the Trust, the Units and the Issue, which is material in the context of the Issue, that the information contained in this Letter of Offer is true and correct in all material aspects and is not misleading in any material respect, that the opinions and intentions expressed herein are honestly held and that there are no other facts, the omission of which makes this Letter of Offer as a whole or any of such information or the expression of any such opinions or intentions misleading in any material respect.

The existing Units of the Trust are listed on National Stock Exchange of India Limited ("**NSE**" or the "**Stock Exchange**" or the "**Designated Stock Exchange**"). The Trust has received in-principle approval from the NSE for the listing of the Units to be allotted pursuant to the Issue through its letter dated December 13, 2024. The Investment Manager (on behalf of the Trust) will also make an application to the Stock Exchange to obtain trading approval for the Rights Entitlements. A copy of this Letter of Offer has been submitted to the SEBI and the Stock Exchange.

This Letter of Offer has not been, and will not be, registered as a prospectus, will not be circulated or distributed to the public at large in India or any other jurisdiction, and will not constitute a public offer in India or any other jurisdiction.

THIS LETTER OF OFFER IS PERSONAL TO EACH ELIGIBLE UNITHOLDER. THIS LETTER OF OFFER HAS BEEN PREPARED BY THE INVESTMENT MANAGER SOLELY FOR PROVIDING INFORMATION IN CONNECTION WITH THE ISSUE.

YOU MAY NOT, AND ARE NOT AUTHORIZED TO, (1) DELIVER THIS LETTER OF OFFER TO ANY OTHER PERSON; OR (2) REPRODUCE THIS LETTER OF OFFER IN ANY MANNER WHATSOEVER. ANY DISTRIBUTION OR REPRODUCTION OF THIS LETTER OF OFFER, IN WHOLE OR IN PART, IS UNAUTHORIZED. FAILURE TO COMPLY WITH THIS INSTRUCTION MAY RESULT IN A VIOLATION OF THE SECURITIES AND EXCHANGE BOARD OF INDIA (INFRASTRUCTURE INVESTMENT TRUSTS) REGULATIONS, 2014 OR OTHER APPLICABLE LAWS OF INDIA AND OF OTHER JURISDICTIONS.

INVESTMENTS IN UNITS INVOLVE RISKS AND INVESTORS SHOULD NOT INVEST ANY FUNDS IN THE ISSUE UNLESS THEY CAN AFFORD TO TAKE THE RISK OF LOSING THEIR ENTIRE INVESTMENT. FOR MAKING AN INVESTMENT DECISION, INVESTORS MUST RELY ON THEIR OWN EXAMINATION OF THE TRUST, THE UNITS, THE ISSUE, AND THIS LETTER OF OFFER. INVESTORS ARE ADVISED TO CAREFULLY READ THIS LETTER OF OFFER, INCLUDING THE SECTIONS "RISK FACTORS" AND "RIGHTS OF UNITHOLDERS" ON PAGES 16 AND 320, RESPECTIVELY. THE UNITS HAVE NOT BEEN RECOMMENDED OR APPROVED BY THE SECURITIES AND EXCHANGE BOARD OF INDIA (THE "SEBI") OR THE NATIONAL STOCK EXCHANGE OF INDIA ("NSE" OR THE "STOCK EXCHANGE") NOR DOES THE SEBI OR THE NSE GUARANTEE THE ACCURACY OR ADEQUACY OF THE CONTENTS OF THIS LETTER OF OFFER. EACH ELIGIBLE UNITHOLDER IS ADVISED TO CONSULT ITS OWN ADVISORS ABOUT THE CONSEQUENCES OF AN INVESTMENT IN THE UNITS BEING OFFERED PURSUANT TO THIS LETTER OF OFFER.

THE RIGHTS ENTITLEMENTS AND THE UNITS HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER THE U.S. SECURITIES ACT, OR ANY U.S. STATE SECURITIES LAWS AND MAY NOT BE OFFERED, SOLD, RESOLD OR OTHERWISE TRANSFERRED WITHIN THE UNITED STATES, EXCEPT IN A TRANSACTION EXEMPT FROM THE REGISTRATION REQUIREMENTS OF THE U.S. SECURITIES ACT. THE UNITS AND RIGHTS ENTITLEMENTS REFERRED TO IN THIS LETTER OF OFFER ARE BEING OFFERED AND SOLD IN OFFSHORE TRANSACTIONS OUTSIDE THE UNITED STATES IN COMPLIANCE WITH REGULATION S TO UNITHOLDERS LOCATED IN JURISDICTIONS WHERE SUCH OFFER AND SALE OF THE UNITS ARE PERMITTED UNDER LAWS OF SUCH JURISDICTIONS. THE OFFERING TO WHICH THIS LETTER OF OFFER RELATES IS NOT, AND UNDER NO CIRCUMSTANCES IS TO BE CONSTRUED AS, AN OFFERING OF ANY UNITS OR RIGHTS ENTITLEMENTS FOR SALE IN THE UNITED STATES OR AS A SOLICITATION THEREIN OF AN OFFER TO BUY ANY OF THE SAID SECURITIES.

The distribution of this Letter of Offer or the disclosure of its contents without the Investment Manager's prior consent to any person other than the Eligible Unitholders is unauthorized and prohibited. Each Eligible Unitholder, by accepting delivery of this Letter of Offer, agrees to observe the foregoing restrictions and to make no copies of this Letter of Offer or any documents referred to in this Letter of Offer.

ISSUE SCHEDULE*

ISSUE OPENS ON	**December 18, 2024**
LAST DATE FOR REQUEST FOR RENUNCIATION	**December 18, 2024**
ISSUE CLOSES ON	**December 20, 2024#@**

** Eligible Unitholders are requested to ensure that any renunciation is completed in such a manner that Rights Entitlements are credited to the demat accounts of the Renouncees on or prior to the Issue Closing Date.*
The Investment Manager will have the right to modify the Issue Period as it may determine from time to time, provided that the Issue will remain open for at least three Working Days and will not remain open for a period longer than 15 Working Days.
@ On the Issue Closing Date, Application Forms and Application Amount shall be accepted until 3 p.m. IST.

LEAD MANAGER	REGISTRAR TO THE ISSUE
Vivro Financial Services Private Limited Vivro House, 11 Shashi Colony, Opp Suvidha Shopping Center Paldi, Ahmedabad 380007, Gujarat, India **Tel**: +91 79 4040 4242 **Email**: investors@vivro.net **SEBI registration number**: INM000010122 **Contact person**: Kruti Saraiya/Jay Dodiya **Website**: www.vivro.net **Investor Grievance Email**: investors@vivro.net **CIN**: U67120GJ1996PTC029182	**KFin Technologies Limited** Selenium Tower-B, Plot No. 31 &32 Gachibowli, Financial District, Nanakramguda Serilingampally, Hyderabad 500 032, Telangana, India **Tel**: +91 40 6716 2222/1800 309 4001 **Email**: irb.rights@kfintech.com **SEBI registration number**: INR000000221 **Contact person**: M. Murali Krishna **Website**: www.kfintech.com **Investor Grievance Email**: einward.ris@kfintech.com **CIN**: L72400TG2017PLC117649

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NOTICE TO INVESTORS

The statements contained in this Letter of Offer relating to the Trust, the Units and the Target SPV are material, true, correct and adequate to enable investors to make an informed decision. The opinions and intentions expressed in this Letter of Offer with regard to the Trust, the Units and the Target SPV are honestly held, have been reached after considering all relevant circumstances and are based on reasonable assumptions and information presently available with the Investment Manager or the Sponsor/Project Manager. There are no other facts in relation to the Trust, the Units and the Target SPV, the omission of which would, in the context of the Issue, make any statement in this Letter of Offer misleading in any material respect. Further, each of the Investment Manager and the Sponsor/Project Manager has made all reasonable enquiries to ascertain such facts and to verify the accuracy of all such information and statements.

This Letter of Offer is solely for the use of the person who has received it from the Investment Manager or the Lead Manager. This Letter of Offer is not to be reproduced or distributed to any other person. Further, this Letter of Offer and the Application Form will be sent only to the e-mail addresses of Eligible Unitholders who have provided their e-mail addresses to the Investment Manager.

Each Applicant must rely on its own examination of the Trust and the merits and risks involved in investing in the Units. Applicants should not construe the contents of this Letter of Offer as legal, tax, accounting or investment advice.

The delivery of this Letter of Offer, at any time, does not imply that the information contained in it is correct as of any time subsequent to its date. This Letter of Offer is personal to each Eligible Unitholder. This Letter of Offer shall not be relied upon by, and the Lead Manager, the Investment Manager, the Trustee and/or the Sponsor/Project Manager shall not be liable to any subsequent acquirer, transferee or investor of the Units.

The distribution of this Letter of Offer or the disclosure of its contents to any person, other than the Eligible Unitholders to whom they are addressed and those retained by such Eligible Unitholders to enable them to make a decision with respect to their subscription to the Units, is unauthorized and prohibited. Each Applicant agrees to observe the foregoing restrictions and make no copies of this Letter of Offer or any other material in connection with the Issue or the Units.

Each Applicant will be deemed to have made the representations, agreements and acknowledgments as described in this section "*Notice to Investors*". Nothing contained herein will relieve any party of its rights or obligations under the Framework Agreement.

Notice to Investors in certain other jurisdictions

The distribution of this Letter of Offer, the Application Form and the issue of the Units in certain jurisdictions may be restricted by law. As such, this Letter of Offer does not constitute, and may not be used for, or in connection with, an offer or solicitation by anyone in any jurisdiction in which such offer or solicitation is not authorized or to any person to whom it is unlawful to make such offer or solicitation. In particular, no action has been taken by the Investment Manager or the Lead Manager which would permit an issue of the Units in any jurisdiction other than India. Accordingly, the Units may not be offered or sold, directly or indirectly, and neither this Letter of Offer nor any Issue materials in connection with the Units be distributed or published in or from any country or jurisdiction that would require registration of the Units in such country or jurisdiction.

THE RIGHTS ENTITLEMENTS AND THE UNITS HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER THE U.S. SECURITIES ACT, OR ANY U.S. STATE SECURITIES LAWS AND MAY NOT BE OFFERED, SOLD, RESOLD OR OTHERWISE TRANSFERRED WITHIN THE UNITED STATES, EXCEPT IN A TRANSACTION EXEMPT FROM THE REGISTRATION REQUIREMENTS OF THE U.S. SECURITIES ACT. THE UNITS AND RIGHTS ENTITLEMENTS REFERRED TO IN THIS LETTER OF OFFER ARE BEING OFFERED AND SOLD IN OFFSHORE TRANSACTIONS OUTSIDE THE UNITED STATES IN COMPLIANCE WITH REGULATION S TO UNITHOLDERS LOCATED IN JURISDICTIONS WHERE SUCH OFFER AND SALE OF THE UNITS ARE PERMITTED UNDER LAWS OF SUCH JURISDICTIONS. THE OFFERING TO WHICH THIS LETTER OF OFFER RELATES IS NOT, AND UNDER NO CIRCUMSTANCES IS TO BE CONSTRUED AS, AN OFFERING OF ANY UNITS OR RIGHTS ENTITLEMENTS FOR SALE IN THE UNITED STATES OR AS A SOLICITATION THEREIN OF AN OFFER TO BUY ANY OF THE SAID SECURITIES.

Representations by Applicants

References herein to "you" or "your" is to each Applicant.

By subscribing to the Units pursuant to the Issue, you are deemed to have represented to the Trustee, the Investment Manager, the Lead Manager and the Sponsor/ Project Manager, and you acknowledge and agree as follows:

1. You are permitted to acquire the Units under the laws of any applicable jurisdiction and that you have necessary capacity and authority, and have obtained all necessary consents and authorizations to enable you to commit to this participation in the Issue and to perform your obligations in relation thereto (including, without limitation, on behalf of any person) and honor such obligations;

2. You will make all necessary filings, in relation to the Issue and your investment in Units, with appropriate governmental, statutory or regulatory authorities, including the RBI, as may be required, in accordance with applicable law;

3. You are aware that the Units have not been, and will not be registered through a prospectus under the InvIT Regulations, or under any other law in force in India. This Letter of Offer will be submitted to the SEBI and the Stock Exchange;

4. None of the Trust, the Sponsor/ Project Manager, the Investment Manager, the Trustee, the Lead Manager, the Project SPVs, the Target SPV or any of their respective shareholders, directors, officers, employees, counsel, representatives, advisers, agents or affiliates is making any recommendations to you or advising you regarding the suitability of any transactions it may enter into in connection with the Issue. None of the Trust, the Sponsor/ Project Manager, the Trustee, the Investment Manager, the Lead Manager, the Project SPVs, the Target SPV or any of their respective shareholders, employees, counsel, officers, directors, representatives, advisers, agents or affiliates have any duties or responsibilities to you for providing the protection afforded to their clients, or for providing advice in relation to the Issue and are in no way acting in a fiduciary capacity towards you;

5. All statements, other than statements of historical fact included in this Letter of Offer, including, without limitation, those regarding the Trust's financial position, business strategy, plans and objectives for future operations and the Investment Objectives, are forward-looking statements. Such forward-looking statements involve known and unknown risks, uncertainties and other important factors that could cause actual results to be materially different from future results, performance or achievements expressed or implied by such forward-looking statements. Such forward-looking statements are based on numerous assumptions regarding the Trust's present and future business strategies and the environment in which the Trust will operate in the future. You should not place undue reliance on forward-looking statements, which speak only as of the date of this Letter of Offer. The Trust, the Trustee, the Sponsor, the Lead Manager and the Investment Manager assume no responsibility to update any of the forward-looking statements contained in this Letter of Offer;

6. You have been provided a copy of this Letter of Offer and have read it in its entirety including, in particular, the section "*Risk Factors*" on page 16;

7. You are aware and understand that the Units are being offered only to Eligible Unitholders on the Record Date on a rights basis and are not being offered to the general public;

8. In making your investment decision, you have (i) relied on your own examination of the Trust, the Units and the terms of the Issue, including the merits and risks involved, (ii) consulted your own independent advisors or otherwise have satisfied yourself concerning, without limitation, the effects of local laws and (iii) received all information in this Letter of Offer that you believe is necessary or appropriate in order to make an investment decision in respect of Trust and the Units;

9. You acknowledge that an investment in the Units involves a high degree of risk and that the Units are, therefore, a speculative investment. You are seeking to subscribe to the Units in the Issue for your own investment and not with a view to resell or distribute in any manner that could characterize you as an underwriter or similar party in any jurisdiction;

10. You will obtain your own independent legal, financial or tax advice and will not rely on the Investment Manager, the Sponsor/ Project Manager, the Trustee, the Lead Manager or any of their respective shareholders, employees, counsel, officers, directors, representatives, advisers, agents or affiliates when

evaluating the tax consequences in relation to the Units (including but not limited to the Issue and the use of the proceeds of the Issue);

11. You are not the Trustee, the Valuer of the Trust or an employee of the Valuer of the Trust or the valuer involved in the valuation of the Project SPVs or the Target SPV;

12. You understand that the Units to be Allotted in the Issue will, when issued, be credited as fully paid and will rank *pari passu* in all respect with all other Units, including in respect of the right to receive all distributions declared, made or paid in respect of the Units after the Allotment. For details, see "*Distributions*" on page 316;

13. The Trustee, the Investment Manager, the Sponsor/ Project Manager, the Lead Manager, their respective shareholders, employees, counsel, offices, directors, representatives, advisers, agents or affiliates, will rely on the truth and accuracy of the foregoing representations, warranties, acknowledgements and undertakings which are given to the Trust, the Sponsor/ Project Manager, the Lead Manager, the Investment Manager and the Trustee;

14. You are eligible to invest in India, in the Issue and in the Units under applicable law, including the InvIT Regulations, the SEBI Master Circular and the FEMA Rules, and have not been prohibited by the SEBI or any regulatory authority from buying, selling or dealing in units or securities;

15. You understand that none of the Investment Manager, the Sponsor/ Project Manager, the Lead Manager or the Trustee has any obligation to purchase or subscribe to all, or any part, of the Units subscribed by you in the Issue;

16. Any dispute arising in connection with the Issue will be governed by, and construed in accordance with, the laws of the Republic of India and shall be subject to the jurisdiction of the court in Mumbai, Maharashtra; and

17. You have made the representations, warranties, acknowledgements and agreements provided in this section and each of the representations, warranties, acknowledgements and agreements set out above shall continue to be true and accurate at all times, until and including the Allotment of Units in the Issue.

SECTION I – GENERAL

DEFINITIONS AND ABBREVIATIONS

This Letter of Offer uses certain definitions and abbreviations which, unless otherwise specified or the context otherwise indicates, requires or implies, shall have the meanings as provided below. References to any legislation, act, regulation, rule, guideline, policy, circular, notification or clarification shall be deemed to include all amendments, supplements, re-enactments and modifications thereto from time to time, and any reference to a statutory provision shall include any subordinate legislation made from time to time thereunder.

General Terms

Term	Description
Trust	IRB Infrastructure Trust, an irrevocable trust set up under the Trusts Act and registered as an infrastructure investment trust under the InvIT Regulations
We / us / our	Unless the context otherwise requires or implies, the Trust and the Project SPVs

Trust Related Terms

Term	Description
Anahera	Anahera Investment Pte. Ltd.
Associate	"Associate" shall have the meaning given to such term under Regulation 2(1)(b) of the InvIT Regulations
Capital Contribution	The total subscription amounts by way of cash or share swap or otherwise (including transfer of interest in the Trust Assets by the Sponsor) received by the Trust from Unitholders (including the Sponsor) in connection with any placement, offering or issue of Units
Consolidated Financial Information	(i) Reviewed consolidated financial information of the Trust and the Project SPVs, prepared in accordance with the requirements of the InvIT Regulations and Ind AS, and the related notes, schedules and annexures thereto, as of and for the six-month period ended September 30, 2024, together with the independent auditors' review report on unaudited interim consolidated financial information of the Trust; and (ii) Audited consolidated financial information for the Trust and the Project SPVs, prepared in accordance with the requirements of the InvIT Regulations and Ind AS, and the related notes, schedules and annexures thereto, and the auditors' reports as of and for the Financial Years 2024, 2023 and 2022
Cintra	Together, Cintra InvIT Investments B.V. and Cintra IM Investments B.V.
Cintra Transaction	The purchase of (i) 24% of the Units of the Trust by Cintra InvIT Investments B.V. from certain other Financial Investors; and (ii) 24% of the equity shares of the Investment Manager, by Cintra IM Investments B.V. from Croxley
Cintra IM Investor	Cintra IM Investments B.V.
Cintra InvIT Investor	Cintra InvIT Investments B.V.
Croxley	Croxley Investment Pte. Ltd.
Current Portfolio	The toll road assets owned, operated and maintained by the Project SPVs
Current Portfolio Valuation Report	Valuation report dated October 28, 2024 issued by the Valuer in relation to the value of the Current Portfolio as of September 30, 2024
Debt Novation Agreements	The debt novation agreements dated February 19, 2020 entered into by the Trust (acting through the Trustee), the Investment Manager and the Sponsor, with each of the Project SPVs (except PDTPL, IRB GEPL, STPL, IRB LTPL, IRB KTPL and IRB GTPL) and the Sponsor's affiliates (as applicable), in relation to the novation of subordinated debt and unsecured loans provided by the Sponsor and its associates to the Project SPVs (except PDTPL, IRB GEPL, STPL, IRB LTPL, IRB KTPL and IRB GTPL), as amended
Designated Stock Exchange or NSE or Stock Exchange	The National Stock Exchange of India Limited
Expanded Portfolio	The Current Portfolio together with MBEL's road asset
Financial Investors	Bricklayers Investment Pte. Ltd., Chiswick Investment Pte. Ltd., Dagenham Investment Pte. Ltd., Anahera Investment Pte. Ltd., Stretford End Investment Pte. Ltd. and Cintra InvIT Investor
Formation Transactions	The transactions pursuant to which the Trust acquired the shareholding of the Sponsor in the Project SPVs (except PDTPL, IRB GEPL, STPL, IRB LTPL, IRB KTPL and IRB GTPL) and the subordinated debt and unsecured loans provided by the Sponsor and its associates to the Project SPV (except PDTPL, IRB GEPL, STPL, IRB LTPL, IRB KTPL and IRB GTPL) stood novated in favor of the Trust in consideration for Units issued to the Sponsor

Term	Description
Framework Agreement	The framework agreement dated August 6, 2019 among the Sponsor, the Investment Manager, the Financial Investors, Cintra IM Investor and Croxley, as amended
GIC Financial Investors	Bricklayers Investment Pte. Ltd., Chiswick Investment Pte. Ltd., Dagenham Investment Pte. Ltd., Anahera Investment Pte. Ltd. and Stretford End Investment Pte. Ltd.
Indenture of Trust	The indenture of trust dated August 27, 2019 between the Sponsor and the Trustee to settle the Trust, as amended
Investment Management Agreement	The investment management agreement dated August 27, 2019 between the Trustee (on behalf of the Trust) and the Investment Manager for managing and administration of the Trust, in accordance with the InvIT Regulations, as amended
Investment Manager	MMK Toll Road Private Limited
Joint Statutory Auditors / Trust's Auditors	Gokhale & Sathe, Chartered Accountants and MSKA & Associates, Chartered Accountants, joint auditors of the Trust
Manager Group or Manager Group Members	The Investment Manager, the Project SPVs, the Trust and the entities controlled by the Investment Manager/ the Trust, including any other SPVs
MBEL or Target SPV	Meerut Budaun Expressway Limited
MBEL Acquisition	The proposed acquisition of MBEL by the Trust through (i) the purchase of equity shares of MBEL from the Sponsor and Anahera aggregating to 80.40% of the equity share capital of MBEL; and (ii) the purchase of non-convertible debentures from the Sponsor and Anahera aggregating to 80.40% of the outstanding non-convertible debentures issued by MBEL
MBEL Project Implementation Agreement	The amended and restated project implementation agreement dated December 16, 2024 entered into by the Trustee (on behalf of the Trust), the Investment Manager and the Project Manager with MBEL, which sets out the obligations of the Project Manager with respect to the execution, operation and maintenance of the project undertaken by MBEL in accordance with the InvIT Regulations
MBEL Securities Purchase Agreement	The securities purchase agreement dated December 16, 2024 entered into by the Trust (acting through the Trustee), the Investment Manager and MBEL with the Sponsor and Anahera to acquire: (i) an aggregate of 80.40% of the equity share capital of MBEL; and (ii) an aggregate of 80.40% of the outstanding non-convertible debentures of MBEL
MBEL Valuation Report or Target Valuation Report	Valuation report dated December 14, 2024 issued by the Valuer in relation to the valuation of MBEL as of September 30, 2024
Parties to the Trust	The Sponsor, the Investment Manager, the Trustee and the Project Manager
Policies	The policies in relation to the Manager Group as specified in "*Corporate Governance*" on page 162.
Pro Forma Financial Information	The pro forma financial information of the Trust and MBEL as at and for the Financial Year 2024 and the six-month month period ended September 30, 2024, prepared in accordance with the requirements of Chapter 9 of the SEBI Master Circular and the InvIT Regulations
Project Entities	The entities through which the Sponsor operates its various road infrastructure projects
Project Implementation Agreements	The project implementation agreements dated February 3, 2020, as amended, entered into by the Trustee (on behalf of the Trust), the Investment Manager and the Project Manager, with each of the Project SPVs (except PDTPL, IRB GEPL, STPL, IRB LTPL, IRB KTPL and IRB GTPL), the project implementation agreement dated May 19, 2022 entered into by the Trustee (on behalf of the Trust), the Investment Manager and the Project Manager with PDTPL, the project implementation agreement dated August 2, 2023 entered into by the Trustee (on behalf of the Trust), the Investment Manager and the Project Manager with IRB GEPL, the project implementation agreement dated October 12, 2023 entered into by the Trustee (on behalf of the Trust), the Investment Manager and the Project Manager with STPL, and the project implementation agreements dated March 13, 2024 entered into by the Trust (acting through the Trustee) and the Investment Manager with each of IRB LTPL, IRB KTPL and IRB GTPL, each as amended, which set out the obligations of the Project Manager with respect to the execution, operation and maintenance of the project undertaken by such Project SPV in accordance with the InvIT Regulations
Project Manager	IRB Infrastructure Developers Limited
Project SPVs	The entities that form part of the Current Portfolio of the Trust, namely the following: i) AE Tollway Limited; ii) CG Tollway Limited; iii) IRB Hapur Moradabad Tollway Limited; iv) IRB Westcoast Tollway Limited; v) Kaithal Tollway Limited; vi) Kishangarh Gulabpura Tollway Limited; vii) Solapur Yedeshi Tollway Limited; viii) Udaipur Tollway Limited; ix) Yedeshi Aurangabad Tollway Limited; x) Palsit Dankuni Tollway Private Limited; xi) IRB Golconda Expressway Private Limited;

Term	Description
	xii) Samakhiyali Tollway Private Limited; xiii) IRB Lalitpur Tollway Private Limited; xiv) IRB Kota Tollway Private Limited; and xv) IRB Gwalior Tollway Private Limited.
Shareholder Loan Agreements or Project SPV Shareholder Loan Agreements	Collectively, the shareholder loan agreements dated February 19, 2020 entered into by the Trust (acting through the Trustee) and the Investment Manager with each of the Project SPVs (except PDTPL, IRB GEPL, STPL, IRB LTPL, IRB KTPL and IRB GTPL), the shareholder loan agreement dated April 7, 2022 entered into by the Trust (acting through the Trustee) and the Investment Manager with PDTPL, the shareholder loan agreement dated July 29, 2023 entered into by the Trust (acting through the Trustee) and the Investment Manager with IRB GEPL, the shareholder loan agreement dated October 12, 2023 entered into by the Trust (acting through the Trustee), and the shareholder loan agreements dated March 13, 2024 entered into by the Trust (acting through the Trustee) and the Investment Manager with each of IRB LTPL, IRB KTPL and IRB GTPL, to provide unsecured loans to each of the Project SPVs
Sponsor Group	Collectively, the Sponsor/Project Manager, IRB Holding Private Limited, Mr. Virendra D. Mhaiskar, Ms. Deepali V. Mhaiskar and Virendra D. Mhaiskar (HUF)
Sponsor	IRB Infrastructure Developers Limited
SPVs or Identified SPVs	The SPVs held by the Trust in accordance with the InvIT Regulations
Standalone Financial Information	(i) Reviewed standalone financial information of the Trust and the Project SPVs, prepared in accordance with the requirements of the InvIT Regulations and Ind AS, as of and for the the six-month period ended September 30, 2024, together with the independent auditors' review report on unaudited interim standalone financial information for the six-month period ended September 30, 2024; and (ii) Audited standalone financial information for the Trust and the Project SPVs, prepared in accordance with the requirements of the InvIT Regulations and Ind AS, and the related notes, schedules and annexures thereto, and the auditors' reports as of and for the Financial Years 2024, 2023 and 2022
Stock Exchanges	BSE Limited and National Stock Exchange of India Limited
Target Traffic Consultant	T&T Consultants
Traffic Consultant	GMD Consultants
Traffic Reports	The reports dated October 2024 prepared by the Traffic Consultant for the underlying road projects operated by the Project SPVs and the reports dated December 2024 prepared by the Target Traffic Consultant for the underlying road project operated by the Target SPV
Trust Assets	The assets owned by the Trust, whether directly or through an SPV or a Holding Company, and shall include all rights, interests and benefits arising from and incidental to ownership of such assets
Trust Documents	The Indenture of Trust, the charter documents of the Investment Manager, the Investment Management Agreement, the Trust Contribution Agreement (if any), the Project Implementation Agreements, any agreements among the Trustee, the Investment Manager and the Unitholders, in relation to the Trust, the Units, any debt securities or instruments or obligations issued by the Trust, any offering document in connection with a capital or debt issuance by the Trust (including the Issue), including any preliminary placement memorandum, final placement memorandum, information memorandum, draft offer document, offer document and final offer document, Policies, the Investment Manager and/or the SPVs/Holdcos, business plans and annual budget adopted by the Investment Manager and such other documents in connection herewith, as executed, issued, adopted and amended, modified, supplemented or restated from time to time
Trust Group or Trust Group Members	The Sponsor and the Manager Group Members
Trustee	IDBI Trusteeship Services Limited
Unitholder	An investor which holds Units of the Trust from time to time
Units	Undivided beneficial interest in the Trust and the Units together represent the entire beneficial interest in the Trust
Valuer	KPMG Valuation Services LLP
Working Day	Any day which is not (a) a Saturday or Sunday; or (b) a day on which commercial banks in Mumbai, Delhi or Singapore are closed for ordinary banking business

Project SPVs

Term	Description
AETL	AE Tollway Limited

Term	Description
CGTL	CG Tollway Limited
IRB GEPL	IRB Golconda Expressway Private Limited
IRB GTPL	IRB Gwalior Tollway Private Limited
IRB HMTL	IRB Hapur Moradabad Tollway Limited
IRB KTPL	IRB Kota Tollway Private Limited
IRB LTPL	IRB Lalitpur Tollway Private Limited
IRB WTL	IRB Westcoast Tollway Limited
KGTL	Kishangarh Gulabpura Tollway Limited
KTL	Kaithal Tollway Limited
PDTPL	Palsit Dankuni Tollway Private Limited
STPL	Samakhiyali Tollway Private Limited
SYTL	Solapur Yedeshi Tollway Limited
UTL	Udaipur Tollway Limited
YATL	Yedeshi Aurangabad Tollway Limited

Issue Related Terms

Term	Description
Allotment Advice	The note or advice or intimation of Allotment sent to each successful Applicant who has been or is to be Allotted Units pursuant to the Issue after approval of the Basis of Allotment by the Designated Stock Exchange
Allot/ Allotment/ Allotted	Unless the context otherwise requires, the issue and allotment of Units pursuant to the Issue
Allottees	Persons to whom Units will be issued and Allotted pursuant to the Issue
Applicant	Eligible Unitholders and Renouncees who are entitled to apply or make an application for Units pursuant to the Issue in terms of this Letter of Offer
Application Amount	The amount payable by an Applicant simultaneously with the submission of the Application Form during the Issue Period, for the number of Units applied for at the Issue Price specified in this Letter of Offer
Application Form	The Application Form used to make an application for Allotment of Units in the Issue
Basis of Allotment	The basis on which the Units will be Allotted to successful Applicants in consultation with the Designated Stock Exchange in the Issue, as described in "*Issue Procedure*" on page 837
Cash Escrow Agreement	Agreement dated December 12, 2024 entered into among the Trustee (acting on behalf of, and in its capacity as trustee to, the Trust), the Investment Manager, the Lead Manager and the Escrow Collection Bank for, *inter-alia*, for collection and refund of the Application Amounts
Client ID	Client identification number maintained with one of the Depositories in relation to a demat account
Demographic Details	Details of the Applicants including the Applicant's address, name of the Applicant's father/husband, investor status, occupation and bank account details
Designated Account	The designated account specified in the Application Form, in whose favor Applicants are required to transfer money through direct credit/NEFT/NACH/RTGS in respect of the Application Amount when submitting an Application Form
Eligible Unitholders	Unitholders of the Trust as on the Record Date
Escrow Collection Bank	Canara Bank
Issue	Issue of up to 58,400,000 Units at a price of ₹293.65 per Unit** aggregating up to ₹17,149.23 million on a rights basis to Eligible Unitholders in the ratio of one Unit for every 19.07 Units* held by them on the Record Date **The Rights Entitlement Ratio is one Unit for every 19.0700901541096 Units held by Eligible Unitholders on the Record Date. For presentation purposes only, the Rights Entitlement Ratio has been presented as rounded-off to two decimal places.* ***The Issue Price is ₹293.6511986. For presentation purposes only, the Issue Price has been presented as rounded-off to two decimal places.*
Issue Closing Date	December 20, 2024[@], which is the last date until which the Application Forms shall be accepted. *@ On the Issue Closing Date, Application Forms and Application Amount shall be accepted until 3 p.m. IST.*

Term	Description
	The Investment Manager will have the right to modify the Issue Period as it may determine from time to time, provided that the Issue will remain open for at least three Working Days and will not remain open for a period longer than 15 Working Days.
Issue Opening Date	December 18, 2024, prior to which the Application Forms shall be dispatched to Eligible Unitholders by the Investment Manager and the date from which the Investment Manager shall accept Application Forms
Issue Period	Period between the Issue Opening Date and the Issue Closing Date, inclusive of both days, during which Applicants can submit their Application Forms
Issue Price	₹293.65 per Unit* **The Issue Price is ₹293.6511986. For presentation purposes only, the Issue Price has been presented as rounded-off to two decimal places.*
Issue Proceeds	The gross proceeds of this Issue, being ₹17,149.23 million* **Assuming full subscription* For further details in relation to the use of Issue Proceeds, see the section "*Objects of the Issue*" on page 79
Lead Manager	Vivro Financial Services Private Limited
Letter of Offer	This Letter of Offer dated December 16, 2024 filed with the SEBI and the Stock Exchange in connection with the Issue
Off Market Renunciation	The renouncement of Rights Entitlements undertaken by an Eligible Unitholder by transferring them through off market transfer through a depository participant in accordance with applicable law
On Market Renunciation	The renouncement of Rights Entitlements undertaken by an Eligible Unitholder by trading them over the secondary market platform of the Stock Exchange through a registered stock broker in accordance with applicable law
Record Date	December 13, 2024
Registrar and Unit Transfer Agent or Registrar	KFin Technologies Limited
Renouncee	Any person(s) who, not being the original recipient, has/have acquired the Rights Entitlement
Renunciation Period	The period during which Eligible Unitholders can renounce or transfer their Rights Entitlements, which will commence from the Issue Opening Date. Eligible Unitholders are requested to ensure that renunciation is completed in such a manner that Rights Entitlements are credited to the demat account of the Renouncees on or prior to the Issue Closing Date
Rights Entitlements	The right to apply for Units being offered pursuant to this Issue in accordance with the InvIT Regulations, in this case being one Unit for every 19.07 Units* held by an Eligible Unitholder on the Record Date. The Rights Entitlement for each Eligible Unitholder will be specified in the Application Form **The Rights Entitlement Ratio is one Unit for every 19.0700901541096 Units held by Eligible Unitholders on the Record Date. For presentation purposes only, the Rights Entitlement Ratio has been presented as rounded-off to two decimal places.*
Rights Entitlements Letter	Letter including details of Rights Entitlements of the Eligible Unitholders
Working Day	Any day which is not (a) a Saturday or Sunday; or (b) a day on which commercial banks in Mumbai, Delhi or Singapore are closed for ordinary banking business. In respect of the Issue Period, "Working Day" shall mean all days, excluding Saturdays, Sundays and public holidays, on which commercial banks in Mumbai are open for business

Technical/Industry Related Terms/Abbreviations

Term	Description
BOT	Build-Operate-Transfer
CCEA	Cabinet Committee on Economic Affairs
DBFOT	Design-Build-Finance-Operate-Transfer
EPC	Engineering Procurement and Construction
ETC	Electronic Toll Collection
HGCL	Hyderabad Growth Corridor Limited
HMDA	Hyderabad Metropolitan Development Authority
MoRTH	Ministry of Road Transport and Highways
NH	National Highway

Term	Description
NHAI	National Highways Authority of India
NHDP	National Highways Development Project
O&M	Operation and Maintenance
PPP	Public Private Partnership
TOT	Toll-Operate-Transfer
UPEIDA	Uttar Pradesh Expressways Industrial Development Authority

Conventional Terms/Abbreviations

Term	Description
Alternative Investment Funds or AIFs	Alternative investment funds as defined in, and registered under, the SEBI AIF Regulations
CAGR	Compounded Annual Growth Rate
Category I FPIs	FPIs registered as "Category I foreign portfolio investors" under the SEBI FPI Regulations
Category II FPIs	FPIs registered as "Category II foreign portfolio investors" under the SEBI FPI Regulations
CCI	Competition Commission of India
CDSL	Central Depository Services (India) Limited
CIN	Corporate Identity Number
Companies Act, 2013	Companies Act, 2013 read with the rules, regulations, clarifications and notifications thereunder
Contract Labour Act	Contract Labour (Regulation and Abolition) Act, 1970
COVID-19	Coronavirus disease 2019
DIN	Director Identification Number
DPIIT	Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, Government of India (formerly known as Department of Industrial Policy and Promotion)
DP ID	Depository participant identification
DP/ Depository Participant	A depository participant as defined under the Depositories Act
Debenture Trustees Regulations	Securities and Exchange Board of India (Debenture Trustees) Regulations, 1993
Depositories	NSDL and CDSL
Depositories Act	Depositories Act, 1996
FCNR Account	Foreign Currency Non-Resident Account, and has the meaning ascribed to the term "FCNR(B) account" under the Foreign Exchange Management (Deposit) Regulations, 2016
FDI	Foreign Direct Investment
FDI Policy	The 'Consolidated FDI Policy Circular of 2020' (No. 5(2)/2020-FDI Policy) issued by the DPIIT (FDI Division), which has been effective since October 15, 2020
FEMA	Foreign Exchange Management Act, 1999, read with rules and regulations thereunder
FEMA Rules	The Foreign Exchange Management (Non-debt Instruments) Rules, 2019
Financial Year / Fiscal / FY	Unless stated otherwise, the period of 12 months ending March 31 of that particular year
FPI(s)	Foreign portfolio investors, as defined in and registered under the SEBI FPI Regulations
GoI / Government	Government of India
HUF	Hindu Undivided Family
ICAI	The Institute of Chartered Accountants of India
IFRS	International Financial Reporting Standards
Income Tax Act/ I.T. Act	The Income-tax Act, 1961
Ind AS	Indian Accounting Standards
InvIT Regulations	Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 and the circulars, notifications, guidelines and clarifications issued thereunder, each as amended
IST	Indian Standard Time
km	Kilometres
LLP Act	The Limited Liability Partnership Act, 2008
Mutual Fund(s)	Mutual fund(s) as defined in and registered under the Securities and Exchange Board of India (Mutual Funds) Regulations, 1996
NACH	National Automated Clearing House
NAV	Net asset value
NEFT	National Electronic Fund Transfer

Term	Description
NRE Account	Non-Resident External Account, as defined under the Foreign Exchange Management (Deposit) Regulations, 2016
NRI	An individual resident outside India who is a citizen of India
NRO	Non-Resident Ordinary Account, as defined under the Foreign Exchange Management (Deposit) Regulations, 2016
NSDL	National Securities Depository Limited
p.a.	Per annum
PAN	Permanent Account Number
PAT	Profit after tax
Pension Fund	Pension fund, as defined in and registered under the Pension Fund Regulatory and Development Authority Act, 2013
PFRDA	Pension Fund Regulatory and Development Authority
RBI	Reserve Bank of India
Registration Act	Registration Act, 1908
RTGS	Real Time Gross Settlement
SCRA	Securities Contracts (Regulation) Act, 1956
SCRR	Securities Contracts (Regulation) Rules, 1957
SEBI	The Securities and Exchange Board of India constituted under the SEBI Act
SEBI Act	Securities and Exchange Board of India Act, 1992
SEBI AIF Regulations	Securities and Exchange Board of India (Alternative Investment Funds) Regulations, 2012
SEBI Depository Regulations	Securities and Exchange Board of India (Depositories and Participants) Regulations, 2018
SEBI FPI Regulations	Securities and Exchange Board of India (Foreign Portfolio Investors) Regulations, 2019
SEBI FVCI Regulations	Securities and Exchange Board of India (Foreign Venture Capital Investors) Regulations, 2000
SEBI Intermediaries Regulations	Securities and Exchange Board of India (Intermediaries) Regulations, 2008
SEBI Master Circular	Master Circular for Infrastructure Investment Trusts (InvITs) dated May 15, 2024 issued by the SEBI
SEBI VCF Regulations	Securities and Exchange Board of India (Venture Capital Funds) Regulations, 1996
Trusts Act	Indian Trusts Act, 1882
VCFs	Venture capital funds as defined in and registered with the SEBI under the SEBI VCF Regulations

The words and expressions used but not defined herein shall have the meanings assigned to such terms under the SEBI Act, the SCRA, the InvIT Regulations and the rules, regulations, circulars and guidelines made thereunder.

Notwithstanding the foregoing, terms in "*Statement of Tax Benefits*", "*Regulations and Policies*", "*Summary of the Concession Agreements*", "*Financial Statements*", and "*Material Litigation and Regulatory Action*" on pages 85, 286, 168, 347 and 806, respectively, shall have the meanings given to such terms in these respective sections.

PRESENTATION OF FINANCIAL, INDUSTRY AND MARKET DATA

Certain Conventions

All references to "India" contained in this Letter of Offer are to the Republic of India and all references to the "U.S.", "USA" or the "United States" are to the United States of America.

Unless stated otherwise, all references to page numbers in this Letter of Offer are to the page numbers of this Letter of Offer.

Financial Data

Unless stated otherwise, the financial data included in this Letter of Offer in relation to the Trust and the Project SPVs is derived from the Consolidated Financial Information which has been prepared in accordance with the requirements of the InvIT Regulations and Ind AS. This Letter of Offer also includes the Standalone Financial Information in relation to the Trust. For further information, see "*Financial Statements*" on page 347.

This Letter of Offer includes summary financial information of MBEL, the Target SPV proposed to be acquired by the Trust, extracted from the special purpose audited financial statements of MBEL, as of and for the six-month period ended September 30, 2024 and the Financial Years 2024, 2023 and 2022. MBEL was incorporated on January 5, 2022. For further information, see "*Summary Financial Information*" on page 44.

This Letter of Offer also contains Pro Forma Financial Information of the Trust and the Target SPV as of and for the Financial Year 2024 and the six-month period ended September 30, 2024, prepared in accordance with the requirements of Chapter 9 of the SEBI Master Circular and the InvIT Regulations. For further information, see "*Financial Statements*" on page 347.

This Letter of Offer also includes summary financial statements of (i) the Sponsor as of and for the Financial Years 2024, 2023 and 2022 from the audited consolidated financial statements of the Sponsor which have been prepared in accordance with the Companies Act and Ind AS; and (ii) the Investment Manager for the Financial Years 2024, 2023 and 2022 from the audited financial statements of the Investment Manager which have been prepared in accordance with the Companies Act and Ind AS. For further information, see "*Summary Financial Statements*" on page 44.

The financial year for the Trust, the Sponsor, the Investment Manager, the Project SPVs and the Target SPV commences on April 1 and ends on March 31 of the next year. Accordingly, all references to a particular Financial Year or fiscal, unless stated otherwise, are to the 12-month period ended on March 31 of that year.

The degree to which the financial information included in this Letter of Offer will provide meaningful information is entirely dependent on the reader's level of familiarity with Indian accounting policies and practices, the Companies Act, Ind AS and the InvIT Regulations. The Investment Manager has not attempted to explain these differences or quantify their impact on the financial data included in this Letter of Offer, and it is urged that you consult your own advisors regarding such differences and their impact on our financial data. Any reliance by persons not familiar with the accounting policies and practices on the financial disclosures presented in this Letter of Offer should accordingly be limited.

In this Letter of Offer, all figures and percentage figures in decimals have been rounded off to two decimals. However, where any figures may have been sourced from third-party industry sources, such figures may be rounded-off to such number of decimal points as provided in such respective sources. In this Letter of Offer, (i) the sum or percentage change of certain numbers may not conform exactly to the total figure given; and (ii) the sum of the numbers in a column or row in certain tables may not conform exactly to the total figure given for that column or row. Any such discrepancies are due to rounding off.

Unless stated or the context requires otherwise, any percentage amounts, as disclosed in "*Risk Factors*", "*Business*" and "*Management's Discussion and Analysis of Financial Condition and Results of Operations*" on pages 16, 127 and 777, respectively, and elsewhere in this Letter of Offer have been calculated on the basis of the Consolidated Financial Statements.

Currency and Units of Presentation

All references to:

i) "Rupees" or "Rs." or "INR" or "₹" are to Indian Rupees, the official currency of the Republic of India; and

ii) "US$" or "USD" are to United States Dollars, the official currency of the United States of America.

Certain numerical information in this Letter of Offer has been presented in "million" and "billion" units. One million represents 1,000,000 and one billion represents 1,000,000,000.

Exchange Rates

This Letter of Offer contains conversions of certain other currency amounts into Indian Rupees. These conversions should not be construed as a representation that these currency amounts could have been, or can be converted into Indian Rupees, at any particular rate or at all.

The following table sets forth, for the periods indicated, information with respect to the exchange rate between the Rupee and the U.S. Dollar (in Rupees per U.S. Dollar):

As at	Reference rate (₹ per US$)
September 30, 2024	83.79
March 31, 2024	83.37
March 31, 2023	82.22
March 31, 2022	75.81
March 31, 2021	73.50

Source: Financial Benchmarks India Private Limited reference rate.

Note: Where the exchange rate was not available on account of the particular day being a holiday, the exchange rate as of the immediately preceding Working Day has been provided.

Industry and Market Data

Unless stated otherwise, industry and market data used in this Letter of Offer has been obtained or derived from the Traffic Reports prepared by the Traffic Consultant and the Target Traffic Consultant with respect to the toll revenues for the underlying road projects operated by the Project SPVs and the Target SPV, which are commissioned reports, and publicly available information as well as other Government and industry publications and sources. The Investment Manager has commissioned the Traffic Reports, included in this Letter of Offer as "*Annexure A: Traffic Reports*", to provide an independent estimation of the projected traffic volumes with respect to the underlying road projects operated by the Project SPVs and the Target SPV, which is based on historical data and certain assumptions.

Industry as well as Government publications generally state that information contained in those publications has been obtained from sources believed to be reliable but that their accuracy and completeness are not guaranteed and their reliability cannot be assured. Such data involves risks, uncertainties and numerous assumptions and is subject to change based on various factors, including those discussed in the section "*Risk Factors*" on page 16. Accordingly, investment decisions should not be based solely on such information.

The extent to which market and industry data used in this Letter of Offer is meaningful depends on the reader's familiarity with and understanding of methodologies used in compiling such data. There are no standard data gathering methodologies in the industry in which business of the Project SPVs/Trust is conducted, and methodologies and assumptions may vary widely among different industry sources.

Valuation

The Target Valuation Report and the Current Portfolio Valuation Report have been prepared by the Valuer commissioned by the Investment Manager and are subject to the following disclaimer:

"This document includes selected provisions of or a summary of the valuation report dated October 18, 2024 in relation to Portfolio of the Trust and valuation report dated December 10, 2024 (together referred as "Reports") related to valuation of Meerut Budaun Expressway Limited, prepared by KPMG Valuation Services LLP ("KPMG"), solely in its capacity as the registered Valuer on behalf of IRB Infrastructure Trust (the "Client") only and is not a full statement of the terms of the Reports.

Any reader of the Reports must view the summaries in the context of the full Reports, which is subject to the limitations and disclaimers in such Reports. Without limiting the generality of the foregoing, the Reports are expressly subject to the qualifications, assumptions made, procedures followed, matters considered and any limitations on the scope of work contained therein. It will be for the reader to determine the extent to which the work undertaken and the Reports provided by KPMG may be suitable for the reader.

These summaries, and the Reports, are provided only as of the date set forth therein and does not contemplate any event, circumstances or changes with respect to Issue or otherwise after such date. The foregoing summaries of

the Reports may include projected information and data (financial and otherwise), and other forward-looking information, that may or may not occur or prove to be accurate. Such projected and forward-looking information is based on current expectations and projections about future events which are beyond the control of KPMG, the Client or any other participant in the Issue, and such projections and information can be affected by inaccurate assumptions. While these projections and information were prepared in good faith, no assurance can be given as to the accuracy or adequacy of such projections and information, or the assumptions underlying such projections and information. These summaries and Reports are confidential and are not to be copied, disclosed, circulated or referred to in whole or part to any other person and or entity other than to whom it has been permitted by KPMG without KPMG's prior written permission. KPMG does not assume any responsibility and disclaims any liability, however occasioned to Client or any other party, as a result of the circulation, publication or reproduction of the summaries and Reports.

These summaries and the Reports are prepared in accordance with the terms agreed with the Client under the engagement letter dated 17th September 2024, for the Client only. The total aggregate liability of KPMG and its officers, employees and affiliates for any loss, damage, cost or expense suffered or incurred by all persons or entities (including but not limited to the Client or any other party) and for all claims in respect of work performed in connection with the Issue and/or the Reports, is hereby limited to the amount of fees actually paid by the Client to KPMG in connection with the Reports (the "Aggregate Liability Cap"). KPMG is released from all liability in excess of the Aggregate Liability Cap.

This is not an expert opinion but is a view basis work done in accordance with the InvIT Regulations requiring an independent valuation. The decision whether to proceed with and consummate any transaction with the Client or its assets or MBEL, solely rests with the respective investor and our findings should not in any way constitute a recommendation as to whether any party should or should not consummate the transaction."

Websites

The information contained on the websites of the Trustee, the Sponsor or the other websites referenced in this Letter of Offer or that can be accessed through such websites, neither constitutes part of this Letter of Offer, nor is it incorporated by reference therein and should not form the basis of any investment decision. For details of the websites of the Trust, the Trustee and the Sponsor, see "*General Information*" on page 75.

FORWARD-LOOKING STATEMENTS

This Letter of Offer contains certain "forward-looking statements". These forward-looking statements generally can be identified by words or phrases such as "aim", "anticipate", "believe", "expect", "estimate", "intend", "objective", "plan", "goal", "project", "propose", "seek to", "likely", "will", "will continue", "will pursue", or other words or phrases of similar import. Similarly, statements that describe strategies, objectives, plans or goals are also forward-looking statements. All forward-looking statements are subject to risks, uncertainties and assumptions about the Trust, the Project SPVs and the Target SPV that could cause actual results to differ materially from those contemplated by the forward-looking statements.

The Target Valuation Reports is based on certain projections and accordingly, should be read together with the assumptions and notes thereto. The Traffic Reports include projections/estimates in relation to traffic growth, and accordingly, should be read in conjunction with the notes and assumptions thereto. See "*Annexure A: Traffic Reports*" and "*Annexure B: Target Valuation Report*" on pages A-1 and B-1, respectively.

Actual results may differ materially from those suggested by forward-looking statements due to risks or uncertainties associated without expectations with respect to, but not limited to, regulatory changes pertaining to the infrastructure sector in India and our ability to respond to them, our ability to successfully implement our strategy, our growth and expansion plans, technological changes, our exposure to market risks, general economic and political conditions in India which have an impact on our business activities or investments, the monetary and fiscal policies of India, inflation, deflation, unanticipated turbulence in interest rates, foreign exchange rates, equity prices or other rates or prices, the performance of the financial markets in India and globally, changes in domestic laws, regulations and taxes and changes in competition in the infrastructure sector. Certain important factors that could cause actual results to differ materially from our expectations include, but are not limited to, the following:

- The debt financing provided by the Trust to each of the Project SPVs and the non-convertible debentures issued by the Target SPV which are proposed to be acquired by the Trust are comprised of unsecured, interest-free loans. Such non-convertible debentures issued by the Target SPV will become interest-bearing from the completion date of the project under the MBEL Concession Agreement. The payment obligations of the respective Project SPVs and the Target SPV in relation to such debt financing will be subordinated to all existing and future obligations of the Project SPVs and the Target SPV towards any senior lenders;

- Any payment by the Project SPVs or the Target SPV, including in an event of termination of the relevant concession agreement, is subject to a mandatory escrow arrangement which restricts their flexibility to utilize the available funds;

- The regulatory framework governing infrastructure investment trusts in India is still evolving and the interpretation and enforcement thereof involve uncertainties, which may have a material, adverse effect on the ability of certain categories of investors to invest in the Units, our business, financial condition and results of operations and our ability to make distributions to Unitholders;

- We may not be able to make distributions to Unitholders or the level of distributions may fall;

- Any default under the existing or future financing arrangements by any of the Project SPVs or the Target SPV could adversely impact the Trust's ability to continue to own a majority of each of the Project SPVs and the Target SPV, its cash flows and its ability to make distributions to Unitholders;

- The Consolidated Financial Information may not be indicative of the Trust's future financial condition and results of operations. We may not be able to operate our business successfully or generate sufficient cash flows to make or sustain distributions;

- The Target Valuation Report, and any underlying reports, are not opinions on the commercial merits or financial condition of the Target SPV and the valuation contained in such Target Valuation Report may not be indicative of the true value of the Target SPV's asset;

- We have referred to the data derived from Traffic Reports commissioned from the Traffic Consultant and the Target Traffic Consultant, which are based on certain bases, estimates and assumptions that are subjective in nature and may not be accurate;

- We are in the process of acquiring the Target SPV (pursuant to definitive acquisition agreements), which if not completed in a timely manner or at all, or any failure to realize the anticipated benefits of the MBEL Acquisition, may adversely affect us; and

- If we are not successful in integrating the Target SPV, our business, financial condition and results of operations may be adversely impacted.

For further discussion on factors that could cause actual results to differ from expectations, see the sections "*Risk Factors*", "*Industry Overview*", "*Business*" and "*Management's Discussion and Analysis of Financial Condition and Results of Operations*" on pages 16, 122, 127 and 777, respectively. By their nature, certain market risk disclosures are only estimates and could be materially different from what actually occurs in the future. As a result, actual gains or losses could materially differ from those that have been estimated.

Forward-looking statements reflect current views as of the date of this Letter of Offer and are not a guarantee of future performance or returns to investors. These statements are based on certain beliefs and assumptions, which in turn are based on currently available information.

Although the Investment Manager believes the assumptions upon which these forward-looking statements are based are reasonable, any of these assumptions could prove to be inaccurate, and the forward-looking statements based on these assumptions could be incorrect. The Investment Manager, the Trustee, the Sponsor, the Lead Manager or any of their affiliates/advisors do not have any obligation to update or otherwise revise any statements reflecting circumstances arising after the date hereof or to reflect the occurrence of underlying events, even if the underlying assumptions do not come to fruition.

There can be no assurance that the expectations reflected in the forward-looking statements and financial information will prove to be correct. Given these uncertainties, Applicants are cautioned not to place undue reliance on such forward-looking statements and not to regard such statements to be a guarantee or assurance of our future performance or returns to investors.

SECTION II – RISK FACTORS

An investment in the Units involves risks. Prospective investors should carefully consider all the information in this Letter of Offer, including the risks and uncertainties described below. To obtain a complete understanding, prospective investors should read this section together with the sections "Business", "Financial Statements", "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Rights of Unitholders" on pages 127, 347, 777 *and* 320, *respectively, as well as the other information contained in this Letter of Offer. The risks and uncertainties described in this section may not be the only risks and uncertainties the Trust and the Project SPVs and the Target SPV currently face. Additional risks and uncertainties not presently known to the Trustee or the Investment Manager, or that the Trustee or the Investment Manager do not currently consider material, may arise or may adversely affect our business, financial condition, cash flows and results of operations. If any of the following risks, or other risks that are not currently known or are currently considered immaterial, actually occur, our business prospects, results of operations, cash flows and financial condition could suffer, the price of the Units could decline and prospective investors may lose all or part of their investment. Unless otherwise specified in the relevant risk factors, the Trustee and the Investment Manager are not in a position to specify or quantify the financial or other risks mentioned herein.*

This Letter of Offer also contains forward-looking statements that involve risks, uncertainties and assumptions. The actual results of the Trust and the Project SPVs and the Target SPV could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the considerations described below and elsewhere in this Letter of Offer.

This Letter of Offer includes (i) unaudited interim consolidated financial information of the Trust and the Project SPVs as of and for the six-month period ended September 30, 2024; (ii) audited consolidated financial statements of the Trust and the Project SPVs as of and for the Financial Years 2024, 2023 and 2022; (iii) unaudited interim standalone financial statements of the Trust as of and for the six-month period ended September 30, 2024; and (iv) audited standalone financial statements of the Trust as of and for the Financial Years 2024, 2023 and 2022.

This Letter of Offer includes summary financial information of MBEL as of and for the six-month period ended September 30, 2024 and the Financial Years 2024, 2023 and 2022. This Letter of Offer also contains Pro Forma Financial Information of the Trust and MBEL as of and for the Financial Year 2024 and the six-month period ended September 30, 2024 prepared in accordance with the requirements of Chapter 9 of the SEBI Master Circular and the InvIT Regulations.

Investors should be aware that the price of the Units, and the income from them, may be subject to volatility. If any of the risks described below occurs, our business and prospects could be materially and adversely affected and investors could lose all or part of their original investment.

In making an investment decision, prospective investors must rely upon their own examinations and the terms of the Issue, including the merits and the risks involved. Prospective investors should consult their tax, financial and legal advisors about the particular consequences of investing in the Issue.

In this section, unless the context otherwise requires, a reference to "we", "us" and "our" refers collectively to the Trust and the Project SPVs. References herein to the "Current Portfolio" are to the pre-MBEL Acquisition portfolio of the Trust and to the "Expanded Portfolio" are to the post-MBEL Acquisition portfolio of the Trust.

Risks Related to the Structure of the Trust

1. ***The debt financing provided by the Trust to each of the Project SPVs and the non-convertible debentures issued by the Target SPV which are proposed to be acquired by the Trust are comprised of unsecured, interest-free loans. Such non-convertible debentures issued by the Target SPV will become interest-bearing from the completion date of the project under the MBEL Concession Agreement. The payment obligations of the respective Project SPVs and the Target SPV in relation to such debt financing will be subordinated to all existing and future obligations of the Project SPVs and the Target SPV towards any senior lenders.***

The debt financing provided by the Trust to each of the Project SPVs (except IRB LTPL, IRB GTPL and IRB KTPL) comprises certain term loans (certain of which are unsecured and interest-free) (the "**Shareholder Loans**"), which is subordinated to the debt owed to the senior lenders of the respective Project SPVs at all times. The Shareholder Loans for the Project SPVs (except PDTPL, UTL, CGTL, IRB GEPL, STPL, IRB LTPL, IRB GTPL and IRB KTPL) became interest-bearing upon the listing of the Units on the NSE, with effect from April 3, 2023. The Shareholder Loans for PDTPL and STPL will become interest-bearing from the date of completion of construction of the projects and the Shareholder Loans for UTL and CGTL will become interest-bearing upon the receipt of consent from the relevant lenders for the projects. The Shareholder Loan for IRB GEPL, IRB LTPL, IRB GTPL

and IRB KTPL became interest-bearing from the appointed date of the projects. Further, the Trust proposes to purchase certain existing non-convertible debentures issued by MBEL to the Sponsor and Anahera under the MBEL Securities Purchase Agreement, which will become interest-bearing after the completion of construction of the project. Also see "*Background and Structure of the Trust – Certain Agreements in relation to the Trust — Shareholder Loan Agreements*" and "*Objects of the Issue – Details of Utilization of Issue Proceeds*" on pages 107 and 79, respectively.

All payment obligations of the Project SPVs and the Target SPV to the Trust are proposed to be serviced from the balance amounts remaining in the escrow accounts maintained by each Project SPV/Target SPV as mandated under the relevant concession agreements, after the payment of, among other things, all taxes due, all expenses in connection with the construction of the project, operations and maintenance expenses, including expenses for repair works, payment of concession fees, debt service payments to senior lenders (as defined under the relevant concession agreements), negative grants payable to the concessioning authority, reimbursement of expenditure incurred by the concessioning authority, any payments and damages due and payable and any reserve requirements set forth in the financing agreements, as defined in the relevant concession agreements (the "**Surplus Cash Flows**"). Accordingly, any reduction in the cash flows of the Project SPVs or the Target SPV or any unanticipated increase in any of the payments to be made by the Project SPVs from the escrow accounts may result in a decrease in the Surplus Cash Flows, which may materially and adversely impact the ability of the Project SPVs and Target SPV to meet their payment obligations to the Trust in relation to the Shareholder Loans. Further, the receivables of each Project SPV and the Target SPV (including the Surplus Cash Flows) are secured in favor of the existing senior lenders to the extent of the amounts payable to such senior lender pursuant to the terms of their respective financing arrangements and restrictive covenants under the financing arrangements with such senior lenders and the concession agreements prevent the Project SPVs and the Target SPV from opening new bank accounts, and accordingly, the Project SPVs and the Target SPV are not permitted to transfer the Surplus Cash Flows (as they arise) to a separate bank account in the name of the Project SPV/Target SPV that can be charged in favor of the Trust. We expect such receivables to remain secured in favor of the senior lenders until all amounts outstanding under such financing arrangements are paid in their entirety to the senior lenders. If an event were to occur under such financing arrangements such that all amounts outstanding under such financing arrangements were to become immediately due and payable, all, or substantially all, of the Surplus Cash Flows may be utilized in satisfying such payment obligations, thereby materially and adversely affecting the ability of such Project SPVs or Target SPV to meet their payment obligations to the Trust. Any adverse impact on any receivables payable to the Trust under such debt financing will materially and adversely affect the Trust's ability to make distributions to the Unitholders. Further, if the relevant concession agreement is terminated, the Surplus Cash Flows together with the termination payments deposited in the relevant escrow account will be applied towards the payment of the amounts outstanding to the senior lenders prior to the payment of the amounts outstanding under the Shareholder Loans. Accordingly, such amounts may be insufficient to repay all amounts outstanding under the Shareholder Loans.

2. ***Any payment by the Project SPVs or the Target SPV, including in an event of termination of the relevant concession agreement, is subject to a mandatory escrow arrangement which restricts their flexibility to utilize the available funds.***

The escrow arrangements mandated under the concession agreements require all monies that are received by each Project SPV and the Target SPV, including funds constituting the financing package, the fees collected from the operation of the Expanded Portfolio and any termination payments received from the concessioning authority, to be deposited in an escrow account and utilized only in accordance with the order prescribed under the escrow agreement. The consent of the concessioning authority is required to amend the order of outflow of payments from such escrow account. The escrow arrangements typically prioritize the payment of all taxes due, followed by payment of expenses in connection with the construction of the project, operation and maintenance expenses including expenses for repair works, payment of concession fees, debt service payments, negative grant/premium payable to the concessioning authority, reimbursement of expenditure incurred by the concessioning authority, any payments and damages due and payable and any reserve requirements set forth in any financing agreements. For details of the escrow arrangements, see "*Summary of the Concession Agreements*" on page 168.

With respect to withdrawals on termination, the escrow arrangements for the BOT projects typically prioritize the payment of all taxes due, followed by the payment of 90% of debt due to senior lenders (excluding subordinated debt), the payment of any outstanding concession fee, the payment of damages in relation to the concession, retentions and payments arising out of liability for any defects, the remainder of debt due, subordinated debt, operation and maintenance expenses and any other payments under the concession agreement, after which the balance may be withdrawn by the Project SPVs for their own purposes. For IRB GEPL, IRB LTPL, IRB GTPL and IRB KTPL, which are TOT projects, the withdrawals on termination under the escrow arrangement prioritize the payment of all taxes due, followed by all payments due to senior lenders, the payment of damages certified by

the concessioning authority as being payable by the concessionaire, retentions and payments arising out of liability for any defects and deficiencies, operation and maintenance expenses and any other payments under the concession agreement, after which the balance may be withdrawn by the Project SPV for its own purposes.

The Shareholder Loans will be classified as subordinated debt and equity under the concession agreements (other than to the extent of refinancing of the debt availed from existing senior lenders). Accordingly, the ability of the Trust to access such termination payments in relation to the Shareholder Loans will be subordinated to the discharge of all obligations towards the senior lenders and the payment of, among other things, any outstanding concession fees and damages. Any shortfall in the termination payments received from the concessioning authority may prevent us from recovering our investments or returns in the relevant Project SPVs and Target SPV adequately or at all.

3. *The regulatory framework governing infrastructure investment trusts in India is still evolving and the interpretation and enforcement thereof involve uncertainties, which may have a material, adverse effect on the ability of certain categories of investors to invest in the Units, our business, financial condition and results of operations and our ability to make distributions to Unitholders.*

The SEBI issued the InvIT Regulations with effect from September 26, 2014. The regulations have been amended and supplemented with additional guidelines, circulars and notifications from time to time. While the InvIT Regulations historically provided a framework for unlisted infrastructure investment trusts and the Trust was initially operating under such framework, the SEBI subsequently decided to discontinue to the framework for unlisted infrastructure investment trusts, and the Trust was listed on the NSE on April 3, 2023.

Because the regulatory framework governing infrastructure investment trusts is still evolving, interpretation and enforcement by regulators and courts involves uncertainties. Further, regulations and processes with respect to certain aspects of infrastructure investment trusts, including, but not limited to, the dissolution and delisting of infrastructure investment trusts and the liabilities of Unitholders, have not yet been issued or adopted. For example, infrastructure investment trusts are not "companies" or "bodies corporate" within the meaning of various SEBI regulations. Accordingly, the applicability of several regulations to the Trust is unclear.

Infrastructure investment trusts operate in a relatively untested regulatory environment. Changes to the Issue structure, changes to agreements entered into or proposed to be entered into in connection with the Issue, cost increases, fines, legal fees or business interruptions may result from changes to regulations, from new regulations, from new interpretations by courts or regulators of existing regulations or from stricter enforcement practices by regulatory authorities of existing regulations. In addition, new costs may arise from audit, certification and/or self-assessment standards required to maintain compliance with new and existing InvIT Regulations. Such changes in regulation, interpretation and enforcement may render it economically infeasible to continue conducting business as an infrastructure investment trust or otherwise have a material, adverse effect on our business, financial condition and results of operations.

Because we operate in an evolving and relatively untested regulatory environment, it is difficult to forecast how any new laws, regulations or standards or future amendments to the InvIT Regulations will affect infrastructure investment trusts and the infrastructure sector in India, and no assurance can be given that the regulatory system will not change in a way that will impair our ability to comply with the regulations, conduct our business, compete effectively or make distributions. Failure to comply with changes in laws, regulations and standards may have a material, adverse effect on our business, financial condition, results of operations and prospects.

4. *We may not be able to make distributions to Unitholders or the level of distributions may fall.*

The Trust's distributions will be based on the NDCF available for distribution and not on whether the Trust makes an accounting profit or loss. The InvIT Regulations provide that not less than 90% of NDCF of each Project SPV (and upon completion of the MBEL Acquisition, MBEL) are required to be distributed to the Trust in proportion of its holding in each of the Project SPVs (and upon completion of MBEL Acquisition, MBEL) subject to applicable provisions of the Companies Act. Under the InvIT Regulations, not less than 90% of the NDCF of the Trust is required be distributed to the Unitholders not less than once every financial year. Such distributions are required to be made within five working days from the record date for such distribution. The Investment Manager has adopted a distribution policy pursuant to which distributions are required to be made to the Unitholders on a quarterly basis. For further details, see "*Distributions*" on page 316.

The utilization of the Issue Proceeds by the Trust is not subject to monitoring by any independent agency.

The Trust primarily relies on interest payments and principal repayments in relation to the Shareholder Loans, the subordinated debt and the unsecured loans for generating its NDCF. NDCF at the Trust level may also be

generated through payment of dividends by the Project SPVs or Target SPV, as applicable, or buy-back of shares of the Project SPVs or the Target SPV. Similar to the Shareholder Loans, a portion of the subordinated debt and unsecured loans of the Project SPVs (except PDTPL, UTL, CGTL, IRB GEPL, STPL, IRB LTPL, IRB GTPL and IRB KTPL) have become interest-bearing upon the listing of the Units. In relation to IRB GEPL, IRB LTPL, IRB GTPL and IRB KTPL Shareholder Loans became interest-bearing upon the receipt of the appointed date for the projects. Further, the Shareholder Loans for PDTPL and STPL will become interest-bearing from the date of completion of construction of these projects and the Shareholder Loans for UTL and CGTL will become interest-bearing upon the receipt of certain consents.

Further, the Trust proposes to acquire certain non-convertible debentures from the Sponsor and Anahera under the MBEL Securities Purchase Agreement. Interest shall be chargeable on such debentures after completion of construction of the project. See also *"–The Project SPVs are subject to restrictive covenants under their financing agreements that could limit our flexibility in managing our business or to use cash or other assets."* on page 34.

There can be no assurance or guarantee that the Trust will have sufficient distributable or realized profits or surplus in any future period to make distributions quarterly in any amount or at all. The ability of the Project SPVs or the Target SPV to service the Shareholder Loans, unsecured loans, subordinated debt and non-convertible debentures and pay dividends may be affected by a number of factors including, among other things:

- their respective businesses and financial positions;
- insufficient cash flows received from the assets;
- applicable law which may restrict the payment of dividends by the Project SPVs and the Target SPV;
- operating losses incurred by the Project SPVs or the Target SPV in any financial year;
- changes in accounting standards, taxation laws and regulations, laws and regulations in respect of foreign exchange repatriation of funds, corporation laws and regulations relating thereto; and
- the terms of agreements, including any concession agreements or financing agreements, to which they are, or may become, a party.

Further, the method of calculation of NDCF is subject to change. Any change in the applicable law in India or elsewhere (including, for example, tax laws and foreign exchange controls) may limit the Trust's ability to pay or maintain distributions to Unitholders. No assurance can be given that the Trust will be able to pay or maintain the levels of distributions or that the level of distributions will increase over time, or that future acquisitions will increase the Trust's distributable free cash flow to Unitholders. Any reduction in, or elimination or taxation of, payments of distributions could materially and adversely affect the distributions made by the Trust.

5. *Any default under the existing or future financing arrangements by any of the Project SPVs or the Target SPV could adversely impact the Trust's ability to continue to own a majority of each of the Project SPVs and the Target SPV, its cash flows and its ability to make distributions to Unitholders.*

Any default under the existing or future financing arrangements by any of the Project SPVs or the Target SPV could adversely impact the Trust's ability to own the Project SPVs and the Target SPV, its cash flows and its ability to make distributions to Unitholders.

In addition, the lenders of the Project SPVs and the Target SPV had issued consents in relation to the Formation Transactions and the MBEL Acquisition, respectively. Such consents impose certain obligations on the Trust, including:

- the existing escrow agreement for the projects and all the toll collection arrangements to be continued;
- no dilution in security and rights of existing lenders;
- IRB group shall continue to hold 51% shareholding in the Trust during the currency of the loan;
- Prior to release of the pledged shares, the Sponsor, the Trust, the Project SPV, the Target SPV, as applicable, and the security trustee (acting on behalf of the lenders) shall execute an agreement setting out, *inter-alia*, the mechanism of and obligations of the parties in relation to the release of the pledge by the security trustee and recreation of the pledge by the Trust to the satisfaction of the lenders;
- unsecured loans availed by the Project SPV and the Target SPV from the Trust will be subordinated to the debt from senior lenders through the currency of loan. Any payment towards unsecured loans extended by

the Trust shall be governed by the clause relating to 'restricted payment' as per the existing financing documents; and

- any new appointment/removal of the Investment Manager/Project Manager by the Trust shall be with prior approval from lenders.

6. *The Consolidated Financial Information and Standalone Financial Information includes unaudited interim financial information as of and for the six-month period ended September 30, 2024. Such information is not audited. Further, the Consolidated Financial Information may not be indicative of the Trust's future financial condition and results of operations. We may not be able to operate our business successfully or generate sufficient cash flows to make or sustain distributions.*

This Letter of Offer includes (i) unaudited interim financial information of the Trust and the Project SPVs as of and for the six-month period ended September 30, 2024; (ii) audited consolidated financial statements of the Trust and the Project SPVs as of and for the Financial Years 2024, 2023 and 2022; (iii) unaudited interim financial information of the Trust as of and for the six-month period ended September 30, 2024; and (iv) audited standalone financial statements of the Trust as of and for the Financial Years 2024, 2023 and 2022.

This Letter of Offer includes summary financial information of MBEL, the Target SPV proposed to be acquired by the Trust as of and for the six-month period ended September 30, 2024 and the Financial Years 2024, 2023 and 2022. MBEL was incorporated on January 5, 2022 and accordingly, the financial information for MBEL included in this Letter of Offer are from the date of incorporation of MBEL. This Letter of Offer also contains Pro Forma Financial Information of the Trust and MBEL as of and for the Financial Year 2024 and the six-month period ended September 30, 2024 prepared in accordance with the requirements of Chapter 9 of the SEBI Master Circular and the InvIT Regulations.

Also see "*Summary Financial Information*" on page 44.

While the unaudited interim financial information has been prepared in accordance with applicable law and accounting standards, such information is not audited and should not be considered as a substitute for audited results for the relevant periods.

Further, the Project SPVs (except PDTPL, IRB GEPL, STPL, IRB LTPL, IRB KTPL and IRB GTPL) were transferred to the Trust on February 25, 2020 by the Sponsor pursuant to the Formation Transactions undertaken as part of the initial offer through private placement of Units. PDTPL, IRB GEPL and STPL were consolidated with effect from such projects' appointed dates, i.e., April 2, 2022, August 12, 2023 and December 28, 2023, respectively. IRB LTPL was incorporated on November 10, 2023 and IRB KTPL and IRB GTPL were each incorporated on January 1, 2024, as SPVs held by the Trust. Accordingly, the Consolidated Financial Information included in this Letter of Offer may not be indicative of our financial results, cash flows and financial position in the future, including pursuant to the acquisition of the Target SPV and any future acquisitions.

7. *The Pro Forma Financial Information included in this Letter of Offer is prepared for illustrative purposes only. Our actual results may be materially different from the outcome of the event or transaction as presented in the Pro Forma Financial Information if the assumptions underlying the preparation of such information do not occur.*

This Letter of Offer contains Pro Forma Financial Information of the Trust and MBEL as at and for the Financial Year 2024 and the six-month period ended September 30, 2024 prepared in accordance with the requirements of Chapter 9 of the SEBI Master Circular and the InvIT Regulations. The Pro Forma Financial Information has been prepared based on certain assumptions for illustrative purposes only, including that the MBEL Acquisition had taken place as of April 1, 2023, and may not necessarily represent our financial position, results of operations and cash flows had MBEL been acquired by the Trust during the periods presented, nor do they give an indication of our financial results, cash flows and financial position in the future.

Further, in relation to the pro forma adjustments, with respect to the equity attributable to Unitholders, the Trust has been assumed to control approximately 80.40% of the equity share capital and 80.40% of non-convertible debenture of MBEL pursuant to the MBEL Securities Purchase Agreement. There are no intra-group elimination adjustments and accordingly, the equity share capital of MBEL is not eliminated in the pro forma consolidated balance sheet as at September 30, 2024 and no other additional material adjustments have been made to the pro forma balance sheet or the pro forma statement of profit and loss. The Pro Forma Financial Information is based upon available information and assumptions that the Investment Manager believes to be reasonable. If the assumptions underlying the preparation of such information do not occur, our actual results could be materially different from those indicated in the information. The rules and regulations related to the preparation of pro forma

financial information in other jurisdictions may vary significantly from the basis of preparation for the Pro Forma Financial Information. Accordingly, the Pro Forma Financial Information should not be relied upon as if it has been prepared in accordance with those standards and practices.

8. *The Target Valuation Report, and any underlying reports, are not opinions on the commercial merits or financial condition of the Target SPV and the valuation contained in such Target Valuation Report may not be indicative of the true value of the Target SPV's asset.*

KPMG Valuation Services LLP has been appointed to undertake valuation of the Target SPV. The Valuer has issued the Target Valuation Report, included in *Annexure B* to this Letter of Offer, which set out its opinion as to the fair enterprise value of the Target SPV as on September 30, 2024.

In order to issue the Target Valuation Report, the Valuer has based its assumptions regarding the traffic volume, toll rates, operation and maintenance costs, amortization, debt repayments and non-cash net working capital projections on information provided by and discussions with or on behalf of us, the Sponsor/Project Manager, the Lead Manager and the Investment Manager, and which reflects current expectations and views regarding future events and, therefore, necessarily involves known and unknown risks and uncertainties. Please see the Target Valuation Report included as *Annexure B* to this Letter of Offer for a detailed description of the assumptions and methodology. The Target Valuation Report contains forecasts, projections and other "forward-looking" statements that relate to future events, which are, by their nature, subject to significant risks and uncertainties. The future events referred to in these forward-looking statements involve risks, uncertainties and other factors which may cause the actual results or performance to be materially different from any future results or performance expressed or implied by the forward-looking statements.

The Target Valuation Report is not an opinion on the commercial merits and structure of the Target SPV, nor is it an opinion, expressed or implied, as to the financial condition of the Trust upon Allotment or listing of the Units in the Issue. The Target SPV Valuation Report does not purport to contain all the information that may be necessary or desirable to fully evaluate the Target SPV or an investment in the Trust or the Units. The Target Valuation Report is not based on a comprehensive review of the business, operational or financial condition of the Target SPV and, accordingly, make no representation or warranty, expressed or implied, in this regard.

The Target Valuation Reports do not constitute and should not be construed as any form of assurance as to the financial condition or future performance of the Trust or as to any other forward-looking statements included therein, including those relating to certain macro-economic factors, by or on behalf of the Sponsor/Project Manager, the Investment Manager, the Trustee, the Lead Manager or their respective affiliates. Further, we cannot assure you that the valuations prepared by the Valuer reflect the true value of the net future revenue of the Target SPV or that other valuers would arrive at the same valuation. Accordingly, the valuation contained therein may not be indicative of the true value of Target SPV's assets. The Target Valuation Report does not take into account any subsequent developments and should not be considered as a recommendation by the Sponsor, the Investment Manager, the Project Manager, the Trustee, the Lead Manager, their respective affiliates or any other party that any person should take any action based on the Target Valuation Report. Accordingly, Applicants should not rely on the Target Valuation Report in making an investment decision to subscribe to Units in the Issue.

9. *We have referred to the data derived from Traffic Reports commissioned from the Traffic Consultant and the Target Traffic Consultant, which are based on certain bases, estimates and assumptions that are subjective in nature and may not be accurate.*

We have relied on Traffic Reports issued by the Traffic Consultant and the Target Traffic Consultant, and commissioned by the Investment Manager, to forecast the traffic volumes for the Project SPVs' projects and the Target SPV's project and to prepare traffic reports on the Expanded Portfolio, which are set out in *Annexure A* to this Letter of Offer. The Traffic Reports are subject to various limitations and are based upon certain bases, estimates and assumptions that are subjective in nature and that are based, in part, on information provided by and discussions with or on behalf of us, the Sponsor/Project Manager and the Investment Manager. The Traffic Reports reflect current expectations and views regarding future events, and therefore, necessarily involve known and unknown risks and uncertainties. The Traffic Reports contain forecasts, projections and other "forward-looking" statements that relate to future events, which are, by their nature, subject to significant risks and uncertainties, including population growth, gross domestic product growth, vehicle ownership rates, per capita income, agricultural output and fuel consumption. The future events referred to in the Traffic Reports involve risks, uncertainties and other factors which may cause the actual traffic volumes to be materially different from any future traffic volumes expressed or implied by the Traffic Reports. There can be no assurance that the bases, estimates and assumptions adopted by the Traffic Consultant and the Target Traffic Consultant for the purposes of preparing the Traffic Reports will prove to be accurate. If any of these bases or assumptions is incorrect, future

traffic volumes for the Current Portfolio and the Target SPV's assets could be materially different from those that are set out in the Traffic Reports and this Letter of Offer. Also see "*Presentation of Financial, Industry and Market Data – Industry and Market Data*" on page 11.

Risks Related to our Business and Industry

10. *We are in the process of acquiring the Target SPV (pursuant to definitive acquisition agreements), which if not completed in a timely manner or at all, or any failure to realise anticipated benefits of the MBEL acquisition, may adversely affect us.*

The proceeds of the Issue are proposed to be utilized for funding the acquisition of the securities of MBEL, the Target SPV, by the Trust pursuant to MBEL Securities Purchase Agreement. The Trust (acting through the Trustee) and the Investment Manager have entered into the MBEL Securities Purchase Agreement dated December 16, 2024 with MBEL, the Sponsor and Anahera for the MBEL Acquisition. Pursuant to the MBEL Securities Purchase Agreement, the Trust proposes to utilize the Issue proceeds to acquire an aggregate of 428,733,000 equity shares of MBEL from the Sponsor and Anahera, aggregating to 80.40% of the equity share capital of MBEL, for a total consideration of ₹4,287.33 million and an aggregate of 128,619 outstanding non-convertible debentures of MBEL from the Sponsor and Anahera, aggregating to 80.40% of the total outstanding non-convertible debentures of MBEL, for a total consideration of ₹12,861.90 million. For details, see "*Objects of the Issue – Details of Utilization of Issue Proceeds*" on page 79.

Certain ancillary agreements have also been entered into in connection with the MBEL Acquisition, including amendments to the Framework Agreement and the Name Licensing Agreement, and the MBEL Project Implementation Agreement.

Our ability to complete the MBEL Acquisition is subject to certain conditions precedent and closing conditions. There can be no assurance that the conditions under the MBEL Securities Purchase Agreement can be completed in a timely manner or at all. Any inability or delay in satisfying any conditions may result in a delay in or failure to complete the proposed investment. Accordingly, there can be no assurance that we will be able to successfully complete the MBEL Acquisition in the manner set out in the agreements or at all.

Further, pursuant to the MBEL Acquisition, we will assume the existing liabilities of MBEL and its asset. The terms of the agreements for the MBEL Acquisition contain indemnities, which are limited on account of monetary and time limits among other limitations, which will limit our recourse under these agreements. Any losses or liabilities suffered by us in relation to MBEL for which we are unable to recover under these agreements may materially and adversely impact our results of operations, profitability, cash flows and our ability to make distributions to Unitholders.

Also, after the completion of the MBEL Acquisition, the Sponsor and Anahera will continue to be shareholders in MBEL, holding 10.00% and 9.60%, respectively, of the post-acquisition equity share capital of MBEL, as mandatory holding under the MBEL Concession Agreement, for a period of two years from the commercial operations date for the project, in accordance with the terms of the MBEL Securities Purchase Agreement. See " *– The Sponsor, whose interests may be different from the other Unitholders, will be able to exercise significant influence over the Trust.*" on page 36 for risks in relation to our relationship with the Sponsor.

11. *If we are not successful in integrating respective assets of the Target SPV, our business, financial condition and results of operations may be adversely impacted.*

While we believe that synergies would result from the MBEL Acquisition, there is a risk that such synergies may not actually occur or the extent of synergies actually recognized post-acquisition may not be as expected. Other risks associated with the proposed acquisition include:

- the difficulty of maintaining uniform standards, controls, procedures and policies throughout our business;
- accurately judging micro-market dynamics, growth potential and competitive environment applicable to the Target SPV, given that this is the Trust's first greenfield project;
- incurring unknown or unexpected potential liabilities;
- obtaining, maintaining and complying with the conditions prescribed under necessary permits certificates, licenses and approvals from governmental and regulatory authorities and agencies; and
- higher than planned expenditure to preserve and grow the value of the Target SPV.

This could materially and adversely affect our business, results of operations and financial condition.

12. *Our failure to extend applicable concession agreements or our inability to identify and acquire new road assets that generate comparable or higher revenue, profits or cash flows than the Project SPVs and the*

Target SPV may have a material adverse impact on our business, financial condition and results of operations and our ability to make distributions.

The concession agreements of the Project SPVs and the Target SPV stipulate a limited concession period. Certain concession agreements provide that if the actual traffic volume or revenue falls short of or exceeds the target traffic volume or revenue on a defined date, the concession period may be extended or reduced, respectively, by the concessioning authority, according to a formula specified in the agreement. The table below sets out the details of the Project SPVs' and the Target SPV's concession periods.

Project SPV/Target SPV	Project	Concession period	Commencement of concession period	End of concession period with no reduction or extension	Residual concession period as of September 30, 2024 with no extension (approx.)
AETL	Agra - Etawah NH-2 Project	24 years	August 1, 2016	July 31, 2040	15 years and 9 months 31 days
CGTL	Gulabpura - Chittorgarh NH-79 Project	20 years	November 4, 2017	November 3, 2037	13 years, 1 month 2 days
IRB HMTL	Hapur - Moradabad NH-9 Project	22 years	May 28, 2019	May 26, 2041	16 years, 7 months 25 days
IRB WTL	Goa - Kundapur NH-17 Project	28 years	March 3, 2014	March 2, 2042	17 years, 5 months 1 day
KGTL	Kishangarh - Gulabpura NH-79/79A Project	20 years	February 21, 2018	February 20, 2038	13 years, 4 months and 22 days
KTL	Kaithal - Rajasthan Board NH-152/65 Project	27 years	July 15, 2015	July 14, 2042	17 years, 9 months and 13 days
SYTL	Solapur - Yedeshi NH-211 Project	29 years	January 21, 2015	January 20, 2044	19 years 3 months 21 days
UTL	Udaipur - Rajasthan NH-8 Project	21 years	September 3, 2017	September 2, 2038	13 years, 11 months 2 days
YATL	Yedeshi - Aurangabad NH-211 Project	26 years	July 1, 2015	June 30, 2041	16 years 8 months 29 days
PDTPL	Palsit-Dankuni NH-19 Project	17 years	April 2, 2022	April 1, 2039	14 years, 6 months and 1 day
IRB GEPL	Hyderabad Outer Ring Road Project	30 years	August 12, 2023	August 11, 2053	28 years, 10 months 10 days
STPL	Samakhiyali – Santalpur NH 27 Project	20 years	December 28, 2023	December 27, 2043	19 years, 2 months and 28 days
IRB LTPL	Lalitpur – Laknadon NH-44 Project	20 years	April 1, 2024	March 31, 2044	19 years, 6 months and 1 day
IRB KTPL	Kota Bypass and Cable Stay Bridge (NH-76) (new NH-27)	20 years	April 1, 2024	March 31, 2044	19 years, 6 months and 1 day
IRB GTPL	Gwalior-Jhansi (NH-44) Project	20 years	April 1, 2024	March 31, 2044	19 years, 6 months and 1 day
MBEL (Target SPV)	Meerut – Budaun	30 years	October 12, 2022	October 11, 2052	28 years and 11 days

As at September 30, 2024, the residual periods for the concessions of the Project SPVs whose concession period have commenced ranged from approximately 28 years, 10 months and 10 days to 13 years, 1 month and 2 days. For

further details on the residual concession period of each of the Current Portfolio assets, see "*Business*" on page 127.

There can also be no assurance that we will be able to acquire new road assets upon the expiry of the Project SPVs' existing concession agreements or at any time thereafter. Accordingly, the number of assets forming part of our portfolio and the revenue generated by them may vary from time to time. Further, even if new road assets are added to our portfolio, there can be no assurance that such road assets will be able to generate comparable or higher cash flows, revenues and profits than the Project SPVs and the Target SPV whose concession periods have expired. If the Project SPVs or the Target SPV are unable to extend their concession agreements, or if we are unable to acquire new road assets that generate comparable or higher cash flows, revenue or profits than the Project SPVs and the Target SPV, our business, financial condition and results of operations and our ability to make distributions to Unitholders may be materially and adversely affected. For further details on the terms of each of the concession agreements, see "*Summary of the Concession Agreements*" on page 168.

13. *The Project SPVs' and the Target SPV's toll-road concessions may be terminated prematurely under certain circumstances.*

The Current Portfolio comprises our principal assets. Upon completion of the MBEL Acquisition, we will also hold MBEL and its road asset. We will be unable to continue the operation of a particular road concession without a continuing concession right from the concessioning authority. A concession may be revoked by the concessioning authority for certain reasons set forth in the relevant concession agreement, including, but not limited to, one or more of the following:

- any failure by the relevant Project SPV or the Target SPV to comply with prescribed minimum shareholding requirements;
- any failure by the relevant Project SPV or the Target SPV to participate in, or match the bid of, the successful bidder in the event of any proposed augmentation of capacity of the relevant road asset;
- any failure by the relevant Project SPV or the Target SPV to augment the capacity of the project if the average daily traffic exceeds the traffic capacity for which the project;
- any failure by the relevant Project SPV or the Target SPV to make any payments, including negative grants, to the concession authority in a timely manner;
- any failure by the relevant Project SPV or the Target SPV to comply with operational or maintenance standards;
- any temporary or permanent halt of operations at the relevant Project SPV or the Target SPV;
- any occurrence of an event of default under any financing document where the lender has recalled any part of the loan;
- any continuation of a force majeure event, such as an act of God, act of war, expropriation or compulsory acquisition of any project assets by the government, industrial strikes, and civil commotions, boycotts and political agitations, beyond a specified time; and
- any failure by the relevant Project SPV or the Target SPV to comply with any other material terms of the relevant concession agreement.

The BOT concession agreements also provide that, if the actual traffic volume exceeds the target traffic volume on a defined date, the NHAI may reduce the concession period according to a formula specified in the concession agreement or require the concessionaire to undertake additional capacity augmentation in lieu of a reduction in the concession period. For IRB GEPL, IRB LTPL, IRB GTPL and IRB KTPL, which are TOT projects, if the actual toll collections exceed the target fee collections on certain dates, as set out in the concession agreement, the concessioning authority may reduce the concession period according to a formula specified in the concession agreement.

For each of the Project SPVs and the Target SPV, we have assumed that we will continue to operate the relevant project until the last date of the concession period as per the relevant concession agreement and have not made provisions for any reduction in the concession periods.

As at the date of this Letter of Offer, completion certificates have not been issued in relation to certain of our four-laning-to-six-laning projects, i.e., IRB WTL, PDTPL and STPL. If we are unable to complete the six-laning/construction of these projects within the timelines under the concession agreements or to the satisfaction

of the NHAI, our concession agreements may be terminated by the NHAI.

AETL, KTL, SYTL, UTL and YATL have received their final completion certificates. CGTL has received a completion certificate dated August 14, 2021. IRB HMTL has received completion certificates dated July 1, 2022 and April 7, 2023. KGTL has received a completion certificate dated July 20, 2022. IRB WTL has received three provisional completion certificates. The receipt of the final completion certificate is subject to the completion of all conditions specified in the provisional completion certificates, such as quadrant pitching, avenue plantation and completion of rest areas. Certain of these activities are subject to the receipt of certain approvals and/or resources from the NHAI. If IRB WTL is unable to complete the pending items listed in the provisional certificates, its concession agreement may be terminated. For more information, see "*Government and Other Approvals –*" on page 831.

In addition, AETL, CGTL, IRB HMTL, KGTL, UTL, PDTPL and STPL are required to pay annual premiums in consideration for being granted the right to build and operate their respective projects. Failure to make such payments could result in the termination of the relevant concession agreement by the NHAI.

In accordance with the terms and conditions of the concession agreements, should threshold levels of traffic set out in the concession agreements be exceeded, the Project SPVs may be required to undertake certain development of their respective assets during an extended concession period by way of augmenting the capacity of the relevant assets. While the Project SPVs are currently in various stages of development, construction and completion, none of the Project SPVs have exceeded the levels of traffic set out in the respective concession agreements and as such, have not been required to undertake certain development of their respective assets, any future requirement to undertake such development may present additional risks to us. Certain concession agreements may impose penalties or provide for termination of such agreement for late or non-completion of certain development of the assets.

Our business, financial condition, reputation and results of operations may be materially and adversely affected if the completion of the construction of the Current Portfolio and/or the conditions specified in the relevant provisional completion certificate is delayed or not achieved in the specified manner. There can be no assurance that these will be completed in the time expected, or at all. Further, there is no assurance that all potential liabilities that may arise from delays or shortfall in performance of contractors will be accurately estimated as part of the planned costs of the construction of the Current Portfolio or conditions specified in the relevant provisional completion certificate, or that the damages that may be claimed from such contractors will be adequate to compensate any loss of revenues or profits resulting from such delays, shortfalls or disruptions. Such risks may increase if completion is delayed for an extended period. If we fail to manage any of the aforesaid risks or any unforeseen risks effectively, our revenues, profitability and results of operations could be materially and adversely affected. For further details on the events that may require the Project SPVs to undertake certain development of their respective assets as contemplated under the relevant concession agreements, see "*Business*" and "*Summary of the Concession Agreements*" on pages 127 and 168, respectively.

If a concession agreement is terminated by the concessioning authority due to a default by a Project SPV or the Target SPV, or by a Project SPV or the Target SPV due to a default by the concessioning authority, such Project SPV or the Target SPV is entitled to termination payments or otherwise from the concessioning authority in accordance with the terms of the relevant concession agreement. The Shareholder Loans may be for a maturity term that exceeds the maturity term of the original facilities obtained from the senior lenders. There can be no assurance that the concessioning authority will recognize such amounts as outstanding after the term of the original facilities obtained by the Project SPVs or the Target SPV from their respective senior lenders. There can also be no assurance that the concessioning authority will pay the termination payments promptly or at all or that any termination payments will be adequate to enable us to recover our investments or returns in the relevant Project SPVs or the Target SPV.

If any of the concession agreements are reduced or terminated prematurely, our business, financial condition and results of operations may be materially and adversely affected. For further details on the termination of the concession agreements, the termination payments, and the definition of "default" as contemplated under the relevant concession agreements, see "*Business*" and "*Summary of the Concession Agreements*" on pages 127 and 168, respectively.

14. *A decline in traffic volumes would materially and adversely affect our business prospects, financial condition and results of operations and our ability to make distributions to Unitholders.*

The Project SPVs currently operate the Current Portfolio assets and the Target SPV will operate its road asset. Toll revenues depend on toll receipts, which in turn depend on toll fees and traffic volumes on the toll roads. Traffic volumes are directly or indirectly affected by many external factors, including:

- toll fees;
- fuel prices in India;
- the frequency of traveller use;
- the number and affordability of automobiles;
- the quality, convenience and travel efficiency of alternative routes outside of our network of toll roads;
- the convenience and extent of a toll road's connections with other parts of the local, state and national highway networks;
- the availability and cost of alternative means of transportation, including rail networks and air transport;
- the level of commercial, industrial and residential development in areas served by the Project SPVs' projects;
- adverse weather conditions; and
- seasonal holidays.

In addition, under the terms of the concession agreements entered into by each of the Project SPVs and the relevant concessioning authority, the Government and State Governments have the right to construct and open additional roads which may serve as alternate routes to the relevant Current Portfolio assets after the expiry of between eight and 15 years, depending on terms of the concession. The construction of such alternative roads and highways may result in a diversion of vehicular traffic from the relevant Current Portfolio assets and a reduction of revenue from toll receipts. Further, local roads and state highways may be improved so as to serve as alternate routes to the relevant Current Portfolio assets, and tolls may or may not be charged on such local roads and state highways. The existence or improvement of such alternative roads and highways may also result in a diversion of vehicular traffic from the relevant Portfolio assets and a reduction of revenue from toll receipts. For instance, the concession agreement for IRB GEPL, a TOT project, also provided for construction of additional roads by the concessioning authority, subject to certain conditions. For additional information on alternate routes, please see the Traffic Reports set out in *Annexure A* to this Letter of Offer. Also see "*Summary of the Concession Agreements*" on page 168.

While most of the Project SPVs' concession agreements provide for an extension in the concession period if the actual traffic volumes/ are significantly lower than the target traffic volumes set forth in the respective concession agreements, there can be no assurances that the concession period will be actually extended by the relevant concessioning authority. In the event that the actual traffic volumes are significantly less than the projected traffic volumes, the revenue generated from toll receipts may be lower than anticipated and our business prospects, financial condition and results of operations and our ability to make distributions to Unitholders may be materially and adversely affected. Similarly, while the Target SPV's concession agreement provides for an extension in the concession period if the actual traffic volumes/ are significantly lower than the target traffic volumes set forth in the concession agreement, based on a formula specified in the concession agreement, there can be no assurance that the concession period will be actually extended by the concessioning authority. This may materially and adversely affect our results of operations and financial condition.

15. *We may face limitations and risks associated with debt financing, refinancing and restrictions on investment.*

We are subject to regulatory restrictions in relation to our debt financing and refinancing. We may from time to time require debt financing and refinancing to carry out the Investment Manager's investment strategy. In the event that we undertake debt financing or refinancing, we may be limited by Indian law as to the form of financing or refinancing that we may undertake. For instance, while the RBI has permitted scheduled commercial banks and certain financial institutions to lend to InvITs, such lending is subject to the conditions specified in the circular which include, *inter-alia*, banks putting in place a board-approved policy for exposure to InvITs and the determination of SPVs not being in "financial difficulty" and lending subject to such policies.

As a listed infrastructure investment trust, we are subject to the leverage limits specified under the InvIT Regulations, i.e., up to 70% of the value of the Trust Assets. Pursuant to a letter dated February 28, 2023, the SEBI has exempted us from the requirement to have a mandatory 'AAA' credit rating and a track record of six distributions to raise debt above 49% of the value of the Trust Assets and up to 70% of the value of the Trust Assets, subject to obtaining a credit rating, disclosure of such credit rating and obtaining unitholder approval. We have obtained and disclosed a credit rating for certain long-term loan facilities from CRISIL Ratings ('AAA/Watch Developing'). Pursuant to a resolution dated August 1, 2023, we have obtained Unitholder

approval for increasing the threshold for borrowings up to 55% of the value of the Trust Assets.

In the event that we undertake debt financing or refinancing, we may also be subject to risks associated with debt financing and refinancing, including the risk that our cash flow may be insufficient to meet required payments of principal and interest under such financing and to make distributions to Unitholders. Our ability to generate sufficient cash to satisfy our debt obligations will depend on our future operating performance, which may be affected by prevailing economic conditions and financial, business and other factors beyond our control. There is no assurance that we will be able to generate sufficient cash flow to meet all of our debt obligations. If we are unable to make payments due under our debt facilities, the lenders may be able to declare an event of default and initiate enforcement proceedings relating to any security provided in respect of the loan facilities, and/or call upon any guarantees, and this may materially and adversely affect our ability to make distributions to Unitholders. In case of default, lenders could initiate proceedings against the Trust Assets and the Trust Assets which remain after recovery of the defaulted amount would be remitted to the Unitholders on a proportionate basis. Such default may also result in the termination of certain concession agreements by the concessioning authority.

We may also be subject to certain covenants in connection with any future borrowings that may limit or otherwise materially and adversely affect our operations and our ability to make distributions to Unitholders, such as covenants restricting our ability to acquire assets or undertake other capital expenditure, requirements to set aside funds for maintenance or repayment of security deposits or requirements to maintain certain financial ratios. For further details, see "*Financial Indebtedness*" on page 800.

Further, if prevailing interest rates or other factors at the time of financing or refinancing (including changes in market conditions and maturity term imposed by any lenders) result in higher interest rates, the interest expense may be significant and may have a material and adverse effect on our cash flow and the amount of distributions available to Unitholders.

Additionally, as privately placed listed infrastructure investment trust, the Trust is permitted to invest only in "eligible infrastructure projects" as defined under the InvIT Regulations, which excludes infrastructure projects that do not meet certain thresholds. This may restrict the scope of potential acquisitions of assets in the future.

16. ***A Project SPV has experienced negative cash flows during the last three financial years.***

The Project SPV set out below has experienced negative cash flows during the periods specified below.

Project SPV	Net cash flow used in operating activities (₹ in million)		
	Financial Year 2024	Financial Year 2023	Financial Year 2022
IRB WTL	(799.85)	(585.47)	2,784.35
KTL	(667.16)	1,841.39	197.3
PDTPL	(236.37)	4,558.50	168.78
STPL	1,402.48	(0.09)	-
UTL	(2,302.07)	594.47	2,541.64
KGTL	(2,633.12)	590.21	3,464.15
CGTL	(1,447.86)	873.33	3,188.04
HMTL	(1,752.52)	1,104.89	4,618.98

Negative cash flows over extended periods, or significant negative cash flows in the short term, could materially impact our ability to operate our business and implement our construction and growth plans. As a result, our cash flows, business, financial condition and results of operations could be adversely affected.

17. ***Leakage of the toll fees on the Project SPVs' and the Target SPV's roads may materially and adversely affect our revenues and financial condition.***

The Project SPVs' and the Target SPV's toll receipts are primarily dependent on the integrity of toll-collection systems and the willingness of road users to pay toll fees. While each of the Project SPVs has, and the Target SPV proposes to have, an integrated toll-collection system in place, the level of revenues derived from collection of tolls may be reduced by leakage through toll evasion, theft, fraud or technical defaults in the Project SPVs' or the Target SPV's toll systems or forced violations by users of the relevant Expanded Portfolio assets. Further, Project SPVs and the Target SPV may also, at times, need to allow users of the relevant Expanded Portfolio assets to pass through without paying applicable tolls due to heavy traffic build-up, or may be unable to collect tolls due to political protests or other agitations relating to tolling. For instance, due to a protest against certain agricultural laws in India, tolling for the Kaithal – Rajasthan project operated by KTL was halted from December 25, 2020. The protest was called off on December 15, 2021 and toll collection resumed from December 16, 2021. Pursuant to a circular dated July 2, 2021 issued by the NHAI, the impact of such protest has been considered an indirect political

force majeure event for purposes of the concession agreement and concessionaires would accordingly be entitled to appropriate relief with respect to the period of concession, cost of force majeure, interest payment on debt and O&M expenses. For details, see "*Management's Discussion and Analysis of our Financial Condition and Results of Operations – Factors affecting Results of Operations*" and "*Regulations and Policies*" on pages 780 and 286, respectively.

In addition, in certain circumstances, the governmental authorities or Indian courts could seek to suspend toll-collection for or during certain periods, in full or in part, on the Expanded Portfolio assets, which suspension would result in a reduction in our revenues. Further, toll-collection errors may amount to a loss of revenue as there is an inherent risk of under-collection of toll fees given that most users of toll roads pay in cash. Any significant failure by us to monitor and control leakage in toll-collection systems could have a material, adverse effect on our business, prospects, financial condition and results of operations and our ability to make distributions. See "*Summary of the Concession Agreements*" on page 168.

18. *Our business will be subject to seasonal fluctuations that may affect our cash flows.*

Our cash flows will be affected by seasonal factors, which may materially and adversely affect traffic volumes. Traffic volumes tend to decrease during the monsoon season and conversely tend to increase during holiday seasons. The monsoon season may also restrict our ability to carry on activities related to our operation and maintenance of the Expanded Portfolio. This may result in delays in periodic maintenance and reduce productivity, thereby materially and adversely affecting our business, financial condition and results of operations.

19. *Changes in the policies adopted by governmental entities or in the relationships of any of the Trust, the Project SPVs and the Target SPV with the Government of India or state governments could materially and adversely affect our business, financial performance and results of operations.*

The Project SPVs and the Target SPV derive almost all of their revenue from their respective concession agreements with the relevant concessioning authority and must maintain good relationships with the concessioning authorities, the Government of India and the various state governments. We expect that we will continue to depend on, and benefit from, policies relating to the terms of the concessions and other incentives that we will receive from governmental entities in respect of the Project SPVs' and the Target SPV's existing projects and any future projects. In addition, we benefit from, and depend on, the NHAI, the relevant state concessioning authority and various Government of India and state government entities in terms of policies, incentives, budgetary allocations and other resources provided by these entities for the roads industry in general. Any adverse change in any existing governmental policies, incentives, allocations or resources, or any change in our relationships with governmental entities, could materially and adversely affect our business, financial condition and results of operations. Also see "*Regulations and Policies*" on page 286. There can be no assurance that the Government of India will continue to focus on and promote toll-road projects on a build-operate-transfer basis or a toll-operate-transfer basis.

Additionally, toll roads which involve public-private partnerships may be subject to delays, extensive internal processes, policy changes, changes due to local, national and internal political pressures and changes in governmental or external budgetary allocation and insufficiency of funds. Since governmental entities are responsible for awarding concessions and are a party to the development and operation of the awarded projects, our business will be directly and significantly dependent on their support. Any withdrawal of support or adverse changes in their policies, even if not quantifiable monetarily, may lead to the Project SPVs' and the Target SPV's concession agreements being restructured or renegotiated or the concession period being decreased, which could materially and adversely affect the Project SPVs' and the Target SPV's financing, capital expenditure, revenues, development or operations.

20. *Certain provisions of the standard form of concession agreement may be non-negotiable or untested, and the concession agreements may contain certain restrictive terms and conditions which may be subject to varying interpretations.*

Our concession agreements were entered into with the concessioning authorities and we have limited ability to negotiate the terms of these contracts. The concession agreements that we have entered into are based on a model concession agreement prescribed by the NHAI. For example, the toll fees under the BOT project concession agreements is fixed, subject to annual adjustments to account for inflation as specified in the concession agreements and the applicable rules issued by the NHAI. In addition, the operation and maintenance standards and specifications require the Project SPVs and the Target SPV to incur operation and maintenance costs on a regular and periodic basis. The model concession agreement prescribed by the NHAI also provides for a fixed term concession and, although all concession agreements provide for an extension or reduction of the concession period based on certain factors, including actual traffic volumes on the target date, the concession agreements do not provide for renewal of the concession agreement after the expiry of the term.

The form of the concession agreement has evolved within the last decade and there is limited guidance available on the interpretation of a number of provisions and conditions of such concession agreements. In addition, certain terms of the concession agreements, such as those related to an augmentation in the capacity of the toll roads, substitution of the concessioning authorities in any or all of the project agreements, termination payments by the concessioning authorities, construction of additional competing roads by the concessioning authorities, the Government of India or state governments and payment of compensation by the concessioning authorities for changes in law are untested. Accordingly, courts or regulators may consider a different interpretation of certain provisions and conditions in the concession agreements of the Project SPVs and the Target SPV, which may be adverse to us.

The concession agreements of the Project SPVs and the Target SPV's also contain certain restrictive covenants. For instance, the concession agreements contain provisions that mandate substitution clauses in the project agreements. Such substitution clauses allow the concessioning authorities to step into project agreements in place of a Project SPV or the Target SPV in the event of suspension or termination of the concession agreements due to a breach or default by such Project SPV or the Target SPV. The concession agreements also provide that the lenders to a Project SPV or the Target SPV may substitute the Project SPV or the Target SPV with new concessionaires approved by the concessioning authority in the event of a default by the Project SPV or the Target SPV under the relevant concession agreement, financing agreements or other project agreements. Additionally, pursuant to a circular dated January 29, 2014 issued by the NHAI, the NHAI or lenders may substitute the Project SPV in the event of a "financial default" by such Project SPV, which includes situations in which the NHAI or lenders have reason to believe that the Project SPV is likely to face financial distress and is likely to default in its compliance with the terms of the relevant concession agreement.

The terms of the Project SPVs' and the Target SPV concession agreements require the Project SPVs and the Target SPV to indemnify the concessioning authority for losses arising out of the design, engineering, construction, procurement, operation and maintenance of the toll road, defect or deficiency in the provision of services, or arising out of breach of the obligations of the Project SPVs and the Target SPV under the relevant concession agreements, as applicable.

In the event the concessioning authority or a lender invokes any restrictive provision in the concession agreements or interprets any term or condition in an adverse manner, such invocation or interpretation may materially and adversely affect our business, financial condition and results of operations. For further details on the terms of the concession agreements, see "*Summary of the Concession Agreements*" on page 168.

21. *Certain actions of the Project SPVs and the Target SPV require the prior approval of the relevant concessioning authority, and no assurance can be given that the concessioning authority will approve such actions in a timely manner or at all.*

Certain terms and conditions in the Project SPVs' and the Target SPV's concession agreements, financing agreements, and our other approvals require the concessioning authority's prior written approval to be obtained for one or more of the following actions, among others:

- amendment, modification or replacement by the Project SPV or the Target SPV of any project agreements (including financing agreements) relating to the operation of the Expanded Portfolio assets to which the Project SPV or the Target SPV is a party if the amendment, modification or replacement of such agreement increases or imposes any financial liability or obligation on the concessioning authority;

- the creation of any encumbrance or security interest over, or transfer of rights and benefits of the Project SPVs or the Target SPV under, the concession agreements or any project agreements; and

- the selection or replacement of any engineering, procurement and construction contract, operation and maintenance contractor and execution of the engineering, procurement and construction agreements and the operation and maintenance agreements (to the extent applicable).

Pursuant to a letter dated January 3, 2020, the NHAI has approved the establishment of the Trust and the transfer of the Project SPVs to the Trust subject to certain conditions, including, (i) submission of no-objection certificates from the lenders of all the Project SPVs; (ii) the concessionaire/developer complying with all the provisions of the concession agreements including holding 51% in the Trust until two years after the completion / provisional COD of the projects; (iii) the incoming investor complying with all relevant contractual obligations of the concession agreements; (iv) the proposal not having the effect of increasing any financial liability or obligation on the NHAI and not jeopardizing the interests of NHAI in any manner; and (v) an undertaking that all statutory compliances as required by SEBI guidelines will be adhered to.

Pursuant to the letter dated October 12, 2022, the UPEIDA, concessioning authority for the Target SPV, has approved the transfer of the project to the Trust subject to certain conditions, including, that the Sponsor and GIC Financial Investors shall continue to hold 10% and 9.60% of the Target SPV's equity, respectively until two years from the commercial operation date for the project (or such other earlier timeline as prescribed under the concession agreement or applicable regulations).

The concession agreements of the Project SPVs and the Target SPV also require the submission to the concessioning authority, for its review and comments, all project agreements to which a Project SPV or the Target SPV is a party prior to entry, amendment or replacement of such agreements, even if such agreements do not affect the financial liability or obligations of the concessioning authority.

The restrictions described above may impose constraints on our flexibility to conduct our business. Further, if as a result of these restrictions, we are unable to pursue a favorable course of action or to respond to an unfavorable event, condition or circumstance, then our business, financial condition and results of operations may be materially and adversely affected. For details on the terms of the concession agreements, see "*Summary of the Concession Agreements*" on page 168.

22. *We depend on certain directors, executive officers and key employees of the Investment Manager and the Project Manager, and such entities may be unable to retain such personnel or to replace them with similarly qualified personnel, which could have a material, adverse effect on the business, financial condition, results of operations and prospects of the Trust, the Project SPVs and the Target SPV.*

Our performance depends, in part, upon the continued service and performance of certain directors, executive officers and key employees of the Investment Manager and the Project Manager. The continued operations and growth of our business will be dependent upon the Investment Manager and the Project Manager being able to attract and retain personnel who have the necessary and required experience and expertise. Competition for qualified personnel with relevant industry expertise in India is intense due to the scarcity of qualified individuals in the toll roads business, and the aforesaid entities may not be able to retain their executive officers and key employees or attract and retain fresh talent in the future. Any inability by the Investment Manager or the Project Manager to retain their respective directors, executive officers and key employees, or the inability to replace such individuals with similarly qualified personnel, could have a material, adverse effect on the business, financial condition, results of operations and prospects of the Trust, the Project SPVs and the Target SPV.

23. *There can be no assurance that we will be able to successfully undertake future acquisitions of road assets or efficiently manage the infrastructure road assets we have acquired or may acquire in the future.*

Our growth strategy in the future may involve strategic acquisitions of toll roads and other road assets, including pursuant to the Framework Agreement. Pursuant to the Framework Agreement, the Sponsor has agreed to certain arrangements in relation to submission of bids for (i) any new concession by the Sponsor and/or its affiliates involving the development or operation of roads and highways; or (ii) over any extensions of the concession period of road projects held by the Sponsor and/or its affiliates (other than the Project SPVs) with the Financial Investors. For details, see "*Related Party Transactions – Details of Related Party Transactions proposed to be undertaken*" and " *– The Sponsor, whose interests may be different from the other Unitholders, will be able to exercise significant influence over the Trust."* on pages 308 and 36, respectively. We may not be able to conclude appropriate or viable acquisitions in a timely manner. The success of our past acquisitions and any future acquisitions will depend upon several factors, including:

- our ability to finance and acquire operational toll roads and other road assets on a cost-effective basis;
- our ability to integrate acquired personnel, operations, products and technologies into our organization effectively;
- unanticipated problems or legal liabilities of the acquired businesses; and
- tax or accounting issues relating to the acquired businesses.

There can be no assurance that we will be able to achieve the strategic purpose of such acquisitions or operational integration or an acceptable return on such investments, which may materially and adversely affect our profits, financial condition and distributions.

Further, concession agreements for future road projects may also contain terms and conditions that are more restrictive than those under the current Project SPVs' concession agreements for the Current Portfolio or the Target SPV's concession agreement. These restrictions may restrict our flexibility in managing our business or projects and could in turn materially and adversely affect our business prospects, financial condition and results

of operations.

24. *The Project SPVs' and the Target SPV concessions are illiquid in nature, which may make it difficult for us to realize, sell or dispose of our shareholding in the Project SPVs or the Target SPV.*

The Project SPVs' and the Target SPV concessions are illiquid in nature, among other reasons, on account of market conditions, the residual periods of the concession agreements, various approvals, consents and confirmations required by the concessioning authorities as per the concession agreements, and a scarcity of disposal options and/or potential acquirers. As a result, it may be difficult for us to realize, sell or dispose of our shareholding in the Project SPVs or the Target SPV at an attractive price, or at the appropriate time, or at all, and such illiquidity may have a material, adverse effect on our market value, business, prospects, financial condition and results of operations. Further, in addition to the restrictions on minimum holding period and divestment under the InvIT Regulations, we are required to comply with the provisions of the concession agreement including holding at least 51% of each of the Project SPVs and the Target SPV until two years after the completion of construction / provisional COD / appointed date with respect to each of the Expanded Portfolio assets.

25. *Our insurance policies may not provide adequate protection against all possible risks associated with our operations.*

The Project SPVs' and the Target SPV's principal types of insurance coverage include standard fire and special perils insurance, contractor all-risk insurance and money insurance. However, there can be no assurance that all possible risks are adequately insured against or that we will be able to procure adequate insurance coverage at commercially reasonable rates in the future.

Further, the Expanded Portfolio is subject to various risks that we may not be insured against, adequately or at all, including:

- changes in governmental and regulatory policies;
- shortages of, or adverse price movement for, construction materials;
- design and engineering defects;
- breakdown, failure or substandard performance of the road assets and other equipment;
- improper installation or operation of the road assets and other equipment;
- labor disturbances;
- terrorism and acts of war;
- inclement weather and natural disasters;
- environmental hazards, including earthquakes, flooding, tsunamis and landslides; and
- adverse developments in the overall economic environment in India.

Further, we are subject to various risks in the operation of the Portfolio, including on account of accidents on the Expanded Portfolio assets. For further details, see "*Material Litigation and Regulatory Action*" on page 806. Our insurance may not provide adequate coverage in certain circumstances and is subject to certain deductibles, exclusions and limits on coverage. To the extent we suffer damage or loss which is not covered by insurance, or exceed our insurance coverage, such damage or loss would have to be borne by us. We can make no assurance that material losses in excess of insurance proceeds (if any at all) will not occur in the future, which could materially and adversely affect our financial condition, business and results of operations.

26. *The Project SPVs, the Sponsor/Project Manager, the Investment Manager and the Trustee are involved in certain legal and other proceedings, which may not be decided in their favor.*

The Project SPVs, the Sponsor/Project Manager, the Investment Manager and the Trustee are involved in legal proceedings or claims which are pending at different levels of adjudication before various courts, tribunals and regulatory authorities. For details of certain material outstanding legal proceedings, see "*Material Litigation and Regulatory Action*" on page 806. There is no assurance that these legal proceedings and regulatory matters will be decided in favor of the respective entities. Decisions in any of the aforesaid proceedings adverse to our interests may have a material, adverse effect on our or their business, future financial performance and results of operations. If the courts, tribunals or regulatory authorities decide against the Project SPVs, the Sponsor/Project Manager, the

Investment Manager or the Trustee, we or such entities may face monetary and/or reputational losses and may have to make provisions in our financial statements, which could increase expenses and liabilities. While the Sponsor will provide certain indemnities under the relevant share purchase agreement in relation to the Project SPVs, there can be no assurance that the relevant Project SPV or the Trust will be able to successfully bring a claim against the Sponsor under the relevant share purchase agreements or that such indemnities will be adequate to satisfy all the losses, damages, costs and expenses suffered by the Trust and the Project SPVs arising from such proceedings (whether now or in the future) or the consequences thereof.

27. *We do not own the "IRB" trademark and logo. Our license to use the "IRB" trademark and logo may be terminated under certain circumstances and our ability to use the trademark and logo may be impaired.*

We do not own the "IRB" trademark and "IRB" logo, which are registered in the name of, and owned by, the Sponsor. However, pursuant to a separate name licensing agreement, as amended, the Sponsor has granted to the Trust, each of the Project SPVs, the Target SPV and the Investment Manager, the non-transferable and non-assignable right to use the IRB trademark as part of their respective corporate names, if applicable, as well as the IRB logo in connection with their respective businesses, on a non-exclusive basis. The license may be terminated under certain circumstances, including (i) if the Sponsor or any of its subsidiaries ceases to be the sponsor of the Trust for any reason whatsoever; or (ii) if the Sponsor or any of its subsidiaries ceases to hold at least 51% of the equity share capital of the Investment Manager, or an entity which is not a subsidiary of the Sponsor is appointed as the investment manager of the Trust. Upon the termination of any license, the Trust and the Project SPVs and the Target SPV will be required to cease the use of the IRB trademark and change their names to remove IRB from their names within three months from the date of termination, which may have a material, adverse effect on the operations of the Trust, the Project SPVs and the Target SPV and require management's time and attention.

28. *The Expanded Portfolio is concentrated in the infrastructure sector and toll-road industry in India, and our business could be adversely affected by an economic downturn in that sector or industry. The Project SPVs' and projects are geographically concentrated in Rajasthan and Maharashtra.*

The Portfolio comprises 15 toll roads in India. Upon completion of the MBEL Acquisition, the portfolio of the Trust will also include MBEL and its road asset. This concentration may expose us to the risk of economic downturns in the infrastructure sector and the toll-road industry to a greater extent than if our assets were more diversified across other industries in the infrastructure sector or other sectors of the economy.

As at the date of this Letter of Offer, four Current Portfolio assets are located in or pass through Rajasthan. Additionally, two Current Portfolio assets each are located in or pass through Maharashtra and Uttar Pradesh. Also, the BOT project of Target SPV is located in and passes through Uttar Pradesh. Our business therefore will be significantly dependent on the general economic conditions, market conditions and natural disasters in the states in which we operate, in particular Rajasthan, Uttar Pradesh and Maharashtra. Any regional slowdown in economic activity in these areas resulting in a reduction in traffic on the Current Portfolio assets could materially and adversely affect our business, financial condition and results of operations.

29. *Political and other agitations against the collection of tolls may affect our ability to collect tolls over prolonged periods, which could have a material, adverse effect on our business, results of operation and financial condition.*

Over the past few years, there have been agitations by political parties and local community members against the collection of tolls on local road and state highway projects across various states, including Maharashtra. These agitations have often turned violent and resulted in the destruction of toll-collection booths and other related property. If such events spread to the Project SPVs' or the Target SPV, which are located on national highways or other roads, it may limit our ability to collect tolls over a prolonged period and may have a material, adverse effect on our business, financial condition and results of operations. Further, the Project SPVs' and the Target SPV's concession agreements provide that in the event that the Project SPVs' and the Target SPV's ability to collect tolls is disrupted as a result of political and other agitations over a specified period, either party to the concession agreement may terminate the agreement. While the concession agreements provide for a specified payment mechanism in the case of such termination, there can be no assurance that the Project SPVs and the Target SPV will receive such payments from the concessioning authorities in a timely manner or at all, or that such payments will be adequate to recover our investment or return, which may materially and adversely affect our business, financial condition and results of operations.

30. *We may be unable to renew or maintain the statutory and regulatory permits and approvals required to operate the Expanded Portfolio.*

The Project SPVs and the Target SPV are required to obtain and maintain certain permits, approvals, licenses,

registrations and permissions under various regulations, guidelines, circulars and statutes regulated by various regulatory and governmental authorities for operating the Expanded Portfolio assets. Certain approvals may lapse in normal course and the respective Project SPVs and the Target SPV make application to the appropriate authorities for renewal of such licenses and/or approvals. For further details, see "*Government and Other Approvals*" on page 695. Under the Project Implementation Agreements, the Project Manager is responsible for the maintenance of such approvals. In relation to the obligations of the Project Manager under the Project Implementation Agreements, see "*The Sponsor and Project Manager – Functions, Duties and Responsibilities of the Project Manager*" on page 328. If the Project Manager, the Project SPVs and the Target SPV and/or the third-party contractor(s) fail to obtain or maintain them, or if there is any delay in obtaining or renewing them, our business, financial condition and results of operations could be materially and adversely affected. Further, these permits, approvals, licenses, registrations and permissions could be subject to several conditions, and we can make no assurance that we would be able to continuously meet such conditions or be able to prove compliance with such conditions to the statutory authorities. This could lead to the cancellation, revocation or suspension of relevant permits, licenses or approvals, which may result in the interruption of our operations and may materially and adversely affect our business, financial condition and results of operations.

31. *Compliance with, and changes in, safety, health and environmental laws and regulations in India may materially and adversely affect our business.*

Our business will be subject to environmental, health and safety laws and regulations and various labor, workplace and related laws and regulations in India and requirements under the concession agreements. For further details, see "*Regulations and Policies*" on page 286. Any changes in, or amendments to, these standards or laws and regulations could further regulate our business and could require us to incur additional, unanticipated expenses in order to comply with these changed standards. Under the Project Implementation Agreements, the Project Manager is responsible for the maintenance of such requirements and standards. In relation to the obligations of the Project Manager under the Project Implementation Agreements, see "*The Sponsor and Project Manager – Functions, Duties and Responsibilities of the Project Manager*" on page 328. If we fail to meet safety, health and environmental requirements, we may also be subject to administrative, civil and criminal proceedings by governmental authorities, as well as civil proceedings by environmental groups and other individuals, which could result in substantial fines and penalties against us. Penalties imposed by regulatory authorities on us or third parties upon whom we depend may also disrupt our business and operations.

There can be no assurance that we will not become involved in future litigation or other proceedings or be held responsible in any such future litigation or proceedings relating to safety, health and environmental matters in the future. Clean-up and remediation costs, as well as damages, payment of fines or other penalties, other liabilities and related litigation, could materially and adversely affect our business, prospects, financial condition and results of operations.

32. *The Project SPVs' financing agreements entail interest at variable rates, and any increases in interest rates may adversely affect our results of operations, financial condition and cash flows.*

The Project SPVs are susceptible to changes in interest rates and the risks arising therefrom. For details, see "*Financial Indebtedness*" on page 800. These financing agreements entail interest at variable rates with a provision for the periodic reset of interest rates. Currently, certain of the Project SPVs' borrowings are at floating rates of interest. Further, under the Project SPVs' financing agreements, the lenders are entitled to change the applicable rate of interest depending upon the policies of the RBI and in the event of an adverse change in the Project SPVs' credit risk rating. Any increase in interest rates may have an adverse effect on our results of operations, financial condition and cash flows.

33. *The Project SPVs are subject to restrictive covenants under their financing agreements that could limit our flexibility in managing our business or to use cash or other assets.*

Various financing agreements that the Project SPVs have entered into with certain banks and financial institutions contain certain restrictive covenants, including, but not limited to, requirements that they obtain consent from the lenders prior to:

- effecting any change in the nature or scope of the project or any change in the financing plan;
- effecting any change in capital structure (including shareholding pattern);
- raising any equity or preference share capital;
- making any capital expenditure other than permitted investments;

- making any dividend payments to the Trust or making any other restricted payments (including redemption of any shares of any class, prepayment in relation to any indebtedness, payment of interest on unsecured loans, investment in any entity) except as permitted under the financing agreements;
- creating of any security interest in any of the secured property;
- incurring any other indebtedness, including the issuance of debentures, other than permitted indebtedness;
- entering into any partnership, profit-sharing or royalty agreement;
- removing any person exercising substantial powers of management over the affairs of the Project SPVs in case of an event of default;
- amending the constitutional documents of the Project SPVs;
- undertaking of any new project or making of any investment or taking any assets on lease;
- providing guarantees, indemnities or similar assurances in respect of indebtedness of any other person, (other than in the ordinary course of business);
- repaying or prepaying any subordinated loan or loans brought in as equity taken by the Project SPVs from the Sponsor;
- creating any subsidiary or permit the Project SPV to become a subsidiary;
- undertaking or permitting any scheme of arrangement or compromise with its creditors or shareholders; and
- changing the management/management control or the composition of the board of directors of any Project SPV.

For details, see "*Financial Indebtedness*" on page 800. In addition, these restrictive covenants may also affect some of the Trust's rights as the shareholder of the Project SPV and the Project SPV's ability to pay dividends if it is in breach of its obligations under the applicable financing agreement.

In case of any shortfall in project receivables, the relevant Project SPV may need to make good the shortfall from its own sources and/or arrange for the loan to be repaid through revenue shortfall loans from the relevant concession authority. Such financing agreements also require us to maintain certain financial ratios. In the event of any breach of any covenant contained in these financing agreements, we may be required to immediately repay our borrowings either in whole or in part, together with any related costs. There can be no assurance that we will be able to secure consents from, and/or negotiate revised terms with, the lenders on terms favorable to the Trust or at all.

Further, the financing agreements also contain cross default provisions which could automatically trigger defaults under other financing agreements. Certain lenders are also entitled to accelerate the repayment of the loans at any time based on the lenders' assessment of the cash flows, subject to any approval required from the concessioning authority.

If the Project SPV or the Target SPV is suspended under the concession in relation to any default by such Project SPV or the Target SPV, at any time during such suspension, the senior lenders of each Project SPV and the Target SPV have the right to request the concessioning authority to substitute the concessionaire in accordance with the substitution agreement.

Any downgrading of the credit rating of the Project SPVs by a credit rating agency or any adverse comment from the statutory auditors of such Project SPV or the Trust may qualify as an event of default under the relevant financing agreements of the Project SPVs. Certain financing agreements also provide the banks and financial institutions with the right to convert amounts due into equity in the event of default, with the approval of the relevant concessioning authority. Certain of these banks and financial institutions also have a right to appoint nominee directors under these financing agreements in the event of default. Pursuant to the provisions of certain loan facilities availed by us, the lenders are entitled to recall the loan at any time on demand or call notice, requiring the borrower to repay (either in full or in part) the amount outstanding on any particular day.

Any or all of the above restrictive covenants may restrict our ability to conduct business and any breach thereof may adversely affect our results of operations and financial condition.

34. ***Shares of the Project SPVs and the Target SPV are required to be pledged in favor of lenders who may***

exercise their rights under the respective share pledge agreements in the event of default under relevant financing agreements.

Shares of the Project SPVs and the Target SPV are required to be pledged in favor of the lenders to such Project SPVs/Target SPV to secure loan facilities obtained by the Project SPVs/Target SPV. 51% of the equity share capital of each of the Project SPVs has been pledged in favor of their respective lenders, in accordance with the relevant financing documents. Further, 51% of the equity share capital of the Target SPV will be pledged in favor of their respective lenders, in accordance with the relevant financing documents.

If there are any defaults in payment or any breach under the relevant financing agreements, the lenders may exercise their right to enforce the security interest under the financing agreements, including by taking ownership of the pledged shares, selling the pledged shares to any third-party purchaser, and exercising voting rights in respect of the pledged shares on any matter at any meeting of the members of the relevant Project SPVs or the Target SPV. If any such event occurs, we may not be able to fully recognize revenue attributable to these Project SPVs or the Target SPV, if at all. In addition, if we lose ownership or control of any of our Project SPVs or the Target SPV, our business, results of operations and financial condition, and our ability to make distributions, would be adversely affected.

35. ***We will enter into related-party transactions. There can be no assurance that we could not have achieved more favorable terms if such transactions had been entered into with third parties.***

The MBEL Acquisition is a related party transaction. We will continue to enter into transactions with related parties, subject to and in accordance with the terms of the Framework Agreement. The procedure with respect to such related party transactions is subject to modification by law, which may have a material, adverse effect on the Trust. Further, there can be no assurance that we could not achieve more favorable terms had such transactions been entered into with unrelated parties. The transactions that we will enter into may involve conflicts of interest which may be detrimental to us. See "*Related Party Transactions*" on page 306. There can be no assurance that such transactions, individually or in the aggregate, will not have a material, adverse effect on our business, financial condition and results of operations, including because of potential conflicts of interest or otherwise.

Risks Related to the Trust's Relationships with the Sponsor and the Investment Manager

36. ***The Sponsor, whose interests may be different from the other Unitholders, will be able to exercise significant influence over the Trust.***

After the completion of the Issue, the Sponsor is expected to own 51.02% of the issued and outstanding Units and will be entitled to vote as a Unitholder on all matters other than matters where it is a related party and not permitted to vote under the InvIT Regulations. Although the Investment Manager has a distinct board of directors, the Sponsor is nonetheless in a position to exercise significant influence in matters which require the approval of Unitholders by virtue of its ownership of Units in the Trust. The interests of the Sponsor may conflict with the interests of our other Unitholders and the Sponsor may, for business considerations or otherwise, seek to benefit itself instead of the Trust or the interests of the other Unitholders. The Sponsor also exercises significant influence over the Investment Manager.

We also rely on the Sponsor to comply with its obligations under the various transaction agreements to which it is a party, including the Framework Agreement. Pursuant to the Framework Agreement, the Sponsor has agreed that prior to the submission of a Bid (as defined under the Framework Agreement) for any Potential Project (as defined under the Framework Agreement), being eligible in accordance with the Investment and Procurement Policy, it will consult the Financial Investors in good faith and make best efforts to bid for the Potential Project on behalf of the Trust on such terms as agreed between Sponsor and the Financial Investors. If the Sponsor and any one or more Agreeable Investors (as defined in the Framework Agreement) agree to bid for Potential Project in a manner not in accordance with the Investment and Procurement Policy or none of the Financial Investors agreed to the terms of the Bid within a reasonable period or do not agree to bid for the Potential Projects on behalf of the Trust, in each case, the Sponsor or the Sponsor and the relevant Agreeable Investor, as the case may be, will be free to submit a Bid (independent and outside the Trust), as it deems fit for the Potential Project subject to the conditions set out in the Framework Agreement.

The Sponsor currently holds 51.00% of the total equity share capital of MBEL. Upon completion of the MBEL Acquisition, the shareholding of the Sponsor in MBEL will reduce to 10% equity share capital of MBEL. Also, please see *"Objects of the Issue - Acquisition of MBEL through purchase of equity shares of MBEL pursuant to the MBEL Securities Purchase Agreement"*.

In addition, as our Project Manager, we rely on the Sponsor to provide construction works for the Project SPVs and the Target SPV which are not yet completed and operation and maintenance services for the completed Project SPVs and the Target SPV. Pursuant to the Project Implementation Agreements and MBEL Project Implementation Agreement, PDTPL, STPL and MBEL will continue to make payments to the Project Manager for the remaining engineering, procurement and construction works in relation to the relevant project on a monthly basis, or as otherwise agreed among the parties to the Project Implementation Agreements based on invoices raised by the Project Manager. Any such payment of fees will be in the nature of a related party transaction and the relevant approvals would be required under the InvIT Regulations. For further information about the fees payable to the Project Manager, please see "*Background and Structure of the Trust – Fees and Expenses*" on page 120.

We also rely on the Sponsor's expertise in executing build-operate-transfer projects in case of any additional work which we may be required to carry out for any of the Project SPVs, the Target SPV or other assets. In the event that the Sponsor does not continue to focus on the infrastructure development sector or the toll-road industry, our business strategy, financial condition and results of operations may be materially and adversely impacted.

37. *The Sponsor is a listed company, operates other road assets and has sponsored another infrastructure investment trust ("Public InvIT"), and anything that impacts the business, results of operations and trading price of the Sponsor's equity shares or the units of the Public InvIT may have a material adverse effect on the Trust.*

The Sponsor has been listed on the Stock Exchanges since 2008. The Sponsor has also previously sponsored the Public InvIT, which has been listed on the Stock Exchanges since 2017 and is also engaged in the toll-roads sector. As at September 30, 2024, the Sponsor had six road projects of which two were operational and four were under-construction. The Public InvIT currently has a portfolio of six toll-road projects, comprising five BOT projects and one HAM asset. Because of our relationship with the Sponsor and its future toll-road assets, anything that impacts the business, results of operations and trading price of the Sponsor's equity shares or the Public InvIT's units may have a material, adverse effect on the Trust.

The Sponsor is subject to ongoing disclosure obligations under applicable regulations. To the extent that business, financial or other information relating to the Trust and its Project SPVs, including any forward-looking information, can be derived from filings made by the Sponsor with the Stock Exchanges, investors are reminded that such information has not been and will not be prepared for purposes of the Issue and does not form a part of this Letter of Offer.

38. *The Investment Manager may not be able to implement its capital and risk management strategies.*

There is no assurance that the Investment Manager will be able to implement these strategies successfully or that it will be able to expand our portfolio at any specified rate or to any specified size or to maintain distributions at projected levels. The Investment Manager may not be able to make acquisitions or investments on favorable terms or within a desired time frame, and it may not be able to manage the operations of its underlying assets in a profitable manner. Factors that may affect this risk may include, but are not limited to, changes in the regulatory framework in India, competition for assets, partial award of concessions or licenses favoring local or other competitors of the Trust, changes in the Indian regulatory or legal environment or macro-economic conditions. If the Investment Manager is unable to implement these strategies successfully or expand our portfolio, we will nonetheless be required to pay the Investment Manager an annual management fee, which may be revised with the approval of the Unitholders such that the votes cast in favor of the resolution shall be at least 60% of total votes cast for the resolution, in accordance with the terms of appointment of the Investment Manager.

Even if the Investment Manager is able to successfully grow the operating business of the underlying assets and to acquire toll roads and other eligible infrastructure projects in India, there can be no assurance that the Investment Manager will achieve any returns on such acquisitions or capital investments.

39. *Parties to the Trust are required to maintain the eligibility conditions specified under Regulation 4 of the InvIT Regulations on an ongoing basis. The Trust may not be able to ensure such ongoing compliance by the Sponsor/Project Manager, the Sponsor Group, the Investment Manager and the Trustee, which could result in the cancellation of the registration of the Trust.*

Parties to the Trust are required to maintain the eligibility conditions specified under Regulation 4 of the InvIT Regulations on an ongoing basis. These eligibility conditions include, among other things, that (a) the Sponsor, Investment Manager and Trustee are separate entities, (b) the Sponsor has a net worth of not less than ₹1,000 million and has a sound track record in the development of infrastructure or fund management in the infrastructure sector, (c) the Investment Manager has a net worth of not less than ₹100 million and has not less than five years' experience in fund management or advisory services or development in the infrastructure sector or the combined

experience of the directors/partners/employees of the investment manager in fund management or advisory services or development in the infrastructure sector is not less than 30 years (provided that for computing the combined experience, only the experience of the directors/partners/employees with more than five years of experience in fund management or advisory services or development in the infrastructure sector shall be considered), (d) the Trustee is registered with the SEBI under Securities and Exchange Board of India (Debenture Trustees) Regulations, 1993 and is not an associate of the Sponsor or Investment Manager and (e) each of the Sponsor/Project Manager, members of the Sponsor Group, the Investment Manager and the Trustee are "fit and proper persons" as defined under Schedule II of the Intermediaries Regulations on an ongoing basis. The Trust may not be able to ensure such ongoing compliance by the Sponsor/Project Manager, members of the Sponsor Group, the Investment Manager and the Trustee, which could result in the cancellation of the registration of the Trust.

40. *The Investment Manager is required to comply with certain ongoing reporting and management obligations in relation to the Trust. There can be no assurance that the Investment Manager will be able to comply with such requirements.*

The Investment Manager is required to comply with certain ongoing reporting and management obligations in relation to the Trust in accordance with the InvIT Regulations. These requirements include, among other things, (a) making investment decisions with respect to the underlying assets or projects of the Trust, (b) overseeing the activities of the Project Manager, (c) investing and declaring distributions in accordance with the InvIT Regulations, (d) submitting reports to the Trustee and (e) ensuring the audit of the Trust's accounts. There can be no assurance that the Investment Manager will be able to comply with such requirements in a timely manner or at all, which could subject the Investment Manager, the other parties to the Trust, the Trust or any person involved in the activity of the Trust to applicable penalties under the InvIT Regulations, the Intermediaries Regulations and/or the SEBI Act. Any such failure to comply or the imposition of any penalty could have a material adverse effect on our business, financial condition and results of operations. Under the InvIT Regulations, the SEBI also has the right to inspect documents, accounts and records relating to the activity of the Trust, the SPVs or Parties to the InvIT and may issue directions in the nature of, *inter-alia*, (i) requiring the Trust to surrender its certificate of registration; (ii) requiring the Trust to wind-up; (iii) requiring the Trust to sell its assets; (iv) requiring the Trust or Parties to the Trust to take such action as may be in the interest of investors; or (v) prohibiting the Trust or Parties to the Trust from operating in the capital markets or from accessing the capital markets for a specified period.

Risks Related to India

41. *Changing laws, rules and regulations, including changes in legislation or the rules relating to tax regimes, legal uncertainties and the political situation in India may materially and adversely affect our business, financial condition and results of operations.*

Our business, financial condition and results of operations could be materially and adversely affected by any change in laws or interpretations of existing, or the promulgation of new, laws, rules and regulations applicable to us and our business. There can be no assurance that the Government of India or the state governments will not implement new regulations and policies which will require the Trust or the Project SPVs or the Target SPV to obtain additional approvals and licenses from governmental and other regulatory bodies or impose onerous requirements and conditions on our operations.

Tax laws and regulations are subject to differing interpretations by tax authorities. Differing interpretations of tax and other fiscal laws and regulations may exist within governmental ministries, including tax administrations and appellate authorities, thus creating uncertainty and potential unexpected results. The degree of uncertainty in tax laws and regulations, combined with significant penalties for default and a risk of aggressive action, including by retrospective legislation, by the governmental or tax authorities, may result in tax risks in the jurisdictions in which we operate being significantly higher than expected. These events may result in a material, adverse effect on our business, financial condition, results of operations and prospects. Tax authorities in India may also introduce additional or new regulations applicable to our business which could adversely affect our business and profitability.

The Government of India has implemented two major reforms in Indian tax laws, namely the goods and services tax and provisions relating to General Anti-Avoidance Rules. Given the relatively recent implementation of these laws, the manner of implementation of these tax regimes could create uncertainty.

The right to own property in India is subject to restrictions that may be imposed by the Government of India. In particular, the Government of India under the provisions of the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 ("**Land Acquisition Act**") has the right to compulsorily acquire any land if such acquisition is for a "public purpose," after providing compensation to the

owner. However, the compensation paid pursuant to such acquisition may not be adequate to compensate the owner for the loss of such property. The likelihood of such acquisitions may increase as central and state governments seek to acquire land for the development of infrastructure projects such as roads, railways, airports and townships. While the NHAI or the relevant concessioning authority is responsible for the acquisition of the land underlying the toll-road infrastructure projects, any delays or disputes relating to such acquisition could lead to delays and disruptions in the execution of our projects, which would have a material adverse effect on our business, financial condition and results of operations.

The Competition Act, 2002, as amended (the "**Competition Act**"), regulates practices having an appreciable adverse effect on competition in the relevant market in India. The Competition Act aims to, among other things, prohibit all agreements and transactions which may have an appreciable adverse effect on competition in India. Further, the CCI has extra-territorial powers and can investigate any agreements, abusive conduct or combination occurring outside India if such agreement, conduct or combination has an appreciable adverse effect on competition in India. In the event that that any of the assets proposed to be acquired by us in the future cross the prescribed thresholds, we cannot assure you that we will receive the necessary approvals from the CCI to consummate such transactions. Any prohibition or substantial penalties levied under the Competition Act could materially and adversely affect our financial condition and results of operations. Any adverse impact on our financial condition or operations due to the Competition Act may have a material adverse impact on our business, financial condition, results of operations and prospects and our ability to make distributions to the Unitholders.

42. ***Significant increases in the price or shortages in the supply of crude oil and products derived therefrom, including petrol and diesel fuel, could materially and adversely affect the volume of traffic at the projects operated by the Project SPVs and the Target SPV and the Indian economy in general, including the infrastructure sector.***

India imports a significant majority of its requirements of crude oil. Crude oil prices are volatile and are subject to a number of factors, including the level of global production and political factors, such as war and other conflicts, particularly in the Middle East, where a substantial proportion of the world's oil reserves are located. The ongoing Russia-Ukraine war and Israel-Hamas war have caused significant volatility in the price of crude oil and impacted fuel prices in India. Further increases in the price of or shortages in the supply of crude oil could materially and adversely affect the volume of traffic at the projects operated by the Project SPVs and the Target SPV and materially and adversely affect the Indian economy in general, including the infrastructure sector, which could have a material, adverse effect on our business, financial condition and results of operations.

43. ***Our business is dependent on economic growth in India and financial stability in Indian markets, and any slowdown in the Indian economy or in Indian financial markets could have a material adverse effect on our business.***

The Trust is registered in India, and all of our assets are located in India. As a result, we are highly dependent on the prevailing economic conditions in India and our results of operations are significantly affected by factors influencing the Indian economy. Factors that may adversely affect the Indian economy, and hence our results of operations, may include:

- any increase in interest rates or inflation in India;
- any exchange rate fluctuations;
- any scarcity of credit or other financing in India;
- prevailing income, consumption and saving conditions among consumers and corporations in India;
- changes in India's tax, trade, fiscal or monetary policies;
- political instability, terrorism or military conflict in India or in countries in the region or globally, including in India's various neighboring countries;
- the occurrence of natural or man-made disasters, pandemics or epidemics;
- prevailing regional or global economic conditions;
- the balance of trade movements, including export demand and movements in key imports, including oil and oil products; annual rainfall which affects agricultural production;
- civil unrest, riots, protests, acts of violence, terrorist attacks, regional conflicts or situations or war involving

India or other countries could materially and adversely affect the financial markets, which could impact our business; and

- other significant regulatory or economic developments in or affecting India or its infrastructure sector.

Any slowdown or perceived slowdown in the Indian economy, or in specific sectors of the Indian economy, could have a material, adverse effect on our business, financial condition and results of operations and the price of the Units.

For instance, during the COVID-19 pandemic, the NHAI had temporarily suspended toll collection at toll plazas across India from March 26, 2020. Toll collection subsequently resumed on April 20, 2020. In addition, during the months of April 2021 and May 2021, due to the measures implemented in the states where our projects are under construction, by the respective State Governments, our project sites were required to occasionally close down for short periods of time. Further, from the second fortnight of April 2021, various State Governments imposed restrictions on travel, which led to a decline in our toll collections during the period. Traffic and toll revenue on the Current Portfolio has been and on the Expanded Portfolio, may continue to be impacted as a result of such restrictions or economic slowdown caused by COVID-19, which may adversely affect our cash flows, operating results, businesses, assets, financial condition, performance, ability to access the equity and debt markets, cost of capital and liquidity and prospects.

Further, the Indian economy and Indian financial market are influenced by economic and market conditions in other countries, particularly in emerging market in Asian countries. Financial turmoil in Asia, Europe, the United States and elsewhere in the world in recent years, as well as the ongoing Russia-Ukraine war, has affected the Indian economy. Recent bank collapses in the United States and globally have contributed to instability in the global banking system. Although economic conditions are different in each country, investors' reactions to developments in one country can have a material, adverse effect on the securities of companies in other countries, including India. A loss in investor confidence in the financial systems of other emerging markets may cause increased volatility in Indian financial markets and, indirectly, in the Indian economy in general. Any global financial instability, including any instability related to relation between the United States and China, as well as India and China, could also have a negative impact on the Indian economy. Financial disruptions may occur again and could harm our results of operations and financial condition.

44. ***Any downgrading of India's sovereign debt rating by a domestic or international rating agency could materially and adversely affect our ability to obtain financing and, in turn, our business and financial performance.***

India's sovereign debt rating could be downgraded due to various factors, including changes in tax or fiscal policy or a decline in India's foreign exchange reserves, which are outside of our control. Any adverse revisions to India's credit ratings for domestic and international debt by domestic or international rating agencies may materially and adversely impact our ability to raise additional financing, and the interest rates and other commercial terms at which any such additional financing is available. This could have a material, adverse effect on our business and financial performance, ability to obtain financing for capital expenditures and the price of the Units.

45. ***Fluctuations in the exchange rate of the Indian Rupee with respect to the U.S. Dollar or other currencies will affect the foreign currency equivalent of the value of the Units and any distributions.***

Fluctuations in the exchange rates between the Indian Rupee and other currencies will affect the foreign currency equivalent of the Indian Rupee price of the Units. Such fluctuations will also affect the amount that holders of the Units will receive in foreign currency upon conversion of any cash distributions or other distributions paid in Indian Rupees by us on the Units, and any proceeds paid in Indian Rupees from any sale of the Units.

Risks Related to Ownership of the Units

46. ***It may not be possible for Unitholders to enforce foreign judgements.***

The Trustee, the Investment Manager and the Sponsor are incorporated in India and the Trust is settled and registered in India. All of our assets are located in India and we may, from time to time, invest in toll roads in India. Where investors wish to enforce foreign judgements in India, where our assets are or will be located, they may face difficulties in enforcing such judgements. India is not a party to any international treaty in relation to the recognition or enforcement of foreign judgements. India exercises reciprocal recognition and enforcement of judgements in civil and commercial matters with a limited number of jurisdictions, including Singapore. In order to be enforceable, a judgement obtained in a jurisdiction which India recognizes as a reciprocating territory must meet certain requirements of the Code of Civil Procedure, 1908 ("**Civil Code**"). Further, the Civil Code only

permits enforcement of monetary decrees not being in the nature of any amounts payable in respect of taxes, or other charges of a like nature or in respect of a fine or other penalty and does not provide for the enforcement of arbitration awards even if such awards are enforceable as a decree or judgement. Judgements or decrees from jurisdictions not recognized as a reciprocating territory by India cannot be enforced or executed in India except through a fresh suit upon judgement. Even if we or a Unitholder were to obtain a judgement in such a jurisdiction, we or it would be required to institute a fresh suit upon the judgement and would not be able to enforce such judgement by proceedings in execution. In addition, the party which has obtained such judgement must institute new proceedings within three years of obtaining the judgement. It is unlikely that an Indian court would award damages on the same basis or to the same extent as was awarded in a judgement rendered by a foreign court if the Indian court believed that the amount of damages awarded was excessive or inconsistent with public policy in India. In addition, any person seeking to enforce a foreign judgement in India is required to obtain prior approval of the RBI to repatriate outside India any amount recovered pursuant to the execution of the judgement.

Consequently, it may not be possible to enforce in an Indian court any judgement obtained in a foreign court, or effect service of process outside of India, against Indian companies, their directors and executive officers, and any other parties resident in India. Additionally, there is no assurance that a suit brought in an Indian court in relation to a foreign judgement will be disposed of in a timely manner.

47. *The Trust may be dissolved, and the proceeds from the dissolution thereof may be less than the amount invested by the Unitholders.*

The Trust is an irrevocable trust registered under the Registration Act and it may only be extinguished, dissolved and terminated in accordance with the InvIT Regulations and other applicable law. Under the Indenture of Trust, in the event of dissolution, the net assets of the Trust, remaining after settlement of all liabilities, and the retention of any reserves which the Trustee deems to be necessary to discharge contingent or unforeseen liabilities, shall be paid to the Unitholders. Should the Trust be dissolved, depending on the circumstances and the terms upon which assets of the Trust are disposed of, there is no assurance that a Unitholder will recover all or any part of its investment. There may also be uncertainty around the interpretation and implementation of certain provisions in relation to the insolvency of a trust under the Insolvency and Bankruptcy Code, 2016.

48. *The reporting requirements and other obligations of infrastructure investment trusts are still evolving. Accordingly, the level of ongoing disclosures made to and the protection granted to Unitholders may be more limited than those made to or available to the shareholders of a listed company in India.*

The InvIT Regulations, along with the guidelines and circulars issued by the SEBI from time to time, govern the affairs of infrastructure investment trusts in India. However, as compared to the statutory and regulatory framework governing listed companies in India, the regulatory framework applicable to infrastructure investment trusts is relatively new and thus, still evolving.

Accordingly, the ongoing disclosures made to Unitholders under the InvIT Regulations may differ from those made to the shareholders of a listed company in accordance with the applicable SEBI regulations. Further, the rights of the Unitholders may not be as extensive as the rights of the shareholders of a listed company and accordingly, the protection available to the Unitholders may be more limited than those available to such shareholders.

49. *The Issue Price may not be indicative of market price of the Units after the Issue and the price of the Units may decline after the Issue.*

The Issue Price determined by the Investment Manager, in consultation with the Lead Manager, may not be indicative of the price of the Units upon completion of the Issue. If the price of the Units declines significantly, Eligible Unitholders may be unable to resell their Units at or above their purchase price, if at all. There can be no assurance that the price of the Units will not fluctuate or decline significantly in the future. The price and value of the Units will depend on many factors, including, among others:

- the perceived prospects of our business and investments and the market for toll roads and other infrastructure projects;
- differences between our actual financial and operating results and those expected by investors and analysts;
- the perceived prospects of future toll roads and other infrastructure projects that may be added to our portfolio in accordance with our investment mandate;
- changes in general economic or market conditions;

- the market value of our assets;
- the perceived attractiveness of the Units against those of other business trusts, equity or debt securities;
- the balance of buyers and sellers of the Units;
- the size and liquidity of the Indian business trusts market;
- any changes to the regulatory system, including the tax system, both generally and specifically in relation to India business trusts;
- the ability of the Investment Manager to implement successfully its investment and growth strategies;
- foreign exchange rates;
- variations in our quarterly operating results;
- additions or departures of key management personnel of the Investment Manager and/or the Project SPVs;
- changes in the amounts of our distributions, if any, and changes in the distribution payment policy or failure to execute the existing distribution policy;
- actions by Unitholders;
- changes in market valuations of similar business entities or companies;
- announcements by us or our competitors of significant contracts, acquisitions, disposals, strategic partnerships, joint ventures or capital commitments;
- speculation in the press or investment community;
- fluctuations in stock market prices and volume;
- general economic and stock market conditions; and
- changes or proposed changes in laws or regulations affecting the road industry and infrastructure development in India or enforcement of these laws and regulations, or announcements relating to these matters.

To the extent that we retain operating cash flow for investment purposes, working capital reserves or other purposes, these retained funds, while increasing the value of our underlying assets, may not correspondingly increase the price of the Units. Our performance with regard to future earnings and distributions may materially and adversely affect the market price of the Units. In addition, Unitholders who do not, or are not able to, participate in a new issuance of Units may experience a dilution of their interest in the Trust. The Units are not capital-safe products and there is no guarantee that Unitholders can regain the amount invested, in full or in part. If the Trust is extinguished, it is possible that investors may lose a part or all of their investment in the Units.

50. *Any future issuance of Units by us or sales of Units by the Sponsor or any of other significant Unitholders may dilute your Unitholding.*

Any future issuance of Units by us could dilute investors' holdings of Units. Any such future issuance of Units could impact our ability to raise capital through an offering of our securities. There can be no assurance that we will not issue further Units. Upon completion of the Issue, 597,839,840 Units (constituting approximately 51.02% of the total number of Units on a post-Issue basis) are expected be held by the Sponsor. While the Sponsor has agreed to certain *inter-se* arrangements in relation to the sale of its Unitholding with the Financial Investors and pre-emptive rights in case of any further issue of Units, if the Sponsor (pursuant to any applicable waivers), directly or indirectly, sells or is perceived as intending to sell a substantial number of its Units, the price for the Units could be materially and adversely affected. These sales may also make it more difficult for us to raise capital through the issue of new units at a time and at a price we deem appropriate. We cannot assure you that the Unitholders, including the Sponsor (subject to the terms of the Framework Agreement), and other significant Unitholders, will not dispose of, pledge or otherwise encumber their Units. For details of the *inter-se* arrangements, see "*Background and Structure of the Trust – Certain Agreements in relation to the Trust – Framework Agreement*" and "*Rights of Unitholders*" on pages 107 and 320, respectively.

51. *Our rights and the rights of the Unitholders to recover claims against the Investment Manager or the Trustee are limited.*

Under the Investment Management Agreement, the Investment Manager is not liable for, among other things, any action for any investment decision taken in respect of the Trust, other than for fraud, gross negligence, or wilful misconduct on the part of the Investment Manager.

Pursuant to the Indenture of Trust, the Trustee is not liable for anything done or omitted to be done or suffered by the Trustee in good faith. Further, the Trustee is not liable for any action or omission that results in any depletion in the value of the trust fund and consequent losses of the Unitholder, except in situations where such depletion is a result of the gross negligence, fraud or wilful default on the part of the Trustee, or a violation of the Investment Management Agreement, as determined by a court of competent jurisdiction whose decision is final and non-appealable. Any costs and expenses incurred by the Trustee in connection with any legal proceedings, in relation to the Trust, shall be incurred by the Trustee from the Trust Assets.

The Investment Management Agreement provides that the Investment Manager is entitled to be indemnified out of the Trust Assets against all taxes and other liabilities, claims, costs, losses, damages and expenses (including reasonable attorney's fees and costs) ("**Losses**") incurred in connection with the Trust, unless arising out of fraud, gross negligence or wilful misconduct. As a result, the Trust's rights and the rights of the Unitholders to recover claims against the Investment Manager are limited. Further, recourse to the Trustee may be limited under the Indenture of Trust. The Indenture of Trust provides for the indemnification of the Trustee for all Losses, except Losses incurred due to any fraud, gross negligence or wilful misconduct, or material breach of the provisions of the Investment Management Agreement, or the provisions of the other Trust Documents, as finally determined by a court of competent jurisdiction.

52. *Information and the other rights of Unitholders under Indian law may differ from such rights available to equity shareholders of an Indian company or under the laws of other jurisdictions.*

The Indenture of Trust and various provisions of Indian law govern our corporate affairs. Legal principles relating to these matters and the validity of corporate procedures, fiduciary duties and liabilities, and Unitholders' rights may differ from those that would apply to a company in India or a trust in another jurisdiction. Unitholders' rights and disclosure standards under Indian law may also differ from the laws of other countries or jurisdictions. Also see "*Rights of Unitholders*" on page 320.

SECTION III – INTRODUCTION

SUMMARY FINANCIAL INFORMATION

The following tables set forth the summary financial statements derived from:

A. (i) unaudited consolidated interim financial information of the Trust and the Project SPVs as of and for the six-month period ended September 30, 2024; and (ii) audited consolidated financial statements of the Trust and the Project SPVs as of and for the Financial Years 2024, 2023 and 2022;

B. (i) unaudited interim standalone financial information of the Trust as of and for the six-month period ended September 30, 2024; and (ii) audited standalone financial statements of the Trust as of and for the Financial Years 2024, 2023 and 2022;

C. the consolidated financial statements of the Sponsor, prepared in accordance with Ind AS and the Companies Act, as of and for the Financial Years ended March 31, 2024, March 31, 2023 and, March 31, 2022;

D. the standalone financial statements of the Investment Manager, prepared in accordance with Ind AS and the Companies Act, as of and for the Financial Years ended March 31, 2024 March 31, 2023 and March 31, 2022;

E. the audited finanical statements of the Target SPV, prepared in accordance with Ind AS and the Companies Act, as of and for the six-month period ended September 30, 2024, and for the Financial Years 2024, 2023 and 2022; and

F. The pro forma financial information of the Trust and the Target SPV as of and for the six-month period ended September 30, 2024, and for the Financial Year 2024.

The degree to which the summary financial information included herein below will provide meaningful information is entirely dependent on the reader's level of familiarity with Indian accounting practices, Ind AS, the Companies Act and the InvIT Regulations. Accordingly, any reliance by persons not familiar with Indian accounting practices, Ind AS, the Companies Act and the InvIT Regulations on the summary financial information presented below should be limited.

With respect to the Trust, the summary financial information on a standalone and consolidated basis for the six-month period ended September 30, 2024 is based on the independent auditors' report on unaudited interim financial information and has been presented together with the audited financial statements for the Financial Years 2024, 2023 and 2022 for presentation purposes only.

The summary financial information derived from the Consolidated Financial Information, as presented herein below, should be read in conjunction with the Consolidated Financial Information, the notes thereto and the sections "*Financial Statements*" and "*Management's Discussion and Analysis of Financial Condition and Results of Operations*" on pages 347 and 777, respectively.

A. Summary Consolidated Financial Statements

I. *Consolidated Balance Sheet as at September 30, 2024, March 31, 2024, March 31, 2023 and March 31, 2022*

(₹ in million)

	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)	As at March 31, 2023 (Audited)	As at March 31, 2022 (Audited)
ASSETS				
Non-current assets				
Property, Plant and Equipment	6.25	6.63	7.59	8.85
Goodwill	604.54	604.54	604.54	604.54
Other Intangible assets	3,84,011.09	3,17,031.32	2,28,418.29	2,21,859.48
Intangible assets under development	4,017.34	64,816.48	2,421.67	1,290.89
Financial assets				
i) Other financial assets	107.43	4,408.10	0.33	2.74
Other non-current assets	-	12.00	174.07	656.55
Deferred tax assets	2,587.29	2,229.78	792.60	287.67
	3,91,333.94	**3,89,108.85**	**2,32,419.09**	**2,24,710.72**
Current assets				
Financial assets				
i) Investments	2,134.16	1,523.07	1,283.09	659.54
ii) Trade receivables	123.23	68.15	84.67	51.55
iii) Cash and cash equivalents	543.41	1,605.67	731.31	287.23
iv) Bank balance other than (iii) above	9,995.20	6,672.40	4,866.69	2,469.97
v) Other financial assets	2,380.35	2,346.30	1,448.56	1,604.18
Current tax assets (net)	193.74	174.41	24.81	114.22
Other current assets	984.14	537.93	2,657.07	1,677.46
	16,354.23	**12,927.93**	**11,096.20**	**6,864.15**
Total assets	**4,07,688.17**	**4,02,036.78**	**2,43,515.29**	**2,31,574.87**
EQUITY AND LIABILITIES				
Equity				
Unit Capital	1,34,645.74	1,35,091.22	87,929.33	85,504.33
Subordinate Debt	16,916.65	16,916.65	-	-
Other Equity	(21,054.62)	(17,640.04)	(10,395.80)	(8,108.29)
Total Equity	**1,30,507.77**	**1,34,367.83**	**77,533.53**	**77,396.04**
Non-controlling interests	1.58	1.49	0.81	-
Total unit holder's Equity	**1,30,509.35**	**1,34,369.32**	**77,534.34**	**77,396.04**
Non-current liabilities				
Financial liabilities				
i) Borrowings	2,20,433.93	2,14,136.34	98,943.95	92,559.82
ii) Other financial liabilities	42,016.93	40,765.03	35,780.80	35,168.79
iii) Trade payables				

a) total outstanding dues of micro enterprises and small enterprises	-	-	-	-
b) total outstanding dues of creditors other than micro enterprises and small enterprises	-	-	4,165.72	5,998.85
Provisions	1,251.53	1,336.98	2,965.03	1,350.57
Deferred tax liabilities (net)	294.55	280.89	36.80	-
	2,63,996.94	**2,56,519.24**	**1,41,892.30**	**1,35,078.03**
Current liabilities				
Financial liabilities				
i) Borrowings	1,940.23	1,178.93	6,135.65	4,719.18
ii) Trade payables				
a) total outstanding dues of micro enterprises and small enterprises	1.83	2.41	1.61	3.69
b) total outstanding dues of creditors other than micro enterprises and small enterprises	6,781.42	5,611.71	15,303.87	11,214.65
iii) Other financial liabilities	1,850.20	1,883.60	2,549.37	3,023.13
Provisions	2,520.74	2,235.58	-	-
Other current liabilities	87.46	235.99	98.15	140.15
Current tax liabilities (net)	-	-	-	-
	13,181.88	**11,148.22**	**24,088.65**	**19,100.80**
Total liabilities	**2,77,178.82**	**2,67,667.46**	**1,65,980.95**	**1,54,178.83**
Total equity and liabilities	**4,07,688.17**	**4,02,036.78**	**2,43,515.29**	**2,31,574.87**

II. ***Consolidated Statement of Profit and Loss for the six-month period ended September 30, 2024, September 30, 2023 and the Financial Years 2024, 2023 and 2022***

(₹ in million)

Particulars	For the six months ended September 30, 2024 (Unaudited)	For the six months ended September 30, 2023 (Unaudited)	For the year ended March 31, 2024 (Audited)	For the year ended March 31, 2023 (Audited)	For the year ended March 31, 2022 (Audited)
Income					
Revenue from operations	23,606.82	15,131.67	38,930.75	26,912.59	12,404.84
Other income	476.66	261.46	839.83	263.08	100.13
Total income	**24,083.48**	**15,393.13**	**39,770.58**	**27,175.67**	**12,504.97**
Expenses					
Valuation Expenses	2.12	0.77	5.41	2.67	1.46
Audit Fees	9.40	2.45	12.48	5.04	3.13
Operating Expenses	10,098.74	7,198.20	19,876.05	12,865.52	2,029.53
Project Management Fees	2,625.90	1,955.49	3,573.20	2,647.70	1,960.27
Insurance	64.99	29.55	94.71	14.72	1.12
Trustee Fees	0.65	3.97	14.97	5.95	4.16
Depreciation & amortisation expenses	0.38	0.48	0.95	1.25	1.74
Amortisation of Intangible Assets	2,505.73	1,658.92	3,648.04	2,809.17	1,673.16
Finance costs (Interest)	10,081.30	5,636.42	13,449.23	9,005.28	8,670.13
Finance costs (Others)	397.62	481.21	1,007.87	1,249.41	868.58
Legal & Professional Fees	66.32	72.75	726.17	163.58	42.48
Loss on sale of assets	-	-	-	0.01	-
Investment Manager Fees	52.65	87.56	146.32	56.52	0.18
Custodian Fees	3.42	0.98	1.21	0.09	-
Fair value loss on measurement of other payable	1,227.70	1,178.97	4,935.37	560.53	2,161.31
Other expenses	18.83	9.12	116.58	92.71	235.06
Total expenses	**27,155.75**	**18,316.84**	**47,608.56**	**29,480.14**	**17,652.31**
Profit/(loss) before tax	**(3,072.27)**	**(2,923.71)**	**(7,837.98)**	**(2,304.47)**	**(5,147.34)**
Tax expenses					
Current tax	140.36	4.85	5.25	435.25	8.87
Deferred tax (credit) / charge	(343.86)	(207.32)	(1,193.08)	(468.13)	(720.23)
MAT Credit utilisation / (Entitlement)	-	-	-	-	-
Total tax expenses	**(203.50)**	**(202.46)**	**(1,187.83)**	**(32.88)**	**(711.36)**
Profit/(loss) after tax	**(2,868.77)**	**(2,721.24)**	**(6,650.15)**	**(2,271.59)**	**(4,435.98)**
Other comprehensive income/loss					
Item that will not be reclassified to profit or loss:					
(a) Re-measurement (loss)/gain on defined benefit plans (net of taxes)	-	-	-	-	-
Other comprehensive (loss) for the year/ period, net of tax	**-**	**-**	**-**	**-**	**-**
Total comprehensive income/(loss) for the year/period	**(2,868.77)**	**(2,721.24)**	**(6,650.15)**	**(2,271.59)**	**(4,435.98)**

III. ***Consolidated Statement of Cash Flow for the six-month period ended September 30, 2024, September 30, 2023, and the Financial Years 2024, 2023 and 2022***

(₹ in million)

Particulars	For the six months ended September 30, 2024 (Unaudited)	For the six months ended September 30, 2023 (Unaudited)	For the year ended March 31, 2024 (Audited)	For the year ended March 31, 2023 (Audited)	For the year ended March 31, 2022 (Audited)
Cash flow from operating activities					
Profit/(loss) before tax	**(3,072.27)**	**(2,923.71)**	**(7,837.98)**	**(2,304.47)**	**(5,147.34)**
Adjustment to reconcile loss before tax to net cash flows:					
Depreciation and amortisation	2,506.11	1,659.40	3,648.99	2,810.42	1,674.90
Resurfacing expenses	1,562.91	1,219.32	607.54	1,614.45	992.73
Fair value gain on mutual funds	5.34	(3.95)	(10.42)	(11.35)	(0.78)
Net (gain) on sale of current Investment	(85.02)	(36.32)	(190.86)	(62.95)	(13.93)
Notional Contract Revenue Margin	(234.77)	(179.86)	-	-	-
Finance costs	10,269.70	5,962.58	14,147.00	10,111.65	9,538.70
Interest income	(373.03)	(208.52)	(566.97)	(186.05)	(81.69)
Gain/(loss) on fair value measurement of other payable	1,252.12	1,178.97	4,935.37	560.53	2,161.31
Dividend income on current investments	-	(0.03)	(0.03)	-	-
Operating profit before working capital changes	**11,831.08**	**6,667.88**	**14,732.63**	**12,532.23**	**9,123.91**
Movement in working capital:					
Increase/ (decrease) in trade payables	1,169.13	(11,479.70)	(14,206.31)	1,178.92	11,498.13
Increase/ (decrease) in other financial liabilities	(33.63)	(84.99)	(1,202.70)	435.72	306.46
(Decrease)/ increase in other liabilities & provisions	(1,511.72)	(985.80)	85.39	(45.01)	30.37
Decrease / (increase) in trade receivables	(55.08)	(238.14)	16.52	(33.12)	48.69
(Increase) / decrease in other financial assets	4,279.94	(248.38)	(904.80)	134.16	(989.59)
(Increase) / decrease in other assets	(434.21)	1,426.78	4,027.16	(343.36)	(167.46)
Cash generated from operations	**15,245.52**	**(4,942.35)**	**2,547.88**	**13,859.54**	**19,850.51**
Taxes paid (net of refunds)	(159.68)	(63.56)	(154.86)	(345.84)	32.09
Net cash flows (used in)/generated from operating activities(A)	**15,085.84**	**(5,005.91)**	**2,393.02**	**13,513.70**	**19,882.59**
Cash flows from investing activities					

Purchase of property, plant and equipment including CWIP, intangible assets including intangible assets under development	(8,451.58)	(80,472.06)	(154,655.86)	(11,055.81)	(17,617.12)
Proceeds from sale/ (purchase) of current investments (net)	(531.41)	651.64	(38.67)	(549.25)	(72.33)
Investments in bank deposits (having maturity of more than three months) (net)	(3,322.80)	(2,620.67)	(6,153.51)	(2,396.72)	(725.62)
Dividend Income	-	0.03	-	-	-
Interest received	359.70	156.85	514.80	200.12	103.63
Net cash flows (used in) investing activities(B)	**(11,946.10)**	**(82,284.21)**	**(160,333.24)**	**(13,801.66)**	**(18,311.44)**
Cash flows from financing activities					
Proceeds from non-current borrowings	7,717.30	81,076.86	165,552.04	32,302.27	3,988.29
Repayment of non-current borrowings	(785.70)	(10,338.47)	(43,167.48)	(25,799.39)	(775.43)
Repayment of non-convertible debentures	(32.08)	(5,386.42)	(5,396.93)	(124.36)	-
Proceed of current borrowings	-	250.00	97.68	1,532.48	4,759.00
Repayment of current borrowings	(0.02)	-	(5,448.38)	(447.97)	(4,828.83)
Issue of Unit Capital	-	28,619.50	51,146.50	2,425.00	3,816.33
Distribution made to unit holders	(445.49)	-	(3,984.60)	-	-
Issue of Subordinate Debt	-	12,044.08	16,916.65	-	-
Unit issue expenses	-	(85.13)	(144.30)	(15.33)	(3.26)
Finance cost paid	(10,110.31)	(5,653.84)	(13,880.03)	(9,140.79)	(8,653.52)
Transaction cost paid	-	(1,614.80)	(2,428.99)	-	-
Interest distribution to unitholders	(545.71)	-	(449.55)	-	-
Net cash flows generated from financing activities(C)	**(4,202.01)**	**98,911.78**	**158,812.61**	**731.91**	**(1,697.41)**
Net increase / (decrease) in cash and cash equivalents (A+B+C)	**(1,062.26)**	**11,621.66**	**872.39**	**443.95**	**(126.26)**
Cash and cash equivalents at the beginning of the year	**1,605.67**	**731.31**	**731.31**	**287.23**	**413.49**
Add: Cash acquired on transfer of SPV's	-	1.62	1.98	0.13	-
Cash and cash equivalents at the end of the year/period	**543.41**	**12,354.59**	**1,605.67**	**731.31**	**287.23**
Components of cash and cash equivalents					
Balances with scheduled banks:					
- Trust, retention and other escrow accounts	358.32	8,997.62	477.22	394.06	161.56
- Others	165.59	2,276.08	349.09	279.37	118.03
- In deposit accounts with original maturity less than 3 months	-	1,067.60	760.00	49.50	-
Cash on hand	19.50	13.29	19.36	8.38	7.64
Total cash and cash equivalents	**543.41**	**12,354.59**	**1,605.67**	**731.31**	**287.23**

Debt reconciliation statement in accordance with Ind AS 7					
Opening balances					
Long term borrowing	2,19,244.66	1,01,369.83	1,01,369.82	94,124.22	90,833.34
Short term borrowing	0.02	5,350.72	5,350.72	4,085.74	4,155.57
Movements					
Cash Flows					
Long term borrowing	7,229.38	66,209.47	1,17,874.84	7,245.60	3,290.88
Short term borrowing	(0.02)	250.00	(5,350.70)	1,264.98	(69.83)
Non-cash changes					
Long term borrowing	-	-	-	-	-
Short term borrowing	-	-	-	-	-
Closing balances					
Long term borrowing	2,26,474.04	1,67,579.31	2,19,244.66	1,01,369.82	94,124.22
Short term borrowing	-	5,600.72	0.02	5,350.72	4,085.74

B. Summary Standalone Financial Information

I. Standalone Balance Sheet as at September 30, 2024, March 31, 2024, March 31, 2023 and March 31, 2022

(₹ in million)

	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)	As at March 31, 2023 (Audited)	As at March 31, 2022 (Audited)
ASSETS				
Non-current assets				
Financial assets				
i) Investments				
Investment in subsidiaries and joint-ventures	52,855.81	69,752.19	94,424.44	90,929.80
ii) Loans	1,68,373.72	1,54,248.07	30,351.69	30,302.98
iii) Other financial assets	-	613.15	-	-
Total non-current assets	**2,21,229.53**	**2,24,613.41**	**1,24,776.13**	**1,21,232.78**
Current assets				
Financial assets				
i) Investments	818.55	86.84	20.08	20.04
ii) Cash and cash equivalents	96.82	150.39	6.56	0.25
iii) Bank Balance other than (ii) above	3,191.40	2,041.10	-	-
iv) Loans	11,317.88	8,451.47	5,421.29	3,492.95
v) Other financial assets	28,816.71	21,008.09	7,965.17	5,610.67
Current tax assets (net)	20.08	9.52	-	-
Other current assets	8.45	-	4.48	-
Total current assets	**44,269.89**	**31,747.41**	**13,417.58**	**9,123.92**
TOTAL ASSETS	**2,65,499.42**	**2,56,360.82**	**1,38,193.71**	**1,30,356.70**
EQUITY AND LIABILITIES				
Equity				
Unit capital	1,34,645.75	1,35,091.23	87,929.33	85,504.33
Other equity	25,675.21	18,052.09	9,526.42	5,992.74
Total unit holder's equity	**1,60,320.96**	**1,53,143.32**	**97,455.75**	**91,497.07**
Non-current liabilities				
Financial liabilities				
i) Borrowings	61,087.51	61,702.15	-	-
ii) Other financial liabilities	42,013.08	40,760.96	35,778.03	35,168.79
Total non- current liabilities	**1,03,100.59**	**1,02,463.11**	**35,778.03**	**35,168.79**
Current liabilities				
Financial liabilities				
i) Borrowings	1,965.68	647.39	4,872.91	3,607.93
ii) Trade payables				
a) total outstanding dues of micro enterprises and small enterprises	-	0.27	0.01	-
b) total outstanding dues of creditors other than micro enterprises and small enterprises	109.51	102.05	81.34	81.71

Other Current liabilities	2.68	4.68	5.67	1.20
Total current liabilities	**2,077.87**	**754.39**	**4,959.93**	**3,690.84**
Total liabilities	**1,05,178.46**	**1,03,217.50**	**40,737.96**	**38,859.63**
TOTAL EQUITY AND LIABILITIES	**2,65,499.42**	**2,56,360.82**	**1,38,193.71**	**1,30,356.70**

II. Standalone Statement of Profit and Loss for the six-month period ended September 30, 2024, September 30, 2023 and the Financial Years 2024, 2023 and 2022

(₹ in million)

	For the six months ended September 30, 2024 (Unaudited)	For the six months ended September 30, 2023 (Unaudited)	For the year ended March 31, 2024 (Audited)	For the year ended March 31, 2023 (Audited)	For the year ended March 31, 2022 (Audited)
Income					
Interest on Loan	11,634.89	6,334.88	16,461.72	-	-
Interest on bank deposits	97.51	14.32	97.04	-	-
Profit in sale of investments	16.43	1.23	101.01	-	-
Other income	499.32	-	50.28	4,222.87	4,200.44
TOTAL INCOME	**12,248.15**	**6,350.43**	**16,710.05**	**4,222.87**	**4,200.44**
Expenses					
Finance costs (Interest)	2,732.64	5.70	2,463.56	-	-
Finance costs (Others)	46.72	1.26	68.53	-	-
Audit Fees	4.42	0.24	6.41	1.63	
Investment Management Fees	52.65	87.56	146.32	56.52	42.48
Custodian fees	0.76	-	0.19		
Trustee fees	0.65	-	7.18	-	-
Valuation Fees	2.12	1.21	5.41	-	-
Legal & professional fees	11.07	18.25	26.89	-	-
Fair value loss on measurement of other payable	1,227.70	1,178.97	4,935.37	560.53	-
Other expenses	0.59	0.84	6.36	55.18	2,182.21
TOTAL EXPENSES	**4,079.32**	**1,294.03**	**7,666.22**	**673.86**	**2,224.69**
Profit / (Loss) before tax	**8,168.83**	**5,056.41**	**9,043.83**	**3,549.01**	**1,975.75**
Tax expenses	-	-	-	-	-
Profit / (Loss) after tax (A)	**8,168.83**	**5,056.41**	**9,043.83**	**3,549.01**	**1,975.75**
Other comprehensive income / (loss) for the year (net of tax)					
Re-measurement gains/ (losses) on defined benefit plans (net of taxes)	-	-	-	-	-
Other comprehensive income/(loss) for the year (net of tax) (B)	-	-	-	-	-
Total comprehensive income for the year, net of tax : (A+B)	**8,168.83**	**5,056.41**	**9,043.83**	**3,549.01**	**1,975.75**

III. Standalone Statement of Cash Flowfor the six-month period ended September 30, 2024, September 30, 2023 and the Financial Years 2024, 2023 and 2022

(₹ in million)

Particulars	For the six months ended September 30, 2024 (Unaudited)	For the six months ended September 30, 2023 (Unaudited)	For the year ended March 31, 2024 (Audited)	For the year ended March 31, 2023 (Audited)	For the year ended March 31, 2022 (Audited)
Cash flow from operating activities					
Profit / (Loss) before tax	8,168.83	5,056.41	9,043.83	3,549.01	1,975.75
Adjustments to reconcile profit before tax to net cash flows:					
Finance costs	2,779.36	6.96	2,532.09	-	-
Fair value (gain)/loss on investments	0.15	-	(1.44)	(0.18)	-
Profit on sale of investments	(16.43)	(1.23)	(101.01)	(0.92)	(0.40)
Fair value loss on measurement of other payable	1,227.70	1,178.97	4,935.37	560.53	2,161.31
Interest paid on interest free loan	-	24.42	-	-	-
Interest income on					
- Fixed Deposits	(97.51)	(14.32)	(97.04)	-	-
- Others	-	-	(16,461.72)	(4,221.77)	(4,200.00)
-Loan to related parties	(11,634.89)	(6,334.88)	-	-	-
-Interest free loan	(499.47)	(24.42)	-	-	-
Operating profit/(loss) before working capital changes	**(72.26)**	**(108.09)**	**(149.92)**	**(113.33)**	**(63.33)**
Movement in working capital:					
Increase/(decrease) in trade payables	7.19	20.68	20.97	(0.36)	14.10
Increase/(decrease) in other financial liabilities	24.42	-	47.57	48.71	50.48
Increase/(decrease) in other current liabilities	(2.00)	2.83	(0.99)	4.48	(0.50)
(Increase)/decrease in Other current assets	(8.45)	3.89	4.48	(4.48)	0.03
(Increase)/decrease in loans	-	-	-	(1,928.34)	(1,682.67)
(Increase)/decrease in Other Financial assets	(16.42)	(15.80)	(620.87)	(229.72)	(0.89)
Cash generated from/(used in) operations	**(67.52)**	**(96.49)**	**(698.77)**	**(2,223.06)**	**(1,682.80)**
Direct taxes paid (net of refunds)	(10.56)	(0.43)	(9.51)	-	-
Net cash flows from/(used in) operating activities (A)	**(78.08)**	**(96.92)**	**(708.28)**	**(2,223.06)**	**(1,682.80)**
Cash flows from investing activities					
Loans (given) / recovered – (Secured interest bearing)	783.60	(15,300.00)	-	-	-
Loans (given) / recovered – (Unsecured interest bearing)	187.00	(113.65)	-	-	-
Loans (given) / recovered – (Interest Free)	-	(24.42)	-	-	-
Loans (given) / recovered – (MMR Loans)	19.94	-	-	-	-
Loans (given) / recovered – (Subordinated Debt)	827.50	(20,647.40)	-	-	-
Loans (given) / recovered – (Short term loans)	(1,913.73)	(752.80)	-	-	-
Equity Investment in subsidiaries	-	(7,154.50)	(13,948.63)	(1,212.00)	(615.00)
Investment in sub debt of subsidiaries	-	-	(27,866.12)	(2,282.64)	(2,264.49)
Repayment of sub debt from subsidiaries	-	-	6,553.77	-	-
Loan given to subsidiaries	-	-	(87,978.13)	(48.71)	(48.71)
Loan repayment from subsidiaries	-	-	20,984.80	-	-

Proceeds from sale / (purchase) of current investments (net)	(715.42)	21.31	35.69	1.06	30.36
Investments in Bank deposits (having maturity of more than twelve months)	-	-	-	-	
Investments in Bank deposits (having maturity of more than three months less than twelve months)	(568.10)	-	(2,041.10)	-	-
Interest received in fixed deposit	95.71	4.25	77.35	-	-
Interest received from related parties	4,374.91	1,349.42	3,446.20	2,097.00	825.00
Net cash flows from/ (used in) investing activities (B)	**3,091.41**	**(42,617.79)**	**(100,736.17)**	**(1,445.29)**	**2,072.84**
Cash flow from financing activities					
Proceeds from issuance of unit capital	-	-	51,146.50	2,425.00	3,816.33
Proceeds from interest free loan (related parties)	1,135.00	250.00	-	-	-
Repayment from interest free loan (related parties)	(135.00)	-	-	-	-
Return of unit capital / proceeds from right issue	(445.48)	28,619.50	(3,984.60)	-	-
Proceeds from long term borrowings	-	-	63,677.20	-	-
Repayment of long term borrowings	(317.44)	24,170.30	(646.54)	-	-
Transaction cost on long term borrowings	-	-	(708.60)	-	-
Proceeds/repayments of current borrowings	-	-	-	1,532.48	4,266.50
Transaction cost on long term borrowings		(324.58)			
Loan received from Sponsor	-	-	726.20	-	-
Loan repayment to Sponsor	-	-	(5,599.11)	-	-
Repayment of current borrowings	-	-	-	(267.50)	(4,336.33)
Interest Distribution	(545.71)	-	(449.55)	-	-
Finance Cost paid	(2,758.27)	(3.62)	(2,504.61)	-	-
Unit Issue Expenses	-	(51.82)	(68.61)	(15.33)	(3.26)
Net cash flows from/ (used in) financing activities (C)	**(3,066.90)**	**52,659.78**	**1,01,588.28**	**3,674.65**	**3,743.24**
Net increase/(decrease) in cash and cash equivalents (A+B+C)	**(53.57)**	**9,945.07**	**143.83**	**6.32**	**(12.40)**
Cash and cash equivalents at the beginning of the period	150.39	6.56	6.56	0.25	12.65
Cash and cash equivalents at the end of the period	**96.82**	**9,951.63**	**150.39**	**6.56**	**0.25**
Components of cash and cash equivalents					
Cash on hand	-	-	-	-	-
Balances with scheduled banks					
- On Current Account	17.85	130.42	141.83	6.56	0.25
-On Escrow Account	78.97	8,753.62	8.56	-	-
Deposits with banks -Maturity less then 3 months	-	1,067.60	-	-	-
Total Cash and cash equivalents	**96.82**	**9,951.63**	**150.39**	**6.56**	**0.25**
Debt reconciliation statement in accordance with Ind AS 7 **Opening balances as at beginning of the period**					
Long term borrowings	63,030.66	-	-	-	
Short term borrowings	-	4,872.91	4,872.91	3,607.93	3,677.76
Movements					
Long term borrowings	(317.44)	24,170.30	63,030.66	-	-
Short term borrowings	1,000.00	250.00	4,872.91	(1,264.98)	69.83

Closing balances as at end of the period					
Long term borrowings	62,713.22	24,170.30	63,030.66	-	-
Short term borrowings	1,000.00	5,122.91	-	4,872.91	3,607.93

C. Summary Consolidated Financial Information of the Sponsor

I. *Sponsor's summary consolidated balance sheet as at March 31, 2024, March 31,2023 and March 31, 2022*

(₹ in million)

		March 31, 2024	March 31, 2023	March 31, 2022
I	**ASSETS**			
1	**Non-current assets**			
	Property, Plant and Equipment	9,106.98	9,348.85	9,458.46
	Capital work-in-progress	76.46	75.35	267.55
	Right-of-use asset	36.32	76.13	115.83
	Goodwill on consolidation	78.04	78.04	78.04
	Other Intangible assets	2,45,916.26	2,55,298.04	2,63,058.62
	Intangible assets under development	-	-	357.73
a.	Financial assets			
	i) Investments	93,770.07	49,452.35	44,407.24
	ii) Trade receivable	-	1,341.72	5,998.85
	iii) Loans	-	-	-
	iv) Other financial assets	51,307.89	41,701.12	49,322.13
b.	Deferred tax assets (net)	507.78	636.60	1,289.09
c.	Other non-current assets	9.03	2.58	38.10
		4,00,808.83	**3,58,010.78**	**3,74,391.64**
2	**Current assets**			
a.	Inventories	2,930.89	2,990.01	3,174.59
b.	Financial assets			
	i) Investments	2,650.30	1,956.99	4,634.98
	ii) Trade receivables	7,586.13	16,352.31	9,935.47
	iii) Cash and cash equivalents	2,326.73	3,005.60	529.75
	iv) Bank balance other than (iii) above	15,299.31	21,165.80	16,908.71
	v) Loans	772.53	6,176.03	4,179.61
	vi) Other financial assets	5,809.97	6,140.86	2,691.10
c.	Current tax assets (net)	542.93	122.57	816.61
d.	Other current assets	10,475.52	11,740.82	8,403.74
		48,394.31	**69,650.99**	**51,274.56**
	TOTAL ASSETS	**4,49,203.14**	**4,27,661.77**	**4,25,666.20**
	EQUITY AND LIABILITIES			
	Equity			
	Equity share capital	6,039.00	6,039.00	6,039.00
	Other equity	1,31,406.05	1,27,749.99	1,19,617.41
		1,37,445.05	**1,33,788.99**	**1,25,656.41**
	Liabilities			
	Non-current liabilities			
	Financial liabilities			
	i) Borrowings	1,68,542.78	1,42,476.99	1,54,747.17
	ii) Lease liabilities	-	45.49	85.06
	iii) Other financial liabilities	1,01,525.34	1,06,490.26	1,12,063.99

Provisions	58.60	537.52	520.43
Deferred tax liabilities (net)	2,538.30	1,273.83	853.71
Other non-current liabilities	-	3.88	2965.63
	2,72,665.02	**2,50,827.97**	**2,71,235.99**
Current liabilities			
Financial liabilities			
i) Borrowings	17,947.19	24,919.87	12,105.50
ii) Trade payables			
a) total outstanding dues of micro enterprises and small enterprises	468.67	419.20	514.59
b) total outstanding dues of creditors other than micro enterprises	6,288.73	4,603.10	3,302.66
iii) Lease liabilities	43.88	39.58	34.92
iv) Other financial liabilities	10,216.33	8,367.53	10,717.31
Other current liabilities	3,286.07	4,637.45	1,824.80
Provisions	839.05	34.39	75.80
Current tax liabilities (net)	3.15	23.69	198.22
	39,093.07	**43,044.81**	**28,773.80**
Total liabilities	**3,11,758.09**	**2,93,872.78**	**3,00,009.79**
TOTAL EQUITY AND LIABILITIES	**4,49,203.14**	**4,27,661.77**	**4,25,666.20**

II. ***Sponsor's summary consolidated statement of profit and loss for the Financial Years 2024, 2023 and 2022***

(₹ in million)

	March 31, 2024	March 31, 2023	March 31, 2022
Income			
Revenue from operations	74,089.97	64,016.41	58,037.00
Other income	7,927.63	3,016.73	5,517.47
TOTAL INCOME	**82,017.60**	**67,033.14**	**63,554.47**
Expenses			
Cost of material consumed	4,063.28	4,187.56	4,701.25
Road work and site expenses	28,926.46	20,767.30	19,083.84
Employee benefits expense	3,940.25	3,461.62	2,873.21
Finance costs	18,633.15	15,146.26	18,906.23
Depreciation and amortisation expenses	9,949.49	8,321.20	6,827.70
Other expenses	3,842.09	3,309.60	3,403.77
TOTAL EXPENSES	**69,354.72**	**55,193.54**	**55,796.00**
Profit before share of profit/(loss) from joint venture/ exceptional item and tax	**12,662.88**	**11,839.60**	**7,758.47**
Share of loss from joint ventures (net)	(3,148.50)	(1,070.09)	(2,262.15)
Profit before exceptional items and tax	**9,514.38**	**10,769.51**	**5,496.32**
Exceptional item	-	-	-
Profit before tax	**9,514.38**	**10,769.51**	**5,496.32**
Tax expenses			
Current tax	1,840.13	2,500.18	1,781.97
Deferred tax	1,616.09	1,069.22	100.38
TOTAL TAX EXPENSES	**3,456.22**	**3,569.40**	**1,882.35**
Profit for the year	**6,058.16**	**7,200.11**	**3,613.97**
Other comprehensive income			
Items that will not be reclassified to statement of Profit and Loss in subsequent year:			
a) Mark to market gain/(loss) on fair value measurement of investments (net of tax)	55.62	1,682.60	244.74
b) Re-measurement loss on defined benefit plans (net of tax)	(31.53)	12.57	(22.31)
Items that will be reclassified to statement of Profit and Loss in subsequent year:			
a) Effective portion of (loss) on cash flow hedge	(924.22)	-	-
b) Tax on effective portion of (loss) on cash flow hedge	232.61	-	-
Other comprehensive income/(loss) for the year, net of tax	**(667.52)**	**1,695.17**	**222.43**

Total comprehensive income for the year, net of tax	**5,390.64**	**8,895.28**	**3,836.40**

III. ***Sponsor's summary consolidated Statement of Cash Flow for the Financial Years 2024, 2023 and 2022***

(₹ in million)

		March 31, 2024	March 31, 2023	March 31, 2022
Cash flow from operating activities				
Profit before tax		**9,514.38**	**10,769.51**	**5,496.32**
Adjustments to reconcile profit before tax net cash flows:				
Depreciation and amortisation		9,949.49	8,321.20	6,827.69
Resurfacing expenses		267.09	228.26	57.74
Cost of cash flow hedge		70.51	-	-
Net loss/ (gain) on sale of property, plant and equipment		(8.57)	(125.19)	(11.52)
Fair value gain on mutual funds / current investment		(8.88)	(45.83)	(84.11)
Gain on fair value measurement of other receivables		(4,935.38)	(560.53)	(2,161.31)
Share of loss from joint ventures		3,148.50	1,070.09	2,262.15
Net (gain) on sale of current Investment		(180.50)	(124.74)	(73.67)
Loss on sale on non current Investment		-	18.76	-
Extinguishment of premium liability		-	-	(246.41)
Finance costs		18,633.15	15,146.26	18,906.23
Interest income		(2,703.21)	(2,037.60)	(2,940.39)
Other non operative income		-	-	(197.11)
Allowance for credit impaired		-	-	64.10
Operating profit before working capital changes		**33,746.58**	**32,660.19**	**27,899.71**
Movement in working capital:				
Increase / (decrease) in trade payables		1,735.07	1,411.95	(3,326.86)
Increase/ (decrease) in provisions		16.50	(235.76)	168.73
Increase / (decrease) in other financial liabilities		1,574.39	(590.78)	523.91
(Decrease)/ increase in other liabilities		(1,355.26)	1,296.10	(890.65)
Decrease / (increase) in trade receivables		10,107.91	(1,759.71)	(8,317.07)
Decrease / (increase) in inventories		59.12	184.58	42.13
(Increase) / decrease in loans		2.01	27.84	(1.06)
(Increase) / decrease in other financial assets		(4,353.20)	(8,864.78)	(5,744.63)
(Increase) / decrease in other assets		1,265.30	(4,468.69)	(4,750.14)
Cash (used for) / generated from operations		**42,798.42**	**19,660.94**	**5,604.07**
Taxes paid (net)		(2,260.57)	(2,019.64)	(1,962.94)
Net cash flows generated from / (used in) operating activities	**(A)**	**40,537.85**	**17,641.30**	**3,641.13**
Cash flows from investing activities				
Addition to intangible assets including intangible assets under development and capital advances		(2,098.86)	(3,814.07)	(11,422.77)
Proceeds from sale of property, plant and equipment		14.72	207.62	152.39
Purchase of property, plant and equipment		(291.14)	(494.89)	(2,473.04)
Proceeds/ redemption from sale of non-current investments		2,372.59	301.30	333.69
Consideration received on transfer of subsidiaries (net)		-	3,418.19	-
Investment in joint venture		(49,857.04)	(4,663.03)	(1,946.33)
Loan given to joint ventures		(2,939.17)	(2,352.78)	(4,759.00)

Loan repaid by Joint Ventures		8,340.66	328.51	4,828.83
Other recoverable/advance towards subscription of units in joint venture		-	-	-
Receipt of other recoverable/advance towards subscription of units		-	-	-
Proceeds from sale/ (purchase) of current investments (net)		(503.94)	2,840.99	(1,354.61)
Proceeds/(Investment in) from maturity of bank deposits		5,866.55	(4,257.73)	(54.38)
(having original maturity of more than three months) (net)				
Interest received		2,650.63	1,982.40	1,160.89
Net cash flows generated from investing activities	**(B)**	**(36,445.00)**	**(6,503.49)**	**(15,534.33)**
Cash flow from financing activities				
Proceeds from non-current borrowings		61,906.29	12,975.02	7,934.32
Proceeds from issue of non-convertible debentures		-	-	3,500.00
Repayments of non-convertible debentures		(27,414.64)	(1,058.74)	(16,210.00)
Repayment of non-current borrowings		(13,464.32)	(15,083.09)	(16,653.93)
Proceeds/ (Repayment) of current borrowings (net)		(7,499.19)	7,641.41	(8,901.29)
Proceeds from Issue of Equity Share Capital (Net of issue expense)		-	-	52,866.92
Payment of lease liabilities		(47.83)	(45.55)	(43.38)
Finance cost paid		(16,591.30)	(12,279.21)	(16,606.99)
Dividend paid on equity shares		(1,660.73)	(754.88)	-
Net cash flows (used in) / generated from financing activities	**(C)**	**(4,771.72)**	**(8,605.04)**	**5,885.65**
Net increase/ (decrease) in cash and cash equivalents (A+B+C)		**(678.87)**	**2,532.77**	**(6,007.55)**
Cash and cash equivalents at the beginning of the year		3,005.60	472.83	6,480.38
Cash and cash equivalents at the end of the year		**2,326.73**	**3,005.60**	**472.83**
Components of cash and cash equivalents				
Balances with scheduled banks:				
- Trust, retention and other escrow accounts		58.66	144.25	68.09
- Current accounts		1,769.89	2,311.87	246.46
- In deposit accounts with original maturity less than 3 months		387.37	439.16	100.78
Cash on hand		110.81	110.32	114.42
Less : Book overdraft		-	-	(56.92)
Total Cash and cash equivalents		**2,326.73**	**3,005.60**	**472.83**

D. Summary Standalone Financial Statements of the Investment Manager

I. Investment Manager's Summary Balance Sheet as at March 31, 2024, March 31, 2023 and March 31, 2022

(₹ in millions)

		March 31, 2024	March 31, 2023	March 31, 2022
I	**ASSETS**			
(1)	**Non-current assets**			
a.	Property, plant and Equipment	0.16	0.38	-
b.	Financial assets			
	i) Investments	0.10	0.10	0.10
	ii) Loans	-	-	-
		0.26	**0.48**	**0.10**
(2)	**Current assets**			
a.	Financial assets			
	i) Investments	-	5.10	4.01
	ii) Trade Receivables	95.19	78.54	81.70
	iii) Cash and cash equivalents	11.56	5.39	17.18
	iv) Bank balance other than (iii) above	13.00	10.00	-
	v) Other financial assets	-	0.01	0.12
b.	Current tax assets (net)	6.85	4.84	12.69
c.	Other current assets	0.47	0.01	0
		127.07	**103.89**	**115.71**
	TOTAL ASSETS	**127.33**	**104.36**	**115.81**
II	**EQUITY AND LIABILITIES**			
	Equity			
a.	Equity share capital	70.00	70.00	70.00
b.	Other equity	38.62	19.47	32.28
		108.62	**89.47**	**102.28**
	Liabilities			
(1)	**Non-current liabilities**			
	Provisions	9.26	8.01	2.71
		9.26	**8.01**	**2.71**
(2)	**Current liabilities**			
a.	Financial liabilities			
	i) Trade payables			
	a) total outstanding dues of micro enterprises and small enterprises	-	-	-
	b) total outstanding dues of creditors other than micro enterprises	0.11	0.11	0.90
	ii) Other financial liabilities	3.35	3.52	5.27
b.	Other current liabilities	5.02	2.44	4.12
c.	Provisions	0.97	0.81	0.13
		9.45	**6.88**	**10.42**
	Total liabilities	**18.71**	**14.89**	**13.13**
	TOTAL EQUITY AND LIABILITIES	**127.33**	**104.36**	**115.81**

II. Investment Manager's Summary Statement of Profit and Loss for the the Financial Years 2024, 2023 and 2022

(₹ in millions)

	March 31, 2024	March 31, 2023	March 31, 2022
Income			
Revenue from operations	124.00	47.90	36.00
Other income	1.13	1.13	0.49
TOTAL INCOME	**125.13**	**49.03**	**36.49**
Expenses			
Employee benefits expense	82.88	53.61	28.50
Depreciation and amortisation expenses	0.28	0	-
Other expenses	16.95	6.35	7.42
TOTAL EXPENSES	**100.11**	**59.96**	**35.92**
Profit before tax	**25.02**	**(10.93)**	**0.57**
Tax expenses			
Current tax	5.64	2.42	0.20
TOTAL TAX EXPENSES	**5.64**	**2.42**	**0.20**
Profit for the year	**19.38**	**(13.35)**	**0.37**
Other comprehensive income			
Item that will not to be reclassified to profit or loss:			
Re-measurement gains/ (losses) on defined benefit plans (net of taxes)	(0.23)	0.14	0.03
Other comprehensive income/(loss) for the year (net of taxes)	**(0.23)**	**0.14**	**0.03**
Total comprehensive income for the year	**19.15**	**(13.21)**	**0.40**

III. Investment Manager's Summary Statement of Cash Flow for the Financial Years 2024, 2023 and 2022

(₹ in millions)

		March 31, 2024	March 31, 2023	March 31, 2022
Cash flow from operating activities				
Profit before tax		**25.02**	**(10.93)**	**0.57**
Adjustments to reconcile profit before tax net cash flows:				
Depreciation and amortisation expenses		0.28	0	-
Re-measurement gains on defined benefit plans (net of taxes)		(0.23)	0.14	-
Fair Value Gain on Mutual Funds		-	(0.10)	(0.01)
(Gain) / Loss on sale of investment		(0.06)	0	(0.10)
Interest income on				
- Bank deposits		(0.88)	(0.56)	(0.35)
- Others		(0.19)	(0.43)	(0.03)
Operating profit before working capital changes		**23.94**	**(11.87)**	**0.08**
Working capital adjustments				
Decrease/(increase) in loans		-	0	0.07
Decrease/(increase) in trade receivables		(16.65)	3.16	15.20
Decrease/(increase) in others financial assets		0.00	0.10	0.01
Increase/(decrease) in provisions		1.41	5.98	0.38
Increase /(decrease) in trade payables		(0.00)	(0.79)	0.78
Decrease/(increase) in other assets		(0.46)	(0.01)	0.63
Increase/(Decrease) in other financial liabilities		(0.17)	(1.75)	(0.37)
(Decrease)/Increase in other liabilities		2.58	(1.69)	(2.46)
Cash (used for) / generated from operations		**10.65**	**(6.86)**	**14.32**
Taxes paid (net)		(7.64)	5.43	(4.44)
Net cash flows generated from / (used in) operating activities	**(A)**	**3.01**	**(1.43)**	**9.88**
Cash flows from investing activities				
Purchase of Property, plant and equipment including CWIP		(0.07)	(0.38)	-
Intangible Assets includes Intangible Assets under Development & Capital Advance		-	-	(3.91)
Proceeds from sale/(purchase) of current investments		5.15	(0.98)	
Bank deposits placed (having original maturity of more than three months)		(13.00)	(10.00)	-
Proceeds from maturity of bank deposits (having original maturity of more than three months		10.00	-	-
Interest received		1.08	1.00	0.37
Dividend received from subsidiary companies		-	-	-
Net cash flows generated from investing activities	**(B)**	**3.16**	**(10.36)**	**(3.54)**
Cash flow from financing activities				
Equity dividend paid		-	-	-
Repayment of current borrowings		-	-	-
Net cash flows (used in) / generated from financing activities	**(C)**	**-**	**-**	**-**
Net increase/ (decrease) in cash and cash equivalents (A+B+C)		**6.17**	**(11.79)**	**6.34**
Cash and cash equivalents at the beginning of the year		5.39	17.18	10.84
Cash and cash equivalents at the end of the year		**11.56**	**5.39**	**17.18**
Components of cash and cash equivalents				
Cash on hand		0	0	0
Balances with scheduled banks:				
- In current accounts		6.56	0.39	2.02
- Original maturity less than 3 months		5.00	5.00	15.16
Total Cash and cash equivalents		**11.56**	**5.39**	**17.18**

E. Summary Financial Information of the Target SPV

I. Target SPV's Summary Balance Sheet as at September 30, 2024, March 31, 2024, March 31, 2023 and March 31, 2022

(₹ in million)

	As at September 30, 2024 (Audited)	As at March 31, 2024 (Audited)	As at March 31, 2023 (Audited)	As at March 31, 2022 (Audited)
ASSETS				
Non-current assets				
Intangible assets under development	42,587.09	39,305.19	16,100.57	8.11
Total non-current assets	**42,587.09**	**39,305.19**	**16,100.57**	**8.11**
Current assets				
Financial assets				
i) Investments	19.29	-	-	-
ii) Cash and cash equivalents	84.26	0.16	0.11	0.30
iii) Other financial assets	1,633.20	406.21	641.46	-
Other current assets	199.31	21.82	9.86	1.12
Total current assets	**1,936.06**	**428.19**	**651.43**	**1.42**
TOTAL ASSETS	**44,523.15**	**39,733.38**	**16,752.00**	**9.53**
EQUITY AND LIABILITIES				
Equity				
Equity share capital	5,332.50	5,332.50	5,332.50	0.50
Other equity	962.82	799.12	340.56	(0.03)
Total equity	**6,295.32**	**6,131.62**	**5,673.06**	**0.47**
Liabilities				
Non-current liabilities				
Financial liabilities				
i) Borrowings	34,658.02	29,171.14	6,233.74	-
Deferred tax liabilities (net)	315.66	261.09	108.28	-
Total non- current liabilities	**34,973.69**	**29,432.23**	**6,342.02**	**-**
Current liabilities				
Financial liabilities				
i) Borrowings	604.93	708.49	759.28	6.68
ii) Trade payables				
a) total outstanding dues of micro enterprises and small enterprises	-	-	0.11	-
b) total outstanding dues of creditors other than micro enterprises	2,648.72	3,406.32	3,281.43	0.03
iii) Other financial liabilities	-	0.04	641.49	1.87
Other Current liabilities	0.04	53.32	50.41	0.48
Current tax liabilities (net)	0.46	1.36	4.20	-
Total current liabilities	**3,254.15**	**4,169.53**	**4,736.92**	**9.06**

Total liabilities	**38,227.83**	**33,601.76**	**11,078.94**	**9.06**
TOTAL EQUITY AND LIABILITIES	**44,523.15**	**39,733.38**	**16,752.00**	**9.53**

II. Target SPV's Summary Statement of Profit and Loss for the the six-month period ended September 30, 2024, September 30, 2023 and the Financial Years 2024, 2023 and 2022

(₹ in million)

	For the six months ended September 30, 2024 (Audited)	For the six months ended September 30, 2023 (Audited)	For the year ended March 31, 2024 (Audited)	For the year ended March 31, 2023 (Audited)	For the period from January 05, 2022 to March 31, 2022 (Audited)
Income					
Revenue from operations	7,631.19	8,273.81	20,884.70	14,791.04	-
Other income	2.02	3.43	5.42	24.92	-
TOTAL INCOME	**7,633.21**	**8,277.24**	**20,890.12**	**14,815.96**	**-**
Expenses					
Road work and site expenses	5,599.70	7,356.07	18,305.72	14,005.32	-
Finance costs	1,775.33	649.47	1,908.81	180.63	-
Other expenses	39.43	27.46	62.98	174.87	0.03
TOTAL EXPENSES	**7,414.46**	**8,033.00**	**20,277.51**	**14,360.82**	**0.03**
Profit / (Loss) before tax	**218.75**	**244.24**	**612.61**	**455.14**	**(0.03)**
Tax expenses					
Current tax	0.48	0.86	1.23	6.27	-
MAT credit utilisation/(entitlement)	-	-	-	-	-
Deferred tax (credit) / charge	54.57	60.61	152.82	108.28	-
Total tax expenses	**55.05**	**61.47**	**154.05**	114.55	-
Profit / (Loss) after tax (A)	**163.70**	**182.77**	**458.56**	**340.59**	**(0.03)**
Other comprehensive income / (loss)					
A. Item that will not be reclassified to statement of profit and loss in subsequent year	-	-	-	-	-
Other comprehensive income/(loss) for the year/period B)	-	-	-	-	-
Total comprehensive income for the year/period: (A+B)	**163.70**	**182.77**	**458.56**	**340.59**	**(0.03)**

III. Target SPV's Summary Statement of Cash Flow for the six-month period ended September 30, 2024, September 30, 2023 and the Financial Years 2024, 2023 and 2022

(₹ in million)

Particulars	For the six months ended September 30, 2024 (Audited)	For the six months ended September 30, 2023 (Audited)	For the year ended March 31, 2024 (Audited)	For the year ended March 31, 2023 (Audited)	For the period from January 05, 2022 to March 31, 2022 (Audited)
Cash flow from operating activities					
Profit / (Loss) before tax	218.75	244.24	612.61	455.14	(0.03)
Adjustments					
Finance costs	1,775.33	649.47	1,908.81	180.63	-
Fair value gain on Mutual funds	(0.12)	(0.14)	-	-	-
(Gain) / loss on sale of investments	(1.90)	(3.29)	(5.42)	(4.24)	-
Interest income on					
- Bank Deposits	-	-	-	(20.69)	-
Operating profit/(loss) before working capital changes	**1,992.06**	**890.28**	**2,515.99**	**610.85**	**(0.03)**
Movement in working capital:					
Decrease/ (increase) in other financial assets	(1,226.98)	(547.29)	235.26	(641.46)	-
Decrease/ (increase) in other assets	(177.49)	(779.22)	(11.96)	(8.74)	(1.12)
Increase/(decrease) in trade payables	(757.60)	(984.26)	124.78	3,281.51	0.03
Increase/(decrease)in other financial liabilities	(0.04)	547.32	(641.45)	639.63	1.87
Increase/(decrease)in other liabilities	(53.28)	(21.44)	2.91	49.92	0.48
Cash generated from/ (used in) operations	**(223.34)**	**(894.62)**	**2,225.53**	**3,931.70**	**1.23**
Direct taxes paid (net of refunds)	(1.38)	-	(4.07)	(2.07)	-
Net cash flows from/ (used in) operating activities (A)	**(224.72)**	**(894.62)**	**2,221.46**	**3,929.63**	**1.23**
Cash flows from investing activities					
Purchase of property, plant and equipment including CWIP, intangible assets including intangible assets under development and capital advances	(3,281.90)	(9,377.30)	(23,204.62)	(16,092.47)	(8.11)
Proceeds from sale/ (purchase) of current investments (net)	(17.29)	(39.37)	5.42	4.24	-
Interest received			-	20.69	-
Net cash flows from/(used in) investing activities (B)	**(3,299.19)**	**(9,416.67)**	**(23,199.19)**	**(16,067.54)**	**(8.11)**
Cash flow from financing activities					
Other Equity					
Proceeds from issuance of equity share capital	-	-	-	5,332.00	0.50
Proceeds from non-current borrowings	5,486.89	11,637.59	22,953.07	6,233.73	-
Proceeds from current borrowings	2,066.65	229.51	2,282.44	752.60	6.68
Loan repayment to subsidiary companies	-	-	(2,333.24)	-	-
Repayment of current borrowings	(2,170.21)	(906.08)	-	-	-
Finance cost paid	(1,775.33)	(649.47)	(1,924.48)	(180.63)	-
Net cash flows from/(used in) financing activities (C)	**3,608.01**	**10,311.55**	**20,977.79**	**12,137.70**	**7.18**
Net increase/(decrease) in cash and cash equivalents (A+B+C)	**84.10**	**0.26**	**0.05**	**(0.19)**	**0.30**

Cash and cash equivalents at the beginning of the period	0.16	0.11	0.11	0.30	-
Cash and cash equivalents at the end of the period	**84.26**	**0.37**	**0.16**	**0.11**	**0.30**
Components of cash and cash equivalents					
Cash on hand	-	-	-	-	-
Balances with scheduled banks					
- On Current Account	84.26	0.37	0.16	0.11	0.30
Total Cash and cash equivalents	**84.26**	**0.37**	**0.16**	**0.11**	**0.30**
Debt reconciliation statement in accordance with Ind AS 7					
Opening balances					
Long term borrowings	29,171.14	6,233.74	6,233.74	-	-
Short term borrowings	708.49	759.28	759.28	6.68	-
Movements					
Long term borrowings	5,486.89	11,637.59	22,937.40	6,233.74	-
Short term borrowings	(103.56)	(676.57)	(50.79)	752.60	6.68
Closing balances					
Long term borrowings	34,658.03	17,871.33	29,171.14	6,233.74	-
Short term borrowings	604.93	82.71	708.49	759.28	6.68

F. Pro forma Summary Financial Information

I. Pr oforma Consolidated Balance Sheet as at September 30, 2024 and March 31, 2024

(₹ in million)

	September 30, 2024 Consolidated Trust (A)	September 30, 2024 MBEL (B)	September 30,2024 Pro forma adjustments (C)	September 30, 2024 Pro forma information (A+B+C)	March 31, 2024 Consolidated Trust (A)	March 31, 2024 MBEL (B)	March 31, 2024 Pro forma adjustments (C)	March 31, 2024 Pro forma information (A+B+C)
ASSETS								
Non-current assets								
Property, Plant and Equipment	6.25	-	-	6.25	6.63	-	-	6.63
Goodwill	604.54	-	-	604.54	604.54	-	-	604.54
Other Intangible assets	3,84,011.09	-	-	3,84,011.09	3,17,031.32	-	-	3,17,031.32
Intangible assets under development	4,017.34	42,587.09	-	46,604.43	64,816.48	39,305.19	-	1,04,121.67
Financial assets								
i) Others	107.43	-	-	107.43	4,408.10	-	-	4,408.10
Deferred tax assets	2,587.29	-	-	2,587.29	2,229.78	-	-	2,229.78
Other non-current assets	-	-	-	-	12.00	-	-	12.00
	3,91,333.94	**42,587.09**	**-**	**4,33,921.03**	**3,89,108.85**	**39,305.19**	**-**	**4,28,414.04**
Current assets								
Inventories	-	-	-	-	-	-	-	-
Financial assets								
i) Investments	2,134.16	19.29	-	2,153.45	1,523.07	-	-	1,523.07
ii) Trade receivables	123.23	-	-	123.23	68.15	-	-	68.15
iii) Cash and cash equivalents	543.41	84.26	-	627.67	1,605.67	0.16	-	1,605.83
iv) Bank balance other than cash & cash equivalents	9,995.20	-	-	9,995.20	6,672.40	-	-	6,672.40
v) Other	2,380.35	1,633.20	-	4,013.55	2,346.30	406.21	-	2,752.51
Current tax assets (net)	193.74	-	-	193.74	174.41	-	-	174.41
Other current assets	984.14	199.31	-	1,183.45	537.93	21.82	-	559.75
	16,354.23	**1,936.06**	**-**	**18,290.29**	**12,927.93**	**428.19**	**-**	**13,356.12**
Total assets	**4,07,688.17**	**44,523.15**	**-**	**4,52,211.32**	**4,02,036.78**	**39,733.38**	**-**	**4,41,770.16**

EQUITY AND LIABILITIES								
Equity								
Unit Capital	1,34,645.74	5,332.50	-	1,39,978.24	1,35,091.22	5,332.50	-	1,40,423.72
Subordinate Debt	16,916.65	-	-	16,916.65	16,916.65	-	-	16,916.65
Other Equity	(21,054.62)	962.82	-	(20,091.80)	(17,640.04)	799.12	-	(16,840.92)
Total Equity	**1,30,507.77**	**6,295.32**	**-**	**1,36,803.09**	**1,34,367.83**	**6,131.62**	**-**	**1,40,499.45**
Non-controlling interests	1.58	-	-	1.58	1.49	-	-	1.49
Total unit holder's Equity	**1,30,509.35**	**6,295.32**	**-**	**1,36,804.67**	**1,34,369.32**	**6,131.62**	**-**	**1,40,500.94**
Non-current liabilities								
Financial liabilities								
i) Borrowings	2,20,433.93	34,658.02	-	2,55,091.95	2,14,136.34	29,171.14	-	2,43,307.48
ii) Other financial liabilities	42,016.93	-	-	42,016.93	40,765.03	-	-	40,765.03
Provisions	1,251.53	-	-	1,251.53	1,336.98	-	-	1,336.98
Deferred tax liabilities (net)	294.55	315.66	-	610.21	280.89	261.09	-	541.98
	2,63,996.94	**34,973.69**	**-**	**2,98,970.62**	**2,56,519.24**	**29,432.23**	**-**	**2,85,951.47**
Current liabilities								
Financial liabilities								
i) Borrowings	1,940.23	604.93	-	2,545.16	1,178.93	708.49	-	1,887.42
ii) Trade payables	-	-	-	-	-	-	-	-
a) total outstanding dues of micro enterprises and small enterprises	1.83	-	-	1.83	2.41	-	-	2.41
b) total outstanding dues of creditors other than micro enterprises and small enterprises	6,781.42	2,648.72	-	9,430.14	5,611.71	3,406.32	-	9,018.03
iii) Other financial liabilities	1,850.20	-	-	1,850.20	1,883.60	0.04	-	1,883.64
Other current liabilities	87.46	0.04	-	87.50	235.99	53.32	-	289.31
Provisions	2,520.74	-	-	2,520.74	2,235.58	-	-	2,235.58
Current tax liabilities (net)	-	0.46	-	0.46	-	1.36	-	1.36
	13,181.88	**3,254.15**	**-**	**16,436.03**	**11,148.22**	**4,169.53**	**-**	**15,317.75**
Total liabilities	**2,77,178.82**	**38,227.83**	**-**	**3,15,406.65**	**2,67,667.46**	**33,601.76**	**-**	**3,01,269.22**
Total equity and liabilities	**4,07,688.17**	**44,523.15**	**-**	**4,52,211.32**	**4,02,036.78**	**39,733.38**	**-**	**4,41,770.16**

II. Pro forma Consolidated Statement of Profit and Loss for the the six-month period ended September 30, 2024 and Financial Year 2024

(₹ in million)

Particulars	September 30, 2024 Consolidated Trust (A)	September 30, 2024 MBEL (B)	September 30,2024 Pro forma adjustments (C)	September 30, 2024 Pro forma information (A+B+C)	March 31, 2024 Consolidated Trust (A)	March 31, 2024 MBEL (B)	March 31, 2024 Pro forma Adjustments (C)	March 31, 2024 Pro forma Information (A+B+C)
Income								
Revenue from operations	23,606.82	7,631.19	-	31,238.01	38,930.75	20,884.70	-	59,815.45
Other income	476.66	2.02	-	478.68	839.83	5.42	-	845.25
Total income	**24,083.48**	**7,633.21**	**-**	**31,716.69**	**39,770.58**	**20,890.12**	**-**	**60,660.70**
Expenses								
Operating Expenses (Road work & site expenses	10,098.74	5,599.70	-	15,698.44	19,876.05	18,305.72	-	38,181.77
Project Management Fees	2,625.90	-	-	2,625.90	3,573.20	-	-	3,573.20
Valuation Expenses	2.12	-	-	2.12	5.41	-	-	5.41
Insurance and Security Expenses	64.99	-	-	64.99	94.71	-	-	94.71
Trustee Fees	0.65	-	-	0.65	14.97	-	-	14.97
Depreciation on Property, Plant and Equipment	0.38	-	-	0.38	0.95	-	-	0.95
Amortisation of Intangible Assets	2,505.73	-	-	2,505.73	3,648.04	-	-	3,648.04
Finance costs (Interest)	10,081.30	1,767.31	-	11,848.61	13,449.23	1,893.04	-	15,342.27
Finance costs (Others)	397.62	8.02	-	405.64	1,007.87	15.77	-	1,023.64
Audit Fees	9.40	-	-	9.40	12.48	-	-	12.48
Legal & Professional Fees	66.32	-	-	66.32	726.17	-	-	726.17
Investment Manager Fees	52.65	-	-	52.65	146.32	-	-	146.32
Custodian Fees	3.42	-	-	3.42	1.21	-	-	1.21
Fair value loss on measurement of other payable	1,227.70	-	-	1,227.70	4,935.37	-	-	4,935.37
Other expenses	18.83	39.43	-	58.26	116.58	62.98	-	179.56
Total expenses	**27,155.75**	**7,414.46**	**-**	**34,570.21**	**47,608.56**	**20,277.51**	**-**	**67,886.07**
Profit/(loss) before tax	**(3,072.27)**	**218.75**	**-**	**(2,853.52)**	**(7,837.98)**	**612.61**	**-**	**(7,225.37)**
Tax expenses								
Current tax	140.36	0.48	-	140.84	5.25	1.23	-	6.48
Deferred tax	(343.86)	54.57	-	(289.29)	(1,193.08)	152.82	-	(1,040.26)

MAT Credit utilisation / (Entitlement)	-	-	-	-	-	-	-	-
Total tax expenses	**(203.50)**	**55.05**	**-**	**(148.45)**	**(1,187.83)**	**154.05**	**-**	**(1,033.78)**
Profit/(loss) after tax	**(2,868.77)**	**163.70**	**-**	**(2,705.07)**	**(6,650.15)**	**458.56**	**-**	**(6,191.59)**
Other comprehensive income								
Item that will not be reclassified to profit or loss:								
(a) Re-measurement (loss)/gain on defined benefit plans (net of taxes)	-	-	-	-	-			
Other comprehensive (loss) for the year/ period, net of tax	**-**	**-**	**-**	**-**	**-**			
Total comprehensive income/(loss) for the year/period	**(2,868.77)**	**163.70**	**-**	**(2,705.07)**	**(6,650.15)**	**458.56**	**-**	**(6,191.59)**

THE ISSUE

The Issue is a rights issue under the InvIT Regulations. The Issue has been authorized by a resolution of the board of directors of the Investment Manager dated December 9, 2024.

The following table summarizes the details of the Issue:

Issue	Up to 58,400,000 Units aggregating up to ₹17,149.23 million
Rights Entitlements	One Unit for every 19.07 Units held on the Record Date*
Allotment Lot	200,000 Units
Trading Lot	200,000 Units
Record Date	December 13, 2024
Issue Price	₹ 293.65 per Unit**
Terms of Payment	See "*Issue Procedure*" on page 837
Issue Proceeds	See "*Objects of the Issue*" on page 79
Designated Stock Exchange	NSE
Timeline for Listing	The Units issued in the Issue will be listed within six Working Days from the Issue Closing Date, or such other timeline as may be specified under applicable law
Details of outstanding Units	
Units outstanding prior to the Issue	1,113,693,265 Units
Units outstanding after the Issue	1,172,093,265 Units***

**The Rights Entitlement Ratio is one Unit for every 19.0700901541096 Units held by Eligible Unitholders on the Record Date. For presentation purposes only, the Rights Entitlement Ratio has been presented as rounded-off to two decimal places.*

***The Issue Price is ₹293.6511986. For presentation purposes only, the Issue Price has been presented as rounded-off to two decimal places.*

****Assuming full subscription in the Issue.*

Pursuant to a letter dated December 6, 2024 (read with the letter dated December 11, 2024 from the Investment Manager), the SEBI granted certain exemptions to the Trust from compliance with certain provisions of Chapter 9 of the SEBI Master Circular, pursuant to which the Trust is eligible to undertake the Issue as a rights issue on a fast-track basis.

The Trust has received in-principle approval from the NSE for the listing of the Units to be allotted pursuant to the Issue through its letter dated December 13, 2024. The Investment Manager (on behalf of the Trust) will also make an application to the Stock Exchange to obtain trading approval for the Rights Entitlements.

The Units will be allotted and traded only in dematerialized form, in accordance with the InvIT Regulations and the SEBI Master Circular. There shall not be multiple classes of Units of the Trust, unless permitted by applicable law.

No person connected with the Issue, including any person connected with the distribution of the Issue, shall offer any incentive, whether direct or indirect, in any manner, whether in cash or kind or services or otherwise to any person for making an application for Allotment of the Units.

GENERAL INFORMATION

The Trust has been settled by the Sponsor as an irrevocable trust under the provisions of the Trusts Act in New Delhi, India pursuant to the Indenture of Trust dated August 27, 2019, as amended. The Indenture of Trust is registered under the Registration Act. The Trust is registered with the SEBI as an infrastructure investment trust under the InvIT Regulations. The Units of the Trust are listed on the NSE.

For details of the business of the Trust, see "*Business*" on page 127.

Principal place of business and correspondence address of the Trust:

IRB Infrastructure Trust
Off No-11th Floor/1101
Hiranandani Knowledge Park
Technology Street, Hill Side Avenue
Powai, Mumbai 400 076
Maharashtra, India
Tel: +91 22 6733 6400
E-mail: irbinfrastructuretrust@irb.co.in
Website: https://www.irbinfratrust.co.in/
SEBI registration number: IN/InvIT/19-20/0012
Date of registration with the SEBI: November 25, 2019

Contact Person and Compliance Officer

Mr. Kaustubh Shevade has been designated by the Investment Manager as the Compliance Officer with respect to the Trust and is the relevant contact person with respect to the Trust. His contact details are as follows:

Mr. Kaustubh Shevade
MMK Toll Road Private Limited
Off No-11th Floor/1101
Hiranandani Knowledge Park
Technology Street, Hill Side Avenue
Powai, Mumbai 400 076
Maharashtra, India
Tel: +91 22 6733 6400
E-mail: kaustubh.shevade@irb.co.in

Applicants can contact the Compliance Officer, the Registrar or the Lead Manager in case of any pre-Issue or post-Issue related problems such as non-credit of Rights Entitlements or Allotted Units in the respective beneficiary account and non-receipt of refunds.

Sponsor/Project Manager

IRB Infrastructure Developers Limited
Off No-11th Floor/1101
Hiranandani Knowledge Park
Technology Street, Hill Side Avenue
Powai, Mumbai 400 076
Maharashtra, India
Tel: +91 22 6640 4220
Email: info@irb.co.in
Contact person: Mr. Mehul Patel

Trustee

IDBI Trusteeship Services Limited
Ground Floor, Universal Insurance Building
Sir Phirozshah Mehta Road, Fort
Mumbai 400 001

Maharashtra, India
Tel: +91 22 4080 7000
Fax: +91 22 6631 1776
E-mail: itsl@idbitrustee.co.in
SEBI registration number: IND000000460
Contact person: Ms. Sheetal Mehta / Mr. Munjal G. Dhanani

Investment Manager

MMK Toll Road Private Limited
Off No-11th Floor/1101
Hiranandani Knowledge Park
Technology Street, Hill Side Avenue
Powai, Mumbai 400 076
Maharashtra, India
Tel: +91 22 6733 6400
Email: dhananjay.joshi@irb.co.in
Contact person: Mr. Dhananjay Joshi

Lead Manager

Vivro Financial Services Private Limited
Vivro House, 11 Shashi Colony, Opp Suvidha Shopping Center
Paldi, Ahmedabad – 380007, Gujarat
India
Tel: +91 79 4040 4242
Email: investors@vivro.net
Investor grievance email: investors@vivro.net
Website: www.vivro.net
Contact Person: Kruti Saraiya/Jay Dodiya
SEBI registration number: INM000010122
CIN: U67120GJ1996PTC029182

Advisors to the Sponsor for the Issue

Avener Capital Private Limited
ONE BKC, 1312, C Wing, 13th Floor
Plot No. C 66, G Block, Bandra-Kurla Complex
Bandra East, Mumbai 400 051
Maharashtra, India

Legal Advisors for the Issue as to Indian law

S&R Associates
One World Center, 1403, Tower 2 B
841 Senapati Bapat Marg, Lower Parel
Mumbai 400 013
Maharashtra, India

Joint Statutory Auditors

Gokhale & Sathe, Chartered Accountants
Unit No. 304/308/309
Udyog Mandir No. 1
7-C, Bhagoji Keer Marg, Mahim
Mumbai 400 016
Maharashtra, India
Tel: +91 22 4348 4242
E-mail: kaustubh@gokhalesathe.in
Firm registration number: 103264W

M S K A & Associates, Chartered Accountants
602, Floor 6, Raheja Titanium, Western Express Highway, Geetanjali Railway Colony
Ram Nagar, Goregaon (E)
Mumbai 400 063
Maharashtra, India
Tel: +91 22 6238 0519
E-mail: nitintiwari@mska.in
Firm registration number: 105047W

Peer Review Certificate number: 016321 **Peer Review Certificate number**: 016966

Valuer for the Target Valuation Report and the Current Portfolio Valuation Report

KPMG Valuation Services LLP
IBBI Registration No. IBBI/RV-E/06/2020/115
2nd Floor, Block T2 (B Wing), Lodha Excelus
Apollo Mills Compounds, N M Joshi Marg
Mahalaxmi, Mumbai 400 011, Maharashtra, India
Tel: + 91 22 3989 6000
E-mail: amitsjain@kpmg.com
Contact Person: Amit Jain

Registrar to the Issue

KFin Technologies Limited
Selenium Tower-B, Plot No. 31 &32
Gachibowli, Financial District
Nanakramguda, Serilingampally
Hyderabad 500 032, Telangana, India
Tel: +91 40 6716 2222/1800 309 4001
Fax: +91 40 6716 1563
Email: irb.rights@kfintech.com
SEBI registration number: INR000000221
Contact person: M. Murali Krishna
Website: www.kfintech.com
Investor Grievance Email: einward.ris@kfintech.com
CIN: L72400TG2017PLC117649

Escrow Collection Bank

Canara Bank
14th Floor, E wing, Market Tower,
Cuffe Parade
Mumbai 400 005
Maharashtra, India
Contact person: Neelu Shukla (Chief Manager)
Tel: 022 2215 6011
E-mail: cb2630@canarabank.com
Website: www.canarabank.com
SEBI registration number: INB100000019

Credit Rating

Certain of our proposed long term loan facilities have received a 'AAA/Watch Developing' credit rating from CRISIL Ratings on November 26, 2024.

Underwriting

The Issue is not proposed to be underwritten.

Responsibilities of the Lead Manager

S. No.	Activity	Responsibility
1.	Capital structuring with the relative components and formalities such type of instrument, number of instruments to be issued, etc.	Lead Manager
2.	Coordination for drafting and design of the Letter of Offer in accordance with the InvIT Regulations and other stipulated requirements and completion of prescribed formalities with the Stock Exchange and SEBI	Lead Manager

S. No.	Activity	Responsibility
3.	Drafting, design and distribution of the Application Form and Rights Entitlement Letter	Lead Manager
4.	Selection of various agencies connected with Issue, such as Registrars to the Issue and printers	Lead Manager
5.	Drafting and approval of all statutory advertisements	Lead Manager
6.	Selection of various agencies connected with Issue, such as Banker(s) to the Issue etc., as may be applicable and co-ordination of the respective agreements	Lead Manager
7.	Drafting and approval of all publicity material including corporate advertisement, brochure, corporate films, etc., (if applicable)	Lead Manager
8.	Drafting and design of management/investor presentation (if applicable)	Lead Manager
9.	Formulating and coordination of international marketing strategy (if applicable)	Lead Manager
10.	Formulation and coordination of domestic institutional marketing strategy (if applicable)	Lead Manager
11.	Co-ordination with stock exchanges and formalities for use of online software, bidding terminal, mock trading, etc. including any stock exchange deposit	Lead Manager
12.	Non-institutional and retail marketing of the Issue, if applicable, which will cover, *inter-alia*: • Formulating marketing strategies; • Finalizing collection centres; and • Follow-up on distribution of publicity and Issue material including Application Form, Letter of Offer	Lead Manager
13.	Post-Issue activities, which shall involve essential follow-up steps including follow-up with escrow banks and advising the Investment Manager about the closure of the Issue, based on correct figures, finalization of the basis of allotment or weeding out of multiple applications, listing of instruments, dispatch of certificates or demat credit and refunds and coordination with various agencies connected with the post-Issue activity such as Registrar to the Issue etc. and coordination of underwriting arrangement, if any, and release of security deposit, if any	Lead Manager

OBJECTS OF THE ISSUE

This Issue comprises a fresh issue of up to 58,400,000 Units aggregating up to ₹17,149.23 million on a rights basis to Eligible Unitholders.

The Trustee and the Investment Manager shall ensure that the subscription amounts are kept in a separate bank account in the name of the Trust until the listing of the Units pursuant to the Issue and are only utilized for adjustment against Allotment of Units or refund of money to Eligible Unitholders.

In accordance with the InvIT Regulations, the Investment Manager (on behalf of the Trust) intends to utilize the Issue Proceeds towards the objects set out below.

Issue Proceeds

The details of the Issue Proceeds are set forth in the following table:

(₹ in million)

Particulars	Amount*
Gross proceeds from the Fresh Issue	17,149.23
Issue Proceeds	17,149.23

**Assuming full subscription in this Issue*

Utilization of Issue Proceeds

The proposed utilisation of the Issue Proceeds is set forth in the table below:

(₹ in million)

S. No.	Particulars	Amount*
1.	Acquisition of MBEL through purchase of equity shares of MBEL pursuant to the MBEL Securities Purchase Agreement	4,287.33
2.	Acquisition of non-convertible debentures issued by MBEL pursuant to the MBEL Securities Purchase Agreement	12,861.90
Issue Proceeds		17,149.23

**Assuming full subscription in this Issue*

The fund requirements mentioned above and the proposed deployment are based on the estimates of the Investment Manager and have not been appraised by any bank, financial institution or any other external agency. The Issue Proceeds will be utilized in accordance with applicable law.

Details of Utilization of Issue Proceeds

The details of utilization of the Issue Proceeds are set forth herein below:

I. *Acquisition of MBEL through purchase of equity shares of MBEL pursuant to the MBEL Securities Purchase Agreement*

The Investment Manager, on behalf of the Trust, proposes to utilize an estimated amount of ₹4,287.33 million ("**MBEL Share Purchase Amount**") from the Issue Proceeds to pay the consideration for acquiring 428,733,000 equity shares of MBEL aggregating to 80.40% of the equity share capital of MBEL from the Sponsor and Anahera, pursuant to the MBEL Securities Purchase Agreement. The Trustee (on behalf of the Trust), the Investment Manager, the Sponsor, Anahera and MBEL have entered into the MBEL Securities Purchase Agreement for the acquisition of 80.40% of the total equity share capital of MBEL by the Trust. Certain other agreements are have also been entered into in connection with the acquisition of MBEL by the Trust. For details, see "*Background and Structure of the Trust – The MBEL Acquisition*" on page 106.

Key terms of the MBEL Securities Purchase Agreement are set out below.

Certain definitions

"**Closing Date**" shall mean the date on which all activities specified in the MBEL Securities Purchase Agreement have been completed.

"**Governmental Authority**" shall include the SEBI, the UPEIDA, the Ministry of Road Transport and Highways

of the Government of India or any state or union territory of India, the Reserve Bank of India, and any national, state, regional or local government or governmental, regulatory, statutory, administrative, fiscal, taxation, judicial, or government-owned body, department, commission, authority, court, arbitrator, tribunal, agency or entity, in India or outside India, in each case, having jurisdiction over any of the Parties, their operations, or the transactions contemplated in the MBEL Securities Purchase Agreement and the project agreements.

"**Financial Investor Securities T1**" shall mean (i) 210,079,170 equity shares aggregating to 39.40% of the equity share capital of MBEL; and (ii) 63,023 non-convertible debentures aggregating to 39.40% of the outstanding non-convertible debentures issued by MBEL, held by Anahera.

"**Indemnified Parties**" or "**Indemnified Party**" shall mean the Trust, the Trustee, Investment Manager, their respective affiliates (as applicable) and all of their respective directors, officers, employees, representatives and advisors.

"**IRB Securities T1**" shall mean (i) 218,653,830 equity shares aggregating to 41% of the equity share capital of MBEL; and (ii) 65,596 non-convertible debentures aggregating to 41% of the outstanding non-convertible debentures issued by MBEL, held by the Sponsor.

"**Material Adverse Change**" shall mean any fact, circumstance, or condition that, individually or in the aggregate, has a material adverse effect on or material adverse change in:

(i) the business, assets (whether tangible or intangible), liabilities, financial condition or regulatory status of MBEL or a Seller; or

(ii) the ability of a Seller to perform its obligations under the MBEL Securities Purchase Agreement, or to complete the transactions contemplated hereunder; or

(iii) the validity, legality or enforceability of the rights or remedies of the Trust or the Investment Manager under the MBEL Securities Purchase Agreement.

"MBEL Sale Securities T1" shall mean the Financial Investor Securities T1 and the IRB Securities T1.

"**Sellers**" shall mean the Sponsor and Anahera.

"UPEIDA" shall mean Uttar Pradesh Expressways Industrial Development Authority.

Sale and purchase of MBEL Sale Securities T1

Subject to the terms and conditions of the MBEL Securities Purchase Agreement, the Sellers have agreed to transfer the MBEL Sale Securities T1 to the Trust and the Trust has agreed to acquire the MBEL Sale Securities T1, together with all rights, title, interest and benefits appertaining thereto, on the Closing Date in the manner set out in MBEL Securities Purchase Agreement, for the agreed consideration.

The Trust shall ensure that such number of the MBEL sale shares, as may be stipulated by the senior lenders, are pledged with the relevant lenders of MBEL within a specified timeline from the Closing Date in accordance with the financing documents of MBEL.

MBEL is also required to complete the necessary form filings with the Registrar of Companies, Maharashtra in relation to the actions contemplated under the MBEL Securities Purchase Agreement post-closing.

Conditions Precedent

- The obligation of the Parties to consummate the transactions contemplated herein is subject to the fulfillment, prior to the Closing Date, of each of the following conditions by IRB, as applicable, to the satisfaction of the Trust, unless waived or deferred in writing by the Trust at its sole discretion, which, *inter alia*, include:
    - no Governmental Authority of competent jurisdiction shall have enacted, issued, promulgated or enforced any Applicable Law that prohibits or makes illegal the consummation of the transactions contemplated under MBEL Securities Purchase Agreement;
    - there shall be no legal proceeding pending against, or, to the knowledge of IRB, threatened, against

the Sponsor or MBEL wherein an unfavorable judgment, decree, injunction or order could reasonably result in any of the transactions contemplated herein being declared unlawful or rescinded, and no such judgment, decree, injunction or order shall be in effect;

- the transfer of the MBEL Sale Securities T1 under the MBEL Securities Purchase Agreement shall be in compliance with the consent provided by UPEIDA, including any further modification thereto by UPEIDA;

- prior to the Closing Date, the Project: (i) has achieved at least 50% construction completion as certified by the independent engineer of the project or at least 50% of the total capital cost set forth in the financial package has been expended; or (ii) otherwise has become eligible to be held by the Trust under the InvIT Regulations;

- the representations and warranties provided by IRB hereunder and/or under the other transaction documents are true, accurate and complete as of the execution date and as of the Closing Date (except those representations and warranties that address matters only as of a specified date, which shall be true, accurate and complete as of that specified date);

- no Material Adverse Change shall be subsisting as on the Closing Date;

- IRB shall furnish to the Trust certified true copies of all resolutions passed by its board of directors and shareholders, as applicable, in relation to the proposed transaction;

- the conditions precedent under the other transaction documents shall be completed in a manner acceptable to the relevant parties thereunder;

- IRB and MBEL shall have duly performed and complied in all respects with all agreements, covenants and conditions required by the transaction documents to be performed or complied with by them prior to or on the Closing Date; and

- the Trust shall have received a certificate (in agreed form), dated the Closing Date and signed by a duly authorized officer of the Sponsor, that each of the conditions set forth above have been satisfied

- The obligation of the Parties to consummate the transactions contemplated herein is subject to the fulfillment, prior to the Closing Date, of each of the following conditions by Anahera, as applicable, to the satisfaction of the Trust, unless waived or deferred in writing by the Trust at its sole discretion, which, *inter alia*, include:

  - no Governmental Authority of competent jurisdiction shall have enacted, issued, promulgated or enforced any Applicable Law that prohibits or makes illegal the consummation of the transactions contemplated under the MBEL Securities Purchase Agreement;

  - there shall be no legal proceeding pending against, or, to the knowledge of Anahera, threatened, against Anahera wherein an unfavorable judgment, decree, injunction or order could reasonably result in any of the transactions contemplated herein being declared unlawful or rescinded, and no such judgment, decree, injunction or order shall be in effect;

  - the representations and warranties provided by Anahera under the MBEL Securities Purchase Agreement are true, accurate and complete as of the execution date and as of the Closing Date (except those representations and warranties that address matters only as of a specified date, which shall be true, accurate and complete as of that specified date).

  - no Material Adverse Change as stipulated under paragraphs (i) (in respect of Anahera) and (ii) shall be subsisting on the Closing Date;

  - Anahera shall furnish to the Trust certified true copies of all resolutions passed by its board of directors and shareholders, as applicable, in relation to the Proposed Transaction;

  - Anahera shall have duly performed and complied in all respects with all agreements, covenants and conditions required by the transaction documents to be performed or complied with by them prior

to or on the Closing Date;

- Anahera shall have provided its consent in writing to undertake transfer of the MBEL Sale Securities T1 by IRB and itself; and

- the Trust shall have received a certificate (in agreed form), dated the Closing Date and signed by a duly authorized officer of Anahera, that each of the conditions set forth above have been satisfied.

Representations and Warranties

IRB has provided representations and warranties in relation to, *inter-alia*, the organization, status and authority of MBEL, no conflict with other obligations, the capital structure and shareholding of MBEL, compliance with applicable law, maintenance of corporate records and filings as per applicable law, obtaining of all material consents required for carrying out business activities by MBEL and no material breach of any of the conditions of such consents, maintenance of books and accounts as per applicable law, representations in relation to financial statements and related party transactions, compliance with anti-bribery and anti-corruption laws, anti-money-laundering laws.

Each of the Sellers have provided representations and warranties in relation to, *inter-alia*, their incorporation, existence, authority to enter into the agreement, eligibility to undertake the transactions under the agreement, no conflicts, beneficial ownership of the securities they are transferring, no outstanding claims, notices from Governmental Authority or pending legal suits, complaints, claims or proceedings before any court in relation to the securities being transferred

Each of the Sellers has agreed that they will not exercise any rights that prevent the Trust from complying with the provisions of the InvIT Regulations and in case of any inconsistences between MBEL Securities Purchase Agreement and the InvIT Regulations, the provisions of the InvIT Regulations shall prevail.

The Trust and MBEL have agreed and acknowledged that the Sponsor and its affiliates can continue to include MBEL and its project as part of their experience and eligibility in any bids for infrastructure projects submitted by the Sponsor or its affiliates in the future even after the Closing Date.

Indemnification

The Sponsor has agreed to indemnify the Indemnified Parties against, any actual and direct losses, costs, damages, expenses and fees (including legal fees) ("**Loss**"), suffered or incurred by the Indemnified Parties based upon, arising out of, with respect to or relating to: (a) any inaccuracy, misrepresentation or any breach of any Sponsor warranties; (b) any non-fulfilment, non-performance or other breach of any covenant or obligation of the Sponsor and/or MBEL contained in the transaction documents; (c) any matter involving fraud, gross negligence or wilful misconduct by the Sponsor and/or MBEL; and/or (d) certain tax-related matters.

Anahera has agreed to indemnify the Indemnified Parties against any actual and direct Loss suffered or incurred by the Indemnified Parties based upon, arising out of, with respect to or relating to: (a) any inaccuracy, misrepresentation or any breach of any Anahera warranties; (b) any matter involving fraud, gross negligence or wilful misconduct by Anahera; and / or (c) any non-fulfilment, non-performance or other breach of any covenant or obligation of Anahera contained in the MBEL Securities Purchase Agreement.

The parties' indemnification obligations are subject to certain limitations as to quantum as specified in the MBEL Securities Purchase Agreement. Further, the Trust will not be entitled to claim any losses with respect to a particular indemnity event unless the losses exceed a particular amount. Payments by the indemnifying parties in respect of any loss will be limited to the amount of any liability or damage that remains after deducting any insurance proceeds received by the indemnified party in respect of any such claim. Subject to the limitations set out in the MBEL Securities Purchase Agreement, the Sellers' liability for all monetary claims for breach of warranties, including claims for damages, will not exceed a specified amount agreed under the MBEL Securities Purchase Agreement.

Governing Law, Dispute Resolution and Termination

The MBEL Securities PurchaseAgreement is governed by the laws of India. Any dispute shall be referred to and finally resolved by arbitration administered by the Singapore International Arbitration Centre in accordance with

the Arbitration Rules of the Singapore International Arbitration Centre ("**SIAC Rules**") for the time being in force. The arbitration panel will consist of three arbitrators, each of which shall be appointed by SIAC in accordance with the SIAC Rules. The seat and venue of the arbitration proceedings will be London, United Kingdom.

The MBEL Securities Purchase Agreement may be terminated prior to the Closing Date: (i) by the mutual written agreement of the parties; (ii) upon termination of the twelfth amendment to the Framework Agreement; or (iii) by the Trust or any of the Sellers if the Closing has not occurred on or prior to the Long Stop Date (six months from the date of the MBEL Securities Purchase Agreement) including on account of non-fulfilment of the conditions precedent set forth in the MBEL Securities Purchase Agreement.

II. ***Acquisition of non-convertible debetures issued by MBEL pursuant to the MBEL Securities Purchase Agreement***

The Investment Manager, on behalf of the Trust, proposes to utilize an estimated amount of ₹12,861.90 million ("**MBEL Debenture Acquisition Amount**") from the Issue Proceeds to pay the consideration for acquiring an aggregate of 128,619 non-convertible debentures issued by MBEL ("**Debentures**"), aggregating to 80.40% of the total non-convertible debentures issued by MBEL and currently held by Sponsor and Anahera, pursuant to the MBEL Securities Purchase Agreement. For details of the MBEL Securities Purchase Agreement, please see *"- Acquisition of MBEL through purchase of equity shares of MBEL pursuant to the MBEL Securities Purchase Agreement"* on page 79. A summary of the key terms of the non-convertible debentures issued by the Target SPV is set forth below:

1. **Tenure and Repayment**: The tenure of each of the Debentures shall commence on the date of allotment of the Debentures and end 36 (thirty-six) years from the date of allotment ("**Tenure**"). The principal amount of the Debentures shall be repaid by MBEL to the Debenture holders at the end of the Tenure; provided that all or a portion of such amount may be repaid by MBEL to the Debenture holders at any time prior to the expiry of the Tenure in such manner as may be agreed among the Parties, in accordance with the transaction documents. All payments made by MBEL to the Debenture holders shall be made in accordance with applicable law, the MBEL concession agreement and the financing agreements entered into by MBEL.

2. **Status**: The Debentures constitute direct, subordinated (to the debt of the senior lenders), unconditional and unsecured obligations of MBEL and shall at all times rank *pari passu* with each other and without any preference or priority amongst themselves. The payment obligations of MBEL under the Debentures shall, save for such exceptions as may be provided by mandatory provisions of applicable law, at all times rank at least equally with all of its other present and future direct, subordinated, unconditional and unsecured obligations.

3. **Interest**:

   (a) Interest at such rate as agreed or may be agreed among the parties to the MBEL Debenture Subscription Agreement, shall be chargeable on the Debentures from the Project Completion Date, as defined under the MBEL concession agreement. No interest shall accrue and/or arise on the Debentures during the Construction Period (as defined under the MBEL concession agreement).

   (b) Interest shall be payable in arrears on a quarterly basis, on or before the expiry of the calendar month immediately succeeding the completion of each quarter or in such manner and mode and at such intervals as agreed among the Parties (each such date, an "**Interest Payment Date**").

   (c) Interest payments shall be made out of balance available in the escrow account for utilization in accordance with the instructions of MBEL, on the relevant Interest Payment Date and / or repayment date, after meeting all payments due and payable to the Senior Lenders as of such date under the financing agreements entered into by MBEL.

4. **Redemption**:

   (a) Unless redeemed earlier, MBEL shall mandatorily redeem the outstanding Debentures in full at the end of the Tenure and shall ensure payment of all amounts due to the Debenture holders, such that all outstanding amounts payable to the Debenture holders are satisfied on the day immediately after the expiry of the Tenure.

(b) Subject to applicable law, the MBEL Concession Agreement and the financing agreements entered into by MBEL, and subject to receipt of the prior written consent of Anahera, MBEL shall have the right to redeem the Debentures prior to the expiry of the Tenure, by providing a prior written notice of not less than 30 (thirty) days, and specifying the amount to be paid and the proposed date of redemption.

5. **Voting Rights**: The Debentures shall not carry any voting rights.

6. **Variation of terms**: No change, amendment or modification to the terms of the Debentures shall be valid and legally binding unless such amendment has been consented to by all the Debenture holders and such change, amendment or modification has been approved by the Board pursuant to a resolution passed in accordance with applicable law.

The descriptions above are indicative, and there may be additional terms and conditions with respect to financial or other covenants.

Also see "*Risk Factors – We are in the process of acquiring the Target SPV (pursuant to definitive acquisition agreements), which if not completed in a timely manner or at all, or any failure to realize the anticipated benefits of the MBEL Acquisition, may adversely affect us*" on page 14.

In addition to the above, the Investment Manager may utilize the Issue Proceeds towards other expenditure (in the ordinary course of business of the Trust) considered expedient. Any such utilization other than as contemplated towards the objects of the Issue described above will be subject to the consent of all the Unitholders. In case of a shortfall in the Issue Proceeds or cost overruns, the Investment Manager may explore a range of options including utilizing the Trust's, the Project SPVs' or the Target SPV's internal accruals or seeking debt financing in accordance with the business plan and annual budget. The objects of this Issue are proposed to be financed solely through the Issue Proceeds.

Schedule of Deployment

The Investment Manager proposes to deploy the Issue Proceeds during the Financial Year 2025, depending on various factors, including the actual timing of completion of this Issue and the receipt of the Issue Proceeds.

Interim use of Issue Proceeds

Pending utilization of the Issue Proceeds for the purposes described above, the Investment Manager may invest the funds only in deposits in one or more scheduled commercial banks included in the Second Schedule of RBI Act. Pending utilization of the Issue Proceeds for the objects of this Issue, the Investment Manager shall not utilize the Issue Proceeds for any investment in the equity markets (excluding any investment in the equity shares of the Project SPVs), real estate or related products.

STATEMENT OF TAX BENEFITS

Statement of possible tax consideration / benefits available to the Trust and its Unitholders under applicable laws in India

To,
IDBI TRUSTEESHIP SERVICES LIMITED
(Trustee of IRB Infrastructure Trust)
Ground Floor, Universal Insurance Building, Sir Phirozshah Mehta Road Fort, Mumbai 400 001, Maharashtra India

MMK Toll Road Private Limited
(As the Investment Manager of the IRB Infrastructure Trust) Off No-11th Floor/1101,
Hiranandani Knowledge Park Technology Street,
Hill Side Avenue Powai, Mumbai 400 076,
Maharashtra India

Dear Sirs/Madam,

Sub: Statement of possible tax considerations / benefits available to the IRB Infrastructure Trust and its Unitholders under the Income-tax Act, 1961.

We refer to the proposed rights issue (the "Issue") of the units of IRB Infrastructure Trust ("the Trust") and enclose the statement showing the current position of tax considerations / benefits available to the Trust and to its Unitholders as per the provisions of the Income-tax Act, 1961 ('the IT Act') presently in force in India (i.e. applicable for the financial year ending 31 March 2025 relevant to the assessment year 2025-26) for inclusion in the letter of offer to be issued in connection with the Issue.

This statement is provided for general information purposes only and each investor is advised to consult its own tax consultant with respect to specific income tax implications arising out of participation in the rights issue.

Unless otherwise specified, sections referred below are sections of the IT Act. The benefits set out below are subject to conditions specified therein read with the Income-tax Rules, 1962 presently in force.

The benefits outlined in the enclosed statement based on the information and particulars provided by the Trust are neither exhaustive nor conclusive.

We do not express any opinion or provide any assurance as to whether:

- the Trust or its Unitholders will continue to obtain these benefits in future;
- the conditions prescribed for availing the benefits have been/would be met with; and
- the revenue authorities/courts will concur with the views expressed herein.

We hereby give our consent to include the enclosed statement regarding tax benefits available to the Trust and to its Unitholders in the letter of offer in connection with the rights issue of the units of the Trust which is intended to be filed with Securities and Exchange Board of India, the National Stock Exchange of India Limited (being the stock exchange where the units of the Trust are listed) and any regulatory authority as may be required under applicable law.

Limitations

No assurance is given that the revenue authorities/courts will concur with the views expressed herein. Our views are based on the existing provisions of law and its interpretation, which are subject to changes from time to time. We do not assume responsibility to update the views consequent to such changes. We shall not be liable to any claims, liabilities or expenses relating to this assignment except to the extent of fees relating to this assignment, as finally judicially determined to have resulted primarily from bad faith or intentional misconduct. We will not be liable to any other person in respect of this statement.

This statement of possible direct tax benefits enumerated above is as per the Income-tax Act as amended by the Finance Act 2024. The statement of possible Direct-tax Benefits sets out the possible tax benefits available to the Trust and its Unitholders under the current tax laws presently in force in India. Several of these benefits available are dependent on the Trust or its Unitholders fulfilling the conditions prescribed under the relevant tax laws.

The information provided above sets out the possible tax benefits available to the Unitholders in a summary manner only and is not a complete analysis or listing of all potential tax consequences of the purchase, ownership and disposal of units, under the current tax laws presently in force in India. It is not exhaustive or comprehensive and is not intended to be a substitute for professional advice.

For Gokhale & Sathe, Chartered
Accountants,
ICAI registration number: 103264W

CA Kaustubh Deshpande,
Partner
Membership No. 121011
UDIN: 24121011BKAAWO1262
Place: Mumbai
Date: December 14, 2024

ANNEXURE TO STATEMENT OF POSSIBLE TAX BENEFITS AVAILABLE / CONSIDERATIONS APPLICABLE TO IRB INFRASTRUCTURE TRUST AND ITS UNITHOLDERS UNDER APPLICABLE LAWS IN INDIA UNDER THE INCOME-TAX ACT, 1961 (hereinafter referred to as 'the Act')

TAX BENEFITS AVAILABLE / CONSIDERATIONS APPLICABLE TO IRB INFRASTRUCTURE TRUST ('TRUST') UNDER THE ACT

IRB Infrastructure Trust is an Infrastructure Investment Trust under the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014, made under the Securities and Exchange Board of India Act, 1992.

Section 2(13A) of the Income Tax Act which defines "Business Trust" has been amended by Finance Act 2020 with effect from 1st April 2021 (i.e. from AY 2021-22) to remove the requirement of listing of units of the trust on stock exchange.

The following benefits are available to a Business Trust after fulfilling conditions as per applicable provisions of the Act and the guidelines prescribed by the Securities and Exchange Board of India ('SEBI') (including the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014, as amended) ('SEBI Regulations').

Tax benefit in the hands of the Trust in respect of interest and dividend income:

(a) Interest received or receivable by the Trust from the Special Purpose Vehicle (SPV) would be exempt from tax. [10(23FC)(a)]

(b) Dividend received or receivable by the Trust from a Special Purpose Vehicle (SPV) shall be exempt from tax. [10(23FC)(b)]

For the purpose of the above, "special purpose vehicle" would mean an Indian company in which the business trust holds controlling interest and any specific percentage of shareholding or interest, as may be required by the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014.

Accordingly, sec. 194A(3)(xi) exempts SPV from the provisions of tax deduction at source in respect of interest paid/payable to the business trust.

Also, sec. 194 provides that the tax deduction at source is not applicable in respect of dividend credited or paid to a business trust by a special purpose vehicle.

Section 193 of the Act provides that provisions relating to tax deduction at source on interest on securities, are not applicable to the payment of interest on securities (like debentures) by SPV to a business trust.

Section 115UA(2) read with section 111A, section 112 of the Act – Taxability of business income, capital gains and income from other sources in the hands of the Trust:

In terms of section 115UA(2) of the Act, the total income of the Trust shall be chargeable to tax at the maximum marginal rates in force, except for the income chargeable to tax on transfer of Short-Term Capital assets under section 111A and Long Terms Capital assets under section 112 of the Act and income referred to in Sec. 10(23FC).

If the period of holding of a security (other than a unit) listed on a recognized stock exchange in India or a unit of the Unit Trust of India or a unit of an equity-oriented fund or a zero-coupon bond is more than 12 months, it will be considered a long-term capital asset as per section 2(29AA) of the Act. With respect to other assets including shares of a company not being listed on a recognized stock exchange or immovable property, being land, building, or both or a unit of a mutual fund other than equity oriented mutual fund or unit of a business trust, the determinative period of holding is more than 24 months for it to be regarded as long-term capital asset.

As per the provisions of section 111A of the Act, any income arising from transfer of short- term capital asset being an equity share in a company or a unit of an equity-oriented fund or a unit of an eligible business trust, transacted through a recognized stock exchange and subject to STT, will be taxable at a rate of 20% (plus applicable surcharge and cess, if any) in respect of transfer taking place on or after 23rd July 2024.

As per the provisions of section 112(1)(d) of the Act, gains arising on the transfer of long- term capital assets shall be chargeable to tax in the hands of the Trust at the rate of 12.5% (plus applicable surcharge and cess) in respect of transfers taking place on or after 23rd July 2024. However, where the tax payable in respect of any income

arising from the transfer of a long-term capital asset which takes place before the 23rd July, 2024, being listed securities (other than a unit) or zero coupon bond, exceeds 10% of the amount of capital gains before giving effect to the second proviso to section 48 relating to indexation, such excess shall be ignored.

With a view to grandfather gains notionally earned by investors up to 31st January 2018, for securities acquired till such date, it has been provided that taxable gains will be determined considering the cost which will be higher of:

- Actual cost of acquisition; or
- Lower of sale price and Fair Market Value (as specifically defined under the Act) (Sec. 55(2)(ac))

In accordance with, and subject to the conditions, including the limit of investment of ₹ 50 lakhs, capital gains arising on transfer of a long term capital asset, being land or building or both, shall be exempt from capital gains under section 54EC if the gains are invested within 6 months from the date of transfer in purchase of specified bonds (redeemable after five years and issued on or after 1 April 2018) issued by National Highways Authority of India (NHAI) or Rural Electrification Corporation Ltd (RECL) or any other bond notified by the Central Government, if permitted to be invested by an Investment trust as per the extant governing regulations. In case the whole of the gains are not so invested, the exemption shall be allowed on a pro rata basis.

As per section 70 read with section 74 of the Act, short term capital loss arising during a year is allowed to be set-off against short term capital gains as well as long term capital gains. Balance loss, if any, shall be carried forward and set-off against any capital gains arising during subsequent eight assessment years. Also, as per section 70 of the Act r.w. section 74, long term capital loss arising during a year is allowed to be set-off only against long term capital gains. Balance loss, if any, shall be carried forward and set-off against long term capital gains arising during subsequent eight assessment years.

TAX BENEFITS AVAILABLE /CONSIDERATIONS APPLICABLE TO UNITHOLDERS OF THE TRUST

SPECIAL CONSIDERATIONS / BENEFITS APPLICABLE TO THE UNITHOLDERS OF THE TRUST:

Following tax benefit is specifically available to the unitholders of the Trust subject to the fulfilment of the conditions specified in the Act and SEBI Regulations:

Section 10(23FD) of the Act - Tax exemption in respect of income distributed by the Trust:

As per the provisions of section 115UA(1) of the Act, the income distributed by the Trust shall be deemed to be of the same nature and in the same proportion in the hands of the Unitholder as it had been received by or accrued to the business trust. However, as per sub-section 3A inserted in section 115UA by the Finance Act, 2023, w.e.f. 01.04.2024, the provisions of sub-section (1) shall not apply in respect of any sum referred to in clause (xii) of section 56(2), received by a unitholder from a business trust.

As per the provisions of section 10(23FD), any income referred to in section 115UA(1) of the Act and distributed by the Trust (except for that proportion of interest income referred in section 10(23FC)(a) of the Act or dividend received/receivable from an SPV referred to in section 10(23FC)(b) in a case where the SPV has exercised the option under section 115BAA; which is taxable under section 115UA(3) of the Act) shall not be included in the total income of the unit- holders.

The Finance Act, 2023 has inserted section 56(2)(xii) w.e.f. 01.04.2024 (i. e. AY 2024-25). The section provides that any specified sum received by unitholder from a business trust during the previous year, with respect to units held by it at any time during the previous year will be taxable as “income from other sources”. The section has introduced a computation methodology to ascertain “specified sum”.

The specified sum is the aggregate of sum distributed [which is not in the nature of income u/s 10(23FC) or which is not chargeable to tax at level of business trust u/s 115UA(2)] by business trust in the previous year or during any earlier previous years to such unitholder who holds such unit on the date of distribution or to any other unitholder who held such unit at any time prior to the date of distribution, and reduced by amount at which such unit was issued by the business trust and further reduced by amount charged to tax u/s 56(2)(xii) in any earlier previous year.

The Finance Act 2023 has also introduced Explanation 1 and Explanation 2 in clause (ii) of section 48 w.e.f. AY 2024-25.

Explanation 1 provides that the cost of acquisition of a unit of business trust shall be reduced and shall be deemed to have always been reduced by any sum received by a unit holder from the business trust w.r.t. such unit, if the sum is-

- Not in the nature of income referred to in section 10(23FC)
- Not chargeable to tax u/s 56(2)(xii)
- Not chargeable to tax u/s 115UA(2)

Explanation 2 covers the situation where the transaction of transfer of a unit is not considered as transfer under section 47 and cost of acquisition of such unit is determined under section 49. It provides that sum received with respect to such unit before such transaction as well as after such transaction shall be reduced from the cost of acquisition. Thus, if an assessee has received unit of business trust under a transaction which is not regarded as 'transfer', the cost of acquisition of such unit shall be reduced by the sum received from the business trust by the assessee as well as the previous unit holder provided such sum is not chargeable to tax either in the hands of the assessee, the previous unit holder and the business trust.

There is no provision for withholding tax obligation to the business trust u/s 194LBA in relation to amount taxable u/s 56(2)(xii) unlike section 195, wherein the trust is liable to withhold tax u/s 195 on distributions to non-resident unitholders.

According to sec. 47(xvii), any transfer of a capital asset, being share of a special purpose vehicle to a business trust in exchange of units allotted by that trust to the transferor shall not be regarded as transfer and accordingly not be liable to capital gains tax.

According to sec. 49(2AC) the cost of units acquired in lieu of shares in SPV shall be deemed to be cost of acquisition of shares in SPV.

As per clause (hc) of explanation 1 of sec. 2(42A), for ascertaining the period of holding of such units, the period of holding of shares in SPV shall also be included.

Notional gain arising on transfer of share of special purpose vehicle to business trust in exchange of units allotted by that trust as referred u/s 47(xvii) or notional gain arising upon change in carrying amount of the units and realised gain on transfer of these units are to be excluded in calculation of book profits for the purposes of MAT u/s 115JB. (clause (iie)) to explanation 1 to section 115JB).

GENERAL BENEFITS AVAILABLE / CONSIDERATIONS APPLICABLE TO ALL UNITHOLDERS OF THE TRUST:

For resident Unitholder- Long-term capital gains:

Income arising on transfer of units of the Trust through a recognized stock exchange, on which STT is paid, shall be chargeable to tax in the hands of the Unitholders at a rate of 12.5% without indexation benefit (plus applicable surcharge and cess) under section 112A of the Act if the said units are long-term capital assets transferred on or after 23rd July 2024.

The determinative period of holding for such units to qualify as long-term capital asset is more than 24 months.

Income arising on transfer of units of the Trust that are long term capital assets, which is not through a recognized stock exchange and not subject to STT, shall be chargeable to tax at 12.5%, (plus applicable surcharge and cess) under section 112 of the Act, if the transfer takes place on or after 23rd July 2024.

In case of a Unitholder being an individual or HUF, where the total taxable income as reduced by long-term capital gains is below the basic exemption limit, the long-term capital gains will be reduced to the extent of the shortfall and only the balance long-term capital gains will be subjected to such tax in accordance with the proviso to clause (a) of sub-section (1) of section 112 of the Act.

For resident Unitholder- Short-term capital gains:

Short-term capital gains arising on transfer of the units of the Trust will be chargeable to tax at the rate of 20% (plus applicable surcharge and cess) in respect of transfers taking place on or after 23rd July 2024 as per the provisions of section 111A of the Act provided such transaction is subject to STT and through a recognized stock exchange.

In case of a Unitholder being an individual or HUF, where the total taxable income as reduced by short-term capital gains is below the basic exemption limit, the short- term capital gains will be reduced to the extent of the shortfall and only the balance short- term capital gains will be subjected to such tax in accordance with the proviso to sub-section (1) of section 111A of the Act.

For resident Unitholder- Set-off of losses:

Short Term Capital Loss computed for the given year is allowed to be set-off against Short Term/ Long Term Capital Gains computed for the said year under section 70 of the Act. Balance loss, if any, shall be carried forward and set-off against any capital gains arising during subsequent eight assessment years. Also, as per section 70 of the Act, long term capital loss arising during a year is allowed to be set-off only against long term capital gains. Balance loss, if any, shall be carried forward and set-off against long term capital gains arising during subsequent eight assessment years.

For resident Unitholder- Deduction of Securities Transaction Tax:

Where the gains arising on the transfer of the units of the Trust are included in the business income of an assessee assessable under the head "Profits and Gains from Business or Profession" and on which securities transaction tax has been charged, such securities transaction tax shall be a deductible expense from business income as per the provisions of section 36(1)(xv) of the Act. The characterization of gains/ losses, arising from transfer of units, as capital gains or business income would depend on the nature of holding in the hands of the unitholders and various other factors.

Section 197 of the Act is amended to include reference to section 194LBA meaning thereby that the unit holder can make application to the assessing officer for obtaining certificate for lower or nil deduction of tax.

For non-resident Unitholder- Long-term capital gains:

Income arising on transfer of units of the Trust, shall be chargeable to tax in the hands of the Unitholders at a rate of 12.5% without indexation and forex fluctuation benefit (plus applicable surcharge and cess) in respect of transfers taking place on or after 23rd July 2024 under section 112A of the Act if the said units are long-term capital assets.

These assets turn long term if they are held for more than 24 months.

Income arising on transfer of units of the Trust that are long term capital assets, which is not through a recognized stock exchange and not subject to STT, shall be chargeable to tax at 12.5%, (plus applicable surcharge and cess) in respect of transfers taking place on or after 23rd July 2024 under section 112 of the Act.

For non-resident Unitholder- Short-term capital gains:

Short-term capital gains arising on transfer of the units of the Trust will be chargeable to tax at the rate of 20% (plus applicable surcharge and cess)) in respect of transfers taking place on or after 23rd July 2024 as per the provisions of section 111A of the Act if such transaction is chargeable to STT.

For non-resident Unitholder- Set-off of losses:

Short Term Capital Loss computed for the given year is allowed to be set-off against Short Term/ Long Term Capital Gains computed for the said year under section 70 of the Act. Balance loss, if any, shall be carried forward and set-off against any capital gains arising during subsequent eight assessment years. Also, as per section 70 of the Act, long term capital loss arising during a year is allowed to be set-off only against long term capital gains. Balance loss, if any, shall be carried forward and set-off against long term capital gains arising during subsequent eight assessment years.

For non-resident Unitholder- Deduction of Securities Transaction Tax:

Where the gains arising on the transfer of units of the trust are included in the business income of an assessee assessable under the head "Profits and Gains from Business or Profession" and on which securities transaction tax has been charged, such securities transaction tax shall be a deductible expense from business income as per the provisions of section 36(1)(xv) of the Act.

For non-resident Unitholder- Benefits under Double Taxation Avoidance Agreements:

Under the provisions of section 90(2) of the Act, a non-resident will be governed by the provisions of the Double Tax Avoidance Agreement (DTAA) between India and the country of tax residence of the non-resident and the provisions of the Act apply to the extent they are more beneficial to the assessee.

As per explanation 4 to section 115JB(2), the provisions of section 115JB shall not be applicable to a foreign company if the foreign company is a resident of a country having DTAA with India and such foreign company does not have a permanent establishment within the definition of the term in the relevant DTAA, or the foreign company is a resident of a country which does not have a DTAA with India and such foreign company is not required to seek registration under section 592 of the Companies Act 1956 or section 380 of the Companies Act 2013.

For non-resident Unitholder- Section 194LBA – Tax Deduction on certain income from units of the Trust:

Where any distributed income referred in section 115UA, is in the nature referred to in clause (23FC) of section 10 payable by the Trust to its unit holder being a non-resident unit holder, then the same shall be subjected to the tax deduction at the rate of 5% in case of income of the nature referred to in sub-clause (a) [interest income] and 10% in case of income of the nature referred to in sub-clause (b) [dividend income] of clause (23FC) of section 10 (plus applicable surcharge and cess). However, in view of section 90(2) of the Act, a non-resident will be governed by the provisions of the Agreement for Avoidance of Double Taxation (AADT) between India and the country of tax residence of the non-resident and the provisions of the Act apply to the extent they are more beneficial to the assessee.

Section 197 of the Act is amended to include reference to section 194LBA meaning thereby that the unit holder can make application to the assessing officer for obtaining certificate for lower or nil deduction of tax.

For unitholders who are Foreign Portfolio Investors ('FPIs')/ Foreign Institutional Investors ('FIIs'):

As per section 2(14) of the Act, any securities held by a FII which has invested in such securities in accordance with the regulations made under the Securities and Exchange Board of India Act, 1992 shall be deemed to be treated as Capital asset. As per section 196D, no tax is to be deducted from any income, by way of capital gains arising from the transfer of units, payable to Foreign Institutional Investor. In respect of non- residents, the tax rates and consequent taxation mentioned above will be further subject to any benefits available under the Tax Treaty, if any, between India and the country in which the FPI/FII has Fiscal domicile. As per the provisions of section 90(2) of the Act, the provisions of the Act would prevail over the provisions of the Tax Treaty to the extent they are more beneficial to the FII.

Pursuant to Central Board of Direct Tax press release dated 24 September 2015, the Government has clarified the inapplicability of Minimum Alternate Tax provisions to FIIs/FPIs.

For unit holders who are Sovereign Wealth Funds:

Under section 10(23FE) of the Act, any income of Sovereign Wealth Fund in the nature of dividend, interest, specified sum referred to in section 56(2)(xii) or long-term capital gains arising from an investment made by it in Business Trust in India is exempt from tax provided such investment is made before 31st March, 2024 and is held for at least three years.

However, the said exemption is not available if a sovereign wealth fund has loans or borrowings, directly or indirectly, for the purpose of making the investment in India.

The exemption would be applicable to a sovereign wealth fund which satisfies stipulated conditions mentioned in Explanation 1 to section 10(23FE) and is notified by the Central Government.

For unitholders who are Mutual Funds:

Under section 10(23D) of the Act, any income earned by a Mutual Fund registered under the Securities and Exchange Board of India Act, 1992, or a Mutual Fund set up by a public sector bank or a public financial institution, or a Mutual Fund authorized by the Reserve Bank of India would be exempt from income-tax, subject to such conditions as the Central Government may by notification in the Official Gazette specify in this behalf.

The Trust is not required to withhold tax on interest payment to Mutual Fund set up under section 10(23D) of the Act.

The above statement of possible direct tax benefits sets out the provisions of law in a summary manner only and is not a complete analysis or listing of all potential tax consequences of the purchase, ownership and disposal of shares and units.

The stated benefits will be available only to the sole/ first named holder in case the units are held by joint holders.

In respect of non-residents, the tax rates and the consequent taxation mentioned above shall be further subject to

any benefits available under the applicable DTAA, if any, between India and the country in which the non-resident has fiscal domicile.

SECTION IV – ABOUT THE TRUST

BACKGROUND AND STRUCTURE OF THE TRUST

Background of the Trust

The Trust has been settled by the Sponsor as an irrevocable trust under the provisions of the Trusts Act in New Delhi, India pursuant to the Indenture of Trust dated August 27, 2019, as amended. The Indenture of Trust is registered under the Registration Act. The Trust is registered with the SEBI as an infrastructure investment trust under the InvIT Regulations. The Units of the Trust are listed on the NSE.

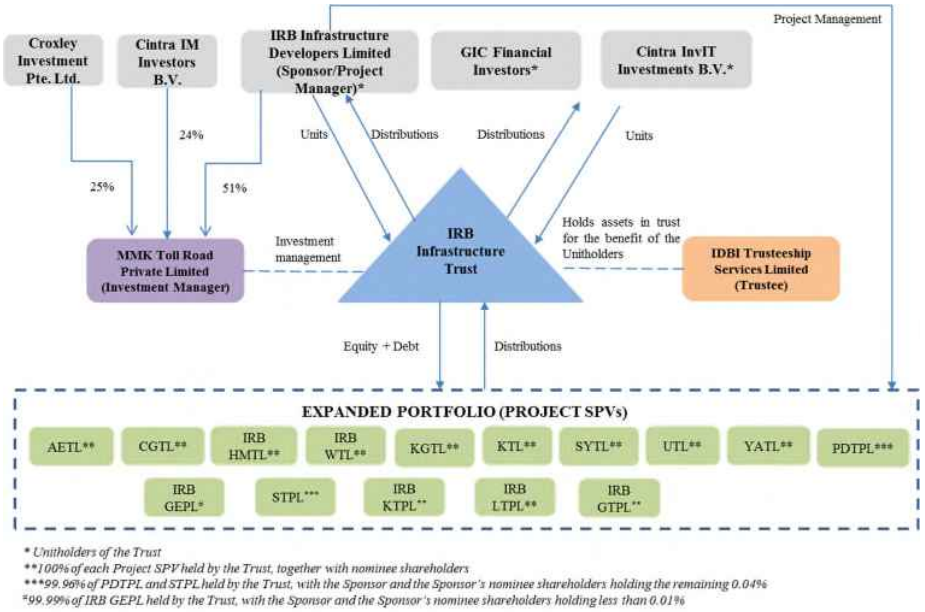
The object and purpose of the Trust, as described in the Indenture of Trust, is to carry on the activity of an infrastructure investment trust under the InvIT Regulations. Investment by the Trust shall only be in holding companies, SPVs, infrastructure projects, securities in India or other permitted investments in accordance with the InvIT Regulations, the investment strategy and the Trust Documents. The principal investment objective of the Trust is to own, operate and invest in infrastructure projects in India, directly or through holding companies or SPVs and make other investments and undertake such activities in such jurisdictions as may be permissible under the InvIT Regulations, other applicable law and the Trust Documents. For further details in relation to the business and investment strategy of the Trust, see "*Business*" on page 127.

The Trust is required to make distributions to the Unitholders in accordance with the InvIT Regulations and the Distribution Policy. For details in relation to the distribution policy of the Trust, see "*Distributions*" on page 316.

Parties to the Trust and Structure of the Trust

In accordance with the InvIT Regulations, the Parties to the Trust are (i) the Sponsor; (ii) the Investment Manager; (iii) the Trustee; and (iv) the Project Manager. For details, see "*The Sponsor and Project Manager*", "*The Investment Manager*" and "*The Trustee*" on pages 327, 331 and 339 respectively.

The following diagram illustrates the relationship among the Trust, the Project SPVs in the Current Portfolio, the Trustee, the Investment Manager and the Unitholders (which includes the Sponsor) as on the date of this Letter of Offer:



For details in relation to the MBEL Acquisition, see "*Business*", "*Objects of the Issue*" and "*The MBEL Acquisition*" on pages 127, 79 and 106 respectively. For details in relation to the Target SPV, see "- *Details of the Target SPV*" on page 105.

Details of the Project SPVs

1. AETL

Corporate Information

AETL was incorporated on July 21, 2015 as a private limited company under the Companies Act, 1956, having CIN U45209MH2015PTC266741. AETL was converted into a public limited company under the Companies Act, and a fresh certificate of incorporation dated November 13, 2019 was issued, having CIN U45209MH2015PLC266741. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of AETL, is as follows:

"*To carry on the business of infrastructure development in respect of the work of Design, Build, Finance and Operation of Six Laning of Agra to Etawah Bypass section of NH-2 from km 199.660 to km 323.525 in the State of Uttar Pradesh under NHDP Phase V on Design, Build, Finance, Operate and Transfer (DBFOT) Toll basis, including collection and retention of the toll or fee and to carry out the ancillary activities, in relation of the foregoing, as specified in the Concession Agreement to be executed with National Highways Authority of India (NHAI).*"

Capital Structure

The capital structure of AETL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	436,500,000
Issued, subscribed and paid-up capital	436,500,000

Shareholding Pattern

The shareholding pattern of AETL is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	436,499,994	100
2.	Mahesh Kavthekar**	1	Negligible
3.	Dhananjay K. Joshi**	1	Negligible
4.	Arati Taskar**	1	Negligible
5.	Shailesh Joshi**	1	Negligible
6.	Nikhil Maniar**	1	Negligible
7.	Amitabh Murarka**	1	Negligible
Total		**436,500,000**	**100**

** On behalf of the Trust*
*** As a nominee of the Trust*

2. CGTL

Corporate Information

CGTL was incorporated on October 18, 2016 as a private limited company under the Companies Act, having CIN U45200MH2016PTC286895. CGTL was converted into a public limited company under the Companies Act, and a fresh certificate of incorporation dated November 13, 2019 was issued, having CIN U45200MH2016PLC286895. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of CGTL, is as follows:

"*To carry on the business of infrastructure development in respect of the work of Design, Build, Finance, and Operation of Six Laning of Kishangarh Udaipur Ahmedabad Section from km 90.000 (near Gulabpura) to km 214.870 (end of Chittorgarh Bypass) of NH-79 in the State of Rajasthan Package-2 under NHDP Phase – V on BOT(Toll) mode, including collection and retention of the toll or fee and to carry out the ancillary activities, in relation of the foregoing, as specified in the Concession Agreement to be executed with National Highways Authority of India (NHAI).*"

Capital Structure

The capital structure of CGTL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	203,500,000
Issued, subscribed and paid-up capital	203,500,000

Shareholding Pattern

The shareholding pattern of CGTL is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	203,499,994	100
2.	Mahesh Kavthekar**	1	Negligible
3.	Dhananjay K. Joshi**	1	Negligible
4.	Arati Taskar**	1	Negligible
5.	Shailesh Joshi**	1	Negligible
6.	Nikhil Maniar**	1	Negligible
7.	Vinod Kumar Menon**	1	Negligible
Total		**203,500,000**	**100**

** On behalf of the Trust*
*** As a nominee of the Trust*

3. IRB HMTL

Corporate Information

IRB HMTL was incorporated on April 18, 2018 as a private limited company under the Companies Act, having CIN U45400MH2018PTC308187. IRB HMTL was converted into a public limited company under the Companies Act, and a fresh certificate of incorporation dated November 13, 2019 was issued, having CIN U45400MH2018PLC308187. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of IRB HMTL, is as follows:

"*To carry on the business of infrastructure development in respect of Six Laning of Hapur bypass to Moradabad Section including Hapur bypass from Km 50.000 (Design Chainage 50.000) to Km 148.277 (Design Chainage 149.867) of NH-24 (New NH-9) in the State of Uttar Pradesh under NHDP Phase V (Bharatmala Pariyojna) on DBFOT (Toll) mode, including collection and retention of the toll of fee and to carry out the ancillary activities, in relation of the foregoing, as specified in the Concession Agreement to be executed with National Highways Authority of India (NHAI).*"

Capital Structure

The capital structure of IRB HMTL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	375,000,000
Issued, subscribed and paid-up capital	371,500,000

Shareholding Pattern

The shareholding pattern of IRB HMTL is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	371,499,994	100
2.	Mahesh Kavthekar**	1	Negligible
3.	Dhananjay K. Joshi**	1	Negligible
4.	Arati Taskar**	1	Negligible
5.	Shailesh Joshi**	1	Negligible
6.	Nikhil Maniar**	1	Negligible
7.	Vinod Kumar Menon**	1	Negligible
Total		**371,500,000**	**100**

** On behalf of the Trust*
*** As a nominee of the Trust*

4. IRB WTL

Corporate Information

IRB WTL was incorporated on August 22, 2012 as a private limited company under the Companies Act, 1956, having CIN U45400MH2012PTC234786. IRB WTL was converted into a public limited company under the Companies Act, and a fresh certificate of incorporation dated November 13, 2019 was issued, having CIN U45400MH2012PLC234786. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of IRB WTL, is as follows:

"*To carry on the business of infrastructure development in respect of the work of Design, Build, Finance, and Operation of Four Laning of Goa/Karnataka border to Kundapur section of NH-17 from existing km 93.700 to km 283.300 in the State of Karnataka under NHDP Phase IV on Design, Build, Finance, Operate and Transfer (DBFOT) Toll basis, inclduing collection and retention of toll or fee and to carry out the ancillary activities, in relation of the foregoing, as specified in the Concession Agreement to be executed with National Highways Authority of India (NHAI).*"

Capital Structure

The capital structure of IRB WTL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	174,194,303
Issued, subscribed and paid-up capital	174,194,303

Shareholding Pattern
The shareholding pattern of IRB WTL is as follows:

S No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	174,194,297	100
2.	Mahesh Kavthekar**	1	Negligible
3.	Dhananjay K. Joshi**	1	Negligible
4.	Shailesh Joshi**	1	Negligible
5.	Nikhil Maniar**	1	Negligible
6.	Arati Taskar**	1	Negligible

S No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
7.	Amitabh Murarka**	1	Negligible
Total		**174,194,303**	**100**

** On behalf of the Trust*
*** As a nominee of the Trust*

5. KGTL

Corporate Information

KGTL was incorporated on January 12, 2017 as a private limited company under the Companies Act, having CIN U45203MH2017PTC289501. KGTL was converted into a public limited company under the Companies Act, and a fresh certificate of incorporation dated November 14, 2019 was issued, having CIN U45203MH2017PLC289501. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of KGTL, is as follows:

"*To carry on the business of infrastructure development in respect of the work of Design, Build, Finance and Operation of Six Laning of Kishangarh to Gulabpura Section of NH 79A and NH 79 in the state of Rajasthan (length 90.000 km) under NHDP Phase V package – I on DBFOT (Toll) mode, including collection and retention of the toll or fee and to carry out the ancillary activities, in relation of the foregoing, as specified in the Concession Agreement to be executed with National Highways Authority of India (NHAI).*"

Capital Structure

The capital structure of KGTL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	155,500,000
Issued, subscribed and paid-up capital	155,500,000

Shareholding Pattern

The shareholding pattern of KGTL is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	155,499,994	100
2.	Mahesh Kavthekar**	1	Negligible
3.	Dhananjay K. Joshi**	1	Negligible
4.	Arati Taskar **	1	Negligible
5.	Shailesh Joshi**	1	Negligible
6.	Nikhil Maniar**	1	Negligible
7.	Vinod Kumar Menon**	1	Negligible
Total		155,500,000	**100**

** On behalf of the Trust*
*** As a nominee of the Trust*

6. KTL

Corporate Information

KTL was incorporated on June 11, 2014 as a private limited company under the Companies Act, having CIN U45201MH2014PTC255454. KTL was converted into a public limited company under the Companies Act, and a fresh certificate of incorporation dated November 14, 2019 was issued, having CIN U45201MH2014PLC255454. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of KTL, is as follows:

"*To carry on the business of infrastructure development in respect of the work of Design, Build, Finance and Operation of Four Laning of Kaithal to Rajasthan Border section of NH-152/65 from km 33+250 (Design Km – 0.500) to km 241+580 (Design Km 165.759) in the State of Haryana under NHDP Phase IV on Design, Build, Finance, Operate and Transfer (DBFOT) Toll basis, including collection and retention of the toll or fee and to carry out the ancillary activities, in relation of the foregoing, as specified in the Concession Agreement to be executed with National Highways Authority of India (NHAI).*"

Capital Structure

The capital structure of KTL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	328,000,000
Issued, subscribed and paid-up capital	328,000,000

Shareholding Pattern

The shareholding pattern of KTL is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	327,999,994	100
2.	Mahesh Kavthekar**	1	Negligible
3.	Dhananjay K. Joshi**	1	Negligible
4.	Arati Taskar**	1	Negligible
5.	Shailesh Joshi**	1	Negligible
6.	Nikhil Maniar**	1	Negligible
7.	Amitabh Murarka*	1	Negligible
Total		**328,000,000**	**100**

** On behalf of the Trust*
*** As a nominee of the Trust*

7. SYTL

Corporate Information

SYTL was incorporated on January 10, 2014 as a private limited company under the Companies Act, 1956, having CIN U45400MH2014PTC251983. SYTL was converted into a public limited company under the Companies Act, and a fresh certificate of incorporation dated November 13, 2019 was issued, having CIN U45400MH2014PLC251983. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of SYTL, is as follows:

"*To carry on the business of infrastructure development in respect of the work of Design, Build, Finance and Operation of Four Laning of Solapur to Yedeshi section of NH-211 from km 0.000 to km 100.000 (Design Length 98.717 km) in the State of Maharashtra under NHDP Phase IV on Design, Build, Finance, Operate and Transfer (DBFOT) Toll basis, including collection and retention of the toll or fee and to carry out the ancillary activities, in relation of the foregoing, as specified in the Concession Agreement to be executed with National Highways Authority of India (NHAI).*"

Capital Structure

The capital structure of SYTL is as follows:

Particulars	No. of equity shares of face value of ₹10 each

Authorized capital	98,250,000
Issued, subscribed and paid-up capital	98,250,000

Shareholding Pattern

The shareholding pattern of SYTL is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	98,249,994	100
2.	Dhananjay K. Joshi**	1	Negligible
3.	Mahesh Kavthekar**	1	Negligible
4.	Shailesh Joshi**	1	Negligible
5.	Nikhil Maniar**	1	Negligible
6.	Arati Taskar**	1	Negligible
7.	Amitabh Murarka**	1	Negligible
Total		**98,250,000**	**100**

** On behalf of the Trust*
*** As a nominee of the Trust*

8. UTL

Corporate Information

UTL was incorporated on October 6, 2016 as a private limited company under the Companies Act, having CIN U45203MH2016PTC286600. UTL was converted into a public limited company under the Companies Act, and a fresh certificate of incorporation dated November 13, 2019 was issued, having CIN U45203MH2016PLC286600. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of UTL, is as follows:

"*To carry on the business of infrastructure development in respect of the work of Design, Build, Finance and Operation of Six Lanning from km 287.400 to km 401.200 section of NH-8 in the States of Rajasthan and Gujarat (approx. length 113.800 km) on Design, Build, Finance, Operate and Transfer (DBFOT) Toll basis under NHDP Phase V (package – V), including collection and retention of the toll or fee and to carry out the ancillary activities, in relation of the foregoing, as specified in the Concession Agreement to be executed with National Highways Authority of India (NHAI).*"

Capital Structure

The capital structure of UTL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	116,800,000
Issued, subscribed and paid-up capital	116,800,000

Shareholding Pattern

The shareholding pattern of UTL is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	116,799,994	100
2.	Mahesh Kavthekar**	1	Negligible

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
3.	Shailesh Joshi**	1	Negligible
4.	Arati Taskar**	1	Negligible
5.	Dhananjay K. Joshi**	1	Negligible
6.	Vinod Kumar Menon**	1	Negligible
7.	Nikhil Maniar**	1	Negligible
Total		**116,800,000**	**100**

** On behalf of the Trust*
*** As a nominee of the Trust*

9. YATL

Corporate Information

YATL was incorporated on May 17, 2014, as a private limited company under the Companies Act, 2013, having CIN U45300MH2014PTC255280. YATL was converted into a public limited company under the Companies Act, and a fresh certificate of incorporation dated November 13, 2019 was issued, having CIN U45300MH2014PLC255280. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of YATL, is as follows:

"*To carry on the business of infrastructure development in respect of the work of Design, Build, Finance and Operation of Four Laning of Yedeshi to Aurangabad section of NH-211 from km 100.000 to km 290.200 in the State of Maharashtra under NHDP Phase IVB on Design, Build, Finance, Operate and Transfer (DBFOT) Toll basis, including collection and retention of the toll or free and to carry out the ancillary activities, in relation of the foregoing, as specified in the Concession Agreement to be excuted with National Highways Authority of India (NHAI).*"

Capital Structure

The capital structure of YATL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	216,000,000
Issued, subscribed and paid-up capital	215,757,001

Shareholding Pattern

The shareholding pattern of YATL is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	215,756,995	100
2.	Mahesh Kavthekar**	1	Negligible
3.	Shailesh Joshi**	1	Negligible
4.	Arati Taskar**	1	Negligible
5.	Dhananjay K. Joshi**	1	Negligible
6.	Amitabh Murarka**	1	Negligible
7.	Nikhil Maniar**	1	Negligible
Total		**215,757,001**	**100**

** On behalf of the Trust*
*** As a nominee of the Trust*

10. PDTPL

Corporate Information

PDTPL was incorporated on April 15, 2021, as a private limited company under the Companies Act, 2013, having CIN U45201MH2021PTC359020. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of PDTPL, is as follows:

"To carry on the business of infrastructure development in respect of 6 Laning of National Corridor NH-19 from Palsit to Dankuni (up to NH-6 Connector) from km. 588.870 to km. 652.700 (total design length 63.830 km) in the State of West Bengal under Bharatmala Pariyojana to be executed on BOT (Toll) basis Project including collection and retention of the toll or fee and to carry out the ancillary activities, in relation of the foregoing, as specified in the Concession Agreement to be executed with National Highways Authority of India (NHAI)."

Capital Structure

The capital structure of PDTPL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	121,250,000
Issued, subscribed and paid-up capital	121,250,000

Shareholding Pattern

The shareholding pattern of PDTPL is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	121,200,000	99.96
2.	IRB Infrastructure Developers Limited	49,994	0.04
3.	Rajpaul Sharma**	1	Negligible
4.	Vinod Kumar Menon**	1	Negligible
5.	Amitabh Murarka**	1	Negligible
6.	Dhananjay K. Joshi**	1	Negligible
7.	Arati Taskar**	1	Negligible
8.	Nikhil Sajeev Maniar**	1	Negligible
Total		**121,250,000**	**100**

** On behalf of the Trust*
*** As a nominee of IRB Infrastructure Developers Limited*

11. IRB GEPL

Corporate Information

IRB GEPL was incorporated on May 13, 2023, as a private limited company under the Companies Act, 2013, having CIN U42101TS2023PTC182805. Its registered office is situated at Plot No. 33, Sai Villa, Near Umda Nagar Railway Station, Shamshabad (K.V.Rangareddy), K.V.Rangareddy, Rangareddy, Telangana, India, 501218.

Main Object

The main object, as contained in the memorandum of association of IRB GEPL, is as follows:

"To carry on the business of infrastructure development in respect of Tolling, Operation, Maintenance and Transfer (TOT) of Nehru Outer Ring Road (from Km. 0+000 to Km. 158+000 in Hyderabad, Telangana and to carry out the ancillary activities, including collection and retention of the toll or fee, as specified in the Concession Agreement to be executed with Hyderabad Metropolitan Development Authority (HMDA / Authority) and/or the Hyderabad Growth Corridor Limited (HGCL / Implementing Authority)."

Capital Structure

The capital structure of IRB GEPL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	717,000,000
Issued, subscribed and paid-up capital	715,500,000

Shareholding Pattern

The shareholding pattern of IRB GEPL is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	715,450,000	99.99
2.	IRB Infrastructure Developers Limited	49,994	Less than 0.01
3.	Rajpaul Sharma**	1	Negligible
4.	Nikhil Maniar**	1	Negligible
5.	Amitabh Murarka**	1	Negligible
6.	Dhananjay K. Joshi**	1	Negligible
7.	Shailesh Joshi**	1	Negligible
8.	Mahesh Kavthekar**	1	Negligible
Total		**715,500,000**	**100**

** On behalf of the Trust*
*** As a nominee of IRB Infrastructure Developers Limited*

12. STPL

Corporate Information

STPL was incorporated on March 14, 2023, as a private limited company under the Companies Act, 2013, having CIN U42101MH2023PTC398913. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of STPL, is as follows:

"To carry on the business of infrastructure development in respect of Upgradation to Six Lane with paved Shoulder of NH-27 from Samakhiyali to Santalpur section from km. 339+200 to Km. 430+100 in the State of Gujarat to be executed on BOT (Toll) Mode, including collection and retention of the toll or fee and to carry out the ancillary activities, in relation of the foregoing, as specified in the Concession Agreement to be executed with National Highways Authority of India (NHAI)"

Capital Structure

The capital structure of STPL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	215,000,000
Issued, subscribed and paid-up capital	116,250,000

Shareholding Pattern

The shareholding pattern of STPL is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	116,200,000	99.96
2.	IRB Infrastructure Developers Limited	49,994	0.04
3.	Rajpaul Sharma**	1	Negligible
4.	Vinod Kumar Menon**	1	Negligible
5.	Amitabh Murarka**	1	Negligible

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
6.	Dhananjay K. Joshi**	1	Negligible
7.	Arati Taskar**	1	Negligible
8.	Nikhil Sanjeev Maniar **	1	Negligible
Total		**116,250,000**	**100**

** On behalf of the Trust*
*** As a nominee of IRB Infrastructure Developers Limited*

13. IRB LTPL

Corporate Information

IRB LTPL was incorporated on November 10, 2023, as a private limited company under the Companies Act, 2013, having CIN U42101MH2023PTC413666. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of IRB LTPL, is as follows:

"*To carry on the business of infrastructure development in respect of the Tolling, Operation, Maintenance and Transfer (TOT) of four lane Lalitpur-Sagar-Lakhnadon section from km.99.005 to km 415.089 of NH - 26 (New NH-44) in the state of Uttar Pradesh and Madhya Pradesh (TOT Bundle-12) and to carry out the ancillary activities, including collection and retention of the toll or fee, as specified in the Concession Agreement to be executed with National Highway Authority of India (NHAI).*"

Capital Structure

The capital structure of IRB LTPL as of the date of this Letter of Offer is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	425,000,000
Issued, subscribed and paid-up capital	420,580,000

Shareholding Pattern

The shareholding pattern of IRB LTPL as of the date of this Letter of Offer is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	420,579,999	99.99
2.	Amitabh Murarka**	1	Negligible
Total		**420,580,000**	**100**

** On behalf of the Trust*
*** As a nominee of the Trust*

14. IRB KTPL

Corporate Information

IRB KTPL was incorporated on January 1, 2024, as a private limited company under the Companies Act, 2013, having CIN U42101MH2024PTC416512. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of IRB KTPL, is as follows:

"*To carry on the business of infrastructure development in respect of the Tolling, Operation, Maintenance and Transfer (TOT) of Kota Bypass and Cable Stay Bridge on NH-76 (New NH-27) in the state of Rajasthan (TOT*

Bundle-13) and to carry out the ancillary activities, including collection and retention of the toll or fee, as specified in the Concession Agreement to be executed with National Highway Authority of India (NHAI)."

Capital Structure

The capital structure of IRB KTPL as of the date of this Letter of Offer is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	45,000,000
Issued, subscribed and paid-up capital	39,347,500

Shareholding Pattern

The shareholding pattern of IRB KTPL as of the date of this Letter of Offer is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	39,347,499	99.99
2.	Amitabh Murarka**	1	Negligible
Total		**39,347,500**	**100**

** On behalf of the Trust*
*** As a nominee of the Trust*

15. IRB GTPL

Corporate Information

IRB GTPL was incorporated on January 1, 2024, as a private limited company under the Companies Act, 2013, having CIN U42101MH2024PTC416522. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of IRB GTPL, is as follows:

"*To carry on the business of infrastructure development in respect of the Tolling, Operation, Maintenance and Transfer of Gwalior-Jhansi section from km 0.00 to km 103.000 (revised section Km. 16.000 to Km. 98.455) of NH75 (New NH-44) in the State of Madhya Pradesh and Uttar Pradesh (TOT Bundle-13) and to carry out the ancillary activities, including collection and retention of the toll or fee, as specified in the Concession Agreement to be executed with National Highway Authority of India (NHAI).*"

Capital Structure

The capital structure of IRB GTPL as of the date of this Letter of Offer is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	115,000,000
Issued, subscribed and paid-up capital	103,285,000

Shareholding Pattern

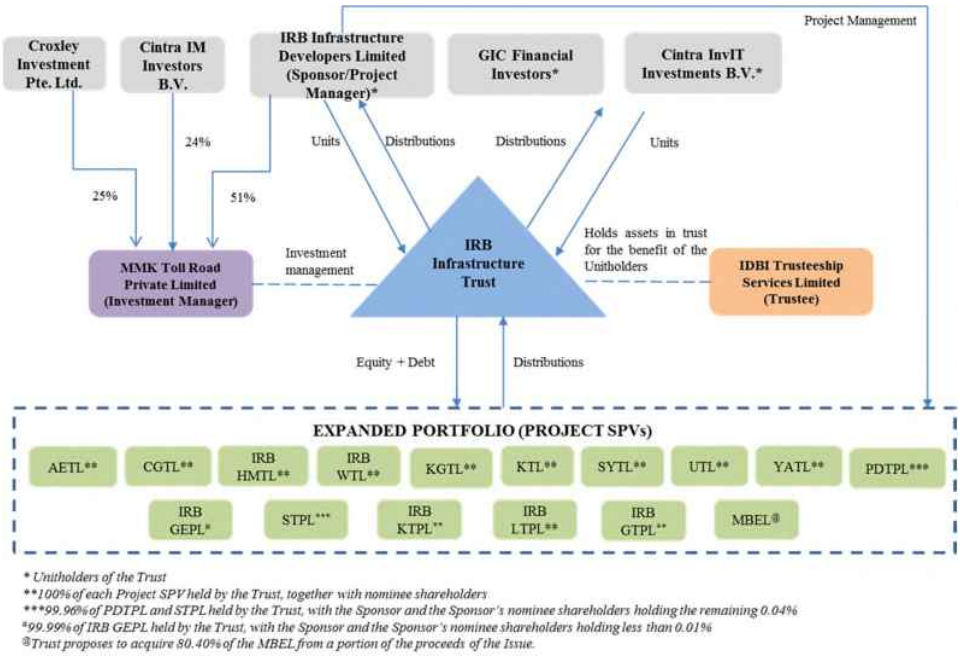
The shareholding pattern of IRB GTPL as of the date of this Letter of Offer is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	103,284,999	99.99
2.	Amitabh Murarka**	1	Negligible
Total		**103,285,000**	**100**

** On behalf of the Trust*
*** As a nominee of the Trust*

Details of the Target SPV

The following diagram illustrates the relationship among the Trust, the Project SPVs and the Target SPV constituting the Expanded Portfolio, the Trustee, the Investment Manager and the Unitholders (which includes the Sponsor) pursuant to the completion of the MBEL Acquisition after the completion of the Issue. For details of the MBEL Acquisition, see "*Business*", "*Objects of the Issue*" and " – *The MBEL Acquisition*" on pages 127, 79 and [●], respectively. Also see "*Risk Factors – We are in the process of acquiring the Target SPV (pursuant to definitive acquisition agreements), which if not completed in a timely manner or at all, or any failure to realize the anticipated benefits of the MBEL Acquisition, may adversely affect us*" on page 106.



** Unitholders of the Trust*
***100% of each Project SPV held by the Trust, together with nominee shareholders*
****99.96% of PDTPL and STPL held by the Trust, with the Sponsor and the Sponsor's nominee shareholders holding the remaining 0.04%*
@99.99% of IRB GEPL held by the Trust, with the Sponsor and the Sponsor's nominee shareholders holding less than 0.01%
@Trust proposes to acquire 80.40% of the MBEL from a portion of the proceeds of the Issue.

MBEL

Corporate Information

MBEL was incorporated on January 5, 2022, as a private limited company under the Companies Act, 2013, having CIN U45309MH2022PTC374506. MBEL was converted into a public limited company and a fresh certificate of incorporation was issued on June 1, 2022. The corporate identification number of MBEI is U45309MH2022PLC374506. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of MBEL, is as follows:

"To carry on the business of infrastructure development in respect of Access Controlled Six Lane (Expandable to Eight Lane) Greenfield 'Ganga Expressway' [Group- I, from Km. 7+900 (Village: Bijoli, Distt: Meerut) to Km.

137+600, (Village: Nagla Barah, Distt: Budaun), Design length 129.700 Km] in the State of Uttar Pradesh on DBFOT (Toll) basis under PPP, including collection and retention of the toll or fee and to carry out the ancillary activities, in relation of the foregoing, as specified in the Concession Agreement to be executed with the Uttar Pradesh Expressways Industrial Development Authority (UPEIDA).”

Capital Structure

The capital structure of MBEL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	535,000,000
Issued, subscribed and paid-up capital	533,250,000

Shareholding Pattern

The shareholding pattern of MBEL as of the date of this Letter of Offer is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IRB Infrastructure Developers Limited	271,957,494	51.00
2.	Anahera Investment Pte. Limited	261,292,500	49.00
3.	Nikhil Sanjeev Maniar*	1	Negligible
4.	Amitabh Murarka*	1	Negligible
5.	Arati Nikhil Taskar*	1	Negligible
6.	Dhananjay Krishnaji Joshi*	1	Negligible
7.	Rajpaul Satyapaul Sharma*	1	Negligible
8.	Vinodkumar Menon*	1	Negligible
Total		**533,250,000**	**100**

** As a nominee of IRB Infrastructure Developers Limited*

The MBEL Acquisition

The Trust intends to acquire 80.40% of the equity shares of MBEL through the acquisition of 428,733,000 equity shares of MBEL and 80.40% of the outstanding non-convertible debentures through acquisition of 128,619 outstanding non-convertible debentures, from the Sponsor and Anahera, after the listing of the Units issued pursuant to the Issue. The proceeds of the Issue will be utilized to pay the consideration for the acquisition of the MBEL Sale Securities T1 from the Sponsor and Anahera. Upon the completion of the MBEL Acquisition, the Sponsor will continue to hold 53,303,670 equity shares aggregating to 10% of the equity share capital of MBEL and Anahera will continue to hold 51,213,330 equity shares aggregating to 9.60% of the equity share capital of MBEL. Further, the Sponsor will continue to hold 15,992 non-covertible debentures aggregating to10% of the total outstanding non-convertible debentures issued by MBEL and Anahera will continue to hold 15,364 non-convertible debentures aggregating to 9.60% of the total outstanding no-convertible debentures issued by MBEL. The Trustee (on behalf of the Trust), the Investment Manager, the Sponsor, Anahera and MBEL have entered into the MBEL Securities Purchase Agreement for the acquisition of MBEL by the Trust. For a summary of the key terms of the MBEL Securities Purchase Agreement, see “*Objects of the Issue – Details of Utilization of Issue Proceeds*” on page 79.

In connection with the MBEL Acquisition, the Sponsor, the Investment Manager, the Financial Investors, Croxley and Cintra IM Investor have entered into an amendment to the Framework Agreement dated December 16, 2024 to record the terms and conditions in relation to, *inter-alia*, investment into the Trust for funding the acquisition of MBEL and further funding for the completion of the project. For details, see “ – *Certain Agreements in relation to the Trust – Framework Agreement*” on page 107.

Further, the Trustee (on behalf of the Trust), the Investment Manager, MBEL and the Sponsor have entered into the MBEL Project Implementation Agreement to appoint the Sponsor as the Project Manager with respect to MBEL’s project under the InvIT Regulations. For details, see “*The Sponsor and Project Manager – Functions, Duties and Responsibilities of the Project Manager*” on page 328.

The Trustee (on behalf of the Trust), the Investment Manager, the Sponsor, the Project SPVs and MBEL have

entered into an amendment agreement to the Name Licensing Agreement, which will be effective from the date of the closing date under the MBEL Securities Purchase Agreement. For details, see "*Business – Intellectual Property*" on page 160.

Certain Agreements in relation to the Trust

Framework Agreement

The Sponsor, the Investment Manager, the Financial Investors, Croxley and Cintra IM Investor have entered into the Framework Agreement to record the terms and conditions in relation to, *inter-alia*, subsequent investment into the Trust by the Sponsor and further funding for completion of the projects of the Project SPVs. The promoter of the Sponsor has also provided undertakings in relation to his shareholding in the Sponsor and other matters.

Pursuant to the terms of the Framework Agreement and the share purchase agreements, the Current Portfolio was acquired by the Trust. Further, the Sponsor, Cintra IM Investor, Croxley and the Investment Manager entered into the IM SHA in connection with Croxley's and Cintra IM Investor's investment in the Investment Manager.

See "*Corporate Governance*" and "*The Investment Manager*" on pages 162 and 331, respectively, for details of the arrangements under these agreements.

A summary of the key provisions of the Framework Agreement as of the date of this Letter of Offer is set out below.

Covenants

The Sponsor has provided covenants and undertakings to the Financial Investors in relation to certain matters under the Framework Agreement. These include, *inter-alia*:

- *Correspondence and regulatory filings:* other than routine or annual filings made by the Manager Group Member with the SEBI or the RBI, regulatory correspondence and filings between the Trustee or Manager Group Member and the SEBI or RBI as specified in the Framework Agreement require the prior written consent of all of the Financial Investors;

- *Project management works*: the Sponsor will act as the Project Manager in accordance with the terms of the Project Implementation Agreements and provide operation and maintenance services for a period of at least 10 years under the Project Implementation Agreements, which shall be further extended in terms of the Framework Agreement. For further details, see "*Background and Structure of the Trust – Fees and Expenses – Fees and expenses of the Project Manager*" and "*The Sponsor and Project Manager*" on pages 120 and 327, respectively;

- *Sponsor categorization*: Unless otherwise agreed by the parties, the Sponsor will continue to act as a sponsor of the Trust so long as the Sponsor and/or its affiliates hold Units and shall fulfil the obligations of a sponsor under the InvIT Regulations; and

- *Right of first offer in relation to the IRB InvIT Fund:* the Sponsor has agreed to provide the Financial Investors a right of first offer over any units of the IRB InvIT Fund held by the Sponsor and its affiliates and proposed to be transferred by them to any person (other than the entities controlled by the Sponsor or its subsidiaries) at any time after the closing date.

In addition, the Sponsor has also undertaken to comply with provisions in relation to material contracts, business plans, policies and initial tax orders and ensure certain information rights. Upon the Project SPVs achieving completion of the projects as required under the relevant concession agreements, the Sponsor has undertaken to ensure that no more than 51% of the equity shares (on a fully diluted basis) of all the Project SPVs will be encumbered in favor of the lenders and/or a debenture trustee.

Conditions precedent in relation to the MBEL Acquisition

The obligation of the parties to complete MBEL Acquisition is subject to the fulfilment of certain conditions by the Sponsor on or before the Closing Date, to the satisfaction of the GIC Financial Investors, unless waived or deferred in writing by the GIC Financial Investors at their sole discretion, which, *inter-alia*, include:

- The MBEL transaction documents, in agreed form, shall have been duly executed by the parties thereunder;

- No governmental authority of competent jurisdiction shall have enacted, issued, promulgated or enforced any Applicable Law that prohibits or makes illegal the consummation of the transactions contemplated under MBEL transaction documents;
- MBEL and IRB shall have obtained all necessary consents in connection with the execution of the MBEL transaction documents and the completion of the transactions contemplated thereunder;
- The warranties provided by IRB under the MBEL transaction documents are true, accurate and complete as of the execution date and as of the closing date (except those representations and warranties that address matters only as of a specified date, which shall be true and correct as of that specified date).
- No MBEL Material Adverse Change shall be subsisting as on the closing date;
- The conditions precedent under all other MBEL transaction documents shall be completed in a manner acceptable to the relevant parties thereunder;
- MBEL and IRB shall have duly performed and complied in all respects with all agreements, covenants and conditions required by the MBEL transaction documents to be performed or complied with by them prior to or on the closing date;
- The Investment Manager shall have duly and validly convened an extraordinary meeting of Unitholders at shorter notice pursuant to notice dated December 14, 2024 received from Chiswick Investment Pte. Ltd under Regulation 22(5C) of the InvIT Regulations; and
- The Financial Investors shall have received a certificate, dated as of the closing date and signed by a duly authorized officer of IRB, that each of the conditions precedents have been satisfied.

For purposes of the conditions and representations and warranties in relation to MBEL, "**MBEL Material Adverse Change**" shall mean any fact, circumstance, development or condition that, individually or in the aggregate, has a material adverse effect on or material adverse change in: (i) the business, assets (whether tangible or intangible), liabilities, financial condition or regulatory status of MBEL and/ or IRB and/or the Investment Manager; (ii) the ability of MBEL and/ or IRB and/or the Investment Manager to perform their respective obligations under any MBEL transaction document, or to complete any of the transactions contemplated thereunder; or (iii) the validity, legality or enforceability of the rights or remedies of the financial investors or their affiliates under the relevant MBEL transaction document.

The parties have also agreed to certain arrangements in relation to the MBEL sponsor claims and future claims as defined in the Framework Agreement.

Representations and Warranties in relation to MBEL Acquisition

The Sponsor has provided representations and warranties in relation to, *inter-alia*, the organization, status and authority of MBEL, the captial structure of MBEL and no conflict with other obligations of MBEL.

The Financial Investors have provided representations and warranties with respect to the Issue in relation to, *inter alia*, their incorporation, existence, authority to enter into the agreement, eligibility to undertake the transactions under the agreement, and no conflicts with other obligations of the Financial Investors.

Reserved Matters

For details of Reserved Matters, see "*Rights of Unitholders – Approval of Unitholders – Reserved Matters*" on page 323.

Further funding in relation to the Current Portfolio

The Financial Investors have agreed to contribute a portion of the total equity commitment required for completion of the project of each Project SPV (the "**Project SPV Commitment**") in accordance with the business plan and the annual budget as set out in the Framework Agreement. Such contribution is proposed to be through subscription to additional Units on a periodic basis. For certain Project SPVs, in the first instance, the internal accruals of the relevant Project SPVs for the relevant period will be applied towards the Project SPV Commitment in such period, and any shortfall or excess as per the forecasts in the business plan will be adjusted towards such Project SPV's Commitment requirements in the subsequent period. The Sponsor and the Financial Investors will together invest the required funding into the Trust in an agreed proportion in accordance with the Framework Agreement.

Potential Projects

For details in relation to Potential Projects, see "*Related Party Transactions – Details of Related Party Transactions proposed to be undertaken*" on page 308.

Further issue of Units, transfer of Units and rights in relation to Unitholding

For details of arrangements agreed in relation to further issue of Units, transfer of Units and rights in relation to Unitholding, see "*Rights of Unitholders – Arrangements between the Sponsor and the Financial Investors*" on page 321.

Event of Default

For details of events of default and consequences, see "*Rights of Unitholders – Arrangements between the Sponsor and the Financial Investors – Events of Default and Consequences*" on page 321.

Indemnification in relation to the Formation Transactions

In relation to the Formation Transactions, the Sponsor has agreed to indemnify the Indemnified Parties (i.e., (a) the Financial Investors, their respective affiliates, their respective directors, officers, employees; and (b) at the option of the Financial Investors, any Manager Group Member, provided the Sponsor agrees to indemnify the relevant Manager Group Member of the entire loss suffered/ incurred by such Manager Group Member in relation to an indemnity event) against, any losses incurred or sustained by, or imposed upon, the Indemnified Parties based upon, arising out of, with respect to or relating to: (i) breach or inaccuracy of any of the Sponsor's warranties; (ii) any non-fulfilment, non-performance or other breach of any covenant or obligation of the Sponsor, its affiliates and/or any Manager Group Member contained in the transaction documents; (iii) any matter involving fraud, gross negligence or wilful misconduct by the Sponsor or any Manager Group Member; and (iv) certain specific indemnity matters.

Further, the Financial Investors have agreed to certain arrangements in relation to indemnification with respect to the Formation Transactions.

The Sponsor's indemnification obligations are subject to certain limitations as to time and quantum as specified in the Framework Agreement. Further, the indemnified parties will not be entitled to claim any losses with respect to a particular indemnity event unless the losses exceed a particular amount. Payments by the Sponsor in respect of any loss will be limited to the amount of any liability or damage that remains after deducting any insurance proceeds received by the indemnified party in respect of any such claim. Subject to the limitations set out in the Framework Agreement, the Sponsor's liability for all monetary claims for breach of warranties, including claims for damages, will not exceed a specified amount agreed under the Framework Agreement.

Indemnification in relation to the acquisition of PDTPL

In relation to the acquisition of PDTPL by the Trust, the Sponsor has agreed to indemnify the indemnified parties against, any losses incurred or sustained by, or imposed upon, the indemnified parties based upon, arising out of, with respect to or relating to: (i) any claim against PDTPL that has occurred prior to the PDTPL closing date; (ii) breach or inaccuracy of any of the Sponsor's warranties in relation to PDTPL; (iii) any non-fulfilment, non-performance or other breach of any covenant or obligation of the Sponsor, its affiliates and/or any Manager Group Member contained in the PDTPL transaction documents; and (iv) any matter involving fraud, gross negligence or wilful misconduct by the Sponsor, the Investment Manager or PDTPL.

The Sponsor's indemnification obligations are subject to certain limitations as to quantum as specified in the Framework Agreement. Further, the indemnified parties will not be entitled to claim any losses with respect to a particular indemnity event unless the losses exceed a particular amount. Payments by the Sponsor in respect of any loss will be limited to the amount of any liability or damage that remains after deducting any insurance proceeds received by the indemnified party in respect of any such claim. Subject to the limitations set out in the Framework Agreement, the Sponsor's liability for all monetary claims for breach of warranties, in relation to the acquisition of PDTPL, including claims for damages, will not exceed a specified amount agreed under the Framework Agreement.

Indemnification in relation to the acquisition of IRB GEPL

In relation to the acquisition of IRB GEPL by the Trust, the Sponsor has agreed to indemnify the indemnified parties against, any losses incurred or sustained by, or imposed upon, the indemnified parties based upon, arising out of, with respect to or relating to: (i) any claim against IRB GEPL that has occurred prior to the IRB GEPL closing date; (ii) breach or inaccuracy of any of the Sponsor's warranties in relation to IRB GEPL; (iii) any non-fulfilment, non-performance or other breach of any covenant or obligation of the Sponsor, its affiliates and/or any Manager Group Member contained in the IRB GEPL transaction documents; (iv) any matter involving fraud, gross negligence or wilful misconduct by the Sponsor, the Investment Manager or IRB GEPL; and (v) certain other matters subject to and in accordance with the terms of the Framework Agreement.

Except in certain specified cases, the Sponsor's indemnification obligations are subject to certain limitations as to quantum as specified in the Framework Agreement. Further, the Indemnified Parties will not be entitled to claim any losses with respect to a particular indemnity event unless the losses exceed a particular amount. Payments by the Sponsor in respect of any loss will be limited to the amount of any liability or damage that remains after deducting any insurance proceeds received by the Indemnified Party in respect of any such claim. Subject to the limitations and carve-outs set out in the Framework Agreement, the Sponsor's liability for all monetary claims for breach of warranties in relation to the acquisition of IRB GEPL by the Trust, including claims for damages, will not exceed a specified amount agreed under the Framework Agreement.

Indemnification in relation to the acquisition of STPL

In relation to the acquisition of STPL by the Trust, the Sponsor has agreed to indemnify the indemnified parties against, any losses incurred or sustained by, or imposed upon, the indemnified parties based upon, arising out of, with respect to or relating to: (i) any claim against STPL that has occurred prior to the STPL closing date; (ii) breach or inaccuracy of any of the Sponsor's warranties in relation to STPL; (iii) any non-fulfilment, non-performance or other breach of any covenant or obligation of the Sponsor, its affiliates and/or any Manager Group Member contained in the STPL transaction documents; and (iv) any matter involving fraud, gross negligence or wilful misconduct by the Sponsor, the Investment Manager or STPL.

The Sponsor's indemnification obligations are subject to certain limitations as to quantum as specified in the Framework Agreement. Further, the indemnified parties will not be entitled to claim any losses with respect to a particular indemnity event unless the losses exceed a particular amount. Payments by the Sponsor in respect of any loss will be limited to the amount of any liability or damage that remains after deducting any insurance proceeds received by the Indemnified Party in respect of any such claim. Subject to the limitations and carve-outs set out in the Framework Agreement, the Sponsor's liability for all monetary claims for breach of warranties in relation to the acquisition of STPL by the Trust, including claims for damages, will not exceed a specified amount agreed under the Framework Agreement.

Indemnification in relation to the investment in IRB LTPL, IRB GTPL and IRB KTPL

In relation to the investment in IRB LTPL, IRB GTPL and IRB KTPL by the Trust, the Sponsor has agreed to indemnify the Indemnified Parties against, any losses incurred or sustained by, or imposed upon, the Indemnified Parties based upon, arising out of, with respect to or relating to a breach or inaccuracy of any of the Sponsor's warranties in relation to each of IRB LTPL, IRB GTPL or IRB KTPL.

The Sponsor's indemnification obligations are subject to certain limitations as to quantum as specified in the Framework Agreement. Further, the indemnified parties will not be entitled to claim any losses with respect to a particular indemnity event unless the losses exceed a particular amount. Payments by the Sponsor in respect of any loss will be limited to the amount of any liability or damage that remains after deducting any insurance proceeds received by the indemnified party in respect of any such claim. Subject to the limitations and carve-outs set out in the Framework Agreement, the Sponsor's liability for all monetary claims for breach of warranties in relation to the investment in IRB LTPL, IRB GTPL and IRB KTPL by the Trust, including claims for damages, will not exceed a specified amount agreed under the Framework Agreement.

Indemnification in relation to the investment in the Target SPV

In relation to the acquisition of MBEL by the Trust, the Sponsor has agreed to indemnify the indemnified parties against, any losses incurred or sustained by, or imposed upon, the indemnified parties based upon, arising out of, with respect to or relating to: (i) any claim against MBEL that has occurred prior to the MBEL closing date that are attributable to any omission or default by IRB, MBEL and/or any of their affiliates; (ii) breach or inaccuracy of any of the Sponsor's warranties in relation to MBEL; (iii) any non-fulfilment, non-performance or other breach of any covenant or obligation of the Sponsor, its affiliates and/or any Manager Group Member contained in the MBEL transaction documents; and (iv) any matter involving fraud, gross negligence or wilful misconduct by the Sponsor, the Investment Manager or MBEL.

The indemnification obligations are subject to certain limitations as to quantum as specified in the Framework Agreement. Further, the indemnified parties will not be entitled to claim any losses with respect to a particular indemnity event unless the losses exceed a particular amount. Payments in respect of any loss will be limited to the amount of any liability or damage that remains after deducting any insurance proceeds received by the indemnified party in respect of any such claim. Subject to the limitations and carve-outs set out in the Framework Agreement, the Sponsor's liability for all monetary claims for breach of warranties in relation to the acquisition of MBEL by the Trust, including claims for damages, will not exceed a specified amount agreed under the Framework Agreement.

Governing Law, Dispute Resolution and Termination

The Framework Agreement is governed by the laws of India. Any dispute shall be referred to and finally resolved by arbitration administered by the Singapore International Arbitration Centre in accordance with the SIAC Rules for the time being in force. The arbitration panel will consist of three arbitrators, each of which shall be appointed by SIAC in accordance with the SIAC Rules. The seat and venue of the arbitration proceedings will be London, United Kingdom.

The rights (excluding certain specified rights) but not the obligations of the parties under the Framework Agreement, terminate with respect to the relevant parties upon (i) the combined unitholding of the relevant financial investor group unitholders falling below 12.5% or the shareholding of the relevant financial investor group in the Investment Manager falling below 12.5% or (ii) the unitholding of the Sponsor falling below 12.5% or the shareholding of the Sponsor in the Investment Manager falling below 12.5%.

Debt Novation Agreements

In connection with the initial offer of Units by the Trust, the Investment Manager and the Trust (acting through the Trustee) entered into Debt Novation Agreements dated February 19, 2020 for the novation of subordinated debt and unsecured loans from the Sponsor and its Associates in consideration for the issue of Units to the Sponsor and the payment of certain amounts to the Sponsor and its Associates. The Debt Novation Agreements also provide for the treatment of Sponsor Claims and Future Claims and repayment of such debt by the Project SPVs (except PDTPL, IRB GEPL, STPL, IRB LTPL, IRB KTPL and IRB GTPL) to the Trust on an ongoing basis.

Certain definitions in the Debt Novation Agreements are set out below:

"**Debt**" shall mean the Subordinated Debt and the Unsecured Loans;

"**Future Claims**" shall mean, with respect to a Project SPV, the claims (including any administrative, legal or other similar proceedings) made or intended to be made by such Project SPV against any Governmental Authority for events pertaining to the period after the Reference Date, including any claims for events pertaining to the period prior to the Closing Date (defined below) but which would likely adversely impact the toll revenue of the Project SPV during periods subsequent to the Closing Date;

"**Governmental Authority**" shall include the SEBI, the NHAI, the Ministry of Road Transport and Highways of the Government of India or any state or union territory of India, the Reserve Bank of India, and any national, state, regional or local government or governmental, regulatory, statutory, administrative, fiscal, taxation, judicial, or government-owned body, department, commission, authority, court, arbitrator, tribunal, agency or entity, in India or outside India, in each case, having jurisdiction over any of the parties, their operations, or the transactions contemplated in the Debt Novation Agreement and the transaction documents;

"**Lenders**" shall mean the Sponsor and its associates that have provided Subordinated Debt and Unsecured Loans to the Project SPV in connection with its project;

"**Reference Date**" shall mean, with respect to a Project SPV, the later of the (i) the Closing Date; and (ii) the project completion date under the Concession Agreement, provided that if a provisional completion certificate is issued under the terms of the Concession Agreement and additional construction is required to be undertaken after the date of such certificate, this date shall be the date of issue of the final completion certificate;

"**Sponsor Claims**" shall mean, with respect to a Project SPV: (a) any kind of claim made by such Project SPV for events pertaining to the period prior to the Reference Date and the impact of which also solely pertains to the period prior to the Reference Date; and/or (b) all construction related claims (including any administrative, legal or other similar proceedings in relation to utilities shifting, change of scope, construction, delays in construction, idling of resources, interest during construction or other matters) made or intended to be made by such Project SPV against any Governmental Authority for events pertaining to the period prior or after to the Reference Date;

"Subordinated Debt" shall mean, with respect to a Project SPV, the outstanding interest-free subordinated debt provided by the Lenders to such Project SPV; and

"**Unsecured Loans**" shall mean, with respect to a Project SPV, the outstanding interest-free unsecured loans provided by the Lenders to such Project SPV.

Treatment of Sponsor Claims and Future Claims

In consideration for the transfer and release of a portion of Subordinated Debt and Unsecured Loans by the Lenders, and all rights and obligations in relation to such Debt, the Trust and the Investment Manager have agreed

that the Amounts (defined below) will be paid by the Trust to the Lenders to the extent that any such amounts are received by the Project SPV in a settlement or adjudication (including arbitration) of Sponsor Claims.

The payment of Amounts to the Lenders shall constitute full, final and complete discharge of the obligation of the Trust with respect to payment of consideration for such Subordinated Debt and Unsecured Loans.

Any payments received by the Project SPV in a settlement or adjudication (including arbitration) of Sponsor Claims will be transferred by the Project SPV to the Trust immediately upon receipt (the "**Amounts**"). The Trust may also pay up to specified amount, in case of IRB WTL, to the Lenders towards the Amounts, including out of its cash flows, and any such amounts paid will be reduced from the aggregate Amounts. If a bank guarantee is required to be submitted to the relevant Governmental Authority in lieu of such Amounts (or any part thereof), the Lenders will provide the bank guarantee. Upon the receipt of the Amounts by the Trust, the Amounts will forthwith be paid by the Trust to the Lenders. All taxes in relation to such payments will be solely borne by the Lenders.

If the final settlement or adjudication in relation to the relevant Sponsor Claim is unsuccessful, the Trust will promptly inform the Lenders, as applicable, and the Sponsor and the Financial Investors will mutually agree on treatment of any outstanding amounts in relation to such Sponsor Claims based on tax considerations in a manner mutually agreed between the Financial Investors and the Sponsor. Any tax impact on the Trust or the Project SPVs on account of such outstanding debt and/ or write-off such debt (whether pertaining to the period prior to the Closing Date or after) will only be to the account of the Lenders, and no Manager Group Member (as defined in the Debt Novation Agreements) and/or any other Unitholder should suffer/ incur a loss in connection with such debt.

The Project SPV, the Investment Manager and the Trust will render all reasonable assistance necessary to enable the payment of the Amounts to the Lenders, as applicable, including to obtain any required approval and authorization required from the NHAI or other Governmental Authority or any of the senior lenders of the Project SPV.

Any amounts received by the Project SPV or the Trust pursuant to the settlement or adjudication of Future Claims shall be distributed among the Unitholders in the proportion of their respective Unitholding percentages in the Trust in such manner as may be permitted under applicable law. In the event of any restructuring as set out above, any amounts received pursuant to Future Claims for periods prior to such restructuring shall be distributed among the Unitholders in the proportion of their respective Unitholding percentages.

Repayment of the Debt by the Project SPVs

The Project SPVs (except PDTPL, IRB GEPL, STPL, IRB LTPL, IRB KTPL and IRB GTPL) will repay the Subordinated Debt and Unsecured Loans to the Trust as may be mutually agreed between the Parties based on availability of cash flows. Interest at rate of 14% p.a. was chargeable on the above Debt with effect from the earlier of (i) the project completion date under the relevant concession agreement and (ii) the date of listing of the Units on one or more Stock Exchanges, and the parties have mutually agreed that interest was chargeable from the date of listing of the Units on the NSE, except in the case of UTL and CGTL, where payment of interest is subject to receipt of approval from the relevant lenders. The terms of the repayment of the unsecured loans extended to PDTPL are set out in the shareholder loan agreement dated April 5, 2022. See "*— Shareholder Loan Agreements*" below.

The above Debt shall, at all times be subordinate to the debt provided by the senior lenders. Subject to the terms of the financing agreements and the relevant escrow agreement, payments towards such Debt (including interest) will be made out of balance available in the escrow account for utilization in accordance with the instructions of the Project SPV, on the relevant interest payment date or repayment date, after meeting all payments due to the senior lenders as of such date.

Governing Law, Dispute Resolution and Termination

The Debt Novation Agreements will be governed by the laws of India. Any dispute shall be referred to and finally resolved by arbitration administered by the Singapore International Arbitration Centre in accordance with the SIAC Rules for the time being in force. The arbitration panel will consist of three arbitrators, each of which shall be appointed by SIAC in accordance with the SIAC Rules. The seat and venue of the arbitration proceedings will be Delhi, India.

The Debt Novation Agreements will stand terminated and fall away automatically without any further act by the parties (i) upon the repayment or settlement of all amounts (including interests and other charges) in relation to the Debt and (ii) there are no Amounts remaining due to the Lenders.

Shareholder Loan Agreements

The Trust has provided Shareholder Loans in the form of unsecured loans to the Project SPVs (except IRB LTPL, IRB GTPL and IRB KTPL) under the shareholder loan agreements dated February 19, 2020 with each Project SPV (except PDTPL, IRB GEPL, STPL, IRB LTPL, IRB GTPL and IRB KTPL), a shareholder loan agreement dated April 5, 2022 with PDTPL, a shareholder loan agreement dated July 29, 2023 with IRB GEPL, a shareholder loan agreement dated October 12, 2023 with STPL and the shareholder loan agreements dated March 13, 2024 entered into by the Trust (acting through the Trustee) and the Investment Manager with each of IRB LTPL, IRB KTPL and IRB GTPL (collectively, the "**Project SPV Shareholder Loan Agreements**"). Additional debt is proposed to be provided by the Trust to the Project SPVs through disbursements under the Project SPV Shareholder Loan Agreements from time to time towards, *inter-alia*, funding of total project cost and working capital requirements of the Project SPVs.

A summary of the key terms of the Project SPV Shareholder Loan Agreements is set forth below.

Purpose	***AETL, IRB WTL, KTL, SYTL and YATL*** The Project SPV shall utilize the loan amounts solely for (i) the purpose of partial refinancing of certain secured loans provided to the Project SPV by the senior lenders; (ii) funding of total project cost; and (iii) working capital requirements or general corporate purposes of the Project SPV. ***CGTL, IRB HMTL, KGTL and UTL*** The Project SPV shall utilize the loan amounts solely for (i) funding of total project cost; and (ii) working capital requirements or general corporate purposes of the Project SPV. ***PDTPL, IRB GEPL, STPL, IRB KTPL, IRB LTPL and IRB GTPL*** The Project SPV shall utilize the loan amounts solely for funding the total project cost of the Project SPV.
Term	The Project SPV shall repay the loan at the end of the concession period under the relevant concession agreement as mutually agreed between the parties to the Project SPV Shareholder Loan Agreement.
Interest	• The Project SPV (except PDTPL, IRB GEPL, STPL, IRB KTPL, IRB LTPL and IRB GTPL) shall pay accrued interest (subject to withholding of applicable taxes) at the rate of 14% p.a., or or such other rate as may be decided mutually by the parties to the Project SPV Shareholder Loan Agreement from time to time. Interest will accrue from the date of disbursement of the loan. • Interest will be chargeable from the earlier of the (i) project completion date under the relevant concession agreement and (ii) the date of listing of the Units on one or more Stock Exchanges. The parties have agreed that interest was chargeable from the date of listing of the Units on the NSE (except for UTL and CGTL, where charging of interest remains subject to the receipt of consent from the relevant lenders). • Interest will be payable in arrears on a quarterly basis, on or before the expiry of the calendar month immediately succeeding the completion of each quarter, provided that the Project SPV may, at its discretion, elect to pay interest on a monthly basis, and such interest shall be payable on the first day of the subsequent month for which the interest is being paid. ***PDTPL*** • The Project SPV shall pay accrued interest (subject to withholding of applicable taxes) at the rate of 14.5% p.a., or or such other rate as may be decided mutually by the parties to the Project SPV Shareholder Loan Agreement from time to time. Interest will accrue from the date of disbursement of the loan. • Interest will be chargeable from the project completion date under the concession agreement. • Interest will be payable in arrears on a quarterly basis, on or before the expiry of the calendar month immediately succeeding the completion of each quarter, provided that the Project SPV may, at its discretion, elect to pay interest on a monthly basis, and such interest shall be payable on the first day of the subsequent month for which the interest is being paid

	IRB GEPL • The Project SPV shall pay accrued interest (subject to withholding of applicable taxes) at the rate of 15% p.a., or or such other rate as may be decided mutually by the parties to the Project SPV Shareholder Loan Agreement from time to time. • Interest will accrue and be chargeable from the appointed date under the concession agreement. • Interest will be payable when able following the appointed date under the concession agreement in arrears on a quarterly basis, on or before the expiry of the calendar month immediately succeeding the completion of each quarter, provided that the Project SPV may, at its discretion, elect to pay interest on a monthly basis, and such interest shall be payable on the first day of the subsequent month for which the interest is being paid. ***STPL*** • The Project SPV shall pay accrued interest (subject to withholding of applicable taxes) at the rate of 15% p.a., or or such other rate as may be decided mutually by the parties to the Project SPV Shareholder Loan Agreement from time to time. • Interest will accrue and be chargeable from the project completion date under the concession agreement. • Interest will be payable when able following the project completion date under the concession agreement in arrears on a quarterly basis, on or before the expiry of the calendar month immediately succeeding the completion of each quarter, provided that the Project SPV may, at its discretion, elect to pay interest on a monthly basis, and such interest shall be payable on the first day of the subsequent month for which the interest is being paid. ***IRB KTPL, IRB LTPL and IRB GTPL*** • The Project SPV shall pay accrued interest (subject to withholding of applicable taxes) at the rate of 16% p.a., or or such other rate as may be decided mutually by the parties to the Project SPV Shareholder Loan Agreement from time to time. • Interest will accrue and be chargeable from the the appointment date under the concession agreement. • Interest will be payable when able following the appointed date under the concession agreement in arrears on a quarterly basis, on or before the expiry of the calendar month immediately succeeding the completion of each quarter, provided that the Project SPVs may, at its discretion, elect to pay interest on a monthly basis, and such interest shall be payable on the first day of the subsequent month for which the interest is being paid.
Repayment	• The Trust may call on the Project SPV to prepay the loan, in full or part, or permit the Project SPV to make payments of the outstanding loan, in full or part, after the date such payment is due, at any time during the term of the Project SPV Shareholder Loan Agreement until the final settlement date (as defined in the Project SPV Shareholder Loan Agreement). • The Project SPV may prepay the whole or part of the loan together with interest on that amount accrued up to the date of prepayment, by giving a prior written notice of not less than 30 days to the Trust, specifying the amount to be prepaid and the date of proposed prepayment. • The loan (in one or more tranches) provided under the Project Shareholder Loan Agreement shall, at all times be subordinate to the debt provided by the senior lenders. Subject to the terms of the financing agreements and the escrow agreements, payments towards the loan amounts (including interest) shall be made out of balance available in the escrow account for utilization in accordance with the instructions of the Project SPV on the relevant interest payment date or repayment date, after meeting all payments due to the senior lenders as of such date.
Security	Unsecured
Events of Default	The occurrence of any of the events or circumstances set out below shall constitute an "**Event of Default**", if not remedied within 180 days (or such extended period as may be provided by the Trust at its sole discretion) from the date of receiving notice of such default from the Trust. The Project SPV shall promptly give written notice to the Trust of any Event of Default and

	of any other event which, with the giving of notice or lapse of time or otherwise could constitute an Event of Default, and inform the Trust of any action taken or proposed to be taken by the Project SPV in connection therewith. • **Non-Payment:** The Project SPV fails to pay any amount due under the Project SPV Shareholder Loan Agreement or any other finance documents within a period of 180 days from the relevant due date. If debt due to senior lenders is outstanding, the Trust may declare a non-payment Event of Default only if one or more of the senior lenders declares an Event of Default in relation to amounts due to such senior lenders. • **Breach of Covenants and Undertakings:** The Project SPV breaches any provision of the Project SPV Shareholder Loan Agreement or any other finance documents. • **Misrepresentation:** Any representation or statement made by the Project SPV in any finance document or any other document delivered by or on behalf of the Project SPV under or in connection with any transaction document is or proves to have been incorrect or misleading in any material respect when made or results in a material adverse effect on the Project SPV or the relevant project. • **Cessation of Business**: The Project SPV ceasing or threatening or likely to cease, to carry on all or substantially all of its business or operations. • **Insolvency:** The Project SPV is unable to, or presumed or deemed to be unable to, or admits its inability to, pay its debts as they fall due, suspends making payments on any of its debts or, by reason of actual or anticipated financial difficulties, commences negotiations with one or more of its creditors with a view to rescheduling any of its indebtedness. • **Insolvency proceedings:** Any corporate action, legal proceedings or other procedure is taken in relation to: (a) the suspension of payments, a moratorium of any indebtedness, winding-up, dissolution, administration, provisional supervision or reorganization (by way of voluntary arrangement, scheme of arrangement or otherwise) of the Project SPV other than a solvent liquidation or reorganization of the Project SPV; (b) a composition or arrangement with any creditor of the Project SPV, or an assignment for the benefit of creditors generally of the Project SPV, or a class of such creditors; (c) the appointment of a liquidator, receiver, and manager, administrator, administrative receiver, compulsory manager, provisional supervisor or other similar officer in respect of the Project SPV or any of its assets; or (d) or any analogous procedure is taken in any jurisdiction. • **Unlawfulness and Invalidity:** (a) It is or becomes unlawful for the Project SPV to perform its obligations under the Project SPV Shareholder Loan Agreement or any other finance documents; or (b) any finance document is not or ceases to be legal, valid, binding or enforceable. • **Nationalization or Expropriation**: Any governmental authority has taken or has threatened to take any action to expropriate, condemn, nationalize or seize the relevant project or whole or part of the assets of the Project SPV, or the whole or substantially whole or part of the relevant project, resulting in the Project SPV being deprived or threatened to deprive to carry on its business or which will have a material adverse effect on the Project SPV or the relevant project on the operation of the business of the Project SPV. • **Cross Default**: The Project SPV defaults in the payment of any principal, interest, premium or other amount due (whether by scheduled maturity, mandatory prepayment, acceleration or demand) under any loan or credit agreement and/or defaults in the payments due under any existing facility agreement or the occurrence of an event of default under the existing facility agreements of the Project SPV. On and at any time after the occurrence of an Event of Default which has not been waived or cured and which is continuing, the Trust may, upon the delivery of seven business days' notice to the Project SPV of the occurrence of an Event of Default: (i) require all or part of the outstanding amounts to be payable immediately; and (ii) exercise such other rights as may be available to the Trust under the Project SPV Shareholder Loan Agreement, the finance documents or under applicable law. No further disbursement shall be made after the occurrence of an Event of Default.

Dispute Resolution	Any dispute shall be referred to and finally resolved by arbitration administered by the Singapore International Arbitration Centre in accordance with the Arbitration Rules of the Singapore International Arbitration Centre ("**SIAC Rules**") for the time being in force. The arbitration panel will consist of three arbitrators, each of which shall be appointed by SIAC in accordance with the SIAC Rules. The seat and venue of the arbitration proceedings shall be Delhi, India.
Governing Law	Laws of India

Unitholding pattern of the Trust

The table below provides details of the pre-Issue Unitholding pattern of the Trust as of September 30, 2024:

Category	Category of Unitholder	No. of Units	As a % of the total outstanding Units	No. of Units mandatorily held		Number of Units pledged or otherwise encumbered	
				No. of Units	As a % of total Units held	No. of Units	As a % of total Units held
(A)	**Sponsor(s)/Investment Manager/Project Manager(s) and their associates/related parties**						
(1)	**Indian**						
(a)	Individuals/HUF	0	0.00	0	0.00	0	0.00
(b)	Central/State Govt.	0	0.00	0	0.00	0	0.00
(c)	Financial Institutions/Banks	0	0.00	0	0.00	0	0.00
(d)	Any other (specify)	0	0.00	0	0.00	0	0.00
	BODIES CORPORATE	568,239,840	51.02	131,893,990	23.21	211,547,238	37.23
	Sub-total (A)(1)	**568,239,840**	**51.02**	**131,893,990**	**23.21**	**211,547,238**	**37.23**
(2)	**Foreign**						
(a)	Individuals (Non Resident Indians/Foreign Individuals)	0	0.00	0	0.00	0	0.00
(b)	Foreign government	0	0.00	0	0.00	0	0.00
(c)	Institutions	0	0.00	0	0.00	0	0.00
(d)	Foreign Portfolio Investors	0	0.00	0	0.00	0	0.00
(e)	Any other (specify)	0	0.00	0	0.00	0	0.00
	Sub-total (A)(2)	0	0.00	0	0.00	0	0.00
	Total unitholding of Sponsor and Sponsor group (A) = (A)(1) + (A)(2)	**568,239,840**	**51.02**	**131,893,990**	**23.21**	**211,547,238**	**37.23**
(B)	**Public holding**						
(1)	**Institutions**						
(a)	Mutual Funds	0	0.00				
(b)	Financial Institutions/Banks	0	0.00				
(c)	Central/State Govt.	0	0.00				
(d)	Venture Capital Funds	0	0.00				
(e)	Insurance companies	0	0.00				
(f)	Provident/pension funds	0	0.00				
(g)	Foreign portfolio investors	341,623,181	30.67				
(h)	Foreign venture capital investors	-	0.00				

Category	Category of Unitholder	No. of Units	As a % of the total outstanding Units	No. of Units mandatorily held		Number of Units pledged or otherwise encumbered	
				No. of Units	As a % of total Units held	No. of Units	As a % of total Units held
(i)	Foreign bodies	203,830,244	18.30				
	Sub-total (B)(1)	**545,453,425**	**48.98**				
(2)	**Non-institutions**						
(a)	Central government/state government(s)/President of India	0	0.00				
(b)	Individuals	0	0.00				
(c)	NBFCs registered with RBI	0	0.00				
(d)	Any other (specify)	0	0.00				
	TRUSTS	0	0.00				
	NON RESIDENT INDIANS	0	0.00				
	CLEARING MEMBERS	0	0.00				
	BODIES CORPORATE	0	0.00				
		0	0.00				
	Sub-total (B)(2)	0	0.00				
	Total public unitholding (B) = (B)(1) + (B)(2)	545,453,425	48.98				
	Total Units outstanding (C) = (A) + (B)	**1,113,693,265**	**100.00**				

Unitholders holding more than 5% of the Units as of September 30, 2024

S. No.	Name of the Unitholder	Pre-Issue	
		No. of Units	% of Unitholding
1.	IRB Infrastructure Developers Limited	568,239,840	51.02
2.	Cintra InvIT Investments B.V.	267,200,000	23.99
3.	Anahera Investment Pte. Ltd.	74,423,181	6.68
4.	Bricklayers Investment Pte. Ltd.	66,557,561	5.98
5.	Chiswick Investment Pte. Ltd.	66,557,561	5.98
TOTAL		**1,042,978,143**	**93.65**

[*] *Chiswick Investment Pte. Ltd has informed the Investment Manager that simultaneous with this Issue, one or more of the GIC Financial Investors (as applicable) will sell certain Units of the Trust pursuant to an inter-se commercial agreement between such seller and buyer ("**Secondary Sale**"). Also see "Government and Other Approvals – Other Approvals" on page 833*

Given that the Issue is a fast-track rights issue, IRB Infrastructure Developers Limited, the Sponsor, will subscribe to the entire extent of its Rights Entitlements. Accordingly, assuming full subscription in the Issue, subject to the finalization of the Basis of Allotment, the Sponsor is expected to hold 597,839,840 Units aggregating to approximately 51.02% of the total number of Units on a post-Issue basis.

The post-Issue unitholding of the other Unitholders will depend on, inter-alia, the extent of subscription to their respective Rights Entitlements, the finalization of the Basis of Allotment and any Secondary Sale.

Fees and Expenses

1. *Fees and expenses of the Investment Manager*

Pursuant to the terms of the Investment Management Agreement, the fees will be paid to the Investment Manager for the services provided by it ("**Management Fees**"). The Management Fees were initially proposed to be an annual amount of ₹36.00 million per annum. The Management Fees may be revised for every Financial Year with the approval of the Unitholders, such that the votes cast in favor of the resolution shall be at least 60% of total votes cast for the resolution.

Pursuant to a resolution dated July 4, 2023 of the Board of Directors of the Investment Manager and a resolution dated July 27, 2023 of the Unitholders, the Management Fees have been revised to be equivalent to 110% of the cost incurred by the Investment Manager in connection with providing investment management services to the Trust including routine administrative and operational expenses (exclusive of any out of pocket expenses, reimbursements and taxes).

2. *Fees and expenses of the Trustee ("Trusteeship Fee")*

The fee payable to the Trustee for acting as the trustee to the Trust pursuant to an engagement letter dated June 27, 2019 is set out below. Any amendment to trusteeship fees will require the approval of the Unitholders, such that the votes cast in favor of the resolution shall be at least 60% of total votes cast for the resolution.

Particulars	Description
Service charges	Service charges are payable on a quarterly basis, i.e., ₹0.28 million plus applicable taxes payable quarterly in advance on April 1 for April to June, July 1 for July to September, October 1 for October to December and January 1 for January to March each year until full and final repayment of funds to Unitholders, winding up of the Trust and termination of the Indenture of Trust.
Delayed payment charges	In case the payment of service charges is not received within a period of 30 days from the date of the bill, the Trustee reserves the right to charge delayed payment charges at the rate of 12% p.a. on the outstanding amount.
Reset clause	The Trustee has the right to reset the service charges after expiry of two years from the date of execution of the Indenture of Trust as mutually agreed with the Investment Manager.
Out-of-pocket expenses	To be claimed by the Trustee on an actual basis within intimation to the Sponsor/Investment Manager
Invocation and enforcement	Any other work relating to invocation and enforcement of the Trust Assets in case of default would attract separate expenses and fees

In case of late payment of the above fees, penal interest on the outstanding amount would be payable in accordance with the terms of the Indenture of Trust (if applicable).

The above fee structure is subject to certain conditions specified in the engagement letter.

3. *Fees and expenses of the Project Manager*

Pursuant to the Project Implementation Agreements, the Project SPVs which operate road assets that have not been completed will make payments to the Project Manager for the remaining engineering, procurement and construction works in relation to the relevant project ("**EPC Payments**") on a monthly basis, or as otherwise agreed among the parties to the Project Implementation Agreements based on invoices raised by the Project Manager. The agreed EPC Payments are set forth in the relevant Project Implementation Agreements, copies of which will be available for inspection to Eligible Unitholders from the date of this Letter of Offer until the Issue Closing Date. See "*Material Contracts and Material Documents for Inspection*" on page 848.

Pursuant to the Project Implementation Agreements, the Project SPVs will also make payments to the Project Manager for the operation and maintenance works in relation to the relevant project ("**O&M Payments**", and together with the EPC Payments, the "**Project Management Payments**") on a monthly basis, or as otherwise agreed among the parties to the Project Implementation Agreements based on invoices raised by the Project Manager. The agreed O&M Payments applicable for the initial term of the Project Implementation Agreements (i.e., 10 years from the date of the relevant agreement) are set forth in the relevant Project Implementation Agreements, copies of which will be available for inspection by the Eligible Unitholders from the date of this Letter of Offer until the Issue Closing Date. See "*Material Contracts and Material Documents for Inspection*" on page 848.

No additional payments, including those on account of out of pocket expenses, delay in construction timeline, payment of taxes, any statutory liabilities, any actual losses or damages incurred on any account whatsoever, will be made to the Project Manager over and above the Project Management Payments, except for any payments related to change of scope (as defined in the relevant concession agreement) or utility shifting as required by the NHAI, which will be paid by the relevant Project SPV to the Project Manager as and when such payments are received from the NHAI. If a Project SPV has made any payments to NHAI related to change of scope, such amount will be reduced from the EPC Payments. If any payment due to a Project SPV by the NHAI in respect of the EPC works or the O&M works is delayed in terms of the relevant concession agreement, the payment obligations of the Project SPV to the Project Manager will be correspondingly delayed until the Project SPV receives payment from the NHAI.

Pursuant to addenda dated May 6, 2021 (the "**Addenda**") to the Project Implementation Agreements for CGTL, IRB HMTL, KGTL, IRB WTL and UTL, such Project SPVs have agreed to pay the Project Manager additional costs in relation to certain delays by NHAI and the lockdowns implemented due COVID-19 in the manner and subject to the conditions set out in the Addenda. Under the Project Implementation Agreement for PDTPL, PDTPL is entitled to retain a certain percentage of the total EPC Payments for the project which will be released to the Project Manager upon the completion of the project or as may be mutually agreed among the parties. Certain arrangements in relation to a mobilization advance have also been agreed under such Project Implementation Agreement.

Pursuant to the MBEL Project Implementation Agreement, MBEL will make payments to the Project Manager for engineering, procurement and construction works and the operation and maintenance works (the "**Project Management Payments**") in relation to the relevant project on a monthly basis, or as otherwise agreed among the parties to the MBEL Project Implementation Agreement based on invoices raised by the Project Manager. The agreed MBEL Project Management Payments applicable for the initial term of the relevant project implementation agreements (i.e., 10 years from the date of the relevant agreement) are set forth in the MBEL Project Implementation Agreement. No additional payments, including those on account of out of pocket expenses, delay in construction timeline, payment of taxes, any statutory liabilities, any actual losses or damages incurred on any account whatsoever, will be made to the Project Manager over and above the MBEL Project Management Payments, except for (i) any payments related to change of scope (as defined in the relevant concession agreement), utility shifting, cost overruns and any other similar matters related thereto and as required by the concessioning authority, which will be paid by MBEL to the Project Manager as and when such payments are received from the concessioning authority; and (ii) any payment received by MBEL from the concessioning authority as compensation for additional expenses actually incurred by the Project Manager pursuant to a change in law for the execution of the EPC Works and the O&M works. If MBEL makes any payments to the concessioning authority related to change of scope, such amount will be reduced from the MBEL Project Management Payments. If any payment due to MBEL by the concessioning authority in respect of the works for the project is delayed in terms of the relevant concession agreement, the payment obligations of MBEL to the Project Manager will be correspondingly delayed until MBEL receives payment from the concessioning authority.

Additionally, amounts already paid by MBEL toward pre-construction activities and geo-technical investigations to the Project Manager have been adjusted and will continue to be adjusted against the invoices raised by the Project Manager in accordance with the MBEL Project Implementation Agreement copies of which will be available for inspection by the Eligible Unitholders from the date of this Letter of Offer until the Issue Closing Date. See "*Material Contracts and Material Documents for Inspection*" on page 848.

4. *Fees and expenses of the Auditor and Valuer*

The fees and expenses paid or payable by the Investment Manager to the Valuer and the Joint Statutory Auditors is approximately ₹1.42 million and approximately ₹2.83 million, respectively, along with goods and services tax.

Set-up costs

In connection with the establishment and registration of the Trust, the Sponsor has incurred ₹1.1 million in expenses.

INDUSTRY OVERVIEW

The information contained in this section is derived from various government and other industry sources. The Investment Manager, the Trustee, the Sponsor, the Lead Manager or any other person connected with the Issue have not independently verified this information. Industry sources and publications generally state that the information contained therein has been obtained from sources generally believed to be reliable, but that their accuracy, completeness and underlying assumptions are not guaranteed and their reliability cannot be assured. Industry publications are also prepared on information as of specific dates and may no longer be current or reflect current trends. Accordingly, investment decisions should not be based on such information. All references to years refer to calendar years except as otherwise stated.

Overview of the Global and Indian Economies

As per the World Bank, global growth is expected to slow to 2.4 per cent in 2024, the third consecutive year of deceleration, reflecting the lagged and ongoing effects of monetary policies to rein in high inflation, restrictive credit conditions, and global trade and investment. Near-term prospects are diverging, with subdued growth in major economies alongside improving conditions in emerging markets and developing economies (EMDEs) with strong fundamentals. Meanwhile, the outlook for EMDEs with pronounced vulnerabilities remains precarious amid elevated debt and financing costs. Downside risks to the outlook predominate.

The recent conflict in the Middle East, in addition to the Russian Federation's invasion of Ukraine, has heightened geopolitical risks. Conflict escalation could lead to surging energy prices, with broader implications for global activity and inflation. Other risks include financial stress related to elevated real interest rates, persistent inflation, weaker-than-expected growth in China, further trade fragmentation, and climate change-related disasters. Against this backdrop, policymakers face enormous challenges and difficult trade-offs.

Despite challenging global conditions, India remains the world's fastest growing major economy. As per World Bank's India Development Update, the country's GDP is projected to grow at a robust 7% in FY 2024-25, underscoring its position as the fastest-growing major economy in the world. This growth momentum has been consistent, with GDP rising from 7.0% in FY 2022-23 to 8.2% in FY 2023-24.

According to data from the Reserve Bank of India, the foreign exchange reserves stood at USD 657 billion as of November 2024. According to the Department for Promotion of Industry and Internal Trade (DPIIT), FDI equity inflow in India during April-September 2024 was over $29 billion, increased by 45 per cent from the previous year.

This positive growth outlook is primarily due to the digital revolution, regulatory environment supportive of entrepreneurship, measured targeted at economic upliftment of the vulnerable sections of the society, developing manufacturing sectors while building the supporting physical infrastructure, and efforts directed at diversifying export basket and moving toward higher value–added products. At the level of sub-national governments, reforms that would unleash the productive potential of India's MSMEs with streamlined regulatory and compliance obligations and sensitive enforcement, will further help in the economic growth.

India's Infrastructure Opportunity

Infrastructure sector is a key driver for the Indian economy and is set to become a biggest driver for the country that aspires to become a $5 trillion economy soon. Growing urbanization, demand for energy and financing needs for sustainable living pose a challenge for the infrastructural setup in the country. Infrastructure, and the lack of it, is envisaged as the primary growth constraint, while good infrastructure is widely recognized as an enabler of growth.

In the coming era of supply chain disruptions, new technologies and reversal of financial deleveraging, infrastructure growth must keep pace with the need created for it. The opportunities in the infrastructure sector have seen an incremental curve over previous years and are growing to establish the sector as a key driver in India's development story at a high rate.

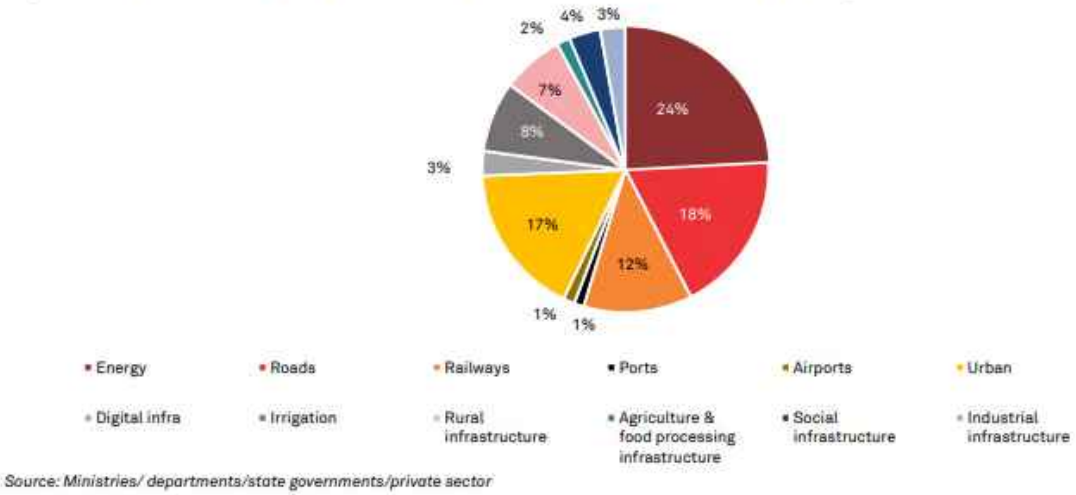
National Infrastructure Pipeline

In December 2019, the Government launched the National Infrastructure Pipeline (the "NIP"), an investment plan for enhancing infrastructure in identified sectors, which is a first-of-its-kind exercise to provide world-class infrastructure across the country and improve the quality of life for all citizens. NIP is expected to enable a forward outlook on infrastructure projects to create jobs, improve ease of living and provide equitable access to infrastructure for all, thereby making growth more inclusive. NIP includes economic and social infrastructure

projects. NIP comprises brownfield and greenfield infrastructure projects of above INR 100 crore across both economic and social infrastructure sectors.

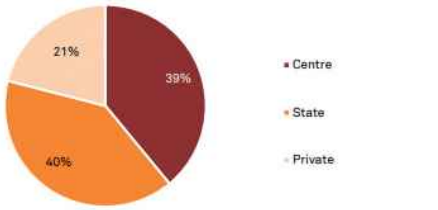
During the Financial Years 2020 to 2025, sectors such as energy (24%), roads (18%), urban (17%) and railways (12%) are expected to amount to approximately 71% of the projected infrastructure investments in India, with a total capital expenditure projected at ₹111 lakh crore. (*Source: National Infrastructure Pipeline – Report of the Task Force, Department of Economic Affairs, Ministry of Finance, Government of India – Volume I (the "Task Force Report – Volume I")*)

Figure 11 Sector-wise break-up of capital expenditure of Rs 111 lakh crore during fiscals 2020-2025



Source: Ministries/ departments/state governments/private sector

The Government of India (39%) and state governments (40%) are expected to have an almost equal share in implementing the NIP in India, followed by the private sector (21%). (*Source: The Task Force Report – Volume I*)



Source: PIRF submitted by ministries/ departments/state governments/private sector

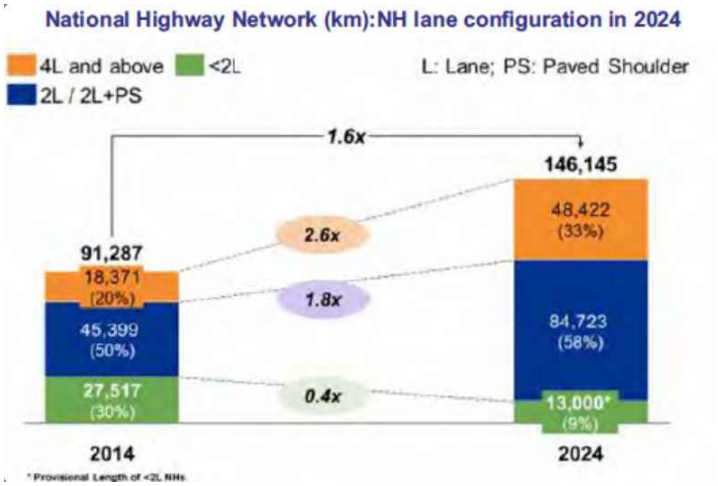
NIP was launched with 6,835 projects and has expanded to capture over 9,288 projects with a total project outlay of Rs 108.88 lakh crore between 2020-2025. Transport (42%), energy (25%), water and sanitation (15%) and social infrastructure (3%) sectors amount to around 85% of the projected infrastructure investments under NIP.

Roads and Highways

India has about 66.71 lakh km of road network, which is the second largest in the world. The Government of India has taken several reforms and initiatives and given a significant push for capital expenditures for key infrastructure sectors, especially highways. The total allocation for the highways sector has increased to Rs. 2.78 lakh crore from Rs. 2.17 lakh crore in the Union Budget for Financial year 2024-25. (Out of the total Rs 2.78 lakh crore, the National Highways Authority of India (NHAI) has been allocated around Rs 1.68 lakh crore as part of MoRTH's capital expenditure plan for 2024-25, a 3.9 % increase from 2023-24 (Source: Government of India, Ministry of Finance, Union Budget 2024-25). This substantial investment underscores the importance placed on enhancing the nation's transportation infrastructure, which is crucial for boosting trade and connectivity.

The FY 2023-24 was the year of consolidation of the gains that accrued from major policy decisions taken in the previous nine years, a time for monitoring of ongoing projects, tackling road blocks and adding to the already

impressive pace of work achieved during the past years. During the year, the MoRTH and its associated organizations have expanded the national highways network in the country, taking various steps to make these highways safe for the commuters and making best efforts to minimize adverse impact on the environment. As a result, over the last nine years, length of National Highways has gone up by 60 % from 91,287 km (FY 2013-14) to 146,145 km in 2024 out of the set target of 200,000 kms by 2024-2025. During the same period, the length of 4 lanes and above NH increased by 2.6 times – 18,371 km (2014) to 48,422 km and the length of less than 2 lane NH decreased from 30% (2014) to 9% (2024). The length of operational High-Speed Corridors of NHs network has increased from 93 km in 2014 to about 2,138 km in 2024.*(Source: MoRTH Annual Report 2023-24)*.



Details of National Highway length constructed per day during last six Financial Years are as follows:

Year	Length in km	Pace (km per day)
2018-19	10,855	29.74
2019-20	10,237	27.97
2020-21	13,327	36.51
2021-22	10,457	28.64
2022-23	10,331	28.30
2023-24	12,349	33.83

(Source: MoRTH Annual Report 2023-24))

The pace of National Highways (NH) construction has increased consistently between 2014-15 and 2023-24 due to the systematic push through corridor-based National Highway development approach. The average pace of National Highway construction has also seen a remarkable increase of 2.8 times to 33.83 km/day in FY 2023-24 from 12.1 km/day in 2014-15. The Government's strong commitment to expand infrastructure is evident from the construction of 12,349 km of National Highway during FY 2023-24 which is the 2nd highest and about 20% more than previous year. The highest achievement was 13,327 km in FY 2020-21. During FY 2023-24, MORTH awarded contracts for 8,581 km of National Highways to improve the connectivity.

Schemes

Bharatmala Pariyojana: This is the umbrella program for the highways sector that aims to optimize the efficiency of road traffic movement across the country by bridging critical infrastructure gaps. Phase I of the Bharatmala Pariyojana approved in October 2017, focuses on development of 34,800 km of National Highways. The Pariyojana emphasized a "corridor based National Highway development" to ensure infrastructure symmetry and consistent road user experience. The key components of the Pariyojana are Economic Corridors development, Inter-corridor and feeder routes development, National Corridors Efficiency Improvement, Border and International Connectivity Roads, Coastal and Port Connectivity Roads and Expressways. The length awarded is 26,425 km and the length constructed is 17,411 km so far. The program is expected to be completed by 2027-28. The Bharatmala Pariyojana phase 1 is expected to be completed by FY 2027-28.

Under the Bharatmala Pariyojana, 60% of projects have been envisaged on Hybrid Annuity Mode (HAM), 10% projects on BOT (Toll) Mode, and 30% projects on EPC mode.

Total aggregate length of 27,391 km with a total capital cost of ₹ 8,75,774 crore have been approved and awarded till date under Bharatmala Pariyojana (including 7,234 km length of residual NHDP with a total capital cost of ₹ 1,86,477 crore). Out of the total approved 27,391 km, an aggregate length of 15,447 km has been approved on EPC mode, an aggregate length of 11,537 km on HAM mode and an aggregate length of 408 km on BOT (Toll) mode [EPC: HAM: BOT: 56%:42%:2%]. *(Source: MoRTH Annual Report 2023-24)*

The Hybrid Annuity Model (HAM) has balanced risk appropriated between private and public partners and boosted PPP activity in the sector. In the recent past, the BOT projects have witnessed renewed interest from private players. Asset recycling, through the TOT model, has also been taken up by the NHAI and other State Government agencies.

Pradhan Mantri (PM) Gati Shakti National Master Plan (NMP): The seven engines that drive PM Gati Shakti are Roads, Railways, Airports, Ports, Mass Transport, Waterways and Logistics Infrastructure. The scope of PM Gati Shakti National Master Plan will encompass the seven engines for economic transformation, seamless multimodal connectivity and logistics efficiency. The projects pertaining to these 7 engines in the National Infrastructure Pipeline will be aligned with PM Gati Shakti framework. PM Gati Shakti National Master Plan is a critical tool for integrating economic & infrastructural planning and development (Source: National Master Plan (pmgatishakti.gov.in)). With multimodal infrastructure development, India's logistics cost will reduce further, improve ease of living and ease of doing business in the country. The main aim of this program is to fasten the approval process which can now be done through the Gati Shakti portal and thus digitized the approval process completely.

National Electronic Toll Collection (FASTag) programme:

The flagship initiative of MoRTH and NHAI has been implemented on pan India basis to remove bottlenecks and ensure seamless movement of traffic and collection of user fee as per the notified rates, using passive Radio Frequency Identification (RFID) technology which is made compulsory with effect from February 15, 2021. The implementation of the FASTag system for toll collection in India has been a resounding success, with a consistent growth trajectory. As on 31st March, 2024, collectively banks have issued over 8.81 crore FASTags. The average daily collection through ETC has increased to ₹ 190.68 crore with penetration of 98.5% in total fee collection. There are 1365 National Highways (NH) and State Highways fee plazas live with ETC infrastructure in all lanes.

NHAI plans to implement the Global Navigation Satellite System (GNSS)-based Electronic Toll Collection (ETC) system within the existing FASTag ecosystem, initially using a hybrid model where both RFID-based ETC and GNSS-based ETC will operate simultaneously. GNSS based Tolling is a barrier free method of Electronic Toll Collection wherein the road users are charged on the distance they have travelled on the tolled Highway stretch. Dedicated GNSS lanes will be available at toll plazas, allowing vehicles using the GNSS-based ETC to pass through freely. As GNSS based ETC becomes more widespread, all lanes will eventually be converted to GNSS lanes

Outlook

India's infrastructure sector is rapidly growing, and the key trends demonstrate positivity and optimism. The market for roads and highways in India is projected to exhibit a CAGR of 36.16% during 2016-2025, on account of growing Government initiatives to improve transportation infrastructure in the country. For the period of 2016-17 to 2021-22, the CAGR stands at 20%.

Development and maintenance of road infrastructure is a key Government priority, the sector has received strong budgetary support over the years. During the past years, the standardized processes for Public Private Partnership & public funded projects and a clear policy framework relating to bidding and tolling have also been developed. The major initiatives undertaken by the Government such as National Infrastructure Pipeline (NIP) and the PM Gati Shakti National Master Plan will raise productivity and accelerate economic growth and sustainable development.

Viksit Bharat @ 2047 is the vision of the Government of India to make India a developed nation by 2047. In line with the objective, the MoRTH is set to embark on an ambitious plan to construct 50,000 km of high-speed (access-controlled) corridors by the year 2047 The highways sector in India has been at the forefront of performance and innovation. The government is committed towards expanding the National Highway network over 2 lakh kilometers by 2047 emphasizing the construction of the World Class Road infrastructure in a time bound & target-oriented way.

India has a well-developed framework for Public-Private-Partnerships (PPP) in the highway sector. The Asian Development Bank ranked India at the first spot in PPP operational maturity and also designated India as a

developed market for PPPs. The Hybrid Annuity Model (HAM) has balanced risk appropriated between private and public partners and boosted PPP activity in the sector. In the recent past, the Build Operate Transfer (BOT) projects have witnessed renewed interest from private players, therefore NHAI has come up with more tenders on BOT mode in the current fiscal year. NHAI has identified 53 highway projects worth Rs 2.1 trillion to be developed through BOT model.

Asset recycling, through the Toll Operate Transfer (TOT) model has also been taken up by the NHAI and other State Government agencies is garnering increased interest among investors. Since its launch in 2018, NHAI has successfully completed 11 rounds of the Road Asset (bundle of roads) monetization through TOT mode and raised Rs. 48,995 crores till date. In line with the National Monetization Plan, NHAI's Total Asset Monetization Program has crossed Rs.1 Lakh Crore which includes Rs. 48,995 Crore through TOT, Rs. 25,900 Crore through InvIT and Rs. 42,000 Crore through Securitization.

Way Side Amenities

To improve the comfort and convenience of the highway users, the Ministry has planned development of state-of-the-art Way Side Amenities (WSA) at approximately every 40 kms along the National Highways. A total of 400 WSA sites are planned for development in FY 2024-25 and further 200+ WSA sites are planned for development in FY 2025-26. A total of 322 WSA sites (along 150 brownfield and 172 greenfield NH) have already been awarded out of which 50 sites are operational.

Multimodal Logistics Parks

A network of 35 Multimodal Logistics Parks is planned to be developed as part of Bharatmala Pariyojana, with a total investment of about Rs 46,000 crore, which once operational, shall be able to handle around 700 million metric tonnes of cargo. Of this, MMLPs at 15 prioritized locations will be developed with a total investment of about Rs 22,000 Crore. These Multi-Modal Logistics Parks shall serve as regional cargo aggregation and distribution hubs for various industrial and agricultural nodes, consumer hubs and EXIM gateways such as seaports with multi-modal connectivity. In certain cases, the MMLPs are also being developed in tandem with the Inland Waterway Terminals under the Sagarmala Pariyojana to reduce the cost of inland cargo movement at a much larger scale as compared to conventional road-based movement.

Port Connectivity Road (PCR) Project

India currently has 87 operational and under implementation ports along its coastline. All major operational ports currently have 4 lane and above last mile road connectivity. MORTH and its implementing agencies have planned the development of 108 Port Connectivity Road (PCR) projects of length ~3,700 km to improve the last mile connectivity of all 87 operational and under implementation ports. 10 projects having about 313 km length have been completed, 24 projects having about 1725 km length are under implementation and DPR is in progress for the remaining 63 projects (1465 km).

Optical Fibre Cables (OFCs)

Working towards development of around 10,000 km of Optic Fibre Cables (OFC) infrastructure across the country by FY2024-25, National Highways Logistics Management Limited (NHLML), a fully owned SPV of NHAI, is implementing the network of Digital Highways by developing integrated utility corridors along the National Highways to develop OFC infrastructure. Around 1,367 km on Delhi – Mumbai Expressway and 512 km on Hyderabad - Bangalore Corridor have been identified for the Digital Highway Development.

Ropeways

Under Parvatmala Pariyojana, ropeway projects of ~60 kms length are planned for award by FY2023-24. Ropeways have emerged as a convenient, safe and preferred mode of transportation to provide both, first as well as last mile connectivity to such hilly & inaccessible areas or to help de-congest urban congestion areas.

Public Transport Terminal Infrastructure

A Public Transport Terminal Infrastructure (PTI) is envisioned as a world-class passenger movement facility, designed to provide a hub for interfacing and interconnecting a variety of intercity, regional and local public transport systems, all within a single facility. PTI is an integrated public transport hub catering to multiple modes of surface transport. Additionally, PTIs also help to address the issue of city congestion arising out of the ever-increasing traffic growth and severe under capacity of transport infrastructure. Policy for PTI is being finalized.

BUSINESS

Some of the information in this section, including information with respect to our plans and strategies, contains forward-looking statements that involve risks and uncertainties. Please see "Forward-Looking Statements" and "Risk Factors" on pages 14 and 16, respectively, for a discussion of certain factors that may affect our business, results of operations or financial condition. Our actual results may differ materially from those expressed in or implied by these forward-looking statements.

Prospective investors should read this section together with the sections "Industry Overview", "Financial Statements", "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Summary of the Concession Agreements" on pages 122, 347, 777and 168, respectively, as well as the other information contained in this Letter of Offer.

This Letter of Offer includes (i) unaudited interim consolidated financial information of the Trust and the Project SPVs as of and for the six-month period ended September 30, 2024; (ii) audited consolidated financial information of the Trust and the Project SPVs as of and for the Financial Years 2024, 2023 and 2022; (iii) unaudited interim standalone financial information of the Trust as of and for the six-month period ended September 30, 2024; and (iv) audited standalone financial information of the Trust as of and for the Financial Years 2024,2023 and 2022.

This Letter of Offer includes summary financial information of MBEL as of and for the six-month period ended September 30, 2024 and the Financial Years 2024, 2023 and 2022. This Letter of Offer also contains Pro Forma Financial Information of the Trust and MBEL as of and for the Financial Year 2024 and the six-month period ended September 30, 2024 prepared in accordance with the requirements of Chapter 9 of the SEBI Master Circular and the InvIT Regulations.

In this section, unless the context otherwise requires, a reference to "we", "us" and "our" refers collectively to the Trust and the Project SPVs. References herein to the "Current Portfolio" are to the pre-MBEL Acquisition portfolio of the Trust and to the "Expanded Portfolio" are to the post-MBEL Acquisition portfolio of the Trust.

Overview

The Trust is a registered infrastructure investment trust under the InvIT Regulations. The Current Portfolio of the Trust comprises 15 toll-road assets in the states of Telangana, West Bengal, Haryana, Uttar Pradesh, Rajasthan, Gujarat, Goa, Maharashtra, Karnataka and Madhya Pradesh in India and consists of 11 Build-Operate-Transfer (BOT) projects and 4 Toll-Operate-Transfer (TOT) projects.

The Trust has acquired the Current Portfolio comprised of the Project SPVs from the Sponsor and in the case of PDTPL, IRB GEPL and STPL, holds the Project SPV together with the Sponsor. IRB LTPL, IRB KTPL and IRB GTPL were incorporated by and are held by the Trust. Each of the Project SPVs is an eligible infrastructure project as defined under the InvIT Regulations. As of September 30, 2024, the Project SPVs owned the following toll road assets comprising approximately 9,789 Lane Kilometers of highway:

- The Agra - Etawah NH-2 Project: A 124.52 km section of NH-2 between Agra and Etawah Bypass in Uttar Pradesh which is held by AETL;
- The Gulabpura - Chittorgarh NH-79 Project: A 124.87 km section of NH-79 between Gulabpura and Chittorgarh Bypass in Rajasthan which is held by CGTL;
- The Hapur - Moradabad NH-9 Project: A 99.867 km section of NH-9 between Hapur and Moradabad in Uttar Pradesh which is held by IRB HMTL;
- The Goa - Kundapur NH-17 Project: A 187.28 km section of NH-17 between Goa/Karnataka border and Kundapur in Karnataka which is held by IRB WTL;
- The Kishangarh - Gulabpura NH-79/79A Project: A 90.00 km section of NH-79/79A between Kishangarh and Gulabpura in Rajasthan which is held by KGTL;
- The Kaithal - Rajasthan Border NH-152/65 Project: A 166.259 km section of NH-152/65 between Kaithal and Rajasthan Border in Haryana which is held by KTL;
- The Solapur - Yedeshi NH-211 Project: A 98.717 km section of NH-211 between Solapur and Yedeshi in Maharashtra which is held by SYTL;
- The Udaipur - Rajasthan Border NH-8 Project: A 113.80 km section of NH-8 between Udaipur and Rajasthan Border in Rajasthan and Gujarat which is held by UTL;

- The Yedeshi - Aurangabad NH-211 Project: A 189.09 km section of NH-211 between Yedeshi and Aurangabad in Maharashtra which is held by YATL;
- The Palsit – Dankuni NH-19 Project: A 63.83 km section of NH-19 between Palsit and Dankuni in West Bengal which is held by PDTPL;
- The Nehru Outer Ring Road Project: A 158.00 km section of the Nehru Outer Ring Road in Telangana which is held by IRB GEPL;
- The Samakhiyali – Santalpur NH-27 Project: A 90.90 km section of NH-27 between Samakhiyali and Santalpur in Gujarat which is held by STPL;
- The Lalitpur – Lakhnadon NH-44 Project: A 316.08 km section of NH-44 between Lalitpur, Sagar and Lakhnadon in Uttar Pradesh and Madhya Pradesh which will be held by IRB LTPL;
- The Kota Bypass and Cable Stay Bridge Project: A section of 27.820 km of NH-76 (new NH-27) in Rajasthan which will be held by IRB KTPL; and
- The Gwalior - Jhansi Project: An 82.455 km section of NH-75 (new NH-44) between Gwalior and Jhansi in the states of Madhya Pradesh and Uttar Pradesh which will be held by IRB GTPL.

The map set out below depicts the location of the Current Portfolio:



The Sponsor of the Trust is IRB Infrastructure Developers Limited, one of the largest infrastructure development and construction companies in India in terms of net worth in the roads and highways sector according to the NHAI's annual prequalification for public private partnerships in national highway projects report for 2016. The Sponsor has been listed on the Stock Exchanges since 2008. As at September 30, 2024, the Sponsor had six road projects of which two were operational and four were under-construction. The Sponsor also acts as the Project Manager. For further details, see "*The Sponsor and Project Manager*" on page 327.

The Investment Manager of the Trust is MMK Toll Road Private Limited. The Investment Manager has experience in operating a road project for a period of 13 years. 51% of the equity share capital in the Investment Manager is held by the Sponsor, approximately 25% of the equity share capital of the Investment Manager is held by Croxley and approximately 24% of the equity share capital of the Investment Manager is held by the Cintra IM Investor. For further details, see "*The Investment Manager*" and "*Corporate Governance*" on pages 331 and 162, respectively.

The Trustee of the Trust is IDBI Trusteeship Services Limited. The Trustee is registered with the SEBI as a debenture trustee under the Debenture Trustees Regulations. For further details, see "*The Trustee*" on page 339.

MBEL or the Target SPV is currently held by the Sponsor (51%) and Anahera (49%). MBEL has entered into a concession agreement with the UPEIDA for the development of access controlled six-lane (expandable to eight-lane) greenfield 'Ganga Expressway' from Bijoli, Meerut to Nagla Barah, Budaun from Km 7.900 to Km 137.600 (total design length 129.700 Km) in the state of Uttar Pradesh. The Target SPV is an eligible infrastructure project under the InvIT Regulations. The Trust proposes to utilize the Issue Proceeds to acquire 80.40% of the equity shares and non-convertible debentures of MBEL pursuant to the MBEL Securities Purchase Agreement. For further details, see "Objects of the Issue" and "*Background and Structure of the Trust*" on pages 79 and 93, respectively.

Competitive Strengths

We believe that our key competitive strengths are as follows:

Portfolio of assets in key growth markets

As on the date of this Letter of Offer, the Trust owns 100% of twelve of the Project SPVs, 99.96% of each of PDTPL and STPL and 99.99% of IRB GEPL. Each of these Project SPVs (except IRB GEPL, IRB LTPL, IRB KTPL and IRB GTPL) is the concessionaire of a BOT toll-road project in India. IRB GEPL, IRB LTPL, IRB KTPL and IRB GTPL are concessionaires of TOT toll-road projects in India.

The Project SPVs' gross toll revenues are set out below:

(₹ in million)

Project SPV	Project	Gross toll revenue in the six-month period ended September 30, 2024	Gross toll revenue in the six-month period ended September 30, 2023	Gross toll revenue in the Financial Year 2024	Gross toll revenue in the Financial Year 2023	Gross toll revenue in the Financial Year 2022
KTL	Kaithal - Rajasthan Board NH-152/65 Project	663.38	712.10	1,423.37	1,504.69	441.10*
SYTL	Solapur - Yedeshi NH-211 Project	586.33	674.07	1,272.75	1,295.10	839.58
YATL	Yedeshi - Aurangabad NH-211 Project	1,150.01	1,341.08	2,524.24	2,555.29	1,612.72
IRB WTL	Goa - Kundapur NH-17 Project	641.34	641.34	1,328.48	1,207.89	851.88
AETL	Agra - Etawah NH-2 Project	1,192.28	1,146.60	2,397.75	2,199.03	1,896.30
UTL	Udaipur - Rajasthan NH-8 Project	1,537.27	1,401.56	2,925.28	2,528.50	2,003.24
CGTL	Gulabpura - Chittorgarh NH-79 Project	1,820.54	1,837.16	3,680.02	3,445.69	2,276.44
KGTL	Kishangarh - Gulabpura NH-79/79A Project	1,143.27	1,203.23	2,380.17	2,024.38	1,050.58
IRB HMTL	Hapur - Moradabad NH-9 Project	1,487.30	1,376.61	2,882.35	2,274.59	1,405.59
PDTPL	Palsit-Dankuni NH-19 Project**	804.22	865.35	1,742.54	2,062.31	-
IRB GEPL	Nehru Outer Ring Road Project***	3,787.27	952.09	4,537.40	-	-
STPL	Samakhiyali-Santalpur NH-27 Project@	664.87	-	375.91	-	-
IRB LTPL	Lalitpur-Sagar-Lakhnadon NH-44 Project$	2,048.70	-	-	-	-
IRB GTPL	Gwalior-Jhansi (NH-44) Project$	583.66	-	-	-	-
IRB KTPL	Kota Bypass and Cable Stay Bridge (NH-76) (new NH-27)$	366.86	-	-	-	-

Project SPV	Project	Gross toll revenue in the six-month period ended September 30, 2024	Gross toll revenue in the six-month period ended September 30, 2023	Gross toll revenue in the Financial Year 2024	Gross toll revenue in the Financial Year 2023	Gross toll revenue in the Financial Year 2022
Total		**18,477.30**	**12,151.19**	**27,470.26**	**21,097.47**	**12,377.43**

**Due to a protest against certain agricultural laws in India, tolling for the Kaithal – Rajasthan project operated by KTL was halted from December 25, 2020. The protest was called off on December 15, 2021 and toll collection resumed from December 16, 2021.*
*** Project commenced toll collection on April 2, 2022.*
**** Project commenced toll collection on August 12, 2023.*
@ Project commenced toll collection on December 28, 2023.
$ Project commenced toll collection on April 1, 2024.

For further information, see "*Financial Statements*" on page 347.

We believe that the Current Portfolio and the Expanded Portfolio assets have growth potential due to expected growth in traffic volumes as a result of regional growth and expected increases in toll fees as a result of inflation adjustments.

Diversified road project portfolio and revenue base

The Current Portfolio and the Expanded Portfolio Assets consist of a mix of infrastructure toll road projects spread across several states in India. We believe that the geographic diversity of the Current Portfolio and the Expanded Portfolio Assets will play a significant role in developing our experience and expertise, including our ability to evaluate, acquire, operate and maintain new projects.

The Current Portfolio and the Expanded Portfolio assets are primarily located along economic corridors and across tourist hubs in India.

The Project SPVs' concession agreements are also temporally diverse in that they commenced and are expected to expire at different times. The concession agreements' residual terms range between 28 years, 10 months and 10 days to 13 years, 1 month and 2 days as at September 30, 2024. IRB LTPL, IRB KTPL and IRB GTPL have received the appointed dates for their respective projects and have commenced toll collection with effect from April 1, 2024. Further, the term of MBEL's concession agreement commenced on October 12, 2022 and is expected to expire of October 11, 2052.

We believe that our geographically and temporally diverse project portfolio provides us with an advantage in capitalizing on new opportunities available in the roads and highways sector. We believe that this diversification strengthens our business by reducing our reliance on any specific region or project and reducing the potential impact on our business of any economic slowdown or force majeure event in any particular region or with respect to any particular project.

Experienced Sponsor/Project Manager and Investment Manager with consistent track record in operating and maintaining projects in the roads and highways sector in India

The Sponsor is one of the largest infrastructure development and construction companies in India in terms of net worth in the roads and highways sector according to the NHAI's annual prequalification for public private partnerships in national highway projects report for 2016. As at September 30, 2024, the Sponsor had six road projects of which two were operational and four were under-construction.

The Sponsor also acts as the Project Manager. The Sponsor's BOT project portfolio includes the Ahmedabad Vadodara section of NH 8 and the Ahmedabad Vadodara Expressway and the Meerut Budaun (Group-I) section of Ganga Expressway. The Sponsor's HAM project portfolio includes the under construction Gandeva to Ena project on the Vadodara-Mumbai eight lane expressway, four-laning of Punjab/Himachal Border to Mo Section of NH-154 and the six-laning of Chittoor Thachur road. The Sponsor's TOT project includes the Yashwantrao Chavan Expressway (Mumbai Pune Expressway) and Mumbai – Pune section of NH-48 (old NH-4). The Sponsor has experience in developing road and highway infrastructure and has received various industry awards and recognitions.

The Sponsor/Project Manager has experience in the execution of construction work for roads, highways, and other relevant structures and had a track record of constructing over 18,000 Lane Kilometres of roads and highways as of September 30, 2024.

The Investment Manager has experience in operating a road project for a period of 13 years. 51% of the equity share capital of the Investment Manager is held by the Sponsor, approximately 25% of the equity share capital of the Investment Manager is held by Croxley and approximately 24% of the equity share capital of the Investment Manager is held by the Cintra IM Investor.

Experienced management team with industry experience

We are managed by qualified personnel of the Investment Manager who have management and operational experience in the roads and highways sector. For further details, see "*The Investment Manager*" on page 331. We believe that the experience and leadership of these teams contribute to our growth and success and position the Current Portfolio and the Expanded Portfolio to be operated and managed in an efficient manner.

Attractive sector with strong underlying fundamentals

As per the World Bank, India is one of the fastest growing economies of the world and is poised to continue on this path, with aspirations to reach high middle-income status by 2047. India is experiencing growing urbanization and rising personal disposable income, resulting in an increase in consumption and discretionary spending. The roads sector registered a pace of construction by NHAI due to the systematic push through corridor-based National Highway development approach. The pace of National Highway increased 2.8 times to 33.8 km/day (2023-24) from 12.1 km/day (2014-15). The road sector has maintained its status as a priority sector for the Government. Investment in the roads and highways sector rose from approximately Rs.2.17 trillion in financial year 2022-2023 to approximately Rs.2.78 trillion in financial year 2024-2025, which represents a growth of approximately 28%

The GoI launched the Bharatmala Pariyojana umbrella program in October 2017 for upgrading highway infrastructure (34,800 km in Phase I) with a focus on ease of land acquisition and timely identification of economically important corridors. The program is expected to be completed by 2027-28.

Furthermore, MoRTH has defined a Vision 2047 for the National Highways sector which serves as the guiding principle for the Master Plan of National Highways and allied infrastructure. Vision 2047 for the National Highways aims to provide access to high-speed corridors within 100–150 km to all citizens. The plan also aims to improve passenger convenience and make roads in India meet international standards. Road business gets further de-risked with increased transparency and penetration of FASTag for toll collection also ensures seamless movement of traffic through fee plazas.

The NHAI has amended the model concession agreement (BOT – Toll) to make it more attractive for private investors to revive the investment in the road sector. NHAI has identified 54 projects worth over Rs 2.2 lakh crore. Also, NHAI is on track to bolster its revenue through a targeted asset monetisation strategy.

Investment Strategy and Risk and Capital Management Strategy

Our principal business strategies which are proposed to be implemented by the Investment Manager are set out below:

Organic growth through proactive management

Our principal investment strategy is to proactively manage the Current Portfolio and the Expanded Portfolio to support growth. In particular, the Investment Manager will seek to maintain or improve the SPVs' net incomes by, among other initiatives, curbing leakages, conducting proper due diligence, formulating and adopting policies and procedures and structuring investments to address tax or regulatory considerations. The Project Manager will assist the Investment Manager by carrying out the construction, operations, management and maintenance of the project in accordance with the relevant concession agreement and the Project Implementation Agreements and by procuring, operating and maintaining the project's toll management systems, including but not limited to, employing staff for toll collection, monitoring toll collection and providing security arrangements at toll plazas.

The Investment Manager will also focus on minimizing project operating expenses. The roads and highways sector is a highly competitive sector that is capital intensive and requires significant expenditure. Our ability to efficiently manage the costs associated with the Current Portfolio and the Expanded Portfolio is critical to maintaining the SPVs' profit margins. The Investment Manager intends to focus on increasing the margins of the SPVs by strengthening internal processes and systems so as to improve utilization of resources and reduce costs. As part of our operations and maintenance systems and processes, the Investment Manager intends to work closely with

the Project Manager to promote best practices, to minimize downtime or defects with respect to the Current Portfolio and the Expanded Portfolio and to monitor performance of toll booth operators and maintenance contractors. The Investment Manager also intends to work with the Project Manager and the SPVs to upgrade technology as needed, to manage any leakages in toll collections and to streamline collection, route and maintenance operations. With this focus on proactive asset management and operating expense minimization, the Investment Manager hopes to increase our profit margins and achieve long-term growth.

Acquisition and divestment of toll road projects

The Investment Manager intends to expand our portfolio by identifying and selectively bidding for and acquiring additional toll road projects in accordance with the Procurement and Divestment Policy. Pursuant to the Framework Agreement, the Sponsor has agreed to certain arrangements in relation to submission of bids for (i) any new concession by the Sponsor and/or its affiliates involving the development or operation of roads and highways; or (ii) over any extensions of the concession period of road projects held by the Sponsor and/or its affiliates (other than the Project SPVs) with the Financial Investors. For details, see "*Related Party Transactions – Details of Related Party Transactions proposed to be undertaken*" on page 308. The Investment Manager may also consider divestment of certain toll road assets, depending on the maturity and profile of the relevant asset and subject to the Procurement and Divestment Policy. For details of the Procurement and Divestment Policy, see "*Corporate Governance – Policies of the Manager Group*" on page 164.

Optimization of capital structure

The Investment Manager will seek to employ appropriate financing policies and diversify its sources of financing with the objective of minimizing our overall cost of capital. The Investment Manager will ensure compliance with the provisions of the Indenture of Trust, the InvIT Regulations and other applicable law for borrowing. The Investment Manager may also pursue growth opportunities that require raising additional capital through the issuance of new Units.

Details of the Project SPVs and the Portfolio

The Current Portfolio of the Trust comprises 15 toll-road assets in the states of Telangana, West Bengal, Haryana, Uttar Pradesh, Rajasthan, Gujarat, Goa, Maharashtra, Karnataka and Madhya Pradesh in India and consists of 11 BOT projects and 4 TOT projects. These toll roads are operated and maintained pursuant to concessions awarded by the NHAI and other state concessioning authorities. In relation to the projects for which construction has not been completed, see "*Government and Other Approvals*" on page 830 for information about the status of approvals and "*Risk Factors*" on page 16 for a discussion of risks in relation to delay of completion of the projects.

See "*Summary of the Concession Agreements*" on page 168 for a summary of the key terms of the concession agreements entered into by the Project SPVs with the NHAI and other state concessioning authorities.

Details of the Project SPVs are set out below: periods.

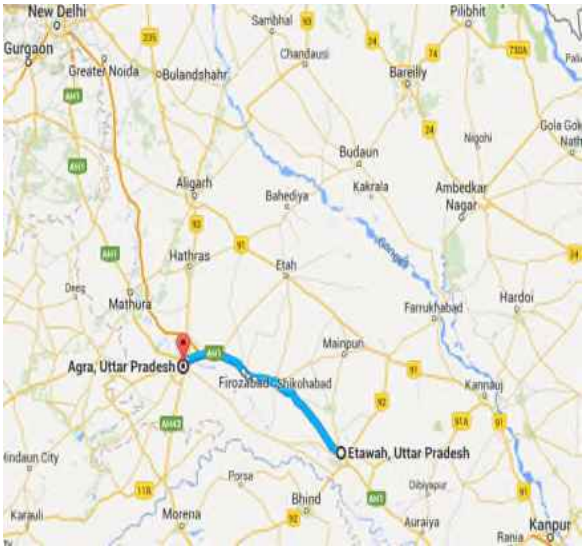
Project SPV	Project	Concession period	Commencement of concession period	End of concession period with no reduction or extension	Residual concession period as of September 30, 2024 with no extension (approx.)
AETL	Agra - Etawah NH-2 Project	24 years	August 1, 2016	July 31, 2040	15 years 9 month 31 days
CGTL	Gulabpura - Chittorgarh NH-79 Project	20 years	November 4, 2017	November 3, 2037	13 years, 1 month 2 days
IRB HMTL	Hapur - Moradabad NH-9 Project	22 years	May 28, 2019	May 26, 2041	16 years, 7 months 25 days
IRB WTL	Goa - Kundapur NH-17 Project	28 years	March 3, 2014	March 2, 2042	17 years, 5 months 1 day
KGTL	Kishangarh - Gulabpura NH-79/79A Project	20 years	February 21, 2018	February 20, 2038	13 years, 4 months and 22 days
KTL	Kaithal - Rajasthan Board NH-152/65	27 years	July 15, 2015	July 14, 2042	17 years, 9 months and 13

Project SPV	Project	Concession period	Commencement of concession period	End of concession period with no reduction or extension	Residual concession period as of September 30, 2024 with no extension (approx.)
	Project				days
SYTL	Solapur - Yedeshi NH-211 Project	29 years	January 21, 2015	January 20, 2044	19 years 3 months 21 days
UTL	Udaipur - Rajasthan NH-8 Project	21 years	September 3, 2017	September 2, 2038	13 years, 11 months 2 days
YATL	Yedeshi - Aurangabad NH-211 Project	26 years	July 1, 2015	June 30, 2041	16 years 8 months 29 days
PDTPL	Palsit-Dankuni NH-19 Project	17 years	April 2, 2022	April 1, 2039	14 years, 6 months and 1 day
IRB GEPL[@]	Hyderabad Outer Ring Road Project	30 years	August 12, 2023	August 11, 2053	28 years, 10 months 10 days
STPL[#]	Samakhiyali – Santalpur NH 27 Project	20 years	December 28, 2023	December 27, 2043	19 years, 2 months and 28 days
IRB LTPL*	Lalitpur – Laknadon NH-44 Project	20 years	April 1, 2024	March 31, 2044	19 years, 6 months and 1 day
IRB KTPL*	Kota Bypass and Cable Stay Bridge (NH-76)(NH-27)	20 years	April 1, 2024	March 31, 2044	19 years, 6 months and 1 day
IRB GTPL*	Gwalior-Jhansi (NH-44) Project	20 years	April 1, 2024	March 31, 2044	19 years, 6 months and 1 day

** The Project SPVs received the appointed date for their project on April 1, 2024.*
[#]The Project SPV received the appointed date for its project on December 28, 2023.
[@]The Project SPV received the appointed date for its project on August 12, 2023.

A summary of the key features of each Current Portfolio asset is discussed below.

1. *Agra – Etawah NH-2 Project*



Map of the Agra – Etawah NH-2 Project

On September 1, 2015, the NHAI and AETL entered into a concession agreement in respect of the Agra - Etawah NH-2 Project. AETL was engaged to augment a 124.52 km section of NH-2 between Agra and Etawah in Uttar Pradesh by six-laning on a DBFOT basis. Being a four-laning to six-laning project, the concession period and the collection of toll commenced on August 1, 2016. As per the relevant concession agreement, the Agra - Etawah NH-2 Project comprises the section of NH-2 from km 199.660 to km 323.525. The completion certificate in relation to the project was issued on November 24, 2020.

Corridor description

The Agra - Etawah NH-2 Project is a 124.52 km six-lane road, forming part of the section between Agra and Etawah in Uttar Pradesh. The Agra - Etawah NH-2 Project passes through the districts of Agra, Firozabad, and Etawah in the state of Uttar Pradesh and towns/ built-up areas of Tundla, Firozabad, Shikohabad, Sirsaganj, and Jaswantnagar.

The Agra - Etawah NH-2 Project connects the national capital Delhi to Kolkata, as well as important cities Mathura, Agra, Kanpur, Allahabad, Varanasi, Dhanbad, Asansol, Durgapur and Bardhman. The highway is part of the Golden Quadrilateral.

The project road is a link between Agra and Kanpur in the state of Uttar Pradesh. In addition, the project influence area includes the districts of Kanpur, Mathura and Aligarh also.

According to Traffic Reports, section of NH-2 from Agra to Etawah is part of the major transportation link in the area connecting industrial cities of Agra- Kanpur and Lucknow. Important cities of Firozabad, Shikohabad, and Jaswant Nagar fall on project alignment. Firozabad has a famous glass work industry. There are two operative toll plazas at project stretch at Tundla at Km 224.950 and sat Gurau at Km 285.200.

Concession period and revenue sharing arrangement

The NHAI granted AETL a concession for a period of 24 years for this project. The concession period commenced on August 1, 2016 and is expected to expire on July 31, 2040. AETL began collecting toll with respect to this project on August 1, 2016.

The concession agreement provides that if the actual traffic volume falls short of or exceeds the target traffic volume on the target date, the concession period will be extended or reduced, respectively. As per the concession agreement, in the event the actual average traffic on the target date exceeds the target traffic volume by more than 2.5%, the concession period may be reduced by 0.75% for every 1.00% excess in actual average traffic as compared to the target traffic volume, provided that such reduction in the concession period does not exceed 10% of the original concession period. In the event that the actual average traffic on the target date falls short of the

target traffic volume by more than 2.5%, the concession period may be extended by 1.5% for every 1.00%, provided that such extension in the concession period does not exceed 20% of the original concession period. The concession agreement, however, also stipulates that, if the actual average traffic exceeds the design capacity in any accounting year, the NHAI may, at its discretion, cause AETL to undertake suitable capacity augmentation of the project. If capacity augmentation is required, the concession period would be for a period of up to five years so as to yield a post-tax return on equity of 16% per annum. The concession agreement also states that in the event that the NHAI requires AETL to undertake capacity augmentation, there will be no reduction in the concession period pursuant to any other provision of the concession agreement.

For this project, the target date and target traffic volume in the concession agreement is April 1, 2025 and 52,995 PCUs, respectively.

In consideration of the grant of concession, AETL pays the NHAI a concession fee of ₹1 per annum. Additionally, AETL was required to pay on the appointed date a premium in the form of an additional concession fee equal to ₹810 million as due to the NHAI during that year, due and payable for the period remaining in that year; and for each subsequent year of the concession period, the premium is determined by increasing the amount of premium in the respective year by an additional 5% as compared to the immediately preceding year.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	Toll revenue (₹ in millions)
October 2024	223.44
November 2024	219.99

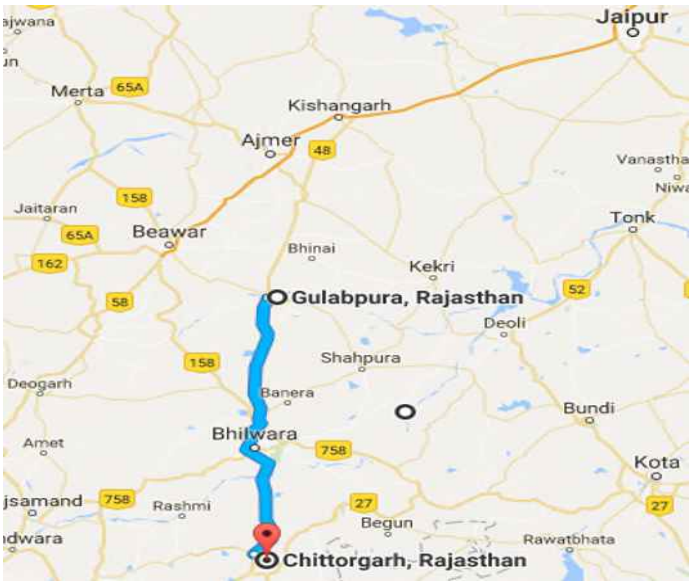
Land

The NHAI owns the land that underlies the Agra - Etawah NH-2 Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 93.

2. *Gulabpura – Chittorgarh NH-79 Project*



Map of the Gulabpura – Chittorgarh NH-79 Project

On December 9, 2016, the NHAI and CGTL entered into a concession agreement in respect of the Gulabpura - Chittorgarh NH-79 Project. CGTL was engaged to augment a 124.87 km section of NH-79 between Gulabpura and Chittorgarh in Rajasthan by six-laning on a DBFOT basis. Being a four-to-six-laning project, the concession

period and the collection of toll commenced on November 4, 2017. As per the relevant concession agreement, the Gulabpura - Chittorgarh NH-79 Project comprises the section of NH-79 from km 90.00 to km 214.870. The completion certificate in relation to the project was issued on August 14, 2021.

Corridor description

The Gulabpura - Chittorgarh NH-79 Project is an 124.87 km six-lane toll road on the section of NH-79 which connects Ajmer to Ghat Bilod. Project section of NH-79 passes through districts of Bhiwara and Chittorgarh and connects to Udaipur via NH-76. Project road alignment passes through the towns/ built-up areas Fakirabad, Bhilwara, Gulabpura, and Chittorgarh.

NH-79 is an important link for traffic connecting Delhi, Jaipur to Udaipur, Chittorgarh and down south. It is one of the major north-south road connectivity for the traffic from northern states of Haryana, Punjab and Delhi to industrial and tourist areas of Rajasthan like Jaipur, Chittorgarh, Udaipur and then to Dahod, Ratlam and other parts of Madhya Pradesh.

Important cities of Firozabad, Shikohabad, and Jaswant Nagar fall on project alignment. Major mining industries of marble, zink, felspar, quarts of Udaipur and textile industry of Bhiwara provide are major contributor of commercial traffic on project corridor. Additionally, Udaipur, Chittorgarh and Bhilwara major tourist centers of India. This adds substantial value for passenger traffic on the project corridor section. There are two operative toll plazas at project stretch at Lambia Kalan at Km 121.020 and Jojro ka Khera at Km 184.020.

Concession period and revenue sharing arrangement

The NHAI granted CGTL a concession for a period of 20 years for this project. The concession period commenced on November 4, 2017 and is expected to expire on November 3, 2037. Being a four-to-six-laning project, CGTL began collecting toll with respect to this project on November 4, 2017. The completion certificate in relation to the project was issued on August 14, 2021.

The concession agreement provides that if the actual traffic volume falls short of or exceeds the target traffic volume on the target date, the concession period will be extended or reduced, respectively. As per the concession agreement, in the event the actual average traffic on the target date exceeds the target traffic volume by more than 2.5%, the concession period may be reduced by 0.75% for every 1.00% excess in actual average traffic as compared to the target traffic volume, provided that such reduction in the concession period does not exceed 10% of the original concession period. In the event that the actual average traffic on the target date falls short of the target traffic volume by more than 2.5%, the concession period may be extended by 1.5% for every 1.00%, provided that such extension in the concession period does not exceed 20% of the original concession period. The concession agreement, however, also stipulates that, if the actual average traffic exceeds the design capacity in any accounting year, the NHAI may, at its discretion, cause CGTL to undertake suitable capacity augmentation of the project. If capacity augmentation is required, the concession period would be for a period of up to five years so as to yield a post-tax return on equity of 16% per annum. The concession agreement also states that in the event that the NHAI requires CGTL to undertake capacity augmentation, there will be no reduction in the concession period pursuant to any other provision of the concession agreement.

For this project, the target date and target traffic volume in the concession agreement is June 1, 2026 and 76,316 PCUs, respectively.

In consideration of the grant of concession, CGTL pays the NHAI a concession fee of ₹1 per annum. Additionally, after the third anniversary of the COD, CGTL is required to pay a premium in the form of an additional concession fee equal to ₹2,286.00 million as due to the NHAI during that year, due and payable for the period remaining in that year; and for each subsequent year until the ninth anniversary of the COD, the premium will be determined by increasing the amount of premium in the respective year by an additional 3% as compared to the immediately preceding year, and for each subsequent year of the concession period, the premium will be determined by increasing the amount of premium in the respective year by an additional 8% as compared to the immediately preceding year.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	Toll revenue (₹ in millions)
October 2024	327.47
November 2024	300.95

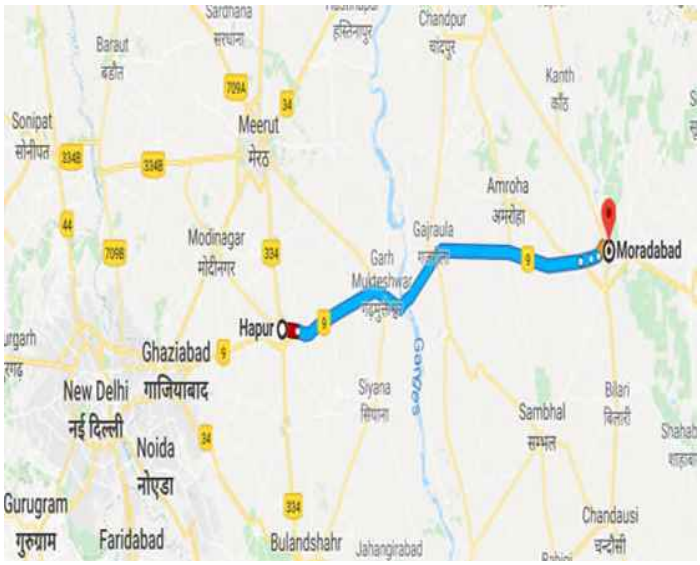
Land

The NHAI owns the land that underlies the Gulabpura - Chittorgarh NH-79 Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 93.

3. *Hapur – Moradabad NH-9 Project*



Map of the Hapur - Moradabad NH-9 Project

On May 29, 2018, the NHAI and IRB HMTL entered into a concession agreement in respect of the Hapur – Moradabad NH-9 Project. IRB HMTL was engaged to augment a 99.867 km section of NH-9 between Hapur and Moradabad in Uttar Pradesh by six laning on a DBFOT basis. The concession period and the collection of tolls commenced on May 28, 2019 and May 30, 2019, respectively. As per the relevant concession agreement, the Hapur – Moradabad NH-9 Project comprises the section of NH-9 from km 50.00 to km 148.277. Completion certificates in relation to the project were issued on July 1, 2022 and April 7, 2023.

Corridor description

The Project section starts from Hapur Bypass (Km50.000) and ends in Moradabad (Km148.277). The total design length of project road section is about 100 Kms. The existing road is four lane divided carriageway, which is proposed to be six laned. The road passes through the districts of Hapur, Amrohaand Moradabad, all in Uttar Pradesh. Project road alignment passes through the small towns/built-up areas of Pakwara, Joya and Babugarh. Simbhaoli, one of the largest integrated sugar refinery complexes is right on the project road.

The project road is the section of the former NH-24 which has now been re-designated as NH-9 connecting Fazilka in Punjab to Pithoragarh in Uttarakhand.

According to Traffic Reports, a number of sections along the project road from Hapur to Moradabad have witnessed urban development along the highway. Places like Pilakhua, Babugarh, Brijghat, Gajrola and Joya are fast upcoming urban centers. Close proximity to Delhi and this being main connectivity of region to NCR is main region for this ribbon development along highway. There are two operative toll plazas at project stretch at Garh at Km 90.661 and at Joya at Km 123.875.

Concession period and revenue sharing arrangement

The NHAI granted IRB HMTL a concession for a period of 22 years for this project. The concession period commenced on May 28, 2019 and is expected to expire on May 26, 2041. Being a four-to-six-laning project, IRB HMTL began collecting toll with respect to this project on May 30, 2019.

The concession agreement provides that if the actual traffic volume falls short of or exceeds the target traffic volume on the target date, the concession period will be extended or reduced, respectively. As per the concession agreement, in the event the actual average traffic on the target date exceeds the target traffic volume by more than 2.5%, the concession period may be reduced by 0.75% for every 1.00% excess in actual average traffic as compared to the target traffic volume, provided that such reduction in the concession period does not exceed 10% of the original concession period. In the event that the actual average traffic on the target date falls short of the target traffic volume by more than 2.5%, the concession period may be extended by 1.5% for every 1.00%, provided that such extension in the concession period does not exceed 20% of the original concession period. The concession agreement, however, also stipulates that, if the actual average traffic exceeds the design capacity in any accounting year, the NHAI may, at its discretion, cause IRB HMTL to undertake suitable capacity augmentation of the project. If capacity augmentation is required, the concession period would be for a period of up to five years so as to yield a post-tax return on equity of 16% per annum. The concession agreement also states that in the event that the NHAI requires IRB HMTL to undertake capacity augmentation, there will be no reduction in the concession period pursuant to any other provision of the concession agreement.

For this project, the target date and target traffic volume in the concession agreement is April 1, 2028 and 67,413 PCUs, respectively.

In consideration of the grant of concession, IRB HMTL pays the NHAI a concession fee of ₹1 per annum. Additionally, after the third anniversary year of the COD, IRB HMTL is required to pay a premium in the form of an additional concession fee equal to ₹315.00 million as due to the NHAI during that year, due and payable for the period remaining in that year; and for each subsequent year till the ninth anniversary of the COD, the premium will be determined by increasing the amount of premium in the respective year by an additional 3% as compared to the immediately preceding year and for each subsequent year of the concession period, the premium will be determined by increasing the amount of premium in the respective year by an additional 8% as compared to the immediately preceding year.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	Toll revenue (₹ in millions)
October 2024	291.39
November 2024	292.04

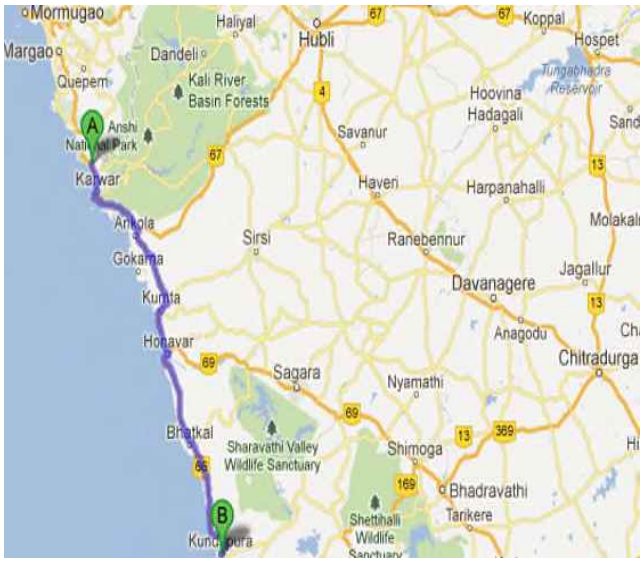
Land

The NHAI owns the land that underlies the Hapur – Moradabad NH-9 Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 93.

4. *Goa – Kundapur NH-17 Project*



Map of the Goa – Kundapur NH-17 Project

On March 25, 2013, the NHAI and IRB WTL entered into a concession agreement in respect of the Goa – Kundapur NH-17 Project. IRB WTL was engaged to augment a 187.28 km section of NH-17 between Goa and Kundapur in Karnataka by four-laning on a DBFOT basis. The concession period commenced on March 3, 2014. As per the relevant concession agreement, the Goa – Kundapur NH-17 Project comprises the section of NH-17 from km 93.700 to km 283.300. Provisional completion certificates in relation to the project were issued on January 31, 2020, February 28, 2022 and March 24, 2023.

Corridor description

The Goa – Kundapur NH-17 Project is situated in the state of Karnataka and this is the main connectivity between Mumbai and- Goa and Kerala. The project road passes through the districts of Karnataka and Goa.

NH-66 is a busy national highway that runs roughly north–south along the western coast of India, parallel to the Western Ghats. As the project highway runs along the west coast for most parts of its alignment, there are only radial roads connecting to the project highway which work as feeder network to project road.

Ankola, Bhatkal, Kumta and Karwar are the main urban centers on project corridor. The project road forms a main connectivity between Mumbai and southern parts on west coast like Goa, Kanoor, Kocchi, Thiruanantpuram and finally Kanyakumai. Thus, transportation requirements in terms of passenger and goods are largely dependent on this spinal road. There are three operative toll plazas at project stretch at km 119.00, km 184.00 and km 243.00 respectively.

Concession period and revenue sharing arrangement

The NHAI granted IRB WTL a concession for a period of 28 years for this project. The concession period commenced on March 3, 2014 and is expected to expire on March 2, 2042. IRB WTL commenced tolling on February 11, 2020.

The concession agreement provides that if the actual traffic volume falls short of or exceeds the target traffic volume on the target date, the concession period will be extended or reduced, respectively. As per the concession agreement, in the event the actual average traffic on the target date exceeds the target traffic volume by more than 2.5%, the concession period may be reduced by 0.75% for every 1.00% excess in actual average traffic as compared to the target traffic volume, provided that such reduction in the concession period does not exceed 10% of the original concession period. In the event that the actual average traffic on the target date falls short of the target traffic volume by more than 2.5%, the concession period may be extended by 1.5% for every 1.00%, provided that such extension in the concession period does not exceed 20% of the original concession period. The concession agreement, however, also stipulates that, if the actual average traffic exceeds the design capacity in any accounting year, the NHAI may, at its discretion, cause IRB WTL to undertake suitable capacity augmentation of the project. If capacity augmentation is required, the concession period would be for a period of up to five years

so as to yield a post-tax return on equity of 16% per annum. The concession agreement also states that in the event that the NHAI requires IRB WTL to undertake capacity augmentation, there will be no reduction in the concession period pursuant to any other provision of the concession agreement.

For this project, the target date and target traffic volume in the concession agreement is April 1, 2022 and 21,307 PCUs, respectively.

In consideration of the grant of concession, IRB WTL pays the NHAI a concession fee of ₹1 per annum.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	Toll revenue (₹ in millions)
October 2024	119.02
November 2024	116.66

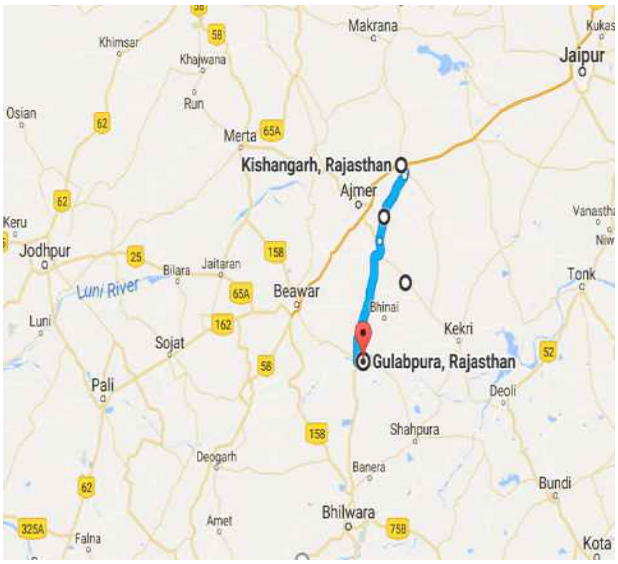
Land

The NHAI owns the land that underlies the Goa – Kundapur NH-17 Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 93.

5. *Kishangarh – Gulabpura NH-79/79A Project*



Map of the Kishangarh – Gulabpura NH-79/79A Project

On February 22, 2017, the NHAI and KGTL entered into a concession agreement in respect of the Kishangarh – Gulabpura NH-79/79A Project. KGTL was engaged to augment a 90.00 km section of NH-79/79A between Kishangarh and Gulabpura in Rajasthan by six-laning on a DBFOT basis. Being a four-to-six-laning project, the concession period and the collection of toll commenced on February 21, 2018. As per the relevant concession agreement, the Kishangarh – Gulabpura NH-79/79A Project comprises the section of NH-79/79A from km 0.000 to km 90.000. The completion certificate in relation to the project was issued on July 20, 2022.

Corridor description

The Kishangarh – Gulabpura NH-79/79A Project is approx. 90 km stretch on NH-79/79A (new NH-48) takes off at Kishangarh and ends at Gulabpura, both in the state of Rajasthan and connects Ajmer to Ghat Bilod. The project road passes through the districts of Bhiwara and Ajmer. Project road alignment passes through the small towns of Shreenagar, Nasirabad, Jharwasa, Bandanwara and Bijainagar (Vijay Nagar).

It is one of the major north-south road connectivity for the traffic from northern states of Haryana, Punjab and Delhi to Industrial and tourist areas of Rajasthan like Jaipur, Chittorgarh, Udaipur and then to Dahod, Ratlam and other parts of Madhya Pradesh.

According to Traffic Reports, Major mining industries of marble, zink, felspar, quarts of Udaipur and textile industry of Bhiwara provide are major contributor of commercial traffic on project corridor. Additionally, Jaipur, Ajmer, Udaipur, Chittorgarh and Bhilwara major tourist centers of India. This adds substantial value for passenger traffic on the project corridor section. There is one operative toll plaza at project stretch at Bandanwara at km 61.020.

Concession period and revenue sharing arrangement

The NHAI granted KGTL a concession for a period of 20 years for this project. The concession period commenced on February 21, 2018 and is expected to expire on February 20, 2038. KGTL began collecting toll with respect to this project on February 21, 2018.

The concession agreement provides that if the actual traffic volume falls short of or exceeds the target traffic volume on the target date, the concession period will be extended or reduced, respectively. As per the concession agreement, in the event the actual average traffic on the target date exceeds the target traffic volume by more than 2.5%, the concession period may be reduced by 0.75% for every 1.00% excess in actual average traffic as compared to the target traffic volume, provided that such reduction in the concession period does not exceed 10% of the original concession period. In the event that the actual average traffic on the target date falls short of the target traffic volume by more than 2.5%, the concession period may be extended by 1.5% for every 1.00%, provided that such extension in the concession period does not exceed 20% of the original concession period. The concession agreement, however, also stipulates that, if the actual average traffic exceeds the design capacity in any accounting year, the NHAI may, at its discretion, cause KGTL to undertake suitable capacity augmentation of the project. If capacity augmentation is required, the concession period would be for a period of up to five years so as to yield a post-tax return on equity of 16% per annum. The concession agreement also states that in the event that the NHAI requires KGTL to undertake capacity augmentation, there will be no reduction in the concession period pursuant to any other provision of the concession agreement.

For this project, the target date and target traffic volume in the concession agreement is May 1, 2026 and 76,236 PCUs, respectively.

In consideration of the grant of concession, KGTL pays the NHAI a concession fee of ₹1 per annum. Additionally, after the third anniversary year of the COD, KGTL is required to pay a premium in the form of an additional concession fee equal to ₹1,863.00 million as due to the NHAI during that year, due and payable for the period remaining in that year; and for each subsequent year till the ninth anniversary of the COD, the premium will be determined by increasing the amount of premium in the respective year by an additional 3% as compared to the immediately preceding year and for each subsequent year of the concession period, the premium will be determined by increasing the amount of premium in the respective year by an additional 8% as compared to the immediately preceding year.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	Toll revenue (₹ in millions)
October 2024	209.51
November 2024	193.31

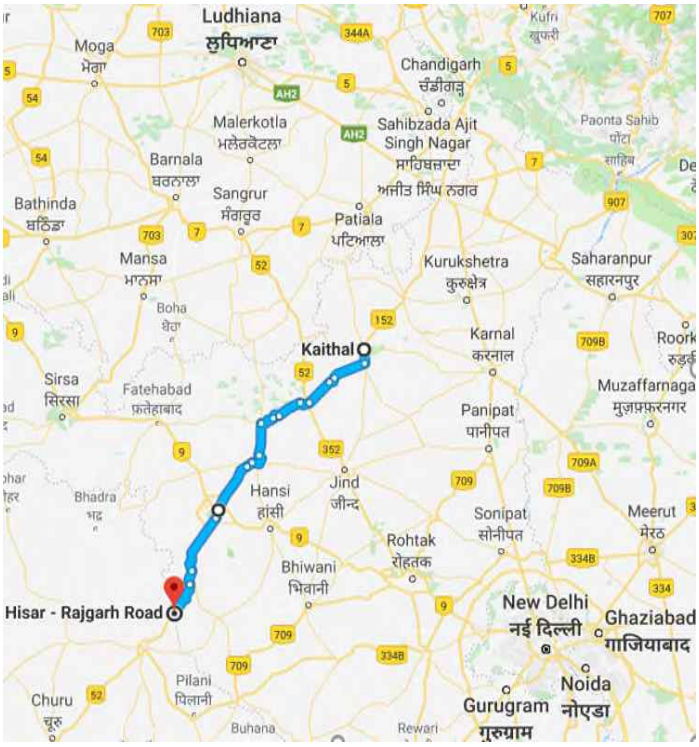
Land

The NHAI owns the land that underlies the Kishangarh – Gulabpura NH-79/79A Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 93.

6. ***Kaithal – Rajasthan Border NH-152/65 Project***



Map of the Kaithal – Rajasthan Border NH-152/65 Project

On June 23, 2014, the NHAI and KTL entered into a concession agreement in respect of the Kaithal – Rajasthan Border NH-152/65 Project. KTL was engaged to augment a 166.259 km section of NH-152/65 between Kaithal and Rajasthan Border in Haryana by four-laning on a DBFOT basis. The concession period commenced on July 15, 2015 and the collection of toll commenced on September 8, 2017. As per the relevant concession agreement, the Kaithal - Rajasthan Border NH-152/65 Project comprises the section of NH-152/65 from km 33.250 to km 241.580. Provisional completion certificates dated September 6, 2017 and July 9, 2018 and a completion certificate dated March 29, 2019 have been issued in relation to the project.

Corridor description

The Kaithal - Rajasthan Border NH-152/65 Project is part of important corridor which connects part of Haryana, Punjab, Himachal Pradesh, Jammu and Kashmir and certain part of Uttarakhand to Rajasthan, Gujarat and costal parts of Maharashtra and then to down to south. Project road section form Kaithal to Rajasthan border passes through three districts of Haryana namely Kaithal, Hisar and Bhiwani. Project road also passes through important towns and development areas of Narwana, Hisar and Siwani in addition to Kaithal.

It is the shortest route between Punjab / J&K, Gujarat, Rajasthan, Maharashtra, Goa, Kerala and becomes good alternate route to NH-1 and NH-8 for Gujarat, Rajasthan, Maharashtra Goa and Kerala bound traffic from Haryana, Punjab, J&K Himachal Pradesh. It also caters to local intrastate traffic between districts of Ambala, Chandigarh, Kaithal, Jind, Hisar, Bhiwani in Haryana and Churu, Sikar, Nagaur and Jodhpur in Rajasthan.

Concession period and revenue sharing arrangement

The NHAI granted KTL a concession for a period of 27 years for this project. The concession period commenced on July 15, 2015 and is expected to expire on July 14, 2042. KTL began collecting toll with respect to this project on September 8, 2017.

The concession agreement provides that if the actual traffic volume falls short of or exceeds the target traffic volume on the target date, the concession period will be extended or reduced, respectively. As per the concession agreement, in the event the actual average traffic on the target date exceeds the target traffic volume by more than 2.5%, the concession period may be reduced by 0.75% for every 1.00% excess in actual average traffic as compared to the target traffic volume, provided that such reduction in the concession period does not exceed 10% of the original concession period. In the event that the actual average traffic on the target date falls short of the

target traffic volume by more than 2.5%, the concession period may be extended by 1.5% for every 1.00%, provided that such extension in the concession period does not exceed 20% of the original concession period. The concession agreement, however, also stipulates that, if the actual average traffic exceeds the design capacity in any accounting year, the NHAI may, at its discretion, cause KTL to undertake suitable capacity augmentation of the project. If capacity augmentation is required, the concession period would be for a period of up to five years so as to yield a post-tax return on equity of 16% per annum. The concession agreement also states that in the event that the NHAI requires KTL to undertake capacity augmentation, there will be no reduction in the concession period pursuant to any other provision of the concession agreement.

For this project, the target date and target traffic volume set out in the concession agreement is April 1, 2023 and 21,919 PCUs, respectively.

In consideration of the grant of concession, KTL pays the NHAI a concession fee of ₹1 per annum.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	Toll revenue (₹ in millions)
October 2024	116.03
November 2024	115.74

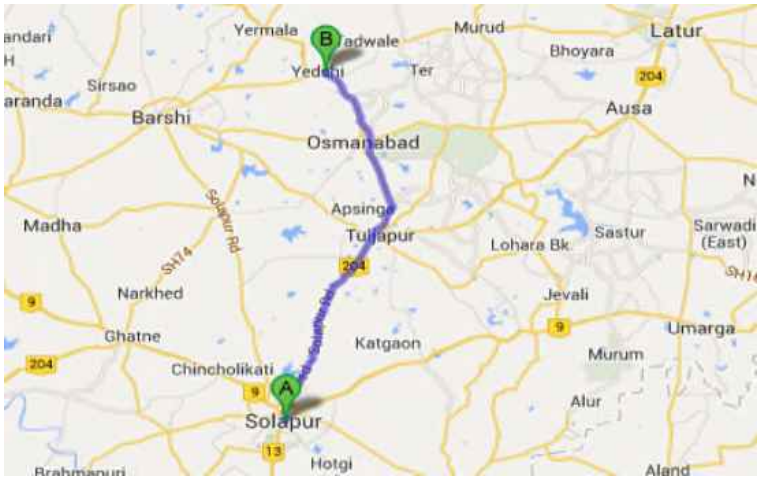
Land

The NHAI owns the land that underlies the Kaithal – Rajasthan Border NH-152/65 Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 93.

7. *Solapur – Yedeshi NH-211 Project*



Map of the Solapur - Yedeshi NH-211 Project

On March 3, 2014, the NHAI and SYTL entered into a concession agreement in respect of the Solapur – Yedeshi NH-211 Project. SYTL was engaged to augment a 98.717 km section of NH-211 between Solapur and Yedeshi in Maharashtra by four-laning on a DBFOT basis. The concession period commenced on January 21, 2015 and the collection of toll commenced on March 7, 2018. As per the relevant concession agreement, the Solapur – Yedeshi NH-211 Project comprises the section of NH-211 from km 0.000 to km 100.000. A provisional completion certificate was issued on March 5, 2018. The completion certificate for the project was issued on October 15, 2019.

Corridor description

The Solapur – Yedeshi NH-211 Project is a 98.717 km stretch that forms part of the NH 211 in the state of Maharashtra which is a part of important north-south connectivity. It connects Karnataka, southern parts of Maharashtra and other southern states to Solapur, Aurangabad, Dhule and then northern parts of India

NH-211 is an important national highway of Maharashtra. It connects northern Karnataka to Marathwada region of Maharashtra.Solapur, the textile and sugar belt of Maharashtra, Jalna, India's first dry port, Aurangabad fall in project corridor. Bidkin, Shendre areas which are coming up with mega green field Industrial smart city of 10000 acre at Bidkin and Shendra in Maharashtra also fall in influence zone of project corridor.

According to the Traffic Reports, the project road forms part of an important transportation corridor which works as gateway to Karnataka and rest of south India for Marathwada region of Maharashtra. It connects Solapur – Dhule and forms an important transportation link for traffic from Vijapur, Hubli and other parts of north Karnataka to Aurangabad, Jalna, Beed and other places in the Marathwada region. Project has two toll plazas at Tamamwadi and Yedeshi.

Concession period and revenue sharing arrangement

The NHAI granted SYTL a concession for a period of 29 years for this project. The concession period commenced on January 21, 2015 and is expected to expire on January 20, 2044. SYTL began collecting toll with respect to this project on March 7, 2018.

The concession agreement provides that if the actual traffic volume falls short of or exceeds the target traffic volume on the target date, the concession period will be extended or reduced, respectively. As per the concession agreement, in the event the actual average traffic on the target date exceeds the target traffic volume by more than 2.5%, the concession period may be reduced by 0.75% for every 1.00% excess in actual average traffic as compared to the target traffic volume, provided that such reduction in the concession period does not exceed 10% of the original concession period. In the event that the actual average traffic on the target date falls short of the target traffic volume by more than 2.5%, the concession period may be extended by 1.5% for every 1.00%, provided that such extension in the concession period does not exceed 20% of the original concession period. The concession agreement, however, also stipulates that, if the actual average traffic exceeds the design capacity in any accounting year, the NHAI may, at its discretion, cause SYTL to undertake suitable capacity augmentation of the project. If capacity augmentation is required, the concession period would be for a period of up to five years so as to yield a post-tax return on equity of 16% per annum. The concession agreement also states that in the event that the NHAI requires SYTL to undertake capacity augmentation, there will be no reduction in the concession period pursuant to any other provision of the concession agreement.

For this project, the target date and target traffic volume in the concession agreement is October 1, 2023 and 22,210 PCUs, respectively.

In consideration of the grant of concession, SYTL pays the NHAI a concession fee of ₹1 per annum.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	Toll revenue (₹ in millions)
October 2024	97.86
November 2024	105.33

Land

The NHAI owns the land that underlies the Solapur - Yedeshi NH-211 Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 93.

8. *Udaipur - Rajasthan Border NH-8 Project*



Map of the Udaipur – Rajasthan Border NH-8 Project

On December 9, 2016, the NHAI and UTL entered into a concession agreement in respect of the Udaipur - Rajasthan Border NH-8 Project. UTL was engaged to augment a 113.80 km section of NH-8 between Udaipur and Rajasthan Border in Rajasthan and Gujarat by six-laning on a DBFOT basis. Being a four-to-six-laning project, the concession period and the collection of toll commenced on September 3, 2017. As per the relevant concession agreement, the Udaipur - Rajasthan Border NH-8 Project comprises the section of NH-8 from km 287.400 to km 401.200. The completion certificate in relation to the project was issued on May 31, 2021.

Corridor description

The 113.8 km four-lane toll road (new NH-48) is located in Rajasthan and Gujarat and forms part of the Delhi-Mumbai arm of the Golden Quadrilateral. Project road alignment passes through the rural area in most part of stretch. After Udaipur there is no major urban establishment other than Rishabhdeo, a famous religious place in the region.

Besides being part of major transport link between Mumbai and Delhi, stretching from Udaipur to Shamlaji forms major connectivity between Udaipur, Ahmedabad, Rajkot Jamnagar and Porbandar. After renumbering of all national highways by National Highway Authority of India in 2010, the current NH 48 was formed by merging the old NH 8 (Delhi-Mumbai section) and NH 4 (Mumbai-Chennai). National Highway 48 starts at Delhi and terminates at Chennai and goes through Jaipur, Udaipur, Vadodara, Mumbai, Pune and Bengaluru, traversing through six states of India

According to the Traffic Reports, the area around the project stretch from Udaipur to Gujarat border has green marble mines and other establishments. Major religious centres like Shamlaji and Ekling ji contribute to substantial passenger traffic on the project stretch. There is one operative toll plaza at project stretch at Khandi Obri at km 348.450.

Concession period and revenue sharing arrangement

The NHAI granted UTL a concession for a period of 21 years for this project. The concession period commenced on September 3, 2017 and is expected to expire on September 2, 2038. UTL began collecting toll with respect to this project on September 3, 2017.

The concession agreement provides that if the actual traffic volume falls short of or exceeds the target traffic volume on the target date, the concession period will be extended or reduced, respectively. As per the concession

agreement, in the event the actual average traffic on the target date exceeds the target traffic volume by more than 2.5%, the concession period may be reduced by 0.75% for every 1.00% excess in actual average traffic as compared to the target traffic volume, provided that such reduction in the concession period does not exceed 10% of the original concession period. In the event that the actual average traffic on the target date falls short of the target traffic volume by more than 2.5%, the concession period may be extended by 1.5% for every 1.00%, provided that such extension in the concession period does not exceed 20% of the original concession period. The concession agreement, however, also stipulates that, if the actual average traffic exceeds the design capacity in any accounting year, the NHAI may, at its discretion, cause UTL to undertake suitable capacity augmentation of the project. If capacity augmentation is required, the concession period would be for a period of up to five years so as to yield a post-tax return on equity of 16% per annum. The concession agreement also states that in the event that the NHAI requires UTL to undertake capacity augmentation, there will be no reduction in the concession period pursuant to any other provision of the concession agreement.

For this project, the target date and target traffic volume in the concession agreement is September 21, 2026 and 61,435 PCUs, respectively.

In consideration of the grant of concession, UTL pays the NHAI a concession fee of ₹1 per annum. Additionally, immediately after the third anniversary year of the COD, a premium in the form of an additional concession fee equal to ₹1,638.00 million is required to be paid by UTL as due to the NHAI during that year, due and payable for the period remaining in that year; and for each subsequent year till the ninth anniversary of the COD, the premium will be determined by increasing the amount of premium in the respective year by an additional 3% as compared to the immediately preceding year and for each subsequent year of the concession period, the premium will be determined by increasing the amount of premium in the respective year by an additional 8% as compared to the immediately preceding year.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	Toll revenue (₹ in millions)
October 2024	263.72
November 2024	257.63

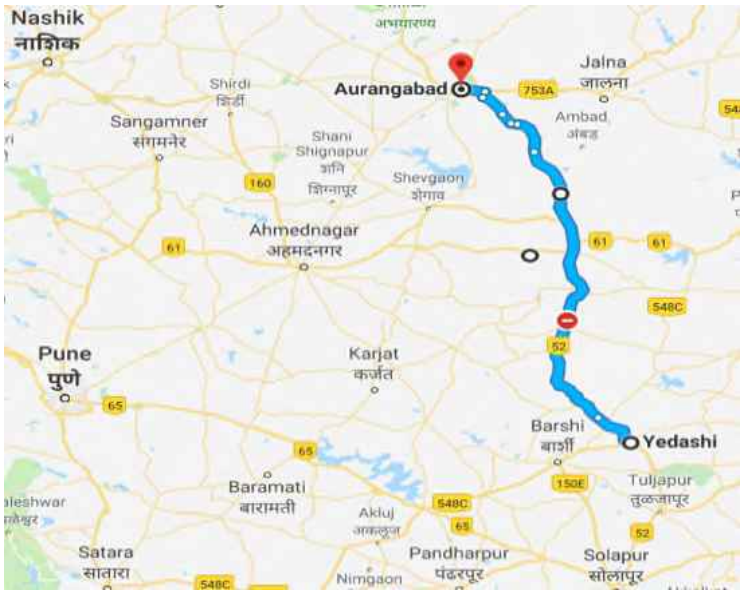
Land

The NHAI owns the land that underlies the Udaipur - Rajasthan Border NH-8 Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 93.

9. *Yedeshi – Aurangabad NH-211 Project*



Map of the Yedeshi - Aurangabad NH-211 Project

On May 30, 2014, the NHAI and YATL entered into a concession agreement in respect of the Yedeshi - Aurangabad NH-211 Project. YATL was engaged to augment a 189.09 km section of NH-211 between Yedeshi and Aurangabad in Maharashtra by four-laning on a DBFOT basis. The concession period commenced on July 1, 2015 and the collection of toll commenced on March 17, 2019. As per the relevant concession agreement, the Yedeshi – Aurangabad NH-211 Project comprises the section of NH-211 from km 100.00 to km 290.200. A provisional completion certificate was issued on March 15, 2019. The completion certificate was issued on September 24, 2020.

Corridor description

The Yedeshi – Aurangabad NH-211 Project forms part of the NH-211 (new NH-52), which s one of the important transportation link in Maharashtra which connects Solapur to Dhule and then at Dhule it can join other important highway like NH-3 (Mumbai – Agra Road) and NH-6 (east-west highway).

According to the Traffic Reports, the project road passes through important places like Chausala, Beed, Adul, Chitegaon and then Aurangabad. The project road passes through the districts of Beed and Aurangabad.There are three operative toll plazas at project stretch at Yedeshi at Km 134.000, at Padalshingi at Km 194.000 and at Bhokarwadi at Km 254.000.

Concession period and revenue sharing arrangement

The NHAI granted YATL a concession for a period of 26 years for this project. The concession period commenced on July 1, 2015 and is expected to expire on June 30, 2041. YATL began collecting toll with respect to this project on March 17, 2019.

The concession agreement provides that if the actual traffic volume falls short of or exceeds the target traffic volume on the target date, the concession period will be extended or reduced, respectively. As per the concession agreement, in the event the actual average traffic on the target date exceeds the target traffic volume by more than 2.5%, the concession period may be reduced by 0.75% for every 1.00% excess in actual average traffic as compared to the target traffic volume, provided that such reduction in the concession period does not exceed 10% of the original concession period. In the event that the actual average traffic on the target date falls short of the target traffic volume by more than 2.5%, the concession period may be extended by 1.5% for every 1.00%, provided that such extension in the concession period does not exceed 20% of the original concession period. The concession agreement, however, also stipulates that, if the actual average traffic exceeds the design capacity in any accounting year, the NHAI may, at its discretion, cause YATL to undertake suitable capacity augmentation of the project. If capacity augmentation is required, the concession period would be for a period of up to five years

so as to yield a post-tax return on equity of 16% per annum. The concession agreement also states that in the event that the NHAI requires YATL to undertake capacity augmentation, there will be no reduction in the concession period pursuant to any other provision of the concession agreement.

For this project, the target date and target traffic volume in the concession agreement is October 1, 2023 and 24,407 PCUs, respectively.

In consideration of the grant of concession, YATL pays the NHAI a concession fee of ₹1 per annum.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	Toll revenue (₹ in millions)
October 2024	199.97
November 2024	201.10

Land

The NHAI owns the land that underlies the Yedeshi – Aurangabad NH-211 Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 93.

10. Palsit – Dankuni NH-19 Project



Map of the Palsit – Dankuni NH-19 Project

On June 14, 2021, the NHAI and PDTPL entered into a concession agreement in respect of the Palsit – Dankuni NH-19 Project. PDTPL was engaged to augment a section of NH-19 Palsit to Dankuni (upto NH-6 Connector) from KM 588.870 to KM 652.700 (total design length 63.830 km) in West Bengal by six-laning on a BOT (toll) basis. Being a four-laning to six-laning project, the concession period and the collection of toll commenced on April 2, 2022. As per the relevant concession agreement, the Palsit – Dankuni NH-19 Project comprises the section of NH-19 from KM 588.870 to KM 652.700.

Corridor description

The asset is located on National Highway 19 (old NH-2) which is oldest highway in India and connects state of Delhi, Haryana, Uttar Pradesh, Bihar, Jharkhand and West Bengal. It constitutes a major portion of the historical grand truck road. It connects the national capital Delhi to Kolkata, as well as important cities Mathura, Agra, Kanpur, Allahabad, Varanasi, Dhanbad, Asansol, Durgapur and Bardhman. The highway is part of the Golden Quadrilateral

New NH-19 connects industrial cities like Agra, Kanpur, Allahabad, Varanasi, Dhanbad, Durgapur, Bardhman and terminates at Dankuni near Kolkata. Close proximity to Kolkata and Howrah has given impetus to industrial development around project highway at various locations. Project stretch is developed at new alignment between Palsit and Dankuni and is known as Durgapur Expressway. The main project influence area of the project road consists of Dhanbad, Durgapur and Kolkata.

According to the Traffic Reports, section of NH-19 from Palsit to Dankuni is part of a major transportation link in the area connecting industrial cities of Dhanbad, Asansol, Durgapur and Kolkata. The project stretch acts as a gateway link to Kolkata from northern India. Being just on the outskirts of the major metro city Kolkata, a large number of warehouses and logistic hubs are established on project road. This also contributes to sustainable traffic and growth on project highway. There is one operative toll plaza at project stretch which is at Dankuni at km 646.005.

Concession period and revenue sharing arrangement

The NHAI granted PDTPL a concession for a period of 17 years for this project. The concession period commenced on April 2, 2022 and is expected to expire on April 1, 2039. PDTPL began collecting toll with respect to this project on April 2, 2022.

The concession agreement provides that if the actual average traffic falls short of or exceeds the target traffic on the target date, the concession period will be extended or reduced, respectively. As per the concession agreement, in the event the actual average traffic on the target date exceeds the target traffic by more than 5%, the concession period may be reduced by 1.00% for every 1.00% excess in actual average traffic as compared to the target traffic, provided that such reduction in the concession period does not exceed 20% of the original concession period. In the event that the actual average traffic on the target date falls short of the target traffic by more than 5%, the concession period may be extended by 1.00% for every 1.00%, provided that such extension in the concession period does not exceed 20% of the original concession period. The concession agreement, however, also stipulates that if the average daily traffic exceeds the design capacity in any accounting year, an indirect political event under the concession agreement will be deemed to have occurred and the NHAI may, at its discretion, terminate the concession agreement. If PDTPL has completed the construction works necessary for augmenting the capacity of the project such that its capacity has increased sufficiently for carrying the then current traffic, prior to the issue of a termination notice by the NHAI, the indirect political event will deemed to have been cured.

For this project, the target dates are expected to be May 1, 2026, May 1, 2031 and May 1, 2036. The target traffic on these dates is expected to be 65,830 PCUs, 84,018 PCUs and 107,270 PCUs, respectively, and the actual average traffic will be derived based on the procedures prescribed by the NHAI in accordance with the concession agreement.

In consideration of the grant of concession, PDTPL pays the NHAI a concession fee of ₹1 per annum. Additionally, immediately after the first anniversary of the project completion date, a premium in the form of an additional concession fee for every year of the remaining concession period is payable by PDTPL. The premium to be paid for the second year after the project completion date is equal to 10.8% of the realisable fee and is required to be paid by PDTPL as due to the NHAI during that year. For subsequent years, the premium will be determined based on the total realisable fee in the respective year at the percentage to be arrived at by increasing the percentage of premium in the respective year by an additional 1% as compared to the immediately preceding year.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	Toll revenue (₹ in millions)
October 2024	123.16

Period	Toll revenue (₹ in millions)
November 2024	136.57

Land

The NHAI owns the land that underlies the Palsit – Dankuni NH-19 Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 93.

11. Hyderabad ORR Project



On May 26, 2023, IRB GEPL and the Sponsor entered into a concession agreement with the HMDA and HGCL in respect of the Hyderabad ORR Project. IRB GEPL was engaged to implement the tolling, operation, maintenance and management of Nehru Outer Ring Road (from Km 0+000 to Km 158+000) in Hyderabad, Telangana on a toll-operate-transfer basis. The concession period for the project commenced on August 12, 2023 and collection of toll commenced on August 12, 2023.

Corridor description

The Nehru Outer Ring Road is approx. 158 km, 8-lanes ring road expressway encircling Hyderabad, Telangana and provides fast connectivity to various radial state and national highways connecting to Mumbai, Nagpur, Karimnagar, Warangal, Suryapet, Vijayawada, Bengaluru. The expressway is fenced and 33 radial roads connect it with the Inner Ring Road. A large part, 124 km (covering urban nodes viz., Hi-Tech city, Nanakramguda Financial District, Rajiv Gandhi International Airport, IKP Knowledge park, Hardware Park, Telangana State Police Academy, Singapore Financial District, and Games village) of the 158-km was opened by December 2012. Rest of the length of Outer Ring Road was opened to traffic in year 2015-16

According to Traffic Reports, Outer Ring Road is one of the most important infrastructural developments which has complimented growth of Hyderabad as major metro of India. On eastern side it has provided express connectivity to major commercial and upscale residential centres and as a result, large number of residential and commercial projects have come up on this north-east part of Outer Ring Road. On north and western side it connects to Shamirpet and Genome Valley.

It provides fast connectivity to all part of Hyderabad Metropolitan Area. This project has also helped in reducing the travel time from Rajiv Gandhi International Airport to cities like Nizamabad and Adilabad.

Concession period and revenue sharing arrangement

The HMDA has granted IRB GEPL a concession for a period of 30 years commencing from the appointed date for the project. The concession period commenced on August 12, 2023 and is expected to expire on August 11, 2053. IRB GEPL began collecting toll with respect to this project on August 12, 2023.

The concession agreement provides that if the average of the actual toll revenue collected by IRB GEPL over certain specified time periods falls short of or exceeds the target revenue for such periods (being ₹1,731.80 million and ₹4,482.5 million, respectively) by more than 20% or 30%, then for every 1% shortfall or increase as compared to the target revenue, the concession period shall be increased by 1.5% or decreased by 0.75% thereof, subject to the limits specified in the concession agreement. The concession agreement also states that in the event that the HMDA requires IRB GEPL to undertake capacity augmentation, there will be no reduction in the concession period pursuant to any other provision of the concession agreement.

In consideration of the grant of concession, IRB GEPL is required to pay the HMDA a concession fee of ₹73,800 million.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	Toll revenue (₹ in millions)
October 2024	670.23
November 2024	659.33

Land

The HMDA owns the land that underlies the Nehru Outer Ring Road Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 93.

12. Samakhiyali – Santalpur NH-27 Project



On May 12, 2023, the NHAI and STPL entered into a concession agreement in respect of the Samakhiyali - Santalpur NH-27 Project. STPL was engaged for upgradation to six lane with paved shoulder of NH-27 from

Samakhiyali to Santalpur section from KM 339+200 to KM 430+100 in the state of Gujarat to be executed on a design, build, finance, operate and transfer basis, for a period of 20 years, from December 28, 2023.

Corridor description

Samakhiyali – Santalpur is approximately 90.90 km long 4-lane National Highway Section on NH-27 in the state of Gujarat. NH-27 which is basically east west connector of country.

The project stretch from is gateway link for both the ports of Mundra and Kandla and also of Saurashtra region. The stretch is having combined traffic of NH-27 which is coming from Palanpur / Radhanpur Abu Road and northern link from north Indian states via NH-68 and small section of SH-127 from Suigaon to Sidhadha on project highway. On north of project stretch lies great Rann of Kutch which is emerging as important tourist destination of area.

Concession period and revenue sharing arrangement

The NHAI granted STPL a concession for a period of 20 years for this project. The concession period commenced on December 28, 2023 and is expected to expire on December 27, 2043. STPL began collecting toll with respect to this project on December 28, 2023.

The concession agreement provides that in the event actual average traffic falls short of the target traffic by more than 5% (five percent), then for every 1% (one percent) shortfall as compared to the target traffic, the cconcession period will be, subject to payment of concession fee and additional concession fee in accordance with the concession agreement, be increased by 1% (one percent) thereof; provided that such increase in concession period shall not in any case exceed 20% (twenty percent) of the concession period. In the event actual average traffic exceeds the target traffic by more than 5% (five percent), then for every 1% (one percent) increase as compared to the target traffic, the concession period shall be reduced by 1% (one percent) thereof; provided that such reduction in concession period shall not in any case exceed 20% (twenty percent) of the concession period. In the event the average daily traffic of PCUs in any accounting year exceeds the designed capacity of the project highway, an indirect political event under the concession agreement will be deemed to have occurred and the NHAI may, at its discretion, terminate the concession agreement. If STPL completes the construction works necessary for augmenting the capacity of the project highway such that its capacity has increased sufficiently for carrying the then current traffic in accordance with the corresponding provisions of the relevant Indian Roads Congress publication, prior to the issue of a termination notice by the NHAI, the indirect political event will deemed to have been cured.

For this project, the target dates are expected to be October 1, 2028, October 1, 2033 and October 1, 2038. The target traffic on these dates is expected to be 58,741 PCUs, 74,971 PCUs and 95,681 PCUs, respectively, and the actual average traffic will be derived based on the procedures prescribed by the NHAI in accordance with the concession agreement.

In consideration of the grant of concession, STPL shall pay to the NHAI by way of concession fee a sum of ₹1 per annum. Additionally, immediately after the first anniversary of the project completion date, a premium in the form of an additional concession fee for every year of the remaining concession period is payable by STPL. The premium to be paid for the second year after the project completion date is equal to 42.84% of the realisable fee and is required to be paid by STPL as due to the NHAI during that year. For subsequent years, the premium will be determined based on the total realisable fee in the respective year at the percentage to be arrived at by increasing the percentage of premium in the respective year by an additional 1% as compared to the immediately preceding year.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	Toll revenue (₹ in millions)
October 2024	126.80
November 2024	119.81

Land

The NHAI owns the land that underlies the Samakhiyali - Santalpur NH-27 Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 93.

13. Lalitpur-Sagar-Lakhnadon NH-44 Project



On November 24, 2023, the NHAI and IRB LTPL entered into a concession agreement in respect of the Lalitpur – Sagar – Lakhnadon NH-44 Project. IRB LTPL was engaged for the tolling, operation, management, maintenance and transfer of four lane Lalitpur-Sagar-Lakhnadon section of NH-44 (from Km 99.005 to Km 415.089) in Uttar Pradesh and Madhya Pradesh to be executed on a toll-operate-transfer basis, for a period of 20 years, from the appointed date under the concession agreement.

Corridor description

Lalitpur – Sagar – Lakhnadon Project is a section of NH-44, which is the longest National Highway in the country, running through North, Central and South India. It starts from Jammu & Kashmir and passes through the states of Punjab, Haryana, Delhi, Uttar Pradesh, Rajasthan, Madhya Pradesh, Maharashtra, Telangana, Andhra Pradesh, Karnataka and Tamil Nadu.

The project stretch under this study starts from km 99.005 of NH-44 at Lalitpur in the state of Uttar Pradesh and ends at km 415.089 of NH-44 at Lakhnadon in the state of Madhya Pradesh. The length of project stretch is 316.084 km and has 4-lane configuration with four number of toll plazas.

Concession period and revenue sharing arrangement

The NHAI granted IRB LTPL a concession for a period of 20 years for this project. The concession period for the project shall commence from the appointed date under the concession agreement.

The concession agreement provides that if the average of the actual toll revenue collected by IRB LTPL over certain specified time periods ("**Target Points**") falls short of or exceeds the target revenue for such periods (being ₹700.20 million and ₹1,225.10 million, respectively) by more than 20% or 30%, then for every 1% shortfall or increase as compared to the target revenue, the concession period shall be increased by 1.5% or decreased by 0.75% thereof, subject to the limits specified in the concession agreement. The concession agreement also states that in the event that the NHAI requires IRB LTPL to undertake capacity augmentation, there will be no modification in the Target Points under the concession agreement.

In consideration of the grant of concession, IRB LTPL shall pay to the NHAI in accordance with terms of the concession agreement and prior to the appointed date, a lumpsum upfront concession fee of an amount equivalent to ₹44.28 billion.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	Toll revenue (₹ in millions)
October 2024	359.61
November 2024	332.49

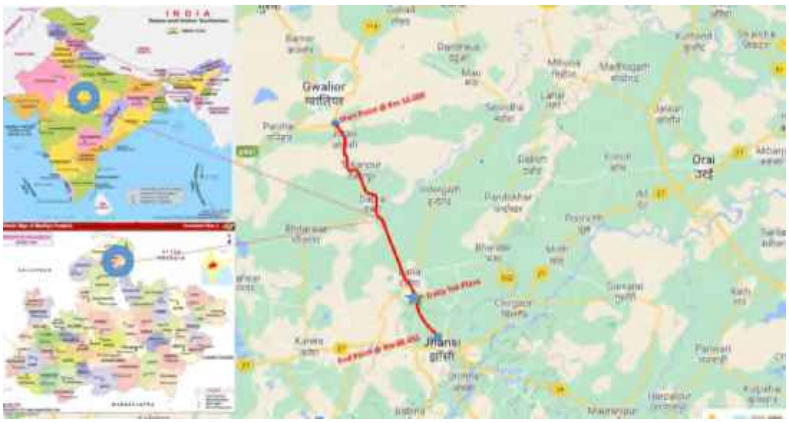
Land

The NHAI owns the land that underlies the Lalitpur – Sagar – Lakhnadon NH-44 Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 93.

14. Gwalior-Jhansi (NH-44) Project



On January 12, 2024, the NHAI and IRB GTPL entered into a concession agreement in respect of the IRB GTPL Project. GTPL was engaged for the tolling, operation, management, maintenance and transfer of the Gwalior-Jhansi section from km 0.00 (revised km 16.00) to km 103.00 (revised km 98.455) of NH-75 (New NH-44) in the Madhya Pradesh and Uttar Pradesh to be executed on a toll-operate-transfer basis, for a period of 20 years, from the appointed date under the concession agreement.

Corridor description

Gwalior – Jhansi (NH-44) Project is a section of NH-44, which is the longest National Highway in the country, running through North, Central and South India. A major part of the project section from Gwalior to Jhansi Road lies in Gwalior and Datia district of Madhya Pradesh followed by Jhansi district. The major towns along the project corridor are Gwalior, Tekampur, Dabra, Datia and Jhansi.

The project stretch starts from km 16.000 of NH-44 at Gwalior in the state of Madhya Pradesh and ends at km 98.455 of NH-44 at Jhansi in the state of Uttar Pradesh.

Concession period and revenue sharing arrangement

The NHAI granted IRB GTPL a concession for a period of 20 years for this project. The concession period for the project shall commence from the appointed dated under the concession agreement.

The concession agreement provides that if the average of the actual toll revenue collected by IRB GTPL over certain specified time periods ("**Target Points**") falls short of or exceeds the target revenue for such periods (being ₹170.90 million in the month of March 2031 and ₹306.80 million in the month of March 2038, respectively)

by more than 20% or 30%, then for every 1% shortfall or increase as compared to the target revenue, the concession period shall be increased by 1.5% or decreased by 0.75% thereof, subject to the limits specified in the concession agreement. The concession agreement also states that in the event that the NHAI requires IRB GTPL to undertake capacity augmentation, there will be no modification in the Target Points under the concession agreement.

In consideration of the grant of concession, IRB GTPL shall pay to the NHAI in accordance with terms of the concession agreement and prior to the appointed date, a lumpsum upfront concession fee of an amount equivalent to ₹11.61 billion.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	Toll revenue (₹ in millions)
October 2024	109.43
November 2024	103.58

Land

The NHAI owns the land that underlies the IRB GTPL Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 93.

15. Kota Bypass and Cable Stay Bridge (NH-76) (new NH-27)Project



On January 12, 2024, the NHAI and IRB KTPL entered into a concession agreement in respect of the IRB KTPL Project. IRB KTPL was engaged for the tolling, operation, management, maintenance and transfer of the Kota Bypass and Cable Stay Bridge on NH-76 (new NH-27) in Rajasthan to be executed on a toll-operate-transfer basis, for a period of 20 years, from the appointed date under the concession agreement.

Corridor description

The Kota Bypass section is located on NH-27 and includes a Cable-Stayed Bridge on the Chambal River in the State of Rajasthan. Kota Bypass is part of NH-27 which is major East – West connectivity in India. The most of the traffic on Kota Bypass is either local in nature or is part of East – West connectivity corridor. Gwalior, Chittorgarh, Jhalawar, Bhilwara areas have major influence on project traffic.

Concession period and revenue sharing arrangement

The NHAI granted IRB KTPL a concession for a period of 20 years for this project. The concession period for the project shall commence from the appointed dated under the concession agreement.

The concession agreement provides that if the average of the actual toll revenue collected by IRB KTPL over certain specified time periods ("**Target Points**") falls short of or exceeds the target revenue for such periods (being ₹91.10 million in the month of March 2031 and ₹168.10 million in the month of March 2028, respectively) by more than 20% or 30%, then for every 1% shortfall or increase as compared to the target revenue, the concession period shall be increased by 1.5% or decreased by 0.75% thereof, subject to the limits specified in the concession agreement. The concession agreement also states that in the event that the NHAI requires IRB KTPL to undertake capacity augmentation, there will be no modification in the Target Points under the concession agreement.

In consideration of the grant of concession, IRB KTPL shall pay to the NHAI in accordance with terms of the concession agreement and prior to the appointed date, a lumpsum upfront concession fee of an amount equivalent to ₹5.22 billion.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	Toll revenue (₹ in millions)
October 2024	70.51
November 2024	67.74

Land

The NHAI owns the land that underlies the IRB KTPL Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 93.

Details of the Target SPV

MBEL is the concessionaire for the development of access controlled six-lane (expandable to eight-lane) greenfield 'Ganga Expressway' from Bijoli, Meerut to Nagla Barah, Budaun from Km 7.900 to Km 137.600 (total design length 129.700 Km) in the state of Uttar Pradesh on design-build-finance-operate-transfer (toll) basis. See "*Government and Other Approvals*" on page 830 for information about the status of approvals and "*Risk Factors*" on page 16 for a discussion of risks in relation, *inter-alia*, the proposed acquisition of the project.

See "*Summary of Concession Agreements*" on page 168 for a summary of the key terms of the concession agreement entered into by MBEL and UPEDIA.

Certain details in relation to MBEL are set out below:

Target SPV	Project	Proposed ownership of Project by the Trust	Lane km	Commencement of Concession Period	Commencement of Toll Collection	End of Concession Period	Concession Period (years)	Percentage of construction completion as at September 30, 2024 (in %)	Expected Completion
MBEL	Meerut-Budaun Expressway Project	80.40%	778	October 12, 2022	-	October 11, 2052	30	68.16*	Financial Year 2026

**As of the date of this Letter of Offer, MBEL has achieved completion of at least 50% of the construction of the project, as certified by an independent engineer of the project, and is eligible to be held by the Trust.*

A summary of the key features of the road asset is discussed below.

Ganga Expressway Project



On January 6, 2022, MBEL has entered into a concession agreement for the development of access controlled six-lane (expandable to eight-lane) greenfield 'Ganga Expressway' from Bijoli, Meerut to Nagla Barah, Budaun from Km 7.900 to Km 137.600 (total design length 129.700 Km) in the state of Uttar Pradesh on design-build-finance-operate-transfer (toll) basis under public-private partnership (the "**MBEL Concession Agreement**"), for a period of 30 years, from October 12, 2022.

Corridor description

The Government of Uttar Pradesh had entrusted Uttar Pradesh Expressways Industrial Development Authority (UPEIDA) to develop a six lane access controlled expressway extendable to eight lane from Meerut to Prayagraj under Design Build Finance Operate and Transfer (DBFOT) mode. The total length of project corridor is approximately 594 km. The project corridor starts from Meerut and ends at Parayagraj passing through the districts of Meerut, Hapur, Bulandshahr, Amroha, Sambhal, Budaun, Shahjahapur, Hardoi, Unnao, Raebarelli, Pratapgarh and Prayagraj. Old NH-24, NH-19, NH-34, Yammuna-Expressway and Agra Lucknow Expressway and NH-34 are important parallel roads to the project corridor. The project corridor shortens the distance between Merrut to Prayagraj by 74 Km from Old NH-24 and 120 km from NH-19.

Concession period and revenue sharing arrangement

The UPEIDA has granted MBEL a concession for period of 30 years commencing from October 12, 2022. As of the date of this Letter of Offer, MBEL has not commenced toll collection with respect to this project.

The concession agreement provides that, in the event actual average traffic shall have fallen short of the target traffic by more than 5% (five percent), then for every 1% (one percent) shortfall as compared to the target traffic, the concession period shall, subject to payment of concession fee and additional concession fee in accordance with the concession agreement, be increased by 1% (one percent) thereof; provided that such increase in the concession period shall not in any case exceed 20% (twenty percent) of the concession period. Further, in the event actual average traffic shall have exceeded the target traffic by more than 5% (five percent), then for every 1% (one percent) increase as compared to the target traffic, the concession period shall be reduced by 1% (one percent) thereof; provided that such reduction in concession period shall not in any case exceed 20% (twenty percent) of the concession period.

Notwithstanding anything to the contrary contained in the concession agreement, if the average daily traffic of PCUs in any accounting year shall exceed the designed capacity of the project expressway, an indirect political

event under the concession agreement will be deemed to have occurred and the UPEIDA may, at its discretion, terminate the concession agreement. If MBEL has completed the construction works necessary for augmenting the capacity of the project expressway such that its capacity has increased sufficiently for carrying the then current traffic in accordance with the corresponding provisions of the relevant Indian Roads Congress publication, prior to the issue of a termination notice by the UPEIDA, the indirect political event will deemed to have been cured.

For this project, the target dates are expected to be April 1, 2025, April 1, 2030, April 1, 2035, April 1, 2040, April 1, 2045 and April 1, 2050. The target traffic on these dates is expected to be 25,719 PCUs, 40,759 PCUs, 61,199 PCUs, 87,256 PCUs, 118,274 PCUs and 148,644 PCUs, respectively, and the actual average traffic will be derived based on the procedures prescribed by the UPEIDA in accordance with the concession agreement.

In consideration of the grant of concession, MBEL shall pay to the UPEIDA by way of concession fee a sum of ₹1 per annum.

Land

The UPEIDA owns the land that underlies the Ganga Expressway Project.

Monthly toll revenue

As of the date of this Letter of Offer, MBEL has not received the commercial operations date for its project. Accordingly, the toll revenue of MBEL is nil.

Structure of ownership of the project

For information about the proposed structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 93.

Operation and Maintenance Services

Our key business activity is the development, operation and maintenance of the Current Portfolio and the Expanded Portfolio pursuant to, and in accordance with, the provisions of the concession and other road project related agreements (as applicable). The Project SPVs and the Target SPV are required to operate and maintain their respective assets in accordance with the relevant concession agreement, including by modifying, repairing or otherwise making improvements to the road. In particular, each of the concession agreements requires the Project SPVs and the Target SPV to maintain their respective assets to certain standards during the concession period. The concessioning authorities have used, and will likely continue to use, independent engineers to carry out periodic tests to assess the quality of the roads or bridges and their related maintenance.

The Project Manager manages the critical day-to-day operation and maintenance of the Current Portfolio and the Expanded Portfolio. The Project Manager, through the relevant Project Implementation Agreement, provides project and contract management support, such as liaising with and supervising sub-contractors, managing design and planning and obtaining necessary licenses and approvals for the projects.

A Project SPV or the Target SPV is generally responsible for carrying out operation and maintenance activities at its toll road during its concession period. The scope of a Project SPV's or the Target SPV's operation and maintenance activities is usually defined in the relevant concession agreement. Within the scope of such operation and maintenance obligations, the Project SPV or the Target SPV may be required to undertake routine and periodic maintenance of project roads, maintain and comply with safety standards to ensure smooth and safe traffic movement, deploy adequate human resources for incident management, maintain proper medical and sanitary arrangements for personnel deployed at the site, prevent any unauthorized entry to and exit from the project as may be required. The activities of the Project SPVs or the Target SPV are undertaken by the Project Manager pursuant to the Project Implementation Agreements.

A computerised maintenance management system is used to ensure that all maintenance is systematically and correctly scheduled, carried out and recorded. In addition, it is used to assure planning, control and monitoring of each maintenance activity. Maintenance methodologies and system performance are regularly reviewed and examined for optimisation of resource deployment.

Operations

Toll collection system

Toll is collected for each journey through each of the toll plazas. Signs setting out the toll rates are displayed at the toll booths and tolls can be paid or tendered by the driver of any vehicle in the following manner:

Cash

Tolls paid by means of cash are collected by toll collectors at the manual toll booths.

Electronic toll collection

The Project SPVs make use of technology for the operation of the projects which helps in improving operational efficiency and ensuring transparency in the process of toll collection, including through electronic toll collection system based on radio-frequency identification technology, which was implemented in the projects. Further, the Project SPVs use weight based tolling systems with the help of devices that are designed to capture and record axle weights and gross vehicle weights as vehicles drive over a measurement device fitted in each lane.

Monitoring

Toll collection

Payments at the toll plazas, both electronic as well as cash payments are processed through a semi-automated or a fully-automated toll collection system, depending on complexity of the project. Both these systems collect and store traffic and payment data, thereby reducing the need for manual operation. A semi-automated system consists of revenue collection software desktop, barrier gate, smart cards and monitoring cameras and a fully automated system includes equipment such as vehicle counting classifier, vehicle audit system, communication channels and traffic control equipment in addition to all the components of a semi-automated system.

For the purpose of identifying categories of vehicles and to charge an appropriate toll rate, the automatic vehicle identification based in-road/infrared sensors are also used. The Project SPVs or the Target SPV also use/will use weigh-in-motion technology for projects where weight based toll collection is mandated. The weight based tolling systems are integrated with the fully automatic toll collection system for enhanced revenue controls.

There are cameras installed particularly for capturing and recording any toll evasion incidents by vehicles. There is also a back-up power supply system to ensure that there is no interruption to power supply at the toll plazas in order to maintain a stable power supply for the sub-systems and equipment. Servers used in the toll collection systems at the toll plazas are capable of real time uploading of transaction data from toll lane equipment and performing an automatic daily backup to prevent any toll data loss and to enable quick system recovery, which allows the Project SPVs to collect variable amounts of tolls depending on the class of motor vehicles and serves as a traffic information system.

Only certain authorized persons have access to the toll collection systems and the activities are recorded for security purposes. The Project Manager is responsible for operating the toll collection system at the toll plazas of the Project SPVs (and will be responsible for the Target SPV) and taking regular preventive and corrective measures to maintain such systems at the highest levels of security and reliability.

We have set up a centralized control room ("**Control Room**") at our office in Mumbai that consolidates cameras at the toll plazas to enable video based monitoring of the toll operations throughout the day.

Traffic control

There is an emergency telephone system to provide a reliable communication channel for the drivers in cases of emergency where they need to communicate with staff at the Control Room. Emergency telephone systems and emergency helpline numbers are provided at all projects where such systems and numbers are required by the relevant concession agreement. There are also patrol vehicles that patrol an assigned section of the relevant project for regulating traffic and undertaking surveillance activities.

Safety Measures

Under the terms of the concession agreements, concessionaires are required to ensure certain safety requirements, which include measures such as road signs, pavement marking, traffic control devices, roadside furniture, highway design elements, enforcement and emergency response. The concessionaires are bound by, *inter-alia*, applicable law and applicable permits, the Manual for Safety in Road Design as issued by MoRTH, relevant standards and guidelines of the Indian Roads Congress and good industry practice. The concessionaires also carry out safety audits of the projects from time to time, by appointing a safety consultant, which is comprised of, among others, one road safety expert and one traffic planner. These safety requirements apply to all phases of construction, operation and maintenance with emphasis on identification of factors associated with accidents and implementation of appropriate remedial measures.

Management

We are managed by qualified personnel of the Investment Manager, all of whom have management and operational experience in the roads and highways sector. The board of directors of the Investment Manager has also constituted committees required under the InvIT Regulations.

The Investment Manager, in consultation with the Trustee, has appointed the directors on the board of each Project SPV in accordance with the InvIT Regulations. Each Project SPV's board of directors has also formed committees as may be required under the Companies Act, 2013 and rules made thereunder. Upon the completion of the MBEL Acquisition, the Investment Manager, in consultation with the Trustee, will designate the existing directors as nominee directors of the Trust on the board of MBEL.

For further details about the Investment Manager, see "*The Investment Manager*" on page 331.

Various financing agreements that the Project SPVs have entered into with certain banks and financial institutions contain certain restrictive covenants, including, but not limited to, requirements that they obtain consent from the lenders prior to changing the composition of any board of directors of any Project SPV. For more details, see "*Risk Factors – The Project SPVs are subject to restrictive covenants under their financing agreements that could limit our flexibility in managing our business or to use cash or other assets*" on page 34.

Seasonality

Traffic volume tends to decrease during the monsoon season and conversely tends to increase during holiday seasons. While the northern parts of India experience monsoon rains during the period from June or July until September or October every year, the southern parts of India, especially Tamil Nadu and some parts of coastal Andhra Pradesh, experience monsoon rains even during the months of October to December. The monsoon season may also restrict the ability to carry on activities related to operation and maintenance of toll roads. For further details on risk associated with seasonality, see "*Risk Factors – Our business will be subject to seasonal fluctuations that may affect our cash flows*" on page 29. Conversely, traffic volume tends to increase during holiday seasons.

Health, Safety and Environment

The Investment Manager and Project Manager believe that the Trust and the Project SPVs are in compliance, in all material respects, with applicable health, safety and environmental regulations and other requirements in their operations. The Project Manager believes that accidents and occupational health hazards can be significantly reduced through a systematic analysis and control of risks and by providing appropriate training to management, employees and sub-contractors. Project managers appointed by the Project SPVs, as applicable, for a project are principally responsible for ensuring that safety standards are met at the relevant project sites.

Intellectual Property

We do not own the "IRB" trademark and "IRB" logo, which are registered in the name of, and owned by, the Sponsor. However, pursuant to a separate name licensing agreement, as amended, the Sponsor has granted to the Trust, each of the Project SPVs and the Investment Manager, the non-transferable and non-assignable right to use the "IRB" trademark as part of their respective corporate names, if applicable, as well as the "IRB" logo in connection with their respective businesses, on a non-exclusive basis. The license may be terminated under certain circumstances, including (i) if the Sponsor or any of its subsidiaries ceases to be the sponsor of the Trust for any

reason whatsoever; or (ii) if the Sponsor or any of its subsidiaries ceases to hold at least 51% of the equity share capital of the Investment Manager, or an entity which is not a subsidiary of the Sponsor is appointed as the investment manager of the Trust. Upon the termination of the license, the Trust or the relevant Project SPV, as the case may be, will be required to cease the use of the IRB trademark and change its name to remove IRB from its name within three months from the date of termination, which may have a material adverse effect on the operations of the Project SPVs and require management's time and attention. Pursuant to an amendment agreement, which will be effective from the date of closing under the MBEL Securities Purchase Agreement, Target SPV, MBEL, has been made parties to the Name Licensing Agreement.

See also "*Risk Factors – We do not own the 'IRB' trademark and logo. Our license to use the 'IRB' trademark and logo may be terminated under certain circumstances and our ability to use the trademark and logo may be impaired*" on page 33.

Property

The Investment Manager's registered office is located in Mumbai from which all its administrative and reporting activities are conducted. The principal place of business of the Trust is located in Mumbai. The Investment Manager and the Trust also have an office located in New Delhi. The Project SPVs typically lease various premises across India to facilitate their work at their project sites. These leases usually expire upon completion of the relevant project.

Insurance

The Project SPVs' and the Target SPV's operations are subject to hazards inherent in providing operation and maintenance services, such as risk of equipment failure, work accidents, fire, earthquake, flood and other force majeure events. This includes hazards that may cause injury and loss of life, damage and destruction of property, equipment and environmental damage. The principal types of insurance coverage for the Expanded Portfolio include standard fire and special perils insurance, contractor all-risk insurance and money insurance. The Investment Manager also maintains management liability insurance. The Investment Manager and the Trustee confirm that the amount of insurance that we presently maintain represents an adequate and appropriate level of coverage required to insure the Project SPVs' business and operations and all the infrastructure assets held by the Project SPVs, and is in accordance with the concession agreements and industry standards in India and will perform regular assessment on the adequacy of its insurance coverage on a yearly basis. The Investment Manager and the Trustee confirm that the amount of insurance that MBEL presently maintains represents an adequate and appropriate level of coverage required to insure MBEL's business and operations and all the infrastructure assets held by MBEL, and is in accordance with the concession agreements and industry standards in India and will perform regular assessment on the adequacy of its insurance coverage on a yearly basis.

Legal Proceedings

The Project SPVs, the Target SPV, the Sponsor, the Investment Manager, the Project Manager and the Trustee are or may be involved in legal proceedings or claims from time to time. Certain proceedings or claims are currently pending at different levels of adjudication before various courts, tribunals and regulatory authorities. For a description of the material legal proceedings that are outstanding, see "*Material Litigation and Regulatory Action*" on page 806.

CORPORATE GOVERNANCE

Set out below is a summary of the corporate governance framework which is applicable in relation to the Trust, the Investment Manager and the Project SPVs and upon completion of the MBEL Acquisition, will also be applicable to MBEL.

Composition of the Board of Directors of the Investment Manager

As at the date of this Letter of Offer, the Sponsor holds 51% of the equity share capital of the Investment Manager, Croxley holds approximately 25% of the equity share capital of the Investment Manager and the Cintra IM Investor holds approximately 24% of the equity share capital of the Investment Manager. For details of the current board of directors of the Investment Manager (the "**Board**"), see "*The Investment Manager*" on page 331.

The Sponsor, Croxley and the Investment Manager have entered into a shareholders agreement dated August 6, 2019, as amended (the "**IM SHA").** Pursuant to an amendment agreement dated March 14, 2024, Cintra IM Investor has become a party to the IM SHA. For details of the rights in relation to shareholding and certain other rights of Croxley and Cintra IM Investor in the Investment Manager, see "*The Investment Manager"* on page 331.

The Board shall consist of eight directors in accordance with the terms of the IM SHA. The current composition of the Board is as follows:

(a) the Sponsor is entitled to nominate two (2) directors on the Board (the "**Sponsor Directors**");

(b) Croxley is entitled to nominate one (1) director on the Board (the "**Croxley Director**");

(c) Cintra IM Investor is entitled to nominate one (1) director on the Board ("**Cintra Director**") (The Croxley Director and Cintra Director are individually referred to as the "**Investor Director**" and collectively, the ("**Investor Directors**"));

(d) Cintra IM Investor is entitled to recommend for appointment one (1) Independent Director;

(e) Croxley is entitled to recommend for appointment one (1) Independent Director; and

(f) the Sponsor is entitled to recommend for appointment two (2) Independent Directors, one of whom shall always be a woman Independent Director if there is no other woman Director serving on the Board.

Under the IM SHA, an alternate director may be appointed to act as an alternate to the Sponsor Directors or Investor Directors during such director's absence for a period of at least three months from India, in accordance with the Companies Act.

The Investment Manager will reimburse the Board for all actual travel and accommodation expenses incurred by them or their alternate directors in connection with the performance of their duties as directors of the Investment Manager in accordance with the IM SHA. The directors will be entitled to sitting fees or any other remuneration for attending meetings as mutually agreed in writing by the parties.

In addition to the right to nominate directors on the Board, the Sponsor, Cintra IM Investor and Croxley are entitled to appoint one observer on the Board and/or the committees of the Board.

Chairperson

The chairperson of the Board will be a Sponsor Director unless an Event of Default has occurred.

Quorum

Subject to the provisions of the InvIT Regulations and other applicable law, the quorum for every meeting of the Board shall be one-third of its total strength or three directors, whichever is higher, including at least one independent director (including any meetings held by video-conferencing or by other audio-visual means).

If quorum is not present within 30 (thirty) minutes of the scheduled time for any meeting of the Board or ceases to exist at any time during such meeting, the meeting of the Board will be automatically adjourned and be reconvened on the same day in the following week, time and place and if such day is not a Business Day, then the

immediately following Business Day. At any such adjourned meeting, the presence of at three directors shall be required to constitute the quorum; provided that no reserved matters will be taken up for discussion or voted upon at any board meeting (including any adjourned board meeting) unless the Croxley Director, the Cintra Director and at least one IRB Director are present in such meeting, or if prior written consent in respect of such reserved matters has been obtained in accordance with the IM SHA. No matters which were not part of the agenda for the original board meeting will be discussed at such adjourned meeting. Subject to the terms of the IM SHA, each of the Investor Directors and the Sponsor Directors may at any time waive their respective right to form part of the quorum for a particular board meeting, in writing, and at any such board meeting, no new matters other than those forming part of the agenda for such board meeting will be discussed or taken up.

Frequency of meetings

The Board will meet at least four times a year and once every 120 days, or at such other frequency of intervals as may be prescribed under the InvIT Regulations and other applicable law, at any location mutually agreed between the Sponsor Directors and the Investor Directors.

Committees

The Investment Manager has constituted (i) an audit committee; (ii) a capex monitoring committee; (iii) a health and safety monitoring committee; (iv) nomination and remuneration committee; (v) stakeholders relationship committee; (vi) risk management committee; and (vii) a prevention of sexual harassment committee, in accordance with the terms of the InvIT Regulations and other applicable law (as applicable).

Each of Croxley and Cintra IM Investor have the right to nominate an Investor Director as a member of any committee or sub-committee of the board, subject to applicable law. The Sponsor has the right to nominate a Sponsor Director as a member of any committee or sub-committee of the Board, subject to applicable law. In addition to the committees of the Board set out above, the Board may constitute committees for various functions from time to time.

Reserved Matters

In accordance with the terms of the IM SHA, the Sponsor, Cintra IM Investor and Croxley have agreed that no resolution will be passed or decision or action be taken by the Investment Manager in relation to any Manager Group Member, in any manner, including by the Board, the shareholders or otherwise in respect of any of the Reserved Matters, unless the written consent of equity shareholders holding a certain agreed percentage of the equity shareholding is obtained in the manner specified in the IM SHA, depending on whether the relevant matter is an Ordinary Reserved Matter (as specified in the IM SHA) or a Special Reserved Matter (as specified in the IM SHA). Subject to applicable law, each of the Sponsor Directors and/or each of the Investor Directors will have the right to require that any Reserved Matter be decided at a shareholder meeting instead of at a Board meeting and/or with the prior written consent of equity shareholders holding a certain agreed percentage of the equity shareholding of the Investment Manager in accordance with the terms of the IM SHA.

Under the IM SHA, any obligation on any Manager Group Member is deemed to be a simultaneous and corresponding obligation on the Sponsor to exercise its voting rights in relation to the Investment Manager to perform such obligation.

For details of the Reserved Matters, see "*Rights of Unitholders – Approval of Unitholders*" on page 322.

Directors of the SPVs

The Investment Manager, in consultation with the Trustee, has appointed the directors on the board of each Project SPV in accordance with the InvIT Regulations. Further, pursuant to the terms of the IM SHA, each of the Sponsor, Cintra IM Investor and Croxley have the right to require a director or observer on the board of directors of any SPV as a representative of the Investment Manager.

Upon completion of the MBEL Acquisition, the Investment Manager will designate nominee directors on the board of directors of the Target SPV in accordance with the InvIT Regulations.

Fall-Away

All rights of the Sponsor, Cintra IM Investor and Croxley under the IM SHA other than the economic and voting rights attached to their equity shares held by them under applicable law and other rights available to the Sponsor, Cintra IM Investor and Croxley under applicable law, shall terminate with respect to such party upon such party's (together with its affiliates') shareholding in the Investment Manager (calculated on a fully diluted basis) falling below 12.5% of the share capital of the Investment Manager or upon such party's unitholding in the Trust falling below 12.5% of the total issued and outstanding unitholding of the Trust.

Policies of the Manager Group

Pursuant to the terms of the IMA SHA, the Investment Manager (on behalf of itself and the Trust), each of the Project SPVs are required to adopt certain policies for corporate governance, key terms of which are set out below. Each Manager Group Member is required to ensure that these policies remain in full force and effect and consider amendments in accordance with the terms of the Framework Agreement. Mr. Kaustubh Shevade has been designated by the Investment Manager as the Compliance Officer with respect to the Trust.

Code of Conduct

The Code of Conduct serves as a basis for maintaining the standards of honest and ethical business conduct including the ethical handling of actual or apparent conflicts of interest between personal and professional relationships, ensuring confidentiality of corporate information and data of the Manager Group, the Sponsor/Project Manager, and the Trustee (together the "**Trust Entities**") and compliance with the applicable laws and the InvIT Regulations. The key terms of the Code of Conduct include *inter-alia*:

(i) Duties must be carried out in an honest, fair, diligent and ethical manner within the scope of the authority conferred and in accordance with applicable laws, rules, regulations, agreements, guidelines, standards, and internal policies and procedures.

(ii) Assets, properties, and human resources of the Manager Group Members are to be used only for the official business of the Trust Entities, and the security of all confidential information must be ensured.

(iii) The Trust Entities must not, and ensure that their employees do not engage in any business activity that conflicts with the interest of a Manager Group Member.

(iv) The Trust and the parties to the Trust must conduct all affairs in the interest of the unitholders of the InvIT, and they shall make adequate, accurate, explicit and timely disclosure of relevant material information to all unit holders, exchanges and the Securities and Exchange Board of India in accordance with the InvIT Regulations.

(v) The Trust, the parties to the Trust and any third party appointed by the Investment Manager shall not use any unethical means to sell, market or induce any person to buy units of the Trust and where a third party appointed by the Investment Manager fails to comply with this condition, the Investment Manager shall be held liable for the same. The Trust and the parties to the Trust shall render at all times high standards of service, exercise due diligence, ensure proper care and exercise independent professional judgment.

Disclosure of Information Policy

This policy sets out the process and procedure for determining materiality of information in relation to periodic disclosures required under applicable law, including the InvIT Regulations. The key terms of the Disclosure of Information Policy include *inter-alia*:

(i) The following information in relation to the Manager Group shall be provided to the Unitholders:

a. quarterly management accounts within 20 days from the end of each calendar month;

b. unaudited quarterly financial statements (including profit and loss accounts and a balance sheet) and management accounts for each financial quarter within 45 days from the end of such financial quarter;

c. audited annual financial statements (including profit and loss accounts and a balance sheet) for every Financial Year within 60 days of the end of such Financial Year;

d. notices, agenda and minutes of meetings of board of directors, committees of the board and shareholders of the Manager Group Member as may be requested by the unitholders;

e. copies of all agreements, business projections, reports, certificates and any material information regularly provided to any other security holder or lender (in their capacity as security holders or lenders), including any management or audit or investigative reports provided to any security holder or lender, simultaneously with such security holder or lender;

f. proposed Annual Budget for the upcoming Financial Year by March 15 of the preceding Financial Year;

g. toll collection MIS data and lenders' independent engineers' reports for each SPV on monthly basis;

h. prior intimation, to the extent practicable, regarding initiation of any criminal litigation to which the Manager Group Member is a party; and

i. prior intimation regarding initiation of any civil or administrative litigation, arbitration or other legal proceedings to which the Manager Group Member is a party and which relate to a claim amount exceeding INR 25 million.

(ii) Disclosure of information to regulators:

a. The Manager Group Member shall submit the information required to be submitted to the SEBI, the NHAI, MoRTH, the RBI, the Stock Exchanges or any other governmental, regulatory, statutory, administrative, or judicial body under applicable law, including or such further information or clarification required by any of them; and

b. The Manager Group Member shall inform the SEBI, in writing, if any information or particulars previously submitted to SEBI are found to be false or misleading in any material particular or if there is any material change in the information already submitted, in accordance with InvIT Regulations.

Distribution Policy

For details of the Distribution Policy, see "*Distributions*" on page 316.

Investment and Procurement Policy

This policy sets out the guidelines for investment in, and/or procurement of the assets by the Trust. The key principles of investment in eligible project under the Procurement and Divestment Policy include, *inter-alia*:

(i) The Investment Manager is empowered to make all investment decisions with respect to the underlying assets or projects of the Trust, including, without limitation, investigation, selection, development, negotiation, structuring, restructuring, commitment to or monitoring and any further investment or divestment of the underlying assets or projects of the Trust.

(ii) Any decision for investment in, or procurement of assets by the Trust must be made in accordance with this policy and the terms of the Framework Agreement and the IM SHA.

(iii) The eligible projects meetings the minimum extended internal rate of retun threshold, traffic assumptions and other applicable conditions stipulated in this policy are to be implemented by the Trust in the manner specified therein. The concessioning authority for such eligible projects shall be NHAI and projects awarded by other concessioning authorities may be implemented by the Trust subject to mutual agreement of IRB and the Financial Investors.

(iv) If IRB, the Financial Investors are not colletively implementing an eligible project through the Trust, then

either IRB and the GIC Financial Investors or IRB and Cintra InvIT Investor shall be entitiled to proceed with the implmentation of such project, without participation of the other group of Financial Investors, subject to and in the manner set out in the Framework Agreement and this policy.

Leverage Policy

For details of the Leverage Policy, see "*Leverage*" on page 294.

Nomination and Remuneration Policy

This policy sets out the guidelines regarding the nomination, remuneration and removal of directors, key managerial personnel and employees of the Manager Group. The key terms of the Nomination and Remuneration Policy include, *inter-alia*:

(i) The board of directors of the Manager Group Members shall, as applicable, have the required number of independent directors in terms of the applicable law, including the Companies Act.

(ii) The board of directors of each of the Manager Group Members, is, as applicable, expected to possess the required expertise, skill and experience to effectively manage and direct the Manager Group Members to attain its organizational and business goals. They are expected to be persons with vision, leadership qualities, and proven competence and integrity.

(iii) Each member of the board of directors of the Manager Group Members, as applicable, shall ensure that their personal interest does not run in conflict with the any of the Manager Group Member's interests.

(iv) The annual performance and remuneration review of the employees of the Manager Group Members shall be done once every year. The review of remuneration will be undertaken on the basis of the following criteria:
   a. Performance of the employee;
   b. Performance of the team to which such employee belongs;
   c. Overall performance of the Manager Group Member; and
   d. Prevailing business environment and requirement of manpower for future projects.

Additionally, the following terms will be applicable to the Investment Manager:

a. The board of directors shall constitute a capex monitoring committee, a health and safety monitoring committee, an audit committee and all such other committees of the board of directors as are required to be constituted by the Investment Manager under applicable law.

b. The board of directors shall appoint and designate such key managerial personnel as are required under applicable law, including a Chief Executive Officer, a Chief Financial Officer and a Company Secretary of the Investment Manager. These key managerial persons shall be jointly nominated by the Sponsor and Croxley, and appointed by the board of directors.

Record Retention Policy

The policy sets out the guidelines for the identification of documents and records which are required to be preserved, storage, maintenance and preservation of documents and records of the Manager Group and protection and preservation of all the necessary documents and records as per the statutory requirements. The key terms of the Record Retention Policy include, *inter-alia*:

(i) The policy applies to all the documents required to be maintained in terms of the InvIT Regulations, the applicable secretarial standards, and any other applicable law which shall be preserved under the custody of the compliance officer of the respective Manager Group Members. It also applies to all financial records required to be maintained in terms of the InvIT Regulations, the prescribed accounting standards, the Income Tax Act, 1961, and any other applicable law which shall be maintained under the custody of the chief financial officer of the respective Manager Group Member.

(ii) All documents which are required to be preserved by virtue of applicable laws shall be preserved either permanently or for such periods as may be mandated by applicable laws from time to time.

(iii) Documents which are required to be preserved for a period of not less than eight years after the completion of the relevant transaction shall be determined by the relevant heads of departments of the Manager Group Member from time to time.

(iv) Documents shall be preserved in a chronological manner for each financial year.

(v) The Manager Group Members shall maintain back-up of all documents maintained in electronic form. Documents which are confidential in nature shall, wherever possible, be kept under lock and key and shall be shared on a 'need to know' basis only, with persons directly involved in the transaction involving such documents and records.

(vi) Certain documents may be required to be kept open by the Manager Group Member for inspection in the manner specified under such applicable law. Regulatory authorities, including the SEBI, have the right of access to all registers and records.

(vii) Documents which are statutorily required to be hosted on the website of any Manager Group Member shall be hosted within the prescribed timeline from the occurrence of the event.

(viii) Where documents are no longer required to be preserved, or on the expiration of the specified period of time for which they were required to be preserved, they may be discarded or disposed off in accordance with the procedure specified under the applicable law, and where no procedure has been specified, they may be discarded or disposed off in accordance with the standard operating procedures applicable to the respective departments.

In addition, the Investment Manager (on behalf of itself and the Trust) and each of the Project SPVs have also adopted, and upon completion of the MBEL Acquisition, the Target SPV will adopt, policies on corporate social responsibility, environment, health and safety, maternity benefits, equal opportunities, prohibited practices and anti-bribery and anti-corruption practices, prevention of sexual harassment and anti-harassment, personal data protection, whistle-blowing / vigil mechanism, corporate disclosures, internal procedure and insider trading, conflict of interest policy, appointment of directors, cyber matters, environmental, social and corporate governance commitments, grievance redressal, human rights, internal control, compensation in case of accident, risk management, secretarial compliance and succession policy.

SUMMARY OF THE CONCESSION AGREEMENTS

Set out below are summaries of the concession agreements entered into by the Project SPVs and the Target SPV in relation to their respective business. The descriptions and summaries of the agreements below are not and nor do they purport to be complete descriptions or summaries of all terms of such agreements. Certain terms used in this section have the meanings assigned to such terms in the respective concession agreements. Copies of these concession agreements will be made available for inspection at the office of the Trust in New Delhi. See "Material Contracts and Documents for Inspection" on page 848.

1. Concession Agreement between AETL and the NHAI dated September 1, 2015

AETL has entered into a concession agreement for six-laning of km 199.660 to km 323.525, Agra to Etawah Bypass section of NH-2 in Uttar Pradesh on build, operate and transfer ("**BOT**") basis (the "**AETL Concession Agreement**"), for a period of 24 years, from August 1, 2016 ("**AETL Appointed Date**") or until such date on which the AETL Concession Agreement is terminated by a termination notice ("**AETL Termination Date**", and the period between the AETL Appointed Date and the AETL Termination Date, the "**AETL Concession Period**").

Certain Definitions

"**AETL Debt Due**" shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the transfer date:

a) the principal amount of the debt provided by the senior lenders under the financing agreements for financing the total project cost (the "**Principal**") but excluding any part of the Principal that had fallen due for repayment two years prior to the transfer date;

b) all accrued interest, financing fees and charges payable under the financing agreements on, or in respect of, the debt referred to in the sub-clause above until the transfer date but excluding (i) any interest, fees or charges that had fallen due one year prior to the transfer date, (ii) any penal interest or charges payable under the financing agreements to any senior lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to an NHAI Default (as defined below); and

c) any subordinated debt which is included in the financing package and disbursed by lenders for financing the total project cost;

If all, or any part of the AETL Debt Due is convertible into equity at the option of the senior lenders and/or AETL, it shall, for the purposes of the AETL Concession Agreement, be deemed to be AETL Debt Due even after the conversion and the Principal thereof shall be dealt with as if such conversion had not been undertaken;

"**AETL Debt Service**" shall mean the sum of all payments on account of Principal, interest, financing fees and charges due and payable in an accounting year to the senior lenders under the financing agreements;

"**AETL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) project facilities situated on the site; (d) all rights of AETL under the project agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) applicable permits and authorizations relating to or in respect of the AETL Project Highway (as defined below), but does not include additional facilities;

"**AETL Project Highway**" shall mean the site comprising the existing road comprising section of six-laning of Agra-Etawah Bypass section of NH-2 from km 199.660 to km 323.525 in the State of Uttar Pradesh under NHDP Phase-V on BOT(Toll) mode and all AETL Project Assets, and its subsequent development and augmentation in accordance with the AETL Concession Agreement;

"**AETL Project**" shall mean the construction, operation, and maintenance of the AETL Project Highway in accordance with the provisions of the AETL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

"**Premium**" shall mean an amount paid to the NHAI by AETL in the form of an additional concession fee, as set forth in the bid for each year of the AETL Concession Period.

Grant of Concession

Subject to, and in accordance with the provisions set out in the AETL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to AETL, and AETL has accepted the concession, including the exclusive right, license, and authority during the subsistence of the AETL Concession Agreement, to construct, operate and maintain the AETL Project for a period of 24 years from the AETL Appointed Date.

Subject to, and in accordance with the provisions of the AETL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, AETL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the AETL Concession Agreement;

b) finance and construct the AETL Project Highway;

c) manage, operate, and maintain the AETL Project Highway and regulate the use thereof by third parties;

d) demand, collect, and appropriate fee from vehicles and persons liable for payment of fee for using the AETL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

e) perform and fulfil all of AETL's obligations under and in accordance with the AETL Concession Agreement;

f) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of AETL under the AETL Concession Agreement; and

g) neither assign, transfer or sublet, or create any lien or encumbrance on the AETL Concession Agreement, or the concession granted, or on the whole or any part of the AETL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the AETL Concession Agreement or the agreement for the substitution of AETL entered into by AETL, the NHAI, and the lenders' representative on behalf of the senior lenders (the "**Substitution Agreement**").

Fees

On and from the commercial operation date ("**COD**") till the transfer date, AETL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the AETL Concession Agreement and the applicable rules and regulations, provided that for ease of payment, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated from time to time. Further, AETL may determine and collect fee at such lower rates as it may, by public notice to the users, specify in respect of all or any category of users or vehicles. In accordance with the AETL Concession Agreement, AETL shall not collect any fees in relation to exempted vehicles.

AETL shall not collect any fee from a local user for non-commercial use of the AETL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the AETL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, AETL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, AETL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the AETL Project Highway and does not cross a toll plaza.

Concession Fee

In consideration of the grant of concession, AETL shall pay to the NHAI by way of concession fee a sum of ₹1 per annum.

Additionally, AETL was required to pay to the NHAI on the AETL Appointed Date, a Premium in the form of an additional concession fee equal to ₹810 million as due to the NHAI during that year, due and payable for the period remaining in that year; and for each subsequent year of the AETL Concession Period, the Premium shall be determined by increasing the amount of Premium in the respective year by an additional 5% as compared to the immediately preceding year. The Premium is deemed to be a part of the concession fee.

The concession fee payable under the provisions of the AETL Concession Agreement shall be due and payable in monthly instalments within seven days of the close of each month.

Escrow Account

AETL was required to, prior to the AETL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the AETL Concession Agreement read with the escrow agreement entered into amongst AETL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

AETL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;

b) all fee and any other revenues from or in respect of the AETL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and

c) all payments by the NHAI, after deducting any outstanding concession fee.

The senior lenders may make direct disbursements to the EPC contractor in accordance with the express provisions contained in this behalf in the financing agreements.

Withdrawals during Concession Period

AETL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by AETL for and in respect of the AETL Project Highway;

b) all payments relating to construction of the AETL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) Operation and Management ("**O&M**") expenses, subject to the ceiling, if any, set forth in the financing agreements;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the AETL Concession Agreement, and certified by the NHAI as due and payable to it;

e) concession fee due and payable to the NHAI;
f) monthly proportionate provision of AETL Debt Service due in an accounting year;

g) premium due and payable to the NHAI;

h) all payments and damages certified by the NHAI as due and payable to it by AETL, including repayment of revenue shortfall loan;

i) monthly proportionate provision of AETL Debt Service payments due in an accounting year in respect of subordinated debt;

j) any reserve requirements set forth in the financing agreements; and

k) balance, if any, in accordance with the instructions of AETL.

AETL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the AETL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by AETL for and in respect of the AETL Project Highway;

b) 90% of the AETL Debt Due excluding the subordinated debt;

c) outstanding concession fee;

d) all payments and damages certified by the NHAI as due and payable to it by AETL, including the Premium and the repayment of the revenue shortfall loan;

e) retention and payments relating to the liability for defects and deficiencies set forth in the AETL Concession Agreement;

f) outstanding AETL Debt Service including balance of AETL Debt Due;

g) outstanding subordinated debt;

h) incurred or accrued O&M expenses;

i) any other payments required to be made under the AETL Concession Agreement; and

j) balance, if any, in accordance with the instructions of AETL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the AETL Concession Agreement, require the provision of additional works and services which are not included in the scope of the project as contemplated by the AETL Concession Agreement. Any such change of scope shall be made in accordance with the provisions of the AETL Concession Agreement and the costs thereof shall be expended by AETL and reimbursed by the NHAI.

If AETL determines at any time that a change in scope is necessary for providing safer and improved services to the users, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 15 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the AETL Concession Agreement, or inform AETL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of AETL being in material default or breach of the AETL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the AETL Concession Agreement.

In the event of the NHAI being in material default of the AETL Concession Agreement at any time after the AETL Appointed Date, it shall pay to AETL by way of compensation, all direct costs suffered or incurred by AETL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary

particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the AETL Concession Agreement.

In the event that a material default or breach of the AETL Concession Agreement causes a delay in achieving COD or leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the AETL Concession Period as provided in the AETL Concession Agreement. In the event that an additional toll way or a competing road, as the case may be, is opened to traffic in breach of the AETL Concession Agreement, the NHAI shall pay to AETL, for each day of the breach, compensation as provided in the AETL Concession Agreement, until the breach is cured. The payment of compensation by the NHAI shall be deemed to cure the breach of the AETL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Effects of Variation in Traffic Growth

Subject to the provisions of the AETL Concession Agreement, in the event actual average traffic shall have fallen short of the target traffic, then for every 1% (one percent) shortfall as compared to the target traffic, the AETL Concession Period shall, subject to payment of concession fee in accordance with the AETL Concession Agreement, be increased by 1.5% (one point five percent) thereof; provided that such increase in AETL Concession Period shall not in any case exceed 20% (twenty percent) of the AETL Concession Period.

Subject to the provisions of the AETL Concession Agreement, in the event actual average traffic shall have exceeded the target traffic, then for every 1% (one percent) excess as compared to the target traffic, the AETL Concession Period shall be reduced by 0.75% (zero point seven five percent) thereof; provided that such reduction in AETL Concession Period shall not in any case exceed 10% (ten percent) thereof.

Provided further that in lieu of a reduction in AETL Concession Period under the AETL Concession Agreement, AETL may elect to pay, in addition to the concession fee that would be due and payable if the AETL Concession Period were not reduced hereunder, a further premium equal to 25% (twenty five percent) of the realizable fee, and upon notice given to this effect by AETL no later than two years prior to the AETL Termination Date contemplated by the AETL Concession Agreement, NHAI shall waive the reduction in AETL Concession Period hereunder forthwith.

Notwithstanding anything to the contrary contained in AETL Concession Agreement, if the average daily traffic of PCUs in any accounting year shall exceed the designed capacity of the AETL Project Highway, the NHAI at its option may cause preparation of detailed project report which will assess the cost that may have to be incurred for augmenting the capacity of the AETL Project Highway so that its capacity is sufficiently increased for carrying the then current traffic in accordance with the corresponding provisions of the Indian Roads Congress publication no. IRC -64, 1990 or any substitute thereof. The AETL Concession Period, may be extended so that it yields for AETL a post-tax return on equity of 16% per annum. This assessment will be made at an assumed debt to equity ratio of 70:30. The extension of the AETL Concession Period shall be however limited to five years. The NHAI may thereafter, at their sole option, issue a notice to AETL, to undertake within six months of such notice, the augmentation so determined by the NHAI. The refusal, non-acceptance, or failure by AETL to undertake such augmentation on the due date so intimated by the NHAI, will be considered an indirect political event and the NHAI may at its discretion terminate this AETL Concession Agreement by issuing a termination notice and making a termination payment in accordance with the provisions of the AETL Concession Agreement without the NHAI being liable to issue any further notice under it.

Termination of the AETL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the AETL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and AETL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, AETL shall be deemed to be in default of the AETL Concession Agreement ("**AETL Default**"), unless the default has occurred solely as a result of any breach of the AETL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the AETL Concession Agreement and AETL fails to replenish or provide fresh performance security within a cure period of 30 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the AETL Concession Agreement, AETL fails to cure, within a cure period of 90 days, the AETL Default for which whole or part of the performance security was appropriated;

c) AETL does not achieve the latest outstanding project milestone due in accordance with the AETL Concession Agreement and continues to be in default for 90 days;

d) AETL abandons or manifests intention to abandon the construction or operation of the AETL Project Highway without the prior written consent of the NHAI;

e) project completion date does not occur within the period specified in the AETL Concession Agreement;

f) the punch list items have not been completed within the period set forth in the AETL Concession Agreement;

g) AETL is in breach of the maintenance requirements or the safety requirements as the case may be;

h) AETL has failed to make any payment to the NHAI within the period specified in the AETL Concession Agreement;

i) an escrow default has occurred and AETL fails to cure the default within a cure period of 15 days;

j) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and AETL fails to cure the default within the cure period specified hereinabove;

k) a breach of the project agreements by AETL has caused a material adverse effect;

l) AETL creates an encumbrance in breach of the AETL Concession Agreement;

m) AETL repudiates the AETL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the AETL Concession Agreement;

n) a change in ownership has occurred in breach of the AETL Concession Agreement;

o) there is a transfer, pursuant to law either of (i) the rights and/or obligations of AETL under any of the project agreements, or of (ii) all or part of the assets or undertaking of AETL, and such transfer causes a material adverse effect;

p) an execution levied on any of the assets of AETL has caused a material adverse effect;

q) AETL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for AETL or for the whole or material part of its assets that has a material bearing on the AETL Project;

r) AETL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

s) a resolution for winding up of AETL is passed, or any petition for winding up of AETL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or AETL is ordered to be wound up by Court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of AETL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of AETL under the AETL Concession Agreement and the project agreements; provided that:

    i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the AETL Concession Agreement and the project agreements;

ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the AETL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of AETL as at the AETL Appointed Date; and

iii) each of the project agreements remains in full force and effect;

t) any representation or warranty of AETL which is, as of the date hereof, found to be materially false, incorrect or misleading or AETL is at any time hereafter found to be in breach thereof;

u) AETL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

v) AETL has failed to fulfil any obligation, for which failure termination has been specified in the AETL Concession Agreement; or

w) AETL commits a default in complying with any other provision of the AETL Concession Agreement if such default causes a material adverse effect on the NHAI.

Without prejudice to any other rights or remedies which the NHAI may have under the AETL Concession Agreement, upon the occurrence of an AETL Default, the NHAI shall be entitled to terminate the AETL Concession Agreement by issuing a termination notice to AETL. Before issuing the termination notice, the NHAI shall, by notice, inform AETL of its intention to issue a termination notice and grant 15 days to AETL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the AETL Concession Agreement.

If there are senior lenders, the NHAI shall send a copy of its notice of intention to issue a termination notice to inform the lenders' representative and grant 15 days to the lenders' representative for making a representation on behalf of the senior lenders stating the intention to substitute AETL in accordance with the Substitution Agreement. If the NHAI receives a representation on behalf of the senior lenders, it shall, in its discretion, either withhold termination for a period not exceeding 180 days from the date of the representation, or exercise its right of suspension, as the case may be, to enable the lenders' representative to exercise the senior lenders' right of substitution in accordance with the Substitution Agreement. The lenders' representative may, instead of exercising the senior lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid 180 days, and upon the curing, the NHAI shall withdraw its notice and restore the rights of AETL. On a written request from the lenders' representative and AETL, the NHAI shall extend the period of 180 days by a further period not exceeding 90 days as it may deem appropriate.

Termination by AETL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the AETL Concession Agreement, the NHAI shall be deemed to be in default of the AETL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the AETL Concession Agreement by AETL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the AETL Concession Agreement and such default has a material adverse effect on AETL;

b) the NHAI has failed to make any payment to AETL within the period specified in the AETL Concession Agreement;

c) the NHAI repudiates the AETL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the AETL Concession Agreement; or

d) the State of Uttar Pradesh commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on AETL and the breach continues for a period of 90 days from the date of notice given in this behalf by AETL to the NHAI.

Without prejudice to any other rights or remedies which AETL may have under the AETL Concession Agreement, upon the occurrence of an NHAI Default, AETL shall be entitled to terminate the AETL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, AETL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 15 days to the NHAI to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of an AETL Default during the operation period, the NHAI shall pay to AETL, by way of termination payment, an amount equal to 90% of the AETL Debt Due less insurance cover. If any insurance claims forming part of the insurance cover are not admitted and paid, then 80% of such unpaid claims shall be included in the computation of AETL Debt Due.

Upon termination on account of an NHAI Default, the NHAI shall pay to AETL, by way of termination payment, an amount equal to:

a) AETL Debt Due; and
b) 150% of the adjusted equity.

Termination payment shall become due and payable to AETL within 15 days of a demand being made by AETL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the AETL Concession Agreement shall constitute a full and final settlement of all claims of AETL on account of termination of the AETL Concession Agreement for any reason whatsoever and AETL shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

AETL shall be responsible for all defects and deficiencies in the AETL Project Highway for a period of 120 days after termination. AETL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the AETL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the AETL Concession Agreement shall be retained in the Escrow Account for a period of 120 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

1.1. Supplementary Agreement between AETL and the NHAI dated April 7, 2018

AETL has entered into a supplementary agreement (the "**Supplementary Agreement**") to amend the concession agreement dated September 1, 2015 (the "**Concession Agreement**") to provide for the installation of a new electronic toll collection system (the "**Hybrid ETC System**") for electronic payment of user fee using RFID tags or any other such device.

Change of Scope

The NHAI shall provide a change in the scope of work order at prices discovered by the NHAI to AETL to provide for, as per the defined technical specifications, installation, testing, commissioning, operations and maintenance of the Hybrid ETC System in all lanes of the toll plaza. AETL shall ensure that the requisite civil work is completed prior to the installation, integration, testing and commissioning of the Hybrid ETC System. It shall also ensure the smooth flow of traffic during installation, integration, testing and commissioning of the Hybrid ETC System. AETL will have no claim against the NHAI on account of any lane closure, if any, on account of any third party claims.

Scope of Work

AETL shall install, integrate, test, commission, operate and maintain the Hybrid ETC System in all the lanes of the toll plazas. The Hybrid ETC System shall be installed, commissioned, operated and maintained for a period of five years or the end of the Concession Agreement, whichever is earlier, beyond which it will be replaced or

renewed, as the case may be, by AETL or the NHAI, at the cost of the NHAI. The cycle shall be maintained till the end of the concession period in accordance with the Concession Agreement.

The provisions of the Concession Agreement relating to change of scope shall not apply to the Supplementary Agreement.

Any permission required by AETL under the applicable laws for the installation of the Hybrid ETC System shall be procured and maintained by AETL. The NHAI shall provide reasonable assistance in this regard.

Timeline

AETL shall complete all responsibilities, obligations and works as described in the Supplementary Agreement within a period of 120 days from the date of issuance of the change of scope work order by the NHAI and the release of advance payment.

Damages for Delay

In case of delay in installation, testing, or commissioning of the Hybrid ETC System at the toll plazas as per the time schedule prescribed on account of reasons attributable to AETL, damages at 0.1% of the cost of installation, testing, or commissioning of the Hybrid ETC System for each day of the delay, subject to a maximum of 10% of the cost of installation, testing, or commissioning of the Hybrid ETC System shall be levied on AETL. Damages for delay will not be applicable in case of a delay in implementation due to delayed payment release by the NHAI.

AETL shall not be entitled to any additional benefit either in monetary terms or on any other account including, but not limited to any extension of time, save on account of and NHAI Default or force majeure.

Compensation

In case of any damage to the Hybrid ETC System due to any act or omission of AETL, the NHAI shall not be liable for any compensation to AETL, and AETL shall bear the cost of repair, replacement or renewal of the damaged Hybrid ETC System equipment or hardware itself.

In case of any damage to the Hybrid ETC System due to the occurrence of any force majeure event, the compensation to AETL shall be derived as per the provisions of the Concession Agreement.

End of the Concession Period

AETL shall hand over all the Hybrid ETC equipment or hardware in an operational condition to the NHAI or a third party as directed by the NHAI at the end of the concession period, beyond which no O&M payment shall be made to AETL. If any Hybrid ETC System equipment or hardware is found to be non-operational, then AETL shall be liable to replace or pay for the replacement of the Hybrid ETC System equipment or hardware required to make the Hybrid ETC System operational on all lanes of the toll plazas to the NHAI promptly.
Upon termination, AETL shall assign warranties received from the original equipment manufacturer and for the components or equipment, and provide the respective warranty assignment agreements and necessary documents. AETL shall ensure that all the warranties are duly assigned in favor of the NHAI and AETL shall bear the cost and expenses towards the assignment.

1.2. Supplementary Agreement between AETL and the NHAI dated May 1, 2017

AETL has entered into a supplementary agreement with the NHAI to amend the concession agreement dated September 1, 2015 (the "**Concession Agreement**") to provide for dispute resolution through the Society for Affordable Redressal of Disputes ("**SAROD**").

Any dispute arising out of the Concession Agreement which is not resolved amicably shall be finally settled by arbitration. The dispute shall be referred to SAROD for resolution by arbitration in accordance with the rules of SAROD and the Arbitration and Conciliation Act, 1996. AETL and the NHAI shall choose the arbitrators from a panel of arbitrators empanelled by SAROD. The arbitral tribunal shall consist of a sole arbitrator in case the total claim of the dispute is ₹30 million or less, and in case the claim is more than ₹30 million, the tribunal shall consist of an odd number of arbitrators to be nominated by the parties.

The arbitral proceedings shall be held at Delhi (India) and the language of the arbitral proceedings, and that of all the correspondence between the parties shall be English. The dispute shall be governed by the substantive law of India.

2. Concession Agreement between CGTL and the NHAI dated December 9, 2016

CGTL has entered into a concession agreement for six-laning of Kishangarh Udaipur Ahmedabad section from km 90.000 (near Gulabpura) to km 214.870 (end of Chittorgarh bypass), of NH-79 in Rajasthan on build, operate and transfer ("**BOT**") basis (the "**CGTL Concession Agreement**"), for a period of 20 years, from November 4, 2017 ("**CGTL Appointed Date**") or until such date on which the CGTL Concession Agreement is terminated by a termination notice ("**CGTL Termination Date**", and the period between the CGTL Appointed Date and the CGTL Termination Date, the "**CGTL Concession Period**").

Certain Definitions

"**CGTL Debt Due**" shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the transfer date:

a) the principal amount of the debt provided by the senior lenders under the financing agreements for financing the total project cost (the "**Principal**") but excluding any part of the Principal that had fallen due for repayment two years prior to the transfer date;

b) all accrued interest, financing fees and charges payable under the financing agreements on, or in respect of, the debt referred to in the sub-clause above until the transfer date but excluding (i) any interest, fees or charges that had fallen due one year prior to the transfer date, (ii) any penal interest or charges payable under the financing agreements to any senior lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to an NHAI Default (as defined below); and

c) any subordinated debt which is included in the financing package and disbursed by lenders for financing the total project cost;

If all, or any part of the CGTL Debt Due is convertible into equity at the option of the senior lenders and/or CGTL, it shall, for the purposes of the CGTL Concession Agreement, be deemed to be CGTL Debt Due even after the conversion and the Principal thereof shall be dealt with as if such conversion had not been undertaken;

"**CGTL Debt Service**" shall mean the sum of all payments on account of Principal, interest, financing fees and charges due and payable in an accounting year to the senior lenders under the financing agreements;

"**CGTL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) project facilities situated on the site; (d) all rights of CGTL under the project agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) applicable permits and authorizations relating to or in respect of the CGTL Project Highway (as defined below), but does not include additional facilities;

"**CGTL Project Highway**" shall mean the site comprising the existing road comprising NH-79 from km 90.000 to km 214.870 and all CGTL Project Assets, and its subsequent development and augmentation in accordance with the CGTL Concession Agreement;

"**CGTL Project**" shall mean the construction, operation, and maintenance of the CGTL Project Highway in accordance with the provisions of the CGTL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

"**Premium**" shall mean an amount paid to the NHAI by CGTL in the form of an additional concession fee, as set forth in the bid for each year of the CGTL Concession Period.

Grant of Concession

Subject to, and in accordance with the provisions set out in the CGTL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to CGTL, and CGTL has accepted the concession, including the exclusive right, license, and authority during the subsistence of the CGTL Concession Agreement, to construct, operate and maintain the CGTL Project for a period of 20 years from the CGTL Appointed Date.

Subject to, and in accordance with the provisions of the CGTL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, CGTL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the CGTL Concession Agreement;

b) finance and construct the CGTL Project Highway;

c) manage, operate, and maintain the CGTL Project Highway and regulate the use thereof by third parties;

d) demand, collect, and appropriate fee from vehicles and persons liable for payment of fee for using the CGTL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

e) perform and fulfil all of CGTL's obligations under and in accordance with the CGTL Concession Agreement;

f) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of CGTL under the CGTL Concession Agreement; and

g) neither assign, transfer or sublet, or create any lien or encumbrance on the CGTL Concession Agreement, or the concession granted, or on the whole or any part of the CGTL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the CGTL Concession Agreement or the agreement for the substitution of CGTL entered into by CGTL, the NHAI, and the lenders' representative on behalf of the senior lenders (the "**Substitution Agreement**").

Fees

On and from the commercial operation date ("**COD**") till the transfer date, CGTL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the CGTL Concession Agreement and the applicable rules and regulations, provided that for ease of payment and collection, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated from time to time. Further, CGTL may determine and collect fee at such lower rates as it may, by public notice to the users, specify in respect of all or any category of users or vehicles. In accordance with the CGTL Concession Agreement, CGTL shall not collect any fees in relation to exempted vehicles.

CGTL shall not collect any fee from a local user for non-commercial use of the CGTL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the CGTL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, CGTL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, CGTL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the CGTL Project Highway and does not cross a toll plaza.

Concession Fee

In consideration of the grant of concession, CGTL shall pay to the NHAI by way of concession fee a sum of ₹1 per annum.

Additionally, CGTL was required to pay to the NHAI, immediately after the third anniversary year of the COD, a Premium in the form of an additional concession fee equal to ₹2,286,000,000 as due to the NHAI during that year, due and payable for the period remaining in that year; and for each subsequent year till the ninth anniversary of the COD, the Premium shall be determined by increasing the amount of Premium in the respective year by an additional 3% as compared to the immediately preceding year, and for each subsequent year of the CGTL Concession Period, the Premium shall be determined by increasing the amount of Premium in the respective year

by an additional 8% as compared to the immediately preceding year. The Premium is deemed to be a part of the concession fee.

The concession fee payable under the provisions of the CGTL Concession Agreement shall be due and payable in monthly instalments within seven days of the close of each month.

Escrow Account

CGTL was required to, prior to the CGTL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the CGTL Concession Agreement read with the escrow agreement entered into amongst CGTL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

CGTL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;

b) all fee and any other revenues from or in respect of the CGTL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and

c) all payments by the NHAI, after deducting any outstanding concession fee.

The senior lenders may make direct disbursements to the EPC contractor in accordance with the express provisions contained in this behalf in the financing agreements.

Withdrawals during Concession Period

CGTL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by CGTL for and in respect of the CGTL Project Highway;

b) all payments relating to construction of the CGTL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) Operation and Management ("**O&M**") expenses, subject to the ceiling, if any, set forth in the financing agreements;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the CGTL Concession Agreement, and certified by the NHAI as due and payable to it;

e) concession fee due and payable to the NHAI;

f) monthly proportionate provision of CGTL Debt Service due in an accounting year;

g) premium due and payable to the NHAI;

h) all payments and damages certified by the NHAI as due and payable to it by CGTL, including repayment of revenue shortfall loan. CGTL has agreed to give irrevocable instructions to the Escrow Bank to make payments from the Escrow Account in accordance with the instructions of the NHAI under the CGTL Concession Agreement and debit the payment to O&M expenses;

i) monthly proportionate provision of CGTL Debt Service payments due in an accounting year in respect of subordinated debt;

j) any reserve requirements set forth in the financing agreements; and

k) balance, if any, in accordance with the instructions of CGTL.

CGTL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the CGTL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by CGTL for and in respect of the CGTL Project Highway;

b) 90% of the CGTL Debt Due excluding the subordinated debt;

c) outstanding concession fee;

d) all payments and damages certified by the NHAI as due and payable to it by CGTL, including the repayment of the revenue shortfall loan. CGTL has agreed to give irrevocable instruction to the Escrow Bank to make payment from the Escrow Account in accordance with the instructions of the NHAI under the CGTL Concession Agreement and debit the payment to O&M expenses.

e) retention and payments relating to the liability for defects and deficiencies set forth in the CGTL Concession Agreement;

f) outstanding CGTL Debt Service including balance of CGTL Debt Due;

g) outstanding subordinated debt;

h) incurred or accrued O&M expenses;

i) any other payments required to be made under the CGTL Concession Agreement; and

j) balance, if any, in accordance with the instructions of CGTL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the CGTL Concession Agreement, require the provision of additional works and services which are not included in the scope of the project as contemplated by the CGTL Concession Agreement. Any such change of scope shall be made in accordance with the provisions of the CGTL Concession Agreement and the costs thereof shall be expended by CGTL and reimbursed by the NHAI.

If CGTL determines at any time that a change in scope is necessary for providing safer and improved services to the users, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 60 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the CGTL Concession Agreement, or inform CGTL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of CGTL being in material default or breach of the CGTL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the CGTL Concession Agreement.

In the event of the NHAI being in material default of the CGTL Concession Agreement at any time after the CGTL Appointed Date, it shall pay to CGTL by way of compensation, all direct costs suffered or incurred by

CGTL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the CGTL Concession Agreement.

In the event that a material default or breach of the CGTL Concession Agreement causes a delay in achieving COD or leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the CGTL Concession Period as provided in the CGTL Concession Agreement. In the event that an additional toll way or a competing road, as the case may be, is opened to traffic in breach of the CGTL Concession Agreement, the NHAI shall pay to CGTL, for each day of the breach, compensation as provided in the CGTL Concession Agreement, until the breach is cured. The payment of compensation by the NHAI shall be deemed to cure the breach of the CGTL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Effects of Variation in Traffic Growth

Subject to the provisions of the CGTL Concession Agreement, in the event actual average traffic shall have fallen short of the target traffic, then for every 1% (one percent) shortfall as compared to the target traffic, the CGTL Concession Period shall, subject to payment of concession fee in accordance with the CGTL Concession Agreement, be increased by 1.5% (one point five percent) thereof; provided that such increase in CGTL Concession Period shall not in any case exceed 20% (twenty percent) of the CGTL Concession Period.

Subject to the provisions of the CGTL Concession Agreement, in the event actual average traffic shall have exceeded the target traffic, then for every 1% (one percent) excess as compared to the target traffic, the CGTL Concession Period shall be reduced by 0.75% (zero point seven five percent) thereof; provided that such reduction in CGTL Concession Period shall not in any case exceed 10% (ten percent) thereof.

Provided further that in lieu of a reduction in CGTL Concession Period under the CGTL Concession Agreement, CGTL may elect to pay, in addition to the concession fee that would be due and payable if the CGTL Concession Period were not reduced hereunder, a further premium equal to 25% (twenty five percent) of the realizable fee, and upon notice given to this effect by CGTL no later than two years prior to the CGTL Termination Date contemplated by the CGTL Concession Agreement, NHAI shall waive the reduction in CGTL Concession Period hereunder forthwith.

Notwithstanding anything to the contrary contained in CGTL Concession Agreement, if the average daily traffic of PCUs in any accounting year shall exceed the designed capacity of the CGTL Project Highway, the NHAI at its option may cause preparation of detailed project report which will assess the cost that may have to be incurred for augmenting the capacity of the CGTL Project Highway so that its capacity is sufficiently increased for carrying the then current traffic in accordance with the corresponding provisions of the Indian Roads Congress publication no. IRC -64, 1990 or any substitute thereof. The CGTL Concession Period, may be extended so that it yields for CGTL a post-tax return on equity of 16% per annum. This assessment will be made at an assumed debt to equity ratio of 70:30. The extension of the CGTL Concession Period shall be however limited to five years. The NHAI may thereafter, at their sole option, issue a notice to CGTL, to undertake within six months of such notice, the augmentation so determined by the NHAI. The refusal, non-acceptance, or failure by CGTL to undertake such augmentation on the due date so intimated by the NHAI, will be considered an indirect political event and the NHAI may at its discretion terminate this CGTL Concession Agreement by issuing a termination notice and making a termination payment in accordance with the provisions of the CGTL Concession Agreement without the NHAI being liable to issue any further notice under it.

Termination of the CGTL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the CGTL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and CGTL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, CGTL shall be deemed to be in default of the CGTL Concession Agreement ("**CGTL Default**"), unless the default has occurred solely as a result of any breach of the CGTL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the CGTL Concession Agreement and CGTL fails to replenish or provide fresh performance security within a cure period of 30 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the CGTL Concession Agreement, CGTL fails to cure, within a cure period of 90 days, the CGTL Default for which whole or part of the performance security was appropriated;

c) CGTL does not achieve the latest outstanding project milestone due in accordance with the CGTL Concession Agreement and continues to be in default for 90 days;

d) CGTL abandons or manifests intention to abandon the construction or operation of the CGTL Project Highway without the prior written consent of the NHAI;

e) project completion date does not occur within the period specified in the CGTL Concession Agreement;

f) the punch list items have not been completed within the period set forth in the CGTL Concession Agreement;

g) CGTL is in breach of the maintenance requirements or the safety requirements as the case may be;

h) CGTL has failed to make any payment to the NHAI within the period specified in the CGTL Concession Agreement;

i) an escrow default has occurred and CGTL fails to cure the default within a cure period of 15 days;

j) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and CGTL fails to cure the default within the cure period specified hereinabove;

k) a breach of the project agreements by CGTL has caused a material adverse effect;

l) CGTL creates an encumbrance in breach of the CGTL Concession Agreement;

m) CGTL repudiates the CGTL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the CGTL Concession Agreement;

n) a change in ownership has occurred in breach of the CGTL Concession Agreement;

o) there is a transfer, pursuant to law either of (i) the rights and/or obligations of CGTL under any of the project agreements, or of (ii) all or part of the assets or undertaking of CGTL, and such transfer causes a material adverse effect;

p) an execution levied on any of the assets of CGTL has caused a material adverse effect;

q) CGTL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for CGTL or for the whole or material part of its assets that has a material bearing on the CGTL Project;

r) CGTL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

s) a resolution for winding up of CGTL is passed, or any petition for winding up of CGTL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or CGTL is ordered to be wound up by Court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of CGTL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of CGTL under the CGTL Concession Agreement and the project agreements; provided that:

i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the CGTL Concession Agreement and the project agreements;

ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the CGTL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of CGTL as at the CGTL Appointed Date; and

iii) each of the project agreements remains in full force and effect;

t) any representation or warranty of CGTL which is, as of the date hereof, found to be materially false, incorrect or misleading or CGTL is at any time hereafter found to be in breach thereof;

u) CGTL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

v) CGTL has failed to fulfil any obligation, for which failure termination has been specified in the CGTL Concession Agreement; or

w) CGTL commits a default in complying with any other provision of the CGTL Concession Agreement if such default causes a material adverse effect on the NHAI.

Without prejudice to any other rights or remedies which the NHAI may have under the CGTL Concession Agreement, upon the occurrence of a CGTL Default, the NHAI shall be entitled to terminate the CGTL Concession Agreement by issuing a termination notice to CGTL. Before issuing the termination notice, the NHAI shall, by notice, inform CGTL of its intention to issue a termination notice and grant 15 days to CGTL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the CGTL Concession Agreement.

If there are senior lenders, the NHAI shall send a copy of its notice of intention to issue a termination notice to inform the lenders' representative and grant 30 days to the lenders' representative for making a representation on behalf of the senior lenders stating the intention to substitute CGTL in accordance with the Substitution Agreement. If the NHAI receives a representation on behalf of the senior lenders, it shall, in its discretion, either withhold termination for a period not exceeding 180 days from the date of the representation, or exercise its right of suspension, as the case may be, to enable the lenders' representative to exercise the senior lenders' right of substitution in accordance with the Substitution Agreement. The lenders' representative may, instead of exercising the senior lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid 180 days, and upon the curing, the NHAI shall withdraw its notice and restore the rights of CGTL. On a written request from the lenders' representative and CGTL, the NHAI shall extend the period of 180 days by a further period not exceeding 90 days as it may deem appropriate.

Termination by CGTL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the CGTL Concession Agreement, the NHAI shall be deemed to be in default of the CGTL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the CGTL Concession Agreement by CGTL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the CGTL Concession Agreement and such default has a material adverse effect on CGTL;

b) the NHAI has failed to make any payment to CGTL within the period specified in the CGTL Concession Agreement;

c) the NHAI repudiates the CGTL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the CGTL Concession Agreement; or

d) the State of Rajasthan commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on CGTL and the breach continues for a period of 90 days from the date of notice given in this behalf by CGTL to the NHAI.

Without prejudice to any other rights or remedies which CGTL may have under the CGTL Concession Agreement, upon the occurrence of an NHAI Default, CGTL shall be entitled to terminate the CGTL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, CGTL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 30 days to the NHAI to make a representation, and may, after the expiry of the 30 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of a CGTL Default during the operation period, the NHAI shall pay to CGTL, by way of termination payment, an amount equal to 90% of the CGTL Debt Due less insurance cover. If any insurance claims forming part of the insurance cover are not admitted and paid, then 80% of such unpaid claims shall be included in the computation of CGTL Debt Due.

Upon termination on account of an NHAI Default, the NHAI shall pay to CGTL, by way of termination payment, an amount equal to:

a) CGTL Debt Due; and
b) 150% of the adjusted equity.

The termination payment shall not be less than an amount equal to the product of six and the average monthly fee actually realized 12 months prior to the transfer date.

Termination payment shall become due and payable to CGTL within 30 days of a demand being made by CGTL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the CGTL Concession Agreement shall constitute a full and final settlement of all claims of CGTL on account of termination of the CGTL Concession Agreement for any reason whatsoever and CGTL shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

CGTL shall be responsible for all defects and deficiencies in the CGTL Project Highway for a period of 120 days after termination. CGTL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the CGTL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the CGTL Concession Agreement shall be retained in the Escrow Account for a period of 120 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

3. Concession Agreement between IRB HMTL and the NHAI dated May 29, 2018

IRB HMTL has entered into a concession agreement for six-laning of Hapur Bypass to Moradabad section including Hapur Bypass from km 50.000 (design chainage 50.000) to km 148.277 (design chainage 149.867) of NH-24 (new NH-9) in Uttar Pradesh on design, build, finance, operate and transfer ("**DBFOT**") basis (the "**IRB HMTL Concession Agreement**"), for a period of 22 years, from May 28, 2019 ("**IRB HMTL Appointed Date**") or until such date on which the IRB HMTL Concession Agreement is terminated by a termination notice ("**IRB HMTL Termination Date**", and the period between the IRB HMTL Appointed Date and the IRB HMTL Termination Date, the "**IRB HMTL Concession Period**").

Certain Definitions

"**IRB HMTL Debt Due**" shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the transfer date:

a) the principal amount of the debt provided by the senior lenders under the financing agreements for financing the total project cost (the "**Principa**l") but excluding any part of the Principal that had fallen due for repayment two years prior to the transfer date;

b) all accrued interest, financing fees and charges payable under the financing agreements on, or in respect of, the debt referred to in the sub-clause above until the transfer date but excluding (i) any interest, fees or charges that had fallen due one year prior to the transfer date, (ii) any penal interest or charges payable under the financing agreements to any senior lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to an NHAI Default (as defined below); and

c) any subordinated debt which is included in the financing package and disbursed by lenders for financing the total project cost;

If all, or any part of the IRB HMTL Debt Due is convertible into equity at the option of the senior lenders and/or IRB HMTL, it shall, for the purposes of the IRB HMTL Concession Agreement, be deemed to be IRB HMTL Debt Due even after the conversion and the Principal thereof shall be dealt with as if such conversion had not been undertaken;

"**IRB HMTL Debt Service**" shall mean the sum of all payments on account of Principal, interest, financing fees and charges due and payable in an accounting year to the senior lenders under the financing agreements;

"**IRB HMTL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) project facilities situated on the site; (d) all rights of IRB HMTL under the project agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) applicable permits and authorizations relating to or in respect of the IRB HMTL Project Highway (as defined below), but does not include additional facilities;

"**IRB HMTL Project Highway**" shall mean the site comprising the existing road comprising Hapur Bypass to Moradabad section including Hapur Bypass from km 50.000 (design chainage km 50.000) to km 148.277 (design chainage km 149.867) of NH-24 (new NH-9) and all IRB HMTL Project Assets, and its subsequent development and augmentation in accordance with the IRB HMTL Concession Agreement;

"**IRB HMTL Project**" shall mean the construction, operation, and maintenance of the IRB HMTL Project Highway in accordance with the provisions of the IRB HMTL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

"**Premium**" shall mean an amount paid to the NHAI by IRB HMTL in the form of an additional concession fee, as set forth in the bid for each year of the IRB HMTL Concession Period.

Grant of Concession

Subject to, and in accordance with the provisions set out in the IRB HMTL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to IRB HMTL, and IRB HMTL has accepted the concession, including the exclusive right, license, and authority during the subsistence of the IRB HMTL Concession Agreement, to construct, operate and maintain the IRB HMTL Project for a period of 22 years from the IRB HMTL Appointed Date.

Subject to, and in accordance with the provisions of the IRB HMTL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, IRB HMTL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the IRB HMTL Concession Agreement;

b) finance and construct the IRB HMTL Project Highway;

c) manage, operate, and maintain the IRB HMTL Project Highway and regulate the use thereof by third parties;

d) demand, collect, and appropriate fee from vehicles and persons liable for payment of fee for using the IRB HMTL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

e) perform and fulfil all of IRB HMTL's obligations under and in accordance with the IRB HMTL Concession Agreement;

f) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of IRB HMTL under the IRB HMTL Concession Agreement; and

g) neither assign, transfer or sublet, or create any lien or encumbrance on the IRB HMTL Concession Agreement, or the concession granted, or on the whole or any part of the IRB HMTL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the IRB HMTL Concession Agreement or the agreement for the substitution of IRB HMTL entered into by IRB HMTL, the NHAI, and the lenders' representative on behalf of the senior lenders (the "**Substitution Agreement**").

Fees

On and from the commercial operation date ("**COD**") till the transfer date, IRB HMTL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the IRB HMTL Concession Agreement and the applicable rules and regulations, provided that for ease of payment and collection, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated from time to time. Further, IRB HMTL may determine and collect fee at such lower rates as it may, by public notice to the users, specify in respect of all or any category of users or vehicles. In accordance with the IRB HMTL Concession Agreement, IRB HMTL shall not collect any fees in relation to exempted vehicles.

IRB HMTL shall not collect any fee from a local user for non-commercial use of the IRB HMTL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the IRB HMTL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, IRB HMTL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, IRB HMTL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the IRB HMTL Project Highway and does not cross a toll plaza.

Concession Fee

In consideration of the grant of concession, IRB HMTL shall pay to the NHAI by way of concession fee a sum of ₹1 per annum.

Additionally, IRB HMTL was required to pay to the NHAI, immediately after the third anniversary year of the COD, a Premium in the form of an additional concession fee equal to ₹315 million as due to the NHAI during that year, due and payable for the period remaining in that year; and for each subsequent year till the ninth anniversary of the COD, the Premium shall be determined by increasing the amount of Premium in the respective year by an additional 3% as compared to the immediately preceding year and for each subsequent year of the IRB HMTL Concession Period, the Premium shall be determined by increasing the amount of Premium in the respective year by an additional 8% as compared to the immediately preceding year. The Premium is deemed to be a part of the concession fee.

The concession fee payable under the provisions of the IRB HMTL Concession Agreement shall be due and payable in monthly instalments within seven days of the close of each month.

Escrow Account

IRB HMTL was required to, prior to the IRB HMTL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the IRB HMTL Concession Agreement read with the escrow agreement entered into amongst IRB HMTL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

IRB HMTL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;
b) all fee and any other revenues from or in respect of the IRB HMTL Project Highway, including the proceeds

of any deposits, capital receipts or insurance claims; and

c) all payments by the NHAI, after deducting any outstanding concession fee.

The senior lenders may make direct disbursements to the EPC contractor in accordance with the express provisions contained in this behalf in the financing agreements.

Withdrawals during Concession Period

IRB HMTL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by IRB HMTL for and in respect of the IRB HMTL Project Highway;

b) all payments relating to construction of the IRB HMTL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) Operation and Management ("**O&M**") expenses, subject to the ceiling, if any, set forth in the financing agreements;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the IRB HMTL Concession Agreement, and certified by the NHAI as due and payable to it;

e) concession fee due and payable to the NHAI;

f) monthly proportionate provision of IRB HMTL Debt Service due in an accounting year;

g) premium due and payable to the NHAI;

h) all payments and damages certified by the NHAI as due and payable to it by IRB HMTL, including repayment of revenue shortfall loan. IRB HMTL has agreed to give irrevocable instructions to the Escrow Bank to make payments from the Escrow Account in accordance with the instructions of the NHAI under the IRB HMTL Concession Agreement and debit the payment to O&M expenses;

i) monthly proportionate provision of IRB HMTL Debt Service payments due in an accounting year in respect of subordinated debt;

j) any reserve requirements set forth in the financing agreements; and

k) balance, if any, in accordance with the instructions of IRB HMTL.

IRB HMTL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the IRB HMTL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by IRB HMTL for and in respect of the IRB HMTL Project Highway;

b) 90% of the IRB HMTL Debt Due excluding the subordinated debt;
c) outstanding concession fee;

d) all payments and damages certified by the NHAI as due and payable to it by IRB HMTL, including the repayment of the revenue shortfall loan. IRB HMTL has agreed to give irrevocable instruction to the Escrow

Bank to make payment from the Escrow Account in accordance with the instructions of the NHAI under the IRB HMTL Concession Agreement and debit the payment to O&M expenses.

e) retention and payments relating to the liability for defects and deficiencies set forth in the IRB HMTL Concession Agreement;

f) outstanding IRB HMTL Debt Service including balance of IRB HMTL Debt Due;

g) outstanding subordinated debt;

h) incurred or accrued O&M expenses;

i) any other payments required to be made under the IRB HMTL Concession Agreement; and

j) balance, if any, in accordance with the instructions of IRB HMTL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the IRB HMTL Concession Agreement, require the provision of additional works and services which are not included in the scope of the project as contemplated by the IRB HMTL Concession Agreement. Any such change of scope shall be made in accordance with the provisions of the IRB HMTL Concession Agreement and the costs thereof shall be expended by IRB HMTL and reimbursed by the NHAI.

If IRB HMTL determines at any time that a change in scope is necessary for providing safer and improved services to the users, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 60 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the IRB HMTL Concession Agreement, or inform IRB HMTL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of IRB HMTL being in material default or breach of the IRB HMTL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the IRB HMTL Concession Agreement.

In the event of the NHAI being in material default of the IRB HMTL Concession Agreement at any time after the IRB HMTL Appointed Date, it shall pay to IRB HMTL by way of compensation, all direct costs suffered or incurred by IRB HMTL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the IRB HMTL Concession Agreement.

In the event that a material default or breach of the IRB HMTL Concession Agreement causes a delay in achieving COD or leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the IRB HMTL Concession Period as provided in the IRB HMTL Concession Agreement. In the event that an additional toll way or a competing road, as the case may be, is opened to traffic in breach of the IRB HMTL Concession Agreement, the NHAI shall pay to IRB HMTL, for each day of the breach, compensation as provided in the IRB HMTL Concession Agreement, until the breach is cured. The payment of compensation by the NHAI shall be deemed to cure the breach of the IRB HMTL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Effects of Variation in Traffic Growth

Subject to the provisions of the IRB HMTL Concession Agreement, in the event actual average traffic shall have fallen short of the target traffic, then for every 1% (one percent) shortfall as compared to the target traffic, the IRB HMTL Concession Period shall, subject to payment of concession fee in accordance with the IRB HMTL Concession Agreement, be increased by 1.5% (one point five percent) thereof; provided that such increase in IRB HMTL Concession Period shall not in any case exceed 20% (twenty percent) of the IRB HMTL Concession Period.

Subject to the provisions of the IRB HMTL Concession Agreement, in the event actual average traffic shall have exceeded the target traffic, then for every 1% (one percent) excess as compared to the target traffic, the IRB HMTL Concession Period shall be reduced by 0.75% (zero point seven five percent) thereof; provided that such reduction in IRB HMTL Concession Period shall not in any case exceed 10% (ten percent) thereof.

Provided further that in lieu of a reduction in IRB HMTL Concession Period under the IRB HMTL Concession Agreement, IRB HMTL may elect to pay, in addition to the concession fee that would be due and payable if the IRB HMTL Concession Period were not reduced hereunder, a further premium equal to 25% (twenty five percent) of the realizable fee, and upon notice given to this effect by IRB HMTL no later than two years prior to the IRB HMTL Termination Date contemplated by the IRB HMTL Concession Agreement, NHAI shall waive the reduction in IRB HMTL Concession Period hereunder forthwith.

Notwithstanding anything to the contrary contained in IRB HMTL Concession Agreement, if the average daily traffic of PCUs in any accounting year shall exceed the designed capacity of the IRB HMTL Project Highway, the NHAI at its option may cause preparation of detailed project report which will assess the cost that may have to be incurred for augmenting the capacity of the IRB HMTL Project Highway so that its capacity is sufficiently increased for carrying the then current traffic in accordance with the corresponding provisions of the Indian Roads Congress publication no. IRC -64, 1990 or any substitute thereof. The IRB HMTL Concession Period, may be extended so that it yields for IRB HMTL a post-tax return on equity of 16% per annum. This assessment will be made at an assumed debt to equity ratio of 70:30. The extension of the IRB HMTL Concession Period shall be however limited to five years. The NHAI may thereafter, at their sole option, issue a notice to IRB HMTL, to undertake within six months of such notice, the augmentation so determined by the NHAI. The refusal, non-acceptance, or failure by IRB HMTL to undertake such augmentation on the due date so intimated by the NHAI, will be considered an indirect political event and the NHAI may at its discretion terminate this IRB HMTL Concession Agreement by issuing a termination notice and making a termination payment in accordance with the provisions of the IRB HMTL Concession Agreement without the NHAI being liable to issue any further notice under it.

Termination of the IRB HMTL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the IRB HMTL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and IRB HMTL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, IRB HMTL shall be deemed to be in default of the IRB HMTL Concession Agreement ("**IRB HMTL Default**"), unless the default has occurred solely as a result of any breach of the IRB HMTL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the IRB HMTL Concession Agreement and IRB HMTL fails to replenish or provide fresh performance security within a cure period of 30 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the IRB HMTL Concession Agreement, IRB HMTL fails to cure, within a cure period of 90 days, the IRB HMTL Default for which whole or part of the performance security was appropriated;

c) IRB HMTL does not achieve the latest outstanding project milestone due in accordance with the IRB HMTL Concession Agreement and continues to be in default for 90 days;

d) IRB HMTL abandons or manifests intention to abandon the construction or operation of the IRB HMTL Project Highway without the prior written consent of the NHAI;

e) project completion date does not occur within the period specified in the IRB HMTL Concession Agreement;

f) the punch list items have not been completed within the period set forth in the IRB HMTL Concession Agreement;

g) IRB HMTL is in breach of the maintenance requirements or the safety requirements as the case may be;

h) IRB HMTL has failed to make any payment to the NHAI within the period specified in the IRB HMTL Concession Agreement;

i) an escrow default has occurred and IRB HMTL fails to cure the default within a cure period of 15 days;

j) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and IRB HMTL fails to cure the default within the cure period specified hereinabove;

k) a breach of the project agreements by IRB HMTL has caused a material adverse effect;

l) IRB HMTL creates an encumbrance in breach of the IRB HMTL Concession Agreement;

m) IRB HMTL repudiates the IRB HMTL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the IRB HMTL Concession Agreement;

n) a change in ownership has occurred in breach of the IRB HMTL Concession Agreement;

o) there is a transfer, pursuant to law either of (i) the rights and/or obligations of IRB HMTL under any of the project agreements, or of (ii) all or part of the assets or undertaking of IRB HMTL, and such transfer causes a material adverse effect;

p) an execution levied on any of the assets of IRB HMTL has caused a material adverse effect;

q) IRB HMTL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for IRB HMTL or for the whole or material part of its assets that has a material bearing on the IRB HMTL Project;

r) IRB HMTL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

s) a resolution for winding up of IRB HMTL is passed, or any petition for winding up of IRB HMTL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or IRB HMTL is ordered to be wound up by Court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of IRB HMTL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of IRB HMTL under the IRB HMTL Concession Agreement and the project agreements; provided that:

   i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the IRB HMTL Concession Agreement and the project agreements;

   ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the IRB HMTL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of IRB HMTL as at the IRB HMTL Appointed Date; and

   iii) each of the project agreements remains in full force and effect;

t) any representation or warranty of IRB HMTL which is, as of the date hereof, found to be materially false, incorrect or misleading or IRB HMTL is at any time hereafter found to be in breach thereof;

u) IRB HMTL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

v) IRB HMTL has failed to fulfil any obligation, for which failure termination has been specified in the IRB HMTL Concession Agreement; or

w) IRB HMTL commits a default in complying with any other provision of the IRB HMTL Concession Agreement if such default causes a material adverse effect on the NHAI.

Without prejudice to any other rights or remedies which the NHAI may have under the IRB HMTL Concession Agreement, upon the occurrence of an IRB HMTL Default, the NHAI shall be entitled to terminate the IRB HMTL Concession Agreement by issuing a termination notice to IRB HMTL. Before issuing the termination notice, the NHAI shall, by notice, inform IRB HMTL of its intention to issue a termination notice and grant 15 days to IRB HMTL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the IRB HMTL Concession Agreement.

If there are senior lenders, the NHAI shall send a copy of its notice of intention to issue a termination notice to inform the lenders' representative and grant 30 days to the lenders' representative for making a representation on behalf of the senior lenders stating the intention to substitute IRB HMTL in accordance with the Substitution Agreement. If the NHAI receives a representation on behalf of the senior lenders, it shall, in its discretion, either withhold termination for a period not exceeding 180 days from the date of the representation, or exercise its right of suspension, as the case may be, to enable the lenders' representative to exercise the senior lenders' right of substitution in accordance with the Substitution Agreement. The lenders' representative may, instead of exercising the senior lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid 180 days, and upon the curing, the NHAI shall withdraw its notice and restore the rights of IRB HMTL. On a written request from the lenders' representative and IRB HMTL, the NHAI shall extend the period of 180 days by a further period not exceeding 90 days as it may deem appropriate.

Termination by IRB HMTL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the IRB HMTL Concession Agreement, the NHAI shall be deemed to be in default of the IRB HMTL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the IRB HMTL Concession Agreement by IRB HMTL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the IRB HMTL Concession Agreement and such default has a material adverse effect on IRB HMTL;

b) the NHAI has failed to make any payment to IRB HMTL within the period specified in the IRB HMTL Concession Agreement;

c) the NHAI repudiates the IRB HMTL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the IRB HMTL Concession Agreement; or

d) the State of Uttar Pradesh commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on IRB HMTL and the breach continues for a period of 90 days from the date of notice given in this behalf by IRB HMTL to the NHAI.

Without prejudice to any other rights or remedies which IRB HMTL may have under the IRB HMTL Concession Agreement, upon the occurrence of an NHAI Default, IRB HMTL shall be entitled to terminate the IRB HMTL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, IRB HMTL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 30 days to the NHAI to make a representation, and may, after the expiry of the 30 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of an IRB HMTL Default during the operation period, the NHAI shall pay to IRB HMTL, by way of termination payment, an amount equal to 90% of the IRB HMTL Debt Due less insurance cover. If any insurance claims forming part of the insurance cover are not admitted and paid, then 80% of such unpaid claims shall be included in the computation of IRB HMTL Debt Due.

Upon termination on account of an NHAI Default, the NHAI shall pay to IRB HMTL, by way of termination payment, an amount equal to:

a) IRB HMTL Debt Due; and
b) 150% of the adjusted equity.

The termination payment shall not be less than an amount equal to the product of six and the average monthly fee actually realized 12 months prior to the transfer date.

Termination payment shall become due and payable to IRB HMTL within 30 days of a demand being made by IRB HMTL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the IRB HMTL Concession Agreement shall constitute a full and final settlement of all claims of IRB HMTL on account of termination of the IRB HMTL Concession Agreement for any reason whatsoever and IRB HMTL shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

IRB HMTL shall be responsible for all defects and deficiencies in the IRB HMTL Project Highway for a period of 120 days after termination. IRB HMTL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the IRB HMTL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the IRB HMTL Concession Agreement shall be retained in the Escrow Account for a period of 120 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

4. Concession Agreement between IRB WTL and the NHAI dated March 25, 2013, as amended

IRB WTL has entered into a concession agreement for four-laning of Goa/Karnataka Border to Kundapur section from km 93.700 to km 283.300 of NH-17 in Karnataka on design, build, finance, operate and transfer ("**DBFOT**") basis (the "**IRB WTL Concession Agreement**"), for a period of 28 years, from March 3, 2014 ("**IRB WTL Appointed Date**") or until such date on which the IRB WTL Concession Agreement is terminated by a termination notice ("**IRB WTL Termination Date**", and the period between the IRB WTL Appointed Date and the IRB WTL Termination Date, the "**IRB WTL Concession Period**").

Certain Definitions

"**IRB WTL Debt Due**" shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the transfer date:

a) the principal amount of the debt provided by the senior lenders under the financing agreements for financing the total project cost (the "**Principa**l") but excluding any part of the Principal that had fallen due for repayment two years prior to the transfer date;

b) all accrued interest, financing fees and charges payable under the financing agreements on, or in respect of, the debt referred to in the sub-clause above until the transfer date but excluding (i) any interest, fees or charges that had fallen due one year prior to the transfer date, (ii) any penal interest or charges payable under the financing agreements to any senior lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to an NHAI Default (as defined below); and

c) any subordinated debt which is included in the financing package and disbursed by lenders for financing the total project cost;

If all, or any part of the IRB WTL Debt Due is convertible into equity at the option of the senior lenders and/or IRB WTL, it shall, for the purposes of the IRB WTL Concession Agreement, be deemed to be IRB WTL Debt Due even after the conversion and the Principal thereof shall be dealt with as if such conversion had not been undertaken;

"**IRB WTL Debt Service**" shall mean the sum of all payments on account of Principal, interest, financing fees and charges due and payable in an accounting year to the senior lenders under the financing agreements;

"**IRB WTL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) project facilities situated on the site; (d) all rights of IRB WTL under the project agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) applicable permits and authorizations relating to or in respect of the IRB WTL Project Highway (as defined below), but does not include additional facilities;

"**IRB WTL Project Highway**" shall mean the site comprising the existing road comprising NH-17 from km 93.700 to km 283.300 and all IRB WTL Project Assets, and its subsequent development and augmentation in accordance with the IRB WTL Concession Agreement;

"**IRB WTL Project**" shall mean the construction, operation, and maintenance of the IRB WTL Project Highway in accordance with the provisions of the IRB WTL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

"**Grant**" shall mean the cash support provided to IRB WTL by the NHAI which is equal to the sum set forth in the bid.

Grant of Concession

Subject to, and in accordance with the provisions set out in the IRB WTL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to IRB WTL, and IRB WTL has accepted the concession, including the exclusive right, license, and authority to construct, operate and maintain the IRB WTL Project for a period of 28 years from the IRB WTL Appointed Date.

Subject to, and in accordance with the provisions of the IRB WTL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, IRB WTL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the IRB WTL Concession Agreement;

b) finance and construct the IRB WTL Project Highway;

c) manage, operate, and maintain the IRB WTL Project Highway and regulate the use thereof by third parties;

d) demand, collect, and appropriate fee from vehicles and users liable for payment of fee for using the IRB WTL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

e) perform and fulfil all of IRB WTL's obligations under and in accordance with the IRB WTL Concession Agreement;

f) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of IRB WTL under the IRB WTL Concession Agreement; and

g) neither assign, transfer or sublet, or create any lien or encumbrance on the IRB WTL Concession Agreement, or the concession granted, or on the whole or any part of the IRB WTL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the IRB WTL Concession Agreement

or the agreement for the substitution of IRB WTL entered into by IRB WTL, the NHAI, and the lenders' representative on behalf of the senior lenders (the "**Substitution Agreement**").

Fees

On and from the commercial operation date ("**COD**") till the transfer date, IRB WTL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the IRB WTL Concession Agreement and the applicable rules and regulations, provided that for ease of payment and collection, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated from time to time. In accordance with the IRB WTL Concession Agreement, IRB WTL shall not collect any fees in relation to exempted vehicles.

IRB WTL shall not collect any fee from a local user for non-commercial use of the IRB WTL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the IRB WTL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, IRB WTL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, IRB WTL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the IRB WTL Project Highway and does not cross a toll plaza.

Grant

The NHAI has agreed to pay to IRB WTL cash support by way of an outright grant equal to ₹5,362.2 million as set out in the bid. The grant shall be disbursed to IRB WTL by way of equity support. It shall be credited to the Escrow Account (as defined below) and shall be applied by IRB WTL for meeting the total project cost. The equity support shall not exceed the sum specified, but shall in no case be greater than twice the equity, and shall be further restricted to a sum not exceeding 40% of the total project cost.

The equity support shall be due and payable to IRB WTL after it has expended the equity, and shall be disbursed proportionately along with the loan funds thereafter remaining to be disbursed by the senior lenders under the financing agreements. The NHAI shall disburse each tranche of the equity support as and when due, but no later than 15 days of receiving a request from IRB WTL along with necessary particulars. In the event of the occurrence of an IRB WTL Default (as defined below), disbursement of equity support shall be suspended till the IRB WTL Default has been cured.

Concession Fee

In consideration of the grant of concession, IRB WTL shall pay to the NHAI by way of concession fee a sum of ₹1.00 per annum.

The concession fee payable under the provisions of the IRB WTL Concession Agreement shall be due and payable in monthly instalments within seven days of the close of each month.

Escrow Account

IRB WTL was required to, prior to the IRB WTL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the IRB WTL Concession Agreement read with the escrow agreement entered into amongst IRB WTL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

IRB WTL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;

b) all fee and any other revenues from or in respect of the IRB WTL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and

c) all payments by the NHAI, after deducting any outstanding concession fee.

The senior lenders may make direct disbursements to the EPC contractor in accordance with the express provisions contained in this behalf in the financing agreements.

Withdrawals during Concession Period

IRB WTL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by IRB WTL for and in respect of the IRB WTL Project Highway;

b) all payments relating to construction of the IRB WTL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) Operation and Management ("**O&M**") expenses, subject to the ceiling, if any, set forth in the financing agreements;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the IRB WTL Concession Agreement, and certified by the NHAI as due and payable to it;

e) concession fee due and payable to the NHAI;

f) monthly proportionate provision of IRB WTL Debt Service due in an accounting year;

g) all payments and damages certified by the NHAI as due and payable to it by IRB WTL, including repayment of revenue shortfall loan.

h) monthly proportionate provision of IRB WTL Debt Service payments due in an accounting year in respect of subordinated debt;

i) any reserve requirements set forth in the financing agreements; and

j) balance, if any, in accordance with the instructions of IRB WTL.

IRB WTL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the IRB WTL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by IRB WTL for and in respect of the IRB WTL Project Highway;

b) 90% of the IRB WTL Debt Due excluding the subordinated debt;

c) outstanding concession fee;

d) all payments and damages certified by the NHAI as due and payable to it by IRB WTL, including the repayment of the revenue shortfall loan. retention and payments relating to the liability for defects and deficiencies set forth in the IRB WTL Concession Agreement;

e) outstanding IRB WTL Debt Service including balance of IRB WTL Debt Due;

f) outstanding subordinated debt;

g) incurred or accrued O&M expenses;

h) any other payments required to be made under the IRB WTL Concession Agreement; and

i) balance, if any, in accordance with the instructions of IRB WTL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the IRB WTL Concession Agreement, require the provision of additional works and services which are not included in the scope of the project as contemplated by the IRB WTL Concession Agreement. Any such change of scope shall be made in accordance with the provisions of the IRB WTL Concession Agreement and the costs thereof shall be expended by IRB WTL and reimbursed by the NHAI.

If IRB WTL determines at any time that a change in scope is necessary for providing safer and improved services to the users, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 15 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the IRB WTL Concession Agreement, or inform IRB WTL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of IRB WTL being in material default or breach of the IRB WTL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the IRB WTL Concession Agreement.

In the event of the NHAI being in material default of the IRB WTL Concession Agreement at any time after the IRB WTL Appointed Date, it shall pay to IRB WTL by way of compensation, all direct costs suffered or incurred by IRB WTL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the IRB WTL Concession Agreement.

In the event that a material default or breach of the IRB WTL Concession Agreement causes a delay in achieving COD or leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the IRB WTL Concession Period as provided in the IRB WTL Concession Agreement. In the event that an additional toll way or a competing road, as the case may be, is opened to traffic in breach of the IRB WTL Concession Agreement, the NHAI shall pay to IRB WTL, for each day of the breach, compensation as provided in the IRB WTL Concession Agreement, until the breach is cured. The payment of compensation by the NHAI shall be deemed to cure the breach of the IRB WTL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Effects of Variation in Traffic Growth

Subject to the provisions of the IRB WTL Concession Agreement, in the event actual average traffic shall have fallen short of the target traffic, then for every 1% (one percent) shortfall as compared to the target traffic, the IRB WTL Concession Period shall, subject to payment of concession fee in accordance with the IRB WTL Concession Agreement, be increased by 1.5% (one point five percent) thereof; provided that such increase in IRB WTL Concession Period shall not in any case exceed 20% (twenty percent) of the IRB WTL Concession Period.

Subject to the provisions of the IRB WTL Concession Agreement, in the event actual average traffic shall have exceeded the target traffic, then for every 1% (one percent) excess as compared to the target traffic, the IRB WTL Concession Period shall be reduced by 0.75% (zero point seven five percent) thereof; provided that such reduction in IRB WTL Concession Period shall not in any case exceed 10% (ten percent) thereof.

Provided further that in lieu of a reduction in IRB WTL Concession Period under the IRB WTL Concession Agreement, IRB WTL may elect to pay, in addition to the concession fee that would be due and payable if the IRB WTL Concession Period were not reduced hereunder, a further premium equal to 25% (twenty five percent) of the realizable fee, and upon notice given to this effect by IRB WTL no later than two years prior to the IRB WTL Termination Date contemplated by the IRB WTL Concession Agreement, NHAI shall waive the reduction in IRB WTL Concession Period hereunder forthwith.

Notwithstanding anything to the contrary contained in IRB WTL Concession Agreement, if the average daily traffic of PCUs in any accounting year shall exceed the designed capacity of the IRB WTL Project Highway, the NHAI at its option may cause preparation of detailed project report which will assess the cost that may have to be incurred for augmenting the capacity of the IRB WTL Project Highway so that its capacity is sufficiently increased for carrying the then current traffic in accordance with the corresponding provisions of the Indian Roads Congress publication no. IRC -64, 1990 or any substitute thereof. The IRB WTL Concession Period, may be extended so that it yields for IRB WTL a post-tax return on equity of 16% per annum. This assessment will be made at an assumed debt to equity ratio of 70:30. The extension of the IRB WTL Concession Period shall be however limited to five years. The NHAI may thereafter, at their sole option, issue a notice to IRB WTL, to undertake within six months of such notice, the augmentation so determined by the NHAI. The refusal, non-acceptance, or failure by IRB WTL to undertake such augmentation on the due date so intimated by the NHAI, will be considered an indirect political event and the NHAI may at its discretion terminate this IRB WTL Concession Agreement by issuing a termination notice and making a termination payment in accordance with the provisions of the IRB WTL Concession Agreement without the NHAI being liable to issue any further notice under it.

Termination of the IRB WTL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the IRB WTL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and IRB WTL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, IRB WTL shall be deemed to be in default of the IRB WTL Concession Agreement ("**IRB WTL Default**"), unless the default has occurred solely as a result of any breach of the IRB WTL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the IRB WTL Concession Agreement and IRB WTL fails to replenish or provide fresh performance security within a cure period of 30 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the IRB WTL Concession Agreement, IRB WTL fails to cure, within a cure period of 90 days, the IRB WTL Default for which whole or part of the performance security was appropriated;

c) IRB WTL does not achieve the latest outstanding project milestone due in accordance with the IRB WTL Concession Agreement and continues to be in default for 120 days;

d) IRB WTL abandons or manifests intention to abandon the construction or operation of the IRB WTL Project Highway without the prior written consent of the NHAI;

e) project completion date does not occur within the period specified in the IRB WTL Concession Agreement;

f) the punch list items have not been completed within the period set forth in the IRB WTL Concession Agreement;

g) IRB WTL is in breach of the maintenance requirements or the safety requirements as the case may be;

h) IRB WTL has failed to make any payment to the NHAI within the period specified in the IRB WTL Concession Agreement;

i) an escrow default has occurred and IRB WTL fails to cure the default within a cure period of 15 days;

j) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and IRB WTL fails to cure the default within the cure period specified hereinabove;

k) a breach of the project agreements by IRB WTL has caused a material adverse effect;

l) IRB WTL creates an encumbrance in breach of the IRB WTL Concession Agreement;

m) IRB WTL repudiates the IRB WTL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the IRB WTL Concession Agreement;

n) a change in ownership has occurred in breach of the IRB WTL Concession Agreement;

o) there is a transfer, pursuant to law either of (i) the rights and/or obligations of IRB WTL under any of the project agreements, or of (ii) all or part of the assets or undertaking of IRB WTL, and such transfer causes a material adverse effect;

p) an execution levied on any of the assets of IRB WTL has caused a material adverse effect;

q) IRB WTL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for IRB WTL or for the whole or material part of its assets that has a material bearing on the IRB WTL Project;

r) IRB WTL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

s) a resolution for winding up of IRB WTL is passed, or any petition for winding up of IRB WTL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or IRB WTL is ordered to be wound up by Court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of IRB WTL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of IRB WTL under the IRB WTL Concession Agreement and the project agreements; provided that:

    i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the IRB WTL Concession Agreement and the project agreements;

    ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the IRB WTL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of IRB WTL as at the IRB WTL Appointed Date; and

    iii) each of the project agreements remains in full force and effect;

t) any representation or warranty of IRB WTL which is, as of the date hereof, found to be materially false, incorrect or misleading or IRB WTL is at any time hereafter found to be in breach thereof;

u) IRB WTL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

v) IRB WTL has failed to fulfil any obligation, for which failure termination has been specified in the IRB WTL Concession Agreement; or

w) IRB WTL commits a default in complying with any other provision of the IRB WTL Concession Agreement if such default causes a material adverse effect on the NHAI.

Without prejudice to any other rights or remedies which the NHAI may have under the IRB WTL Concession Agreement, upon the occurrence of an IRB WTL Default, the NHAI shall be entitled to terminate the IRB WTL Concession Agreement by issuing a termination notice to IRB WTL. Before issuing the termination notice, the NHAI shall, by notice, inform IRB WTL of its intention to issue a termination notice and grant 15 days to IRB

WTL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the IRB WTL Concession Agreement.

If there are senior lenders, the NHAI shall send a copy of its notice of intention to issue a termination notice to inform the lenders' representative and grant 15 days to the lenders' representative for making a representation on behalf of the senior lenders stating the intention to substitute IRB WTL in accordance with the Substitution Agreement. If the NHAI receives a representation on behalf of the senior lenders, it shall, in its discretion, either withhold termination for a period not exceeding 180 days from the date of the representation, or exercise its right of suspension, as the case may be, to enable the lenders' representative to exercise the senior lenders' right of substitution in accordance with the Substitution Agreement. The lenders' representative may, instead of exercising the senior lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid 180 days, and upon the curing, the NHAI shall withdraw its notice and restore the rights of IRB WTL. On a written request from the lenders' representative and IRB WTL, the NHAI shall extend the period of 180 days by a further period not exceeding 90 days as it may deem appropriate.

Termination by IRB WTL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the IRB WTL Concession Agreement, the NHAI shall be deemed to be in default of the IRB WTL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the IRB WTL Concession Agreement by IRB WTL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the IRB WTL Concession Agreement and such default has a material adverse effect on IRB WTL;

b) the NHAI has failed to make any payment to IRB WTL within the period specified in the IRB WTL Concession Agreement;

c) the NHAI repudiates the IRB WTL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the IRB WTL Concession Agreement; or

d) the State of Karnataka commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on IRB WTL and the breach continues for a period of 90 days from the date of notice given in this behalf by IRB WTL to the NHAI.

Without prejudice to any other rights or remedies which IRB WTL may have under the IRB WTL Concession Agreement, upon the occurrence of an NHAI Default, IRB WTL shall be entitled to terminate the IRB WTL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, IRB WTL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 15 days to the NHAI to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of an IRB WTL Default during the operation period, the NHAI shall pay to IRB WTL, by way of termination payment, an amount equal to 90% of the IRB WTL Debt Due less insurance cover. If any insurance claims forming part of the insurance cover are not admitted and paid, then 80% of such unpaid claims shall be included in the computation of IRB WTL Debt Due.

Upon termination on account of an NHAI Default, the NHAI shall pay to IRB WTL, by way of termination payment, an amount equal to:

a) IRB WTL Debt Due; and
b) 150% of the adjusted equity.

Termination payment shall become due and payable to IRB WTL within 15 days of a demand being made by IRB WTL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the IRB WTL Concession Agreement shall constitute a full and

final settlement of all claims of IRB WTL on account of termination of the IRB WTL Concession Agreement for any reason whatsoever and IRB WTL, or any shareholder thereof, shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

IRB WTL shall be responsible for all defects and deficiencies in the IRB WTL Project Highway for a period of 120 days after termination. IRB WTL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the IRB WTL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the IRB WTL Concession Agreement shall be retained in the Escrow Account for a period of 120 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

5. Concession Agreement between KGTL and the NHAI dated February 22, 2017, as amended

KGTL has entered into a concession agreement for six-laning of Kishangarh to Gulabpura section of NH-79A and NH-79 in Rajasthan with a length of 90.000 km on design, build, finance, operate and transfer ("D**BFOT**") basis (the "**KGTL Concession Agreement**"), for a period of 20 years, from February 21, 2018 ("**KGTL Appointed Date**") or until such date on which the KGTL Concession Agreement is terminated by a termination notice ("**KGTL Termination Date**", and the period between the KGTL Appointed Date and the KGTL Termination Date, the "**KGTL Concession Period**").

Certain Definitions

"**KGTL Debt Due**" shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the transfer date:

a) the principal amount of the debt provided by the senior lenders under the financing agreements for financing the total project cost (the "**Principa**l") but excluding any part of the Principal that had fallen due for repayment two years prior to the transfer date;

b) all accrued interest, financing fees and charges payable under the financing agreements on, or in respect of, the debt referred to in the sub-clause above until the transfer date but excluding (i) any interest, fees or charges that had fallen due one year prior to the transfer date, (ii) any penal interest or charges payable under the financing agreements to any senior lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to an NHAI Default (as defined below); and

c) any subordinated debt which is included in the financing package and disbursed by lenders for financing the total project cost;

If all, or any part of the KGTL Debt Due is convertible into equity at the option of the senior lenders and/or KGTL, it shall, for the purposes of the KGTL Concession Agreement, be deemed to be KGTL Debt Due even after the conversion and the Principal thereof shall be dealt with as if such conversion had not been undertaken;

"**KGTL Debt Service**" shall mean the sum of all payments on account of Principal, interest, financing fees and charges due and payable in an accounting year to the senior lenders under the financing agreements;

"**KGTL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) project facilities situated on the site; (d) all rights of KGTL under the project agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) applicable permits and authorizations relating to or in respect of the KGTL Project Highway (as defined below), but does not include additional facilities;

"**KGTL Project Highway**" shall mean the site comprising the existing road comprising NH-79A and 79 from km 0.000 to km 90.000 and all KGTL Project Assets, and its subsequent development and augmentation in accordance with the KGTL Concession Agreement;

"**KGTL Project**" shall mean the construction, operation, and maintenance of the KGTL Project Highway in accordance with the provisions of the KGTL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project;

"**Premium**" shall mean an amount paid to the NHAI by KGTL in the form of an additional concession fee, as set forth in the bid for each year of the KGTL Concession Period.

Grant of Concession

Subject to, and in accordance with the provisions set out in the KGTL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to KGTL, and KGTL has accepted the concession, including the exclusive right, license, and authority during the subsistence of the KGTL Concession Agreement, to construct, operate and maintain the KGTL Project for a period of 20 years from the KGTL Appointed Date.

Subject to, and in accordance with the provisions of the KGTL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, KGTL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the KGTL Concession Agreement;

b) finance and construct the KGTL Project Highway;

c) manage, operate, and maintain the KGTL Project Highway and regulate the use thereof by third parties;

d) demand, collect, and appropriate fee from vehicles and persons liable for payment of fee for using the KGTL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

e) perform and fulfil all of KGTL's obligations under and in accordance with the KGTL Concession Agreement;
f) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of KGTL under the KGTL Concession Agreement; and

g) neither assign, transfer or sublet, or create any lien or encumbrance on the KGTL Concession Agreement, or the concession granted, or on the whole or any part of the KGTL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the KGTL Concession Agreement or the agreement for the substitution of KGTL entered into by KGTL, the NHAI, and the lenders' representative on behalf of the senior lenders (the "**Substitution Agreement**").

Fees

On and from the commercial operation date ("**COD**") till the transfer date, KGTL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the KGTL Concession Agreement and the applicable rules and regulations, provided that for ease of payment and collection, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated from time to time. Further, KGTL may determine and collect fee at such lower rates as it may, by public notice to the users, specify in respect of all or any category of users or vehicles. In accordance with the KGTL Concession Agreement, KGTL shall not collect any fees in relation to exempted vehicles.

KGTL shall not collect any fee from a local user for non-commercial use of the KGTL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the KGTL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, KGTL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, KGTL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the KGTL Project Highway and does not cross a toll plaza.

Concession Fee

In consideration of the grant of concession, KGTL shall pay to the NHAI by way of concession fee a sum of ₹1 per annum.

Additionally, KGTL was required to pay to the NHAI, immediately after the third anniversary year of the COD, a Premium in the form of an additional concession fee equal to ₹1,863 million as due to the NHAI during that year, due and payable for the period remaining in that year; and for each subsequent year till the ninth anniversary of the COD, the Premium shall be determined by increasing the amount of Premium in the respective year by an additional 3% as compared to the immediately preceding year and for each subsequent year of the KGTL Concession Period, the Premium shall be determined by increasing the amount of Premium in the respective year by an additional 8% as compared to the immediately preceding year. The Premium is deemed to be a part of the concession fee.

The concession fee payable under the provisions of the KGTL Concession Agreement shall be due and payable in monthly instalments within seven days of the close of each month.

Escrow Account

KGTL was required to, prior to the KGTL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the KGTL Concession Agreement read with the escrow agreement entered into amongst KGTL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

KGTL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;
b) all fee and any other revenues from or in respect of the KGTL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and
c) all payments by the NHAI, after deducting any outstanding concession fee.

The senior lenders may make direct disbursements to the EPC contractor in accordance with the express provisions contained in this behalf in the financing agreements.

Withdrawals during Concession Period

KGTL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by KGTL for and in respect of the KGTL Project Highway;

b) all payments relating to construction of the KGTL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) Operation and Management ("**O&M**") expenses, subject to the ceiling, if any, set forth in the financing agreements;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the KGTL Concession Agreement, and certified by the NHAI as due and payable to it;

e) concession fee due and payable to the NHAI;

f) monthly proportionate provision of KGTL Debt Service due in an accounting year;

g) premium due and payable to the NHAI;

h) all payments and damages certified by the NHAI as due and payable to it by KGTL, including repayment of revenue shortfall loan. KGTL has agreed to give irrevocable instructions to the Escrow Bank to make payments from the Escrow Account in accordance with the instructions of the NHAI under the KGTL Concession Agreement and debit the payment to O&M expenses;

i) monthly proportionate provision of KGTL Debt Service payments due in an accounting year in respect of subordinated debt;

j) any reserve requirements set forth in the financing agreements; and

k) balance, if any, in accordance with the instructions of KGTL.

KGTL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the KGTL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by KGTL for and in respect of the KGTL Project Highway;

b) 90% of the KGTL Debt Due excluding the subordinated debt;
c) outstanding concession fee;

d) all payments and damages certified by the NHAI as due and payable to it by KGTL, including the repayment of the revenue shortfall loan. KGTL has agreed to give irrevocable instruction to the Escrow Bank to make payment from the Escrow Account in accordance with the instructions of the NHAI under the KGTL Concession Agreement and debit the payment to O&M expenses.

e) retention and payments relating to the liability for defects and deficiencies set forth in the KGTL Concession Agreement;

f) outstanding KGTL Debt Service including balance of KGTL Debt Due;

g) outstanding subordinated debt;

h) incurred or accrued O&M expenses;

i) any other payments required to be made under the KGTL Concession Agreement; and

j) balance, if any, in accordance with the instructions of KGTL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the KGTL Concession Agreement, require the provision of additional works and services which are not included in the scope of the project as contemplated by the KGTL Concession Agreement. Any such change of scope shall be made in accordance with the provisions of the KGTL Concession Agreement and the costs thereof shall be expended by KGTL and reimbursed by the NHAI.

If KGTL determines at any time that a change in scope is necessary for providing safer and improved services to the users, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 60 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the KGTL Concession Agreement, or inform KGTL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of KGTL being in material default or breach of the KGTL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the KGTL Concession Agreement.

In the event of the NHAI being in material default of the KGTL Concession Agreement at any time after the KGTL Appointed Date, it shall pay to KGTL by way of compensation, all direct costs suffered or incurred by KGTL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the KGTL Concession Agreement.

In the event that a material default or breach of the KGTL Concession Agreement causes a delay in achieving COD or leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the KGTL Concession Period as provided in the KGTL Concession Agreement. In the event that an additional toll way or a competing road, as the case may be, is opened to traffic in breach of the KGTL Concession Agreement, the NHAI shall pay to KGTL, for each day of the breach, compensation as provided in the KGTL Concession Agreement, until the breach is cured. The payment of compensation by the NHAI shall be deemed to cure the breach of the KGTL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Effects of Variation in Traffic Growth

Subject to the provisions of the KGTL Concession Agreement, in the event actual average traffic shall have fallen short of the target traffic, then for every 1% (one percent) shortfall as compared to the target traffic, the KGTL Concession Period shall, subject to payment of concession fee in accordance with the KGTL Concession Agreement, be increased by 1.5% (one point five percent) thereof; provided that such increase in KGTL Concession Period shall not in any case exceed 20% (twenty percent) of the KGTL Concession Period.

Subject to the provisions of the KGTL Concession Agreement, in the event actual average traffic shall have exceeded the target traffic, then for every 1% (one percent) excess as compared to the target traffic, the KGTL Concession Period shall be reduced by 0.75% (zero point seven five percent) thereof; provided that such reduction in KGTL Concession Period shall not in any case exceed 10% (ten percent) thereof.

Provided further that in lieu of a reduction in KGTL Concession Period under the KGTL Concession Agreement, KGTL may elect to pay, in addition to the concession fee that would be due and payable if the KGTL Concession Period were not reduced hereunder, a further premium equal to 25% (twenty five percent) of the realizable fee, and upon notice given to this effect by KGTL no later than two years prior to the KGTL Termination Date contemplated by the KGTL Concession Agreement, NHAI shall waive the reduction in KGTL Concession Period hereunder forthwith.

Notwithstanding anything to the contrary contained in KGTL Concession Agreement, if the average daily traffic of PCUs in any accounting year shall exceed the designed capacity of the KGTL Project Highway, the NHAI at its option may cause preparation of detailed project report which will assess the cost that may have to be incurred for augmenting the capacity of the KGTL Project Highway so that its capacity is sufficiently increased for carrying the then current traffic in accordance with the corresponding provisions of the Indian Roads Congress publication no. IRC -64, 1990 or any substitute thereof. The KGTL Concession Period, may be extended so that it yields for KGTL a post-tax return on equity of 16% per annum. This assessment will be made at an assumed debt to equity ratio of 70:30. The extension of the KGTL Concession Period shall be however limited to five years. The NHAI may thereafter, at their sole option, issue a notice to KGTL, to undertake within six months of such notice, the augmentation so determined by the NHAI. The refusal, non-acceptance, or failure by KGTL to undertake such augmentation on the due date so intimated by the NHAI, will be considered an indirect political event and the NHAI may at its discretion terminate this KGTL Concession Agreement by issuing a termination notice and making a termination payment in accordance with the provisions of the KGTL Concession Agreement without the NHAI being liable to issue any further notice under it.

Termination of the KGTL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the KGTL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and KGTL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, KGTL shall be deemed to be in default of the KGTL Concession Agreement ("**KGTL Default**"), unless the default has occurred solely as a result of any breach of the KGTL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the KGTL Concession Agreement and KGTL fails to replenish or provide fresh performance security within a cure period of 30 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the KGTL Concession Agreement, KGTL fails to cure, within a cure period of 90 days, the KGTL Default for which whole or part of the performance security was appropriated;

c) KGTL does not achieve the latest outstanding project milestone due in accordance with the KGTL Concession Agreement and continues to be in default for 90 days;

d) KGTL abandons or manifests intention to abandon the construction or operation of the KGTL Project Highway without the prior written consent of the NHAI;

e) project completion date does not occur within the period specified in the KGTL Concession Agreement;

f) the punch list items have not been completed within the period set forth in the KGTL Concession Agreement;

g) KGTL is in breach of the maintenance requirements or the safety requirements as the case may be;

h) KGTL has failed to make any payment to the NHAI within the period specified in the KGTL Concession Agreement;

i) an escrow default has occurred and KGTL fails to cure the default within a cure period of 15 days;

j) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and KGTL fails to cure the default within the cure period specified hereinabove;

k) a breach of the project agreements by KGTL has caused a material adverse effect;

l) KGTL creates an encumbrance in breach of the KGTL Concession Agreement;

m) KGTL repudiates the KGTL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the KGTL Concession Agreement;

n) a change in ownership has occurred in breach of the KGTL Concession Agreement;

o) there is a transfer, pursuant to law either of (i) the rights and/or obligations of KGTL under any of the project agreements, or of (ii) all or part of the assets or undertaking of KGTL, and such transfer causes a material adverse effect;

p) an execution levied on any of the assets of KGTL has caused a material adverse effect;

q) KGTL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for KGTL or for the whole or material part of its assets that has a material bearing on the KGTL Project;

r) KGTL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

s) a resolution for winding up of KGTL is passed, or any petition for winding up of KGTL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or KGTL is ordered to be wound up by Court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of KGTL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of KGTL under the KGTL Concession Agreement and the project agreements; provided that:

   i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the KGTL Concession Agreement and the project agreements;

   ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the KGTL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of KGTL as at the KGTL Appointed Date; and

   iii) each of the project agreements remains in full force and effect;

t) any representation or warranty of KGTL which is, as of the date hereof, found to be materially false, incorrect or misleading or KGTL is at any time hereafter found to be in breach thereof;

u) KGTL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

v) KGTL has failed to fulfil any obligation, for which failure termination has been specified in the KGTL Concession Agreement; or

w) KGTL commits a default in complying with any other provision of the KGTL Concession Agreement if such default causes a material adverse effect on the NHAI.

Without prejudice to any other rights or remedies which the NHAI may have under the KGTL Concession Agreement, upon the occurrence of a KGTL Default, the NHAI shall be entitled to terminate the KGTL Concession Agreement by issuing a termination notice to KGTL. Before issuing the termination notice, the NHAI shall, by notice, inform KGTL of its intention to issue a termination notice and grant 15 days to KGTL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the KGTL Concession Agreement.

If there are senior lenders, the NHAI shall send a copy of its notice of intention to issue a termination notice to inform the lenders' representative and grant 30 days to the lenders' representative for making a representation on behalf of the senior lenders stating the intention to substitute KGTL in accordance with the Substitution Agreement. If the NHAI receives a representation on behalf of the senior lenders, it shall, in its discretion, either withhold termination for a period not exceeding 180 days from the date of the representation, or exercise its right of suspension, as the case may be, to enable the lenders' representative to exercise the senior lenders' right of substitution in accordance with the Substitution Agreement. The lenders' representative may, instead of exercising the senior lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid 180 days, and upon the curing, the NHAI shall withdraw its notice and restore the rights of KGTL. On a written request from the lenders' representative and KGTL, the NHAI shall extend the period of 180 days by a further period not exceeding 90 days as it may deem appropriate.

Termination by KGTL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the KGTL Concession Agreement, the NHAI shall be deemed to be in default of the KGTL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the KGTL Concession Agreement by KGTL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the KGTL Concession Agreement and such default has a material adverse effect on KGTL;

b) the NHAI has failed to make any payment to KGTL within the period specified in the KGTL Concession Agreement;

c) the NHAI repudiates the KGTL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the KGTL Concession Agreement; or

d) the State of Rajasthan commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on KGTL and the breach continues for a period of 90 days from the date of notice given in this behalf by KGTL to the NHAI.

Without prejudice to any other rights or remedies which KGTL may have under the KGTL Concession Agreement, upon the occurrence of an NHAI Default, KGTL shall be entitled to terminate the KGTL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, KGTL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 30 days to the NHAI to make a representation, and may, after the expiry of the 30 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of a KGTL Default during the operation period, the NHAI shall pay to KGTL, by way of termination payment, an amount equal to 90% of the KGTL Debt Due less insurance cover. If any insurance claims forming part of the insurance cover are not admitted and paid, then 80% of such unpaid claims shall be included in the computation of KGTL Debt Due.

Upon termination on account of an NHAI Default, the NHAI shall pay to KGTL, by way of termination payment, an amount equal to:

a) KGTL Debt Due; and
b) 150% of the adjusted equity.

The termination payment shall not be less than an amount equal to the product of six and the average monthly fee actually realized 12 months prior to the transfer date.

Termination payment shall become due and payable to KGTL within 30 days of a demand being made by KGTL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the KGTL Concession Agreement shall constitute a full and final settlement of all claims of KGTL on account of termination of the KGTL Concession Agreement for any reason whatsoever and KGTL shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

KGTL shall be responsible for all defects and deficiencies in the KGTL Project Highway for a period of 120 days after termination. KGTL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the KGTL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the KGTL Concession Agreement shall be retained in the Escrow Account for a period of 120 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

6. Concession Agreement between KTL and the NHAI dated June 23, 2014

KTL has entered into a concession agreement for four-laning of Kaithal – Rajasthan border section of NH-152/65 in Haryana from km 33+250 (design km -0.500) to km 241+580 (design km 165.759) on design, build, finance, operate and transfer ("**DBFOT**") basis (the "**KTL Concession Agreement**"), for a period of 27 years, from July 15, 2015 ("**KTL Appointed Date**") or until such date on which the KTL Concession Agreement is terminated by a termination notice ("**KTL Termination Date**", and the period between the KTL Appointed Date and the KTL Termination Date, the "**KTL Concession Period**").

Certain Definitions

"**KTL Debt Due**" shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the transfer date:

a) the principal amount of the debt provided by the senior lenders under the financing agreements for financing the total project cost (the "**Principa**l") but excluding any part of the Principal that had fallen due for repayment two years prior to the transfer date;

b) all accrued interest, financing fees and charges payable under the financing agreements on, or in respect of, the debt referred to in the sub-clause above until the transfer date but excluding (i) any interest, fees or charges that had fallen due one year prior to the transfer date, (ii) any penal interest or charges payable under the financing agreements to any senior lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to an NHAI Default (as defined below); and

c) any subordinated debt which is included in the financing package and disbursed by lenders for financing the total project cost;

If all, or any part of the KTL Debt Due is convertible into equity at the option of the senior lenders and/or KTL, it shall, for the purposes of the KTL Concession Agreement, be deemed to be KTL Debt Due even after the conversion and the Principal thereof shall be dealt with as if such conversion had not been undertaken;

"**KTL Debt Service**" shall mean the sum of all payments on account of Principal, interest, financing fees and charges due and payable in an accounting year to the senior lenders under the financing agreements;

"**KTL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) project facilities situated on the site; (d) all rights of KTL under the project agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) applicable permits and authorizations relating to or in respect of the KTL Project Highway (as defined below), but does not include additional facilities;

"**KTL Project Highway**" shall mean the site comprising the existing road comprising NH-152/65 from km 33.250 to km 241.580 and all KTL Project Assets, and its subsequent development and augmentation in accordance with the KTL Concession Agreement;

"**KTL Project**" shall mean the construction, operation, and maintenance of the KTL Project Highway in accordance with the provisions of the KTL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

"**Grant**" shall mean the cash support provided to KTL by the NHAI which is equal to the sum set forth in the bid.

Grant of Concession

Subject to, and in accordance with the provisions set out in the KTL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to KTL, and KTL has accepted the concession, including the exclusive right, license, and authority to construct, operate and maintain the KTL Project for a period of 27 years from the KTL Appointed Date.

Subject to, and in accordance with the provisions of the KTL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, KTL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the KTL Concession Agreement;

b) finance and construct the KTL Project Highway;

c) manage, operate, and maintain the KTL Project Highway and regulate the use thereof by third parties;

d) demand, collect, and appropriate fee from vehicles and users liable for payment of fee for using the KTL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

e) perform and fulfil all of KTL's obligations under and in accordance with the KTL Concession Agreement;

f) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of KTL under the KTL Concession Agreement; and

g) neither assign, transfer or sublet, or create any lien or encumbrance on the KTL Concession Agreement, or the concession granted, or on the whole or any part of the KTL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the KTL Concession Agreement or the agreement for the substitution of KTL entered into by KTL, the NHAI, and the lenders' representative on behalf of the senior lenders (the "**Substitution Agreement**").

Fees

On and from the commercial operation date ("**COD**") till the transfer date, KTL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the KTL Concession Agreement and the applicable rules and regulations, provided that for ease of payment and collection, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated from time to time. Further, KTL may determine and collect fee at such lower rates as it may, by public notice to the users, specify in respect of all or any category of users or vehicles. In accordance with the KTL Concession Agreement, KTL shall not collect any fees in relation to exempted vehicles.

KTL shall not collect any fee from a local user for non-commercial use of the KTL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the KTL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, KTL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, KTL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the KTL Project Highway and does not cross a toll plaza.

Grant

The NHAI has agreed to pay to KTL cash support by way of an outright grant equal to ₹2340 million as set out in the bid. The grant shall be disbursed to KTL by way of equity support. It shall be credited to the Escrow Account (as defined below) and shall be applied by KTL for meeting the total project cost. The equity support shall not exceed the sum specified, but shall in no case be greater than twice the equity, and shall be further restricted to a sum not exceeding 40% of the total project cost.

The equity support shall be due and payable to KTL after it has expended the equity, and shall be disbursed proportionately along with the loan funds thereafter remaining to be disbursed by the senior lenders under the financing agreements. The NHAI shall disburse each tranche of the equity support as and when due, but no later than 15 days of receiving a request from KTL along with necessary particulars. In the event of the occurrence of a KTL Default (as defined below), disbursement of equity support shall be suspended till the KTL Default has been cured.

Concession Fee

In consideration of the grant of concession, KTL shall pay to the NHAI by way of concession fee a sum of ₹1 per annum.

Escrow Account

KTL was required to, prior to the KTL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the KTL Concession Agreement read with the

escrow agreement entered into amongst KTL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

KTL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;

b) all fee and any other revenues from or in respect of the KTL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and

c) all payments by the NHAI, after deducting any outstanding concession fee.

The senior lenders may make direct disbursements to the EPC contractor in accordance with the express provisions contained in this behalf in the financing agreements.

Withdrawals during Concession Period

KTL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by KTL for and in respect of the KTL Project Highway;

b) all payments relating to construction of the KTL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) Operation and Management ("**O&M**") expenses, subject to the ceiling, if any, set forth in the financing agreements;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the KTL Concession Agreement, and certified by the NHAI as due and payable to it;

e) concession fee due and payable to the NHAI;

f) monthly proportionate provision of KTL Debt Service due in an accounting year;

g) all payments and damages certified by the NHAI as due and payable to it by KTL, including repayment of revenue shortfall loan.

h) monthly proportionate provision of KTL Debt Service payments due in an accounting year in respect of subordinated debt;

i) any reserve requirements set forth in the financing agreements; and

j) balance, if any, in accordance with the instructions of KTL.

KTL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the KTL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by KTL for and in respect of the KTL Project Highway;

b) 90% of the KTL Debt Due excluding the subordinated debt;

c) outstanding concession fee;

d) all payments and damages certified by the NHAI as due and payable to it by KTL, including the repayment of the revenue shortfall loan.

e) retention and payments relating to the liability for defects and deficiencies set forth in the KTL Concession Agreement;

f) outstanding KTL Debt Service including balance of KTL Debt Due;

g) outstanding subordinated debt;

h) incurred or accrued O&M expenses;

i) any other payments required to be made under the KTL Concession Agreement; and

j) balance, if any, in accordance with the instructions of KTL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the KTL Concession Agreement, require the provision of additional works and services which are not included in the scope of the project as contemplated by the KTL Concession Agreement. Any such change of scope shall be made in accordance with the provisions of the KTL Concession Agreement and the costs thereof shall be expended by KTL and reimbursed by the NHAI.

If KTL determines at any time that a change in scope is necessary for providing safer and improved services to the users, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 15 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the KTL Concession Agreement, or inform KTL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of KTL being in material default or breach of the KTL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the KTL Concession Agreement.

In the event of the NHAI being in material default of the KTL Concession Agreement at any time after the KTL Appointed Date, it shall pay to KTL by way of compensation, all direct costs suffered or incurred by KTL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the KTL Concession Agreement.

In the event that a material default or breach of the KTL Concession Agreement causes a delay in achieving COD or leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the KTL Concession Period as provided in the KTL Concession Agreement. In the event that an additional toll way or a competing road, as the case may be, is opened to traffic in breach of the KTL Concession Agreement, the NHAI shall pay to KTL, for each day of the breach, compensation as provided in the KTL Concession Agreement, until the breach is cured. The payment of compensation by the NHAI shall be deemed to cure the breach of the KTL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Effects of Variation in Traffic Growth

Subject to the provisions of the KTL Concession Agreement, in the event actual average traffic shall have fallen short of the target traffic, then for every 1% (one percent) shortfall as compared to the target traffic, the KTL Concession Period shall, subject to payment of concession fee in accordance with the KTL Concession Agreement, be increased by 1.5% (one point five percent) thereof; provided that such increase in KTL Concession Period shall not in any case exceed 20% (twenty percent) of the KTL Concession Period.

Subject to the provisions of the KTL Concession Agreement, in the event actual average traffic shall have exceeded the target traffic, then for every 1% (one percent) excess as compared to the target traffic, the KTL Concession Period shall be reduced by 0.75% (zero point seven five percent) thereof; provided that such reduction in KTL Concession Period shall not in any case exceed 10% (ten percent) thereof.

Provided further that in lieu of a reduction in KTL Concession Period under the KTL Concession Agreement, KTL may elect to pay, in addition to the concession fee that would be due and payable if the KTL Concession Period were not reduced hereunder, a further premium equal to 25% (twenty five percent) of the realizable fee, and upon notice given to this effect by KTL no later than two years prior to the KTL Termination Date contemplated by the KTL Concession Agreement, NHAI shall waive the reduction in KTL Concession Period hereunder forthwith.

Notwithstanding anything to the contrary contained in KTL Concession Agreement, if the average daily traffic of PCUs in any accounting year shall exceed the designed capacity of the KTL Project Highway, the NHAI at its option may cause preparation of detailed project report which will assess the cost that may have to be incurred for augmenting the capacity of the KTL Project Highway so that its capacity is sufficiently increased for carrying the then current traffic in accordance with the corresponding provisions of the Indian Roads Congress publication no. IRC -64, 1990 or any substitute thereof. The KTL Concession Period, may be extended so that it yields for KTL a post-tax return on equity of 16% per annum. This assessment will be made at an assumed debt to equity ratio of 70:30. The extension of the KTL Concession Period shall be however limited to five years. The NHAI may thereafter, at their sole option, issue a notice to KTL, to undertake within six months of such notice, the augmentation so determined by the NHAI. The refusal, non-acceptance, or failure by KTL to undertake such augmentation on the due date so intimated by the NHAI, will be considered an indirect political event and the NHAI may at its discretion terminate this KTL Concession Agreement by issuing a termination notice and making a termination payment in accordance with the provisions of the KTL Concession Agreement without the NHAI being liable to issue any further notice under it.

Termination of the KTL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the KTL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and KTL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, KTL shall be deemed to be in default of the KTL Concession Agreement ("**KTL Default**"), unless the default has occurred solely as a result of any breach of the KTL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the KTL Concession Agreement and KTL fails to replenish or provide fresh performance security within a cure period of 30 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the KTL Concession Agreement, KTL fails to cure, within a cure period of 90 days, the KTL Default for which whole or part of the performance security was appropriated;

c) KTL does not achieve the latest outstanding project milestone due in accordance with the KTL Concession Agreement and continues to be in default for 120 days;

d) KTL abandons or manifests intention to abandon the construction or operation of the KTL Project Highway without the prior written consent of the NHAI;

e) project completion date does not occur within the period specified in the KTL Concession Agreement;

f) the punch list items have not been completed within the period set forth in the KTL Concession Agreement;

g) KTL is in breach of the maintenance requirements or the safety requirements as the case may be;

h) KTL has failed to make any payment to the NHAI within the period specified in the KTL Concession Agreement;

i) an escrow default has occurred and KTL fails to cure the default within a cure period of 15 days;

j) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and KTL fails to cure the default within the cure period specified hereinabove;

k) a breach of the project agreements by KTL has caused a material adverse effect;

l) KTL creates an encumbrance in breach of the KTL Concession Agreement;

m) KTL repudiates the KTL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the KTL Concession Agreement;

n) a change in ownership has occurred in breach of the KTL Concession Agreement;

o) there is a transfer, pursuant to law either of (i) the rights and/or obligations of KTL under any of the project agreements, or of (ii) all or part of the assets or undertaking of KTL, and such transfer causes a material adverse effect;

p) an execution levied on any of the assets of KTL has caused a material adverse effect;

q) KTL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for KTL or for the whole or material part of its assets that has a material bearing on the KTL Project;

r) KTL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

s) a resolution for winding up of KTL is passed, or any petition for winding up of KTL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or KTL is ordered to be wound up by Court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of KTL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of KTL under the KTL Concession Agreement and the project agreements; provided that:

   i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the KTL Concession Agreement and the project agreements;

   ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the KTL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of KTL as at the KTL Appointed Date; and

   iii) each of the project agreements remains in full force and effect;

t) any representation or warranty of KTL which is, as of the date hereof, found to be materially false, incorrect or misleading or KTL is at any time hereafter found to be in breach thereof;

u) KTL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

v) KTL has failed to fulfil any obligation, for which failure termination has been specified in the KTL Concession Agreement; or

w) KTL commits a default in complying with any other provision of the KTL Concession Agreement if such default causes a material adverse effect on the NHAI.

Without prejudice to any other rights or remedies which the NHAI may have under the KTL Concession Agreement, upon the occurrence of a KTL Default, the NHAI shall be entitled to terminate the KTL Concession Agreement by issuing a termination notice to KTL. Before issuing the termination notice, the NHAI shall, by notice, inform KTL of its intention to issue a termination notice and grant 15 days to KTL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the KTL Concession Agreement.

If there are senior lenders, the NHAI shall send a copy of its notice of intention to issue a termination notice to inform the lenders' representative and grant 15 days to the lenders' representative for making a representation on behalf of the senior lenders stating the intention to substitute KTL in accordance with the Substitution Agreement. If the NHAI receives a representation on behalf of the senior lenders, it shall, in its discretion, either withhold termination for a period not exceeding 180 days from the date of the representation, or exercise its right of suspension, as the case may be, to enable the lenders' representative to exercise the senior lenders' right of substitution in accordance with the Substitution Agreement. The lenders' representative may, instead of exercising the senior lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid 180 days, and upon the curing, the NHAI shall withdraw its notice and restore the rights of KTL. On a written request from the lenders' representative and KTL, the NHAI shall extend the period of 180 days by a further period not exceeding 90 days as it may deem appropriate.

Termination by KTL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the KTL Concession Agreement, the NHAI shall be deemed to be in default of the KTL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the KTL Concession Agreement by KTL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the KTL Concession Agreement and such default has a material adverse effect on KTL;

b) the NHAI has failed to make any payment to KTL within the period specified in the KTL Concession Agreement;

c) the NHAI repudiates the KTL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the KTL Concession Agreement; or

d) the State of Haryana commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on KTL and the breach continues for a period of 90 days from the date of notice given in this behalf by KTL to the NHAI.

Without prejudice to any other rights or remedies which KTL may have under the KTL Concession Agreement, upon the occurrence of an NHAI Default, KTL shall be entitled to terminate the KTL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, KTL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 15 days to the NHAI to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of a KTL Default during the operation period, the NHAI shall pay to KTL, by way of termination payment, an amount equal to 90% of the KTL Debt Due less insurance cover. If any insurance claims forming part of the insurance cover are not admitted and paid, then 80% of such unpaid claims shall be included in the computation of KTL Debt Due.

Upon termination on account of an NHAI Default, the NHAI shall pay to KTL, by way of termination payment, an amount equal to:

a) KTL Debt Due; and
b) 150% of the adjusted equity.

Termination payment shall become due and payable to KTL within 15 days of a demand being made by KTL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the KTL Concession Agreement shall constitute a full and final settlement of all claims of KTL on account of termination of the KTL Concession Agreement for any reason whatsoever and KTL, or any shareholder thereof, shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

KTL shall be responsible for all defects and deficiencies in the KTL Project Highway for a period of 120 days after termination. KTL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the KTL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the KTL Concession Agreement shall be retained in the Escrow Account for a period of 120 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

6.1. Supplementary Agreement between KTL and the NHAI dated April 5, 2018

KTL has entered into a supplementary agreement (the "**Supplementary Agreement**") to amend the concession agreement dated June 23, 2014 (the "**Concession Agreement**") to provide for the installation of a new electronic toll collection system (the "**Hybrid ETC System**") for electronic payment of user fee using RFID tags or any other such device.

Change of Scope

The NHAI shall provide a change in the scope of work order at prices discovered by the NHAI to KTL to provide for, as per the defined technical specifications, installation, testing, commissioning, operations and maintenance of the Hybrid ETC System in all lanes of the toll plaza. KTL shall ensure that the requisite civil work is completed prior to the installation, integration, testing and commissioning of the Hybrid ETC System. It shall also ensure the smooth flow of traffic during installation, integration, testing and commissioning of the Hybrid ETC System. KTL will have no claim against the NHAI on account of any lane closure, if any, on account of any third party claims.

Scope of Work

KTL shall install, integrate, test, commission, operate and maintain the Hybrid ETC System in all the lanes of the toll plazas. The Hybrid ETC System shall be installed, commissioned, operated and maintained for a period of five years or the end of the Concession Agreement, whichever is earlier, beyond which it will be replaced or renewed, as the case may be, by KTL or the NHAI, at the cost of the NHAI. The cycle shall be maintained till the end of the concession period in accordance with the Concession Agreement.

The provisions of the Concession Agreement relating to change of scope shall not apply to the Supplementary Agreement.

Any permission required by KTL under the applicable laws for the installation of the Hybrid ETC System shall be procured and maintained by KTL. The NHAI shall provide reasonable assistance in this regard.

Timeline

KTL shall complete all responsibilities, obligations and works as described in the Supplementary Agreement within a period of 120 days from the date of signing the Supplementary Agreement.

Damages for Delay

In case of delay in installation, testing, or commissioning of the Hybrid ETC System at the toll plazas as per the time schedule prescribed on account of reasons attributable to KTL, damages at 0.1% of the cost of installation, testing, or commissioning of the Hybrid ETC System for each day of the delay, subject to a maximum of 10% of

the cost of installation, testing, or commissioning of the Hybrid ETC System shall be levied on KTL. Damages for delay will not be applicable in case of a delay in implementation due to delayed payment release by the NHAI.

KTL shall not be entitled to any additional benefit either in monetary terms or on any other account including, but not limited to any extension of time, save on account of and NHAI Default or force majeure.

Compensation

In case of any damage to the Hybrid ETC System due to any act or omission of KTL, the NHAI shall not be liable for any compensation to KTL, and KTL shall bear the cost of repair, replacement or renewal of the damaged Hybrid ETC System equipment or hardware itself.

In case of any damage to the Hybrid ETC System due to the occurrence of any force majeure event, the compensation to KTL shall be derived as per the provisions of the Concession Agreement.

End of the Concession Period

KTL shall hand over all the Hybrid ETC equipment or hardware in an operational condition to the NHAI or a third party as directed by the NHAI at the end of the concession period, beyond which no O&M payment shall be made to KTL. If any Hybrid ETC System equipment or hardware is found to be non-operational, then KTL shall be liable to replace or pay for the replacement of the Hybrid ETC System equipment or hardware required to make the Hybrid ETC System operational on all lanes of the toll plazas to the NHAI promptly.

Upon termination, KTL shall assign warranties received from the original equipment manufacturer and for the components or equipment, and provide the respective warranty assignment agreements and necessary documents. KTL shall ensure that all the warranties are duly assigned in favor of the NHAI and KTL shall bear the cost and expenses towards the assignment.

7. Concession Agreement between SYTL and the NHAI dated March 3, 2014

SYTL has entered into a concession agreement for four-laning of Solapur to Yedeshi section of NH-211 in Maharashtra from km 0.000 to km 100.000 (design length – 98.717 km) on build, operate and transfer ("**BOT**") basis (the "**SYTL Concession Agreement**"), for a period of 29 years, from January 21, 2015 ("**SYTL Appointed Date**") or until such date on which the SYTL Concession Agreement is terminated by a termination notice ("**SYTL Termination Date**", and the period between the SYTL Appointed Date and the SYTL Termination Date, the "**SYTL Concession Period**").

Certain Definitions

"**SYTL Debt Due**" shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the transfer date:

a) the principal amount of the debt provided by the senior lenders under the financing agreements for financing the total project cost (the "**Principa**l") but excluding any part of the Principal that had fallen due for repayment two years prior to the transfer date;

b) all accrued interest, financing fees and charges payable under the financing agreements on, or in respect of, the debt referred to in the sub-clause above until the transfer date but excluding (i) any interest, fees or charges that had fallen due one year prior to the transfer date, (ii) any penal interest or charges payable under the financing agreements to any senior lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to an NHAI Default (as defined below); and

c) any subordinated debt which is included in the financing package and disbursed by lenders for financing the total project cost;

If all, or any part of the SYTL Debt Due is convertible into equity at the option of the senior lenders and/or SYTL, it shall, for the purposes of the SYTL Concession Agreement, be deemed to be SYTL Debt Due even after the conversion and the Principal thereof shall be dealt with as if such conversion had not been undertaken;

"**SYTL Debt Service**" shall mean the sum of all payments on account of Principal, interest, financing fees and charges due and payable in an accounting year to the senior lenders under the financing agreements;

"**SYTL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) project facilities situated on the site; (d) all rights of SYTL under the project agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) applicable permits and authorizations relating to or in respect of the SYTL Project Highway (as defined below), but does not include additional facilities;

"**SYTL Project Highway**" shall mean the site comprising the existing road comprising NH-211 from km 0.000 to km 100.000 and all SYTL Project Assets, and its subsequent development and augmentation in accordance with the SYTL Concession Agreement;

"**SYTL Project**" shall mean the construction, operation, and maintenance of the SYTL Project Highway in accordance with the provisions of the SYTL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

"**Grant**" shall mean the cash support provided to SYTL by the NHAI which is equal to the sum set forth in the bid.

Grant of Concession

Subject to, and in accordance with the provisions set out in the SYTL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to SYTL, and SYTL has accepted the concession, including the exclusive right, license, and authority to construct, operate and maintain the SYTL Project for a period of 29 years from the SYTL Appointed Date.

Subject to, and in accordance with the provisions of the SYTL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, SYTL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the SYTL Concession Agreement;

b) finance and construct the SYTL Project Highway;

c) manage, operate, and maintain the SYTL Project Highway and regulate the use thereof by third parties;

d) demand, collect, and appropriate fee from vehicles and users liable for payment of fee for using the SYTL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

e) perform and fulfil all of SYTL's obligations under and in accordance with the SYTL Concession Agreement;

f) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of SYTL under the SYTL Concession Agreement; and

g) neither assign, transfer or sublet, or create any lien or encumbrance on the SYTL Concession Agreement, or the concession granted, or on the whole or any part of the SYTL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the SYTL Concession Agreement or the agreement for the substitution of SYTL entered into by SYTL, the NHAI, and the lenders' representative on behalf of the senior lenders (the "**Substitution Agreement**").

Fees

On and from the commercial operation date ("**COD**") till the transfer date, SYTL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the SYTL Concession Agreement and the applicable rules and regulations, provided that for ease of payment and collection, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated

from time to time. Further, SYTL may determine and collect fee at such lower rates as it may, by public notice to the users, specify in respect of all or any category of users or vehicles. In accordance with the SYTL Concession Agreement, SYTL shall not collect any fees in relation to exempted vehicles.

SYTL shall not collect any fee from a local user for non-commercial use of the SYTL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the SYTL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, SYTL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, SYTL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the SYTL Project Highway and does not cross a toll plaza.

Grant

The NHAI has agreed to pay to SYTL cash support by way of an outright grant equal to ₹1,890 million as set out in the bid. The grant shall be disbursed to SYTL by way of equity support. It shall be credited to the Escrow Account (as defined below) and shall be applied by SYTL for meeting the total project cost. The equity support shall not exceed the sum specified, but shall in no case be greater than twice the equity, and shall be further restricted to a sum not exceeding 40% of the total project cost.

The equity support shall be due and payable to SYTL after it has expended the equity, and shall be disbursed proportionately along with the loan funds thereafter remaining to be disbursed by the senior lenders under the financing agreements. The NHAI shall disburse each tranche of the equity support as and when due, but no later than 15 days of receiving a request from SYTL along with necessary particulars. In the event of the occurrence of an SYTL Default (as defined below), disbursement of equity support shall be suspended till the SYTL Default has been cured.

Concession Fee

In consideration of the grant of concession, SYTL shall pay to the NHAI by way of concession fee a sum of ₹1 per annum.

Escrow Account

SYTL was required to, prior to the SYTL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the SYTL Concession Agreement read with the escrow agreement entered into amongst SYTL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

SYTL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;

b) all fee and any other revenues from or in respect of the SYTL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and

c) all payments by the NHAI, after deducting any outstanding concession fee.

The senior lenders may make direct disbursements to the EPC contractor in accordance with the express provisions contained in this behalf in the financing agreements.

Withdrawals during Concession Period

SYTL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by SYTL for and in respect of the SYTL Project Highway;

b) all payments relating to construction of the SYTL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) Operation and Management ("**O&M**") expenses, subject to the ceiling, if any, set forth in the financing agreements;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the SYTL Concession Agreement, and certified by the NHAI as due and payable to it;

e) concession fee due and payable to the NHAI;

f) monthly proportionate provision of SYTL Debt Service due in an accounting year;

g) all payments and damages certified by the NHAI as due and payable to it by SYTL, including repayment of revenue shortfall loan.

h) monthly proportionate provision of SYTL Debt Service payments due in an accounting year in respect of subordinated debt;

i) any reserve requirements set forth in the financing agreements; and

j) balance, if any, in accordance with the instructions of SYTL.

SYTL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the SYTL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by SYTL for and in respect of the SYTL Project Highway;

b) 90% of the SYTL Debt Due excluding the subordinated debt;

c) outstanding concession fee;

d) all payments and damages certified by the NHAI as due and payable to it by SYTL, including the repayment of the revenue shortfall loan.

e) retention and payments relating to the liability for defects and deficiencies set forth in the SYTL Concession Agreement;

f) outstanding SYTL Debt Service including balance of SYTL Debt Due;

g) outstanding subordinated debt;

h) incurred or accrued O&M expenses;

i) any other payments required to be made under the SYTL Concession Agreement; and

j) balance, if any, in accordance with the instructions of SYTL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the SYTL Concession Agreement, require the provision of additional works and services which are not included in the scope of the project as contemplated by the SYTL Concession Agreement. Any such change of scope shall be made in accordance with the provisions of the SYTL Concession Agreement and the costs thereof shall be expended by SYTL and reimbursed by the NHAI.

If SYTL determines at any time that a change in scope is necessary for providing safer and improved services to the users, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 15 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the SYTL Concession Agreement, or inform SYTL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of SYTL being in material default or breach of the SYTL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the SYTL Concession Agreement.

In the event of the NHAI being in material default of the SYTL Concession Agreement at any time after the SYTL Appointed Date, it shall pay to SYTL by way of compensation, all direct costs suffered or incurred by SYTL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the SYTL Concession Agreement.

In the event that a material default or breach of the SYTL Concession Agreement causes a delay in achieving COD or leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the SYTL Concession Period as provided in the SYTL Concession Agreement. In the event that an additional toll way or a competing road, as the case may be, is opened to traffic in breach of the SYTL Concession Agreement, the NHAI shall pay to SYTL, for each day of the breach, compensation as provided in the SYTL Concession Agreement, until the breach is cured. The payment of compensation by the NHAI shall be deemed to cure the breach of the SYTL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Effects of Variation in Traffic Growth

Subject to the provisions of the SYTL Concession Agreement, in the event actual average traffic shall have fallen short of the target traffic, then for every 1% (one percent) shortfall as compared to the target traffic, the SYTL Concession Period shall, subject to payment of concession fee in accordance with the SYTL Concession Agreement, be increased by 1.5% (one point five percent) thereof; provided that such increase in SYTL Concession Period shall not in any case exceed 20% (twenty percent) of the SYTL Concession Period.

Subject to the provisions of the SYTL Concession Agreement, in the event actual average traffic shall have exceeded the target traffic, then for every 1% (one percent) excess as compared to the target traffic, the SYTL Concession Period shall be reduced by 0.75% (zero point seven five percent) thereof; provided that such reduction in SYTL Concession Period shall not in any case exceed 10% (ten percent) thereof.

Provided further that in lieu of a reduction in SYTL Concession Period under the SYTL Concession Agreement, SYTL may elect to pay, in addition to the concession fee that would be due and payable if the SYTL Concession Period were not reduced hereunder, a further premium equal to 25% (twenty five percent) of the realizable fee, and upon notice given to this effect by SYTL no later than two years prior to the SYTL Termination Date contemplated by the SYTL Concession Agreement, NHAI shall waive the reduction in SYTL Concession Period hereunder forthwith.

Notwithstanding anything to the contrary contained in SYTL Concession Agreement, if the average daily traffic of PCUs in any accounting year shall exceed the designed capacity of the SYTL Project Highway, the NHAI at its option may cause preparation of detailed project report which will assess the cost that may have to be incurred for augmenting the capacity of the SYTL Project Highway so that its capacity is sufficiently increased for carrying the then current traffic in accordance with the corresponding provisions of the Indian Roads Congress publication no. IRC -64, 1990 or any substitute thereof. The SYTL Concession Period, may be extended so that it yields for SYTL a post-tax return on equity of 16% per annum. This assessment will be made at an assumed debt to equity ratio of 70:30. The extension of the SYTL Concession Period shall be however limited to five years. The NHAI may thereafter, at their sole option, issue a notice to SYTL, to undertake within six months of such notice, the augmentation so determined by the NHAI. The refusal, non-acceptance, or failure by SYTL to undertake such augmentation on the due date so intimated by the NHAI, will be considered an indirect political event and the NHAI may at its discretion terminate this SYTL Concession Agreement by issuing a termination notice and making a termination payment in accordance with the provisions of the SYTL Concession Agreement without the NHAI being liable to issue any further notice under it.

Termination of the SYTL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the SYTL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and SYTL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, SYTL shall be deemed to be in default of the SYTL Concession Agreement ("**SYTL Default**"), unless the default has occurred solely as a result of any breach of the SYTL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the SYTL Concession Agreement and SYTL fails to replenish or provide fresh performance security within a cure period of 30 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the SYTL Concession Agreement, SYTL fails to cure, within a cure period of 90 days, the SYTL Default for which whole or part of the performance security was appropriated;

c) SYTL does not achieve the latest outstanding project milestone due in accordance with the SYTL Concession Agreement and continues to be in default for 120 days;

d) SYTL abandons or manifests intention to abandon the construction or operation of the SYTL Project Highway without the prior written consent of the NHAI;

e) project completion date does not occur within the period specified in the SYTL Concession Agreement;

f) the punch list items have not been completed within the period set forth in the SYTL Concession Agreement;

g) SYTL is in breach of the maintenance requirements or the safety requirements as the case may be;

h) SYTL has failed to make any payment to the NHAI within the period specified in the SYTL Concession Agreement;

i) an escrow default has occurred and SYTL fails to cure the default within a cure period of 15 days;

j) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and SYTL fails to cure the default within the cure period specified hereinabove;

k) a breach of the project agreements by SYTL has caused a material adverse effect;

l) SYTL creates an encumbrance in breach of the SYTL Concession Agreement;

m) SYTL repudiates the SYTL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the SYTL Concession Agreement;

n) a change in ownership has occurred in breach of the SYTL Concession Agreement;

o) there is a transfer, pursuant to law either of (i) the rights and/or obligations of SYTL under any of the project agreements, or of (ii) all or part of the assets or undertaking of SYTL, and such transfer causes a material adverse effect;

p) an execution levied on any of the assets of SYTL has caused a material adverse effect;

q) SYTL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for SYTL or for the whole or material part of its assets that has a material bearing on the SYTL Project;

r) SYTL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

s) a resolution for winding up of SYTL is passed, or any petition for winding up of SYTL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or SYTL is ordered to be wound up by Court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of SYTL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of SYTL under the SYTL Concession Agreement and the project agreements; provided that:

   i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the SYTL Concession Agreement and the project agreements;

   ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the SYTL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of SYTL as at the SYTL Appointed Date; and

   iii) each of the project agreements remains in full force and effect;

t) any representation or warranty of SYTL which is, as of the date hereof, found to be materially false, incorrect or misleading or SYTL is at any time hereafter found to be in breach thereof;

u) SYTL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

v) SYTL has failed to fulfil any obligation, for which failure termination has been specified in the SYTL Concession Agreement; or

w) SYTL commits a default in complying with any other provision of the SYTL Concession Agreement if such default causes a material adverse effect on the NHAI.

Without prejudice to any other rights or remedies which the NHAI may have under the SYTL Concession Agreement, upon the occurrence of an SYTL Default, the NHAI shall be entitled to terminate the SYTL Concession Agreement by issuing a termination notice to SYTL. Before issuing the termination notice, the NHAI shall, by notice, inform SYTL of its intention to issue a termination notice and grant 15 days to SYTL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the SYTL Concession Agreement.

If there are senior lenders, the NHAI shall send a copy of its notice of intention to issue a termination notice to inform the lenders' representative and grant 15 days to the lenders' representative for making a representation on behalf of the senior lenders stating the intention to substitute SYTL in accordance with the Substitution Agreement. If the NHAI receives a representation on behalf of the senior lenders, it shall, in its discretion, either withhold termination for a period not exceeding 180 days from the date of the representation, or exercise its right of suspension, as the case may be, to enable the lenders' representative to exercise the senior lenders' right of substitution in accordance with the Substitution Agreement. The lenders' representative may, instead of exercising the senior lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid 180 days, and upon the curing, the NHAI shall withdraw its notice and restore the rights of SYTL. On a written

request from the lenders' representative and SYTL, the NHAI shall extend the period of 180 days by a further period not exceeding 90 days as it may deem appropriate.

Termination by SYTL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the SYTL Concession Agreement, the NHAI shall be deemed to be in default of the SYTL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the SYTL Concession Agreement by SYTL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the SYTL Concession Agreement and such default has a material adverse effect on SYTL;

b) the NHAI has failed to make any payment to SYTL within the period specified in the SYTL Concession Agreement;

c) the NHAI repudiates the SYTL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the SYTL Concession Agreement; or

d) the State of Maharashtra commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on SYTL and the breach continues for a period of 90 days from the date of notice given in this behalf by SYTL to the NHAI.

Without prejudice to any other rights or remedies which SYTL may have under the SYTL Concession Agreement, upon the occurrence of an NHAI Default, SYTL shall be entitled to terminate the SYTL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, SYTL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 15 days to the NHAI to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of an SYTL Default during the operation period, the NHAI shall pay to SYTL, by way of termination payment, an amount equal to 90% of the SYTL Debt Due less insurance cover. If any insurance claims forming part of the insurance cover are not admitted and paid, then 80% of such unpaid claims shall be included in the computation of SYTL Debt Due.

Upon termination on account of an NHAI Default, the NHAI shall pay to SYTL, by way of termination payment, an amount equal to:

a) SYTL Debt Due; and
b) 150% of the adjusted equity.

Termination payment shall become due and payable to SYTL within 15 days of a demand being made by SYTL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the SYTL Concession Agreement shall constitute a full and final settlement of all claims of SYTL on account of termination of the SYTL Concession Agreement for any reason whatsoever and SYTL, or any shareholder thereof, shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

SYTL shall be responsible for all defects and deficiencies in the SYTL Project Highway for a period of 120 days after termination. SYTL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the SYTL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the SYTL Concession Agreement shall be retained in the Escrow Account for a period of 120 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

7.1. Supplementary Agreement between SYTL and the NHAI dated April 12, 2018

SYTL has entered into a supplementary agreement (the "**Supplementary Agreement**") to amend the concession agreement dated March 3, 2014 (the "**Concession Agreement**") to provide for the installation of a new electronic toll collection system (the "**Hybrid ETC System**") for electronic payment of user fee using RFID tags or any other such device.

Change of Scope

The NHAI shall provide a change in the scope of work order at prices discovered by the NHAI to SYTL to provide for, as per the defined technical specifications, installation, testing, commissioning, operations and maintenance of the Hybrid ETC System in all lanes of the toll plaza. SYTL shall ensure that the requisite civil work is completed prior to the installation, integration, testing and commissioning of the Hybrid ETC System. It shall also ensure the smooth flow of traffic during installation, integration, testing and commissioning of the Hybrid ETC System. SYTL will have no claim against the NHAI on account of any lane closure, if any, on account of any third party claims.

Scope of Work

SYTL shall install, integrate, test, commission, operate and maintain the Hybrid ETC System in all the lanes of the toll plazas. The Hybrid ETC System shall be installed, commissioned, operated and maintained for a period of five years or the end of the Concession Agreement, whichever is earlier, beyond which it will be replaced or renewed, as the case may be, by SYTL or the NHAI, at the cost of the NHAI. The cycle shall be maintained till the end of the concession period in accordance with the Concession Agreement.

The provisions of the Concession Agreement relating to change of scope shall not apply to the Supplementary Agreement.

Any permission required by SYTL under the applicable laws for the installation of the Hybrid ETC System shall be procured and maintained by SYTL. The NHAI shall provide reasonable assistance in this regard.

Timeline

SYTL shall complete all responsibilities, obligations and works as described in the Supplementary Agreement within a period of 120 days from the date of signing the Supplementary Agreement.

Damages for Delay

In case of delay in installation, testing, or commissioning of the Hybrid ETC System at the toll plazas as per the time schedule prescribed on account of reasons attributable to SYTL, damages at 0.1% of the cost of installation, testing, or commissioning of the Hybrid ETC System for each day of the delay, subject to a maximum of 10% of the cost of installation, testing, or commissioning of the Hybrid ETC System shall be levied on SYTL. Damages for delay will not be applicable in case of a delay in implementation due to delayed payment release by the NHAI.

SYTL shall not be entitled to any additional benefit either in monetary terms or on any other account including, but not limited to any extension of time, save on account of and NHAI Default or force majeure.

Compensation

In case of any damage to the Hybrid ETC System due to any act or omission of SYTL, the NHAI shall not be liable for any compensation to SYTL, and SYTL shall bear the cost of repair, replacement or renewal of the damaged Hybrid ETC System equipment or hardware itself.

In case of any damage to the Hybrid ETC System due to the occurrence of any force majeure event, the compensation to SYTL shall be derived as per the provisions of the Concession Agreement.

End of the Concession Period

SYTL shall hand over all the Hybrid ETC equipment or hardware in an operational condition to the NHAI or a third party as directed by the NHAI at the end of the concession period, beyond which no O&M payment shall be made to SYTL. If any Hybrid ETC System equipment or hardware is found to be non-operational, then SYTL shall be liable to replace or pay for the replacement of the Hybrid ETC System equipment or hardware required to make the Hybrid ETC System operational on all lanes of the toll plazas to the NHAI promptly.

Upon termination, SYTL shall assign warranties received from the original equipment manufacturer and for the components or equipment, and provide the respective warranty assignment agreements and necessary documents. SYTL shall ensure that all the warranties are duly assigned in favor of the NHAI and SYTL shall bear the cost and expenses towards the assignment.

8. Concession Agreement between UTL and the NHAI dated December 9, 2016, as amended

UTL has entered into a concession agreement for six-laning of NH-8 in Rajasthan and Gujarat from km 287.400 to km 401.200 (approx. length 113.800 km) on design, build, finance, operate and transfer ("**DBFOT**") basis (the "**UTL Concession Agreement**"), for a period of 21 years, from September 3, 2017 ("**UTL Appointed Date**") or until such date on which the UTL Concession Agreement is terminated by a termination notice ("**UTL Termination Date**", and the period between the UTL Appointed Date and the UTL Termination Date, the "**UTL Concession Period**").

Certain Definitions

"**UTL Debt Due**" shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the transfer date:

a) the principal amount of the debt provided by the senior lenders under the financing agreements for financing the total project cost (the "**Principal**") but excluding any part of the Principal that had fallen due for repayment two years prior to the transfer date;

b) all accrued interest, financing fees and charges payable under the financing agreements on, or in respect of, the debt referred to in the sub-clause above until the transfer date but excluding (i) any interest, fees or charges that had fallen due one year prior to the transfer date, (ii) any penal interest or charges payable under the financing agreements to any senior lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to an NHAI Default (as defined below); and

c) any subordinated debt which is included in the financing package and disbursed by lenders for financing the total project cost;

If all, or any part of the UTL Debt Due is convertible into equity at the option of the senior lenders and/or UTL, it shall, for the purposes of the UTL Concession Agreement, be deemed to be UTL Debt Due even after the conversion and the Principal thereof shall be dealt with as if such conversion had not been undertaken;

"**UTL Debt Service**" shall mean the sum of all payments on account of Principal, interest, financing fees and charges due and payable in an accounting year to the senior lenders under the financing agreements;

"**UTL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) project facilities situated on the site; (d) all rights of UTL under the project agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) applicable permits and authorizations relating to or in respect of the UTL Project Highway (as defined below), but does not include additional facilities;

"**UTL Project Highway**" shall mean the site comprising the existing road comprising NH-8 from km 287.400 to km 401.200 and all UTL Project Assets, and its subsequent development and augmentation in accordance with the UTL Concession Agreement;

"**UTL Project**" shall mean the construction, operation, and maintenance of the UTL Project Highway in accordance with the provisions of the UTL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project;

"**Premium**" shall mean an amount paid to the NHAI by UTL in the form of an additional concession fee, as set forth in the bid for each year of the UTL Concession Period.

Grant of Concession

Subject to, and in accordance with the provisions set out in the UTL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to UTL, and UTL has accepted the concession, including the exclusive right, license, and authority during the subsistence of the UTL Concession Agreement, to construct, operate and maintain the UTL Project for a period of 21 years from the UTL Appointed Date.

Subject to, and in accordance with the provisions of the UTL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, UTL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the UTL Concession Agreement;

b) finance and construct the UTL Project Highway;

c) manage, operate, and maintain the UTL Project Highway and regulate the use thereof by third parties;

d) demand, collect, and appropriate fee from vehicles and persons liable for payment of fee for using the UTL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

e) perform and fulfil all of UTL's obligations under and in accordance with the UTL Concession Agreement;

f) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of UTL under the UTL Concession Agreement; and

g) neither assign, transfer or sublet, or create any lien or encumbrance on the UTL Concession Agreement, or the concession granted, or on the whole or any part of the UTL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the UTL Concession Agreement or the agreement for the substitution of UTL entered into by UTL, the NHAI, and the lenders' representative on behalf of the senior lenders (the "**Substitution Agreement**").

Fees

On and from the commercial operation date ("**COD**") till the transfer date, UTL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the UTL Concession Agreement and the applicable rules and regulations, provided that for ease of payment and collection, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated from time to time. Further, UTL may determine and collect fee at such lower rates as it may, by public notice to the users, specify in respect of all or any category of users or vehicles. In accordance with the UTL Concession Agreement, UTL shall not collect any fees in relation to exempted vehicles.

UTL shall not collect any fee from a local user for non-commercial use of the UTL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the UTL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, UTL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, UTL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the UTL Project Highway and does not cross a toll plaza.

Concession Fee

In consideration of the grant of concession, UTL shall pay to the NHAI by way of concession fee a sum of ₹1 per annum.

Additionally, UTL was required to pay to the NHAI, immediately after the third anniversary year of the COD, a Premium in the form of an additional concession fee equal to ₹1,638,000,000 as due to the NHAI during that year, due and payable for the period remaining in that year; and for each subsequent year till the ninth anniversary of the COD, the Premium shall be determined by increasing the amount of Premium in the respective year by an additional 3% as compared to the immediately preceding year and for each subsequent year of the UTL Concession Period, the Premium shall be determined by increasing the amount of Premium in the respective year by an additional 8% as compared to the immediately preceding year. The Premium is deemed to be a part of the concession fee.

The concession fee payable under the provisions of the UTL Concession Agreement shall be due and payable in monthly instalments within seven days of the close of each month.

Escrow Account

UTL was required to, prior to the UTL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the UTL Concession Agreement read with the escrow agreement entered into amongst UTL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

UTL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;

b) all fee and any other revenues from or in respect of the UTL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and

c) all payments by the NHAI, after deducting any outstanding concession fee.

The senior lenders may make direct disbursements to the EPC contractor in accordance with the express provisions contained in this behalf in the financing agreements.

Withdrawals during Concession Period

UTL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by UTL for and in respect of the UTL Project Highway;

b) all payments relating to construction of the UTL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) Operation and Management ("**O&M**") expenses, subject to the ceiling, if any, set forth in the financing agreements;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the UTL Concession Agreement, and certified by the NHAI as due and payable to it;

e) concession fee due and payable to the NHAI;

f) monthly proportionate provision of UTL Debt Service due in an accounting year;

g) premium due and payable to the NHAI;

h) all payments and damages certified by the NHAI as due and payable to it by UTL, including repayment of revenue shortfall loan. UTL has agreed to give irrevocable instructions to the Escrow Bank to make payments from the Escrow Account in accordance with the instructions of the NHAI under the UTL Concession Agreement and debit the payment to O&M expenses;

i) monthly proportionate provision of UTL Debt Service payments due in an accounting year in respect of subordinated debt;

j) any reserve requirements set forth in the financing agreements; and

k) balance, if any, in accordance with the instructions of UTL.

UTL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the UTL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by UTL for and in respect of the UTL Project Highway;

b) 90% of the UTL Debt Due excluding the subordinated debt;

c) outstanding concession fee;

d) all payments and damages certified by the NHAI as due and payable to it by UTL, including the repayment of the revenue shortfall loan. UTL has agreed to give irrevocable instruction to the Escrow Bank to make payment from the Escrow Account in accordance with the instructions of the NHAI under the UTL Concession Agreement and debit the payment to O&M expenses.

e) retention and payments relating to the liability for defects and deficiencies set forth in the UTL Concession Agreement;

f) outstanding UTL Debt Service including balance of UTL Debt Due;

g) outstanding subordinated debt;

h) incurred or accrued O&M expenses;

i) any other payments required to be made under the UTL Concession Agreement; and

j) balance, if any, in accordance with the instructions of UTL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the UTL Concession Agreement, require the provision of additional works and services which are not included in the scope of the project as contemplated by the UTL Concession Agreement. Any such change of scope shall be made in accordance with the provisions of the UTL Concession Agreement and the costs thereof shall be expended by UTL and reimbursed by the NHAI.

If UTL determines at any time that a change in scope is necessary for providing safer and improved services to the users, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 60 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the UTL Concession Agreement, or inform UTL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of UTL being in material default or breach of the UTL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the UTL Concession Agreement.

In the event of the NHAI being in material default of the UTL Concession Agreement at any time after the UTL Appointed Date, it shall pay to UTL by way of compensation, all direct costs suffered or incurred by UTL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the UTL Concession Agreement.

In the event that a material default or breach of the UTL Concession Agreement causes a delay in achieving COD or leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the UTL Concession Period as provided in the UTL Concession Agreement. In the event that an additional toll way or a competing road, as the case may be, is opened to traffic in breach of the UTL Concession Agreement, the NHAI shall pay to UTL, for each day of the breach, compensation as provided in the UTL Concession Agreement, until the breach is cured. The payment of compensation by the NHAI shall be deemed to cure the breach of the UTL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Effects of Variation in Traffic Growth

Subject to the provisions of the UTL Concession Agreement, in the event actual average traffic shall have fallen short of the target traffic, then for every 1% (one percent) shortfall as compared to the target traffic, the UTL Concession Period shall, subject to payment of concession fee in accordance with the UTL Concession Agreement, be increased by 1.5% (one point five percent) thereof; provided that such increase in UTL Concession Period shall not in any case exceed 20% (twenty percent) of the UTL Concession Period.

Subject to the provisions of the UTL Concession Agreement, in the event actual average traffic shall have exceeded the target traffic, then for every 1% (one percent) excess as compared to the target traffic, the UTL Concession Period shall be reduced by 0.75% (zero point seven five percent) thereof; provided that such reduction in UTL Concession Period shall not in any case exceed 10% (ten percent) thereof.

Provided further that in lieu of a reduction in UTL Concession Period under the UTL Concession Agreement, UTL may elect to pay, in addition to the concession fee that would be due and payable if the UTL Concession Period were not reduced hereunder, a further premium equal to 25% (twenty five percent) of the realizable fee, and upon notice given to this effect by UTL no later than two years prior to the UTL Termination Date contemplated by the UTL Concession Agreement, NHAI shall waive the reduction in UTL Concession Period hereunder forthwith.

Notwithstanding anything to the contrary contained in UTL Concession Agreement, if the average daily traffic of PCUs in any accounting year shall exceed the designed capacity of the UTL Project Highway, the NHAI at its option may cause preparation of detailed project report which will assess the cost that may have to be incurred for augmenting the capacity of the UTL Project Highway so that its capacity is sufficiently increased for carrying the then current traffic in accordance with the corresponding provisions of the Indian Roads Congress publication no. IRC -64, 1990 or any substitute thereof. The UTL Concession Period, may be extended so that it yields for UTL a post-tax return on equity of 16% per annum. This assessment will be made at an assumed debt to equity ratio of 70:30. The extension of the UTL Concession Period shall be however limited to five years. The NHAI may thereafter, at their sole option, issue a notice to UTL, to undertake within six months of such notice, the augmentation so determined by the NHAI. The refusal, non-acceptance, or failure by UTL to undertake such augmentation on the due date so intimated by the NHAI, will be considered an indirect political event and the NHAI may at its discretion terminate this UTL Concession Agreement by issuing a termination notice and making a termination payment in accordance with the provisions of the UTL Concession Agreement without the NHAI being liable to issue any further notice under it.

Termination of the UTL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the UTL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and UTL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, UTL shall be deemed to be in default of the UTL Concession Agreement ("**UTL Default**"), unless the default has occurred solely as a result of any breach of the UTL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the UTL Concession Agreement and UTL fails to replenish or provide fresh performance security within a cure period of 30 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the UTL Concession Agreement, UTL fails to cure, within a cure period of 90 days, the UTL Default for which whole or part of the performance security was appropriated;

c) UTL does not achieve the latest outstanding project milestone due in accordance with the UTL Concession Agreement and continues to be in default for 90 days;

d) UTL abandons or manifests intention to abandon the construction or operation of the UTL Project Highway without the prior written consent of the NHAI;

e) project completion date does not occur within the period specified in the UTL Concession Agreement;

f) the punch list items have not been completed within the period set forth in the UTL Concession Agreement;

g) UTL is in breach of the maintenance requirements or the safety requirements as the case may be;

h) UTL has failed to make any payment to the NHAI within the period specified in the UTL Concession Agreement;

i) an escrow default has occurred and UTL fails to cure the default within a cure period of 15 days;

j) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and UTL fails to cure the default within the cure period specified hereinabove;

k) a breach of the project agreements by UTL has caused a material adverse effect;

l) UTL creates an encumbrance in breach of the UTL Concession Agreement;

m) UTL repudiates the UTL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the UTL Concession Agreement;

n) a change in ownership has occurred in breach of the UTL Concession Agreement;

o) there is a transfer, pursuant to law either of (i) the rights and/or obligations of UTL under any of the project agreements, or of (ii) all or part of the assets or undertaking of UTL, and such transfer causes a material adverse effect;

p) an execution levied on any of the assets of UTL has caused a material adverse effect;

q) UTL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for UTL or for the whole or material part of its assets that has a material bearing on the UTL Project;

r) UTL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

s) a resolution for winding up of UTL is passed, or any petition for winding up of UTL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or UTL is ordered to be wound up by Court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of UTL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of UTL under the UTL Concession Agreement and the project agreements; provided that:

   i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the UTL Concession Agreement and the project agreements;

   ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the UTL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of UTL as at the UTL Appointed Date; and

   iii) each of the project agreements remains in full force and effect;

t) any representation or warranty of UTL which is, as of the date hereof, found to be materially false, incorrect or misleading or UTL is at any time hereafter found to be in breach thereof;

u) UTL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

v) UTL has failed to fulfil any obligation, for which failure termination has been specified in the UTL Concession Agreement; or

w) UTL commits a default in complying with any other provision of the UTL Concession Agreement if such default causes a material adverse effect on the NHAI.

Without prejudice to any other rights or remedies which the NHAI may have under the UTL Concession Agreement, upon the occurrence of a UTL Default, the NHAI shall be entitled to terminate the UTL Concession Agreement by issuing a termination notice to UTL. Before issuing the termination notice, the NHAI shall, by notice, inform UTL of its intention to issue a termination notice and grant 15 days to UTL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the UTL Concession Agreement.

If there are senior lenders, the NHAI shall send a copy of its notice of intention to issue a termination notice to inform the lenders' representative and grant 30 days to the lenders' representative for making a representation on behalf of the senior lenders stating the intention to substitute UTL in accordance with the Substitution Agreement. If the NHAI receives a representation on behalf of the senior lenders, it shall, in its discretion, either withhold termination for a period not exceeding 180 days from the date of the representation, or exercise its right of suspension, as the case may be, to enable the lenders' representative to exercise the senior lenders' right of substitution in accordance with the Substitution Agreement. The lenders' representative may, instead of exercising the senior lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid 180 days, and upon the curing, the NHAI shall withdraw its notice and restore the rights of UTL. On a written request from the lenders' representative and UTL, the NHAI shall extend the period of 180 days by a further period not exceeding 90 days as it may deem appropriate.

Termination by UTL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the UTL Concession Agreement, the NHAI shall be deemed to be in default of the UTL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the UTL Concession Agreement by UTL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the UTL Concession Agreement and such default has a material adverse effect on UTL;

b) the NHAI has failed to make any payment to UTL within the period specified in the UTL Concession Agreement;

c) the NHAI repudiates the UTL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the UTL Concession Agreement; or

d) the State of Rajasthan or Gujarat commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on UTL and the breach continues for a period of 90 days from the date of notice given in this behalf by UTL to the NHAI.

Without prejudice to any other rights or remedies which UTL may have under the UTL Concession Agreement, upon the occurrence of an NHAI Default, UTL shall be entitled to terminate the UTL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, UTL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 30 days to the NHAI to make a representation, and may, after the expiry of the 30 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of a UTL Default during the operation period, the NHAI shall pay to UTL, by way of termination payment, an amount equal to 90% of the UTL Debt Due less insurance cover. If any insurance claims forming part of the insurance cover are not admitted and paid, then 80% of such unpaid claims shall be included in the computation of UTL Debt Due.

Upon termination on account of an NHAI Default, the NHAI shall pay to UTL, by way of termination payment, an amount equal to:

a) UTL Debt Due; and
b) 150% of the adjusted equity.

The termination payment shall not be less than an amount equal to the product of six and the average monthly fee actually realized 12 months prior to the transfer date.

Termination payment shall become due and payable to UTL within 30 days of a demand being made by UTL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the UTL Concession Agreement shall constitute a full and final settlement of all claims of UTL on account of termination of the UTL Concession Agreement for any reason whatsoever and UTL shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

UTL shall be responsible for all defects and deficiencies in the UTL Project Highway for a period of 120 days after termination. UTL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the UTL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the UTL Concession Agreement shall be retained in the Escrow Account for a period of 120 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

9. Concession Agreement between YATL and the NHAI dated May 30, 2014

YATL has entered into a concession agreement for four-laning of Yedeshi-Aurangabad section of NH-211 in Maharashtra from km 100.000 to km 290.200 on design, build, finance, operate and transfer ("**DBFOT**") basis (the "**YATL Concession Agreement**"), for a period of 26 years, from July 1, 2015 ("**YATL Appointed Date**") or until such date on which the YATL Concession Agreement is terminated by a termination notice ("**YATL Termination Date**", and the period between the YATL Appointed Date and the YATL Termination Date, the "**YATL Concession Period**").

Certain Definitions

"**YATL Debt Due**" shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the transfer date:

a) the principal amount of the debt provided by the senior lenders under the financing agreements for financing the total project cost (the "**Principa**l") but excluding any part of the Principal that had fallen due for repayment two years prior to the transfer date;

b) all accrued interest, financing fees and charges payable under the financing agreements on, or in respect of, the debt referred to in the sub-clause above until the transfer date but excluding (i) any interest, fees or charges that had fallen due one year prior to the transfer date, (ii) any penal interest or charges payable under the financing agreements to any senior lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to an NHAI Default (as defined below); and

c) any subordinated debt which is included in the financing package and disbursed by lenders for financing the total project cost;

If all, or any part of the YATL Debt Due is convertible into equity at the option of the senior lenders and/or YATL, it shall, for the purposes of the YATL Concession Agreement, be deemed to be YATL Debt Due even after the conversion and the Principal thereof shall be dealt with as if such conversion had not been undertaken;

"**YATL Debt Service**" shall mean the sum of all payments on account of Principal, interest, financing fees and charges due and payable in an accounting year to the senior lenders under the financing agreements;

"**YATL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) project facilities situated on the site; (d) all rights of YATL under the project agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) applicable permits and authorizations relating to or in respect of the YATL Project Highway (as defined below), but does not include additional facilities;

"**YATL Project Highway**" shall mean the site comprising the existing road comprising NH-211 from km 100.000 to km 290.200 and all YATL Project Assets, and its subsequent development and augmentation in accordance with the YATL Concession Agreement;

"**YATL Project**" shall mean the construction, operation, and maintenance of the YATL Project Highway in accordance with the provisions of the YATL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

"**Grant**" shall mean the cash support provided to YATL by the NHAI which is equal to the sum set forth in the bid.

Grant of Concession

Subject to, and in accordance with the provisions set out in the YATL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to YATL, and YATL has accepted the concession, including the exclusive right, license, and authority to construct, operate and maintain the YATL Project for a period of 26 years from the YATL Appointed Date.

Subject to, and in accordance with the provisions of the YATL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, YATL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the YATL Concession Agreement;

b) finance and construct the YATL Project Highway;

c) manage, operate, and maintain the YATL Project Highway and regulate the use thereof by third parties;

d) demand, collect, and appropriate fee from vehicles and users liable for payment of fee for using the YATL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

e) perform and fulfil all of YATL's obligations under and in accordance with the YATL Concession Agreement;
f) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of YATL under the YATL Concession Agreement; and

g) neither assign, transfer or sublet, or create any lien or encumbrance on the YATL Concession Agreement, or the concession granted, or on the whole or any part of the YATL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the YATL Concession Agreement or the agreement for the substitution of YATL entered into by YATL, the NHAI, and the lenders' representative on behalf of the senior lenders (the "**Substitution Agreement**").

Fees

On and from the commercial operation date ("**COD**") till the transfer date, YATL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the YATL Concession Agreement and the applicable rules and regulations, provided that for ease of payment and collection, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated from time to time. Further, YATL may determine and collect fee at such lower rates as it may, by public notice to the users, specify in respect of all or any category of users or vehicles. In accordance with the YATL Concession Agreement, YATL shall not collect any fees in relation to exempted vehicles.

YATL shall not collect any fee from a local user for non-commercial use of the YATL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the YATL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, YATL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, YATL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the YATL Project Highway and does not cross a toll plaza.

Grant

The NHAI has agreed to pay to YATL cash support by way of an outright grant equal to ₹5,580 million as set out in the bid. The grant shall be disbursed to YATL by way of equity support. It shall be credited to the Escrow Account (as defined below) and shall be applied by YATL for meeting the total project cost. The equity support shall not exceed the sum specified, but shall in no case be greater than twice the equity, and shall be further restricted to a sum not exceeding 40% of the total project cost.

The equity support shall be due and payable to YATL after it has expended the equity, and shall be disbursed proportionately along with the loan funds thereafter remaining to be disbursed by the senior lenders under the financing agreements. The NHAI shall disburse each tranche of the equity support as and when due, but no later than 15 days of receiving a request from YATL along with necessary particulars. In the event of the occurrence of a YATL Default (as defined below), disbursement of equity support shall be suspended till the YATL Default has been cured.

Concession Fee

In consideration of the grant of concession, YATL shall pay to the NHAI by way of concession fee a sum of ₹1 per annum.

Escrow Account

YATL was required to, prior to the YATL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the YATL Concession Agreement read with the

escrow agreement entered into amongst YATL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

YATL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;

b) all fee and any other revenues from or in respect of the YATL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and

c) all payments by the NHAI, after deducting any outstanding concession fee.

The senior lenders may make direct disbursements to the EPC contractor in accordance with the express provisions contained in this behalf in the financing agreements.

Withdrawals during Concession Period

YATL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by YATL for and in respect of the YATL Project Highway;

b) all payments relating to construction of the YATL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) Operation and Management ("**O&M**") expenses, subject to the ceiling, if any, set forth in the financing agreements;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the YATL Concession Agreement, and certified by the NHAI as due and payable to it;

e) concession fee due and payable to the NHAI;

f) monthly proportionate provision of YATL Debt Service due in an accounting year;

g) all payments and damages certified by the NHAI as due and payable to it by YATL, including repayment of revenue shortfall loan.

h) monthly proportionate provision of YATL Debt Service payments due in an accounting year in respect of subordinated debt;

i) any reserve requirements set forth in the financing agreements; and

j) balance, if any, in accordance with the instructions of YATL.

YATL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the YATL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by YATL for and in respect of the YATL Project Highway;

b) 90% of the YATL Debt Due excluding the subordinated debt;

c) outstanding concession fee;

d) all payments and damages certified by the NHAI as due and payable to it by YATL, including the repayment of the revenue shortfall loan.

e) retention and payments relating to the liability for defects and deficiencies set forth in the YATL Concession Agreement;

f) outstanding YATL Debt Service including balance of YATL Debt Due;

g) outstanding subordinated debt;

h) incurred or accrued O&M expenses;

i) any other payments required to be made under the YATL Concession Agreement; and

j) balance, if any, in accordance with the instructions of YATL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the YATL Concession Agreement, require the provision of additional works and services which are not included in the scope of the project as contemplated by the YATL Concession Agreement. Any such change of scope shall be made in accordance with the provisions of the YATL Concession Agreement and the costs thereof shall be expended by YATL and reimbursed by the NHAI.

If YATL determines at any time that a change in scope is necessary for providing safer and improved services to the users, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 15 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the YATL Concession Agreement, or inform YATL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of YATL being in material default or breach of the YATL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the YATL Concession Agreement.

In the event of the NHAI being in material default of the YATL Concession Agreement at any time after the YATL Appointed Date, it shall pay to YATL by way of compensation, all direct costs suffered or incurred by YATL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the YATL Concession Agreement.

In the event that a material default or breach of the YATL Concession Agreement causes a delay in achieving COD or leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the YATL Concession Period as provided in the YATL Concession Agreement. In the event that an additional toll way or a competing road, as the case may be, is opened to traffic in breach of the YATL Concession Agreement, the NHAI shall pay to YATL, for each day of the breach, compensation as provided in the YATL Concession Agreement, until the breach is cured. The payment of compensation by the NHAI shall be deemed to cure the breach of the YATL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Effects of Variation in Traffic Growth

Subject to the provisions of the YATL Concession Agreement, in the event actual average traffic shall have fallen short of the target traffic, then for every 1% (one percent) shortfall as compared to the target traffic, the YATL Concession Period shall, subject to payment of concession fee in accordance with the YATL Concession Agreement, be increased by 1.5% (one point five percent) thereof; provided that such increase in YATL Concession Period shall not in any case exceed 20% (twenty percent) of the YATL Concession Period.

Subject to the provisions of the YATL Concession Agreement, in the event actual average traffic shall have exceeded the target traffic, then for every 1% (one percent) excess as compared to the target traffic, the YATL Concession Period shall be reduced by 0.75% (zero point seven five percent) thereof; provided that such reduction in YATL Concession Period shall not in any case exceed 10% (ten percent) thereof.

Provided further that in lieu of a reduction in YATL Concession Period under the YATL Concession Agreement, YATL may elect to pay, in addition to the concession fee that would be due and payable if the YATL Concession Period were not reduced hereunder, a further premium equal to 25% (twenty five percent) of the realizable fee, and upon notice given to this effect by YATL no later than two years prior to the YATL Termination Date contemplated by the YATL Concession Agreement, NHAI shall waive the reduction in YATL Concession Period hereunder forthwith.

Notwithstanding anything to the contrary contained in YATL Concession Agreement, if the average daily traffic of PCUs in any accounting year shall exceed the designed capacity of the YATL Project Highway, the NHAI at its option may cause preparation of detailed project report which will assess the cost that may have to be incurred for augmenting the capacity of the YATL Project Highway so that its capacity is sufficiently increased for carrying the then current traffic in accordance with the corresponding provisions of the Indian Roads Congress publication no. IRC -64, 1990 or any substitute thereof. The YATL Concession Period, may be extended so that it yields for YATL a post-tax return on equity of 16% per annum. This assessment will be made at an assumed debt to equity ratio of 70:30. The extension of the YATL Concession Period shall be however limited to five years. The NHAI may thereafter, at their sole option, issue a notice to YATL, to undertake within six months of such notice, the augmentation so determined by the NHAI. The refusal, non-acceptance, or failure by YATL to undertake such augmentation on the due date so intimated by the NHAI, will be considered an indirect political event and the NHAI may at its discretion terminate this YATL Concession Agreement by issuing a termination notice and making a termination payment in accordance with the provisions of the YATL Concession Agreement without the NHAI being liable to issue any further notice under it.

Termination of the YATL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the YATL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and YATL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, YATL shall be deemed to be in default of the YATL Concession Agreement ("**YATL Default**"), unless the default has occurred solely as a result of any breach of the YATL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the YATL Concession Agreement and YATL fails to replenish or provide fresh performance security within a cure period of 30 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the YATL Concession Agreement, YATL fails to cure, within a cure period of 90 days, the YATL Default for which whole or part of the performance security was appropriated;

c) YATL does not achieve the latest outstanding project milestone due in accordance with the YATL Concession Agreement and continues to be in default for 120 days;

d) YATL abandons or manifests intention to abandon the construction or operation of the YATL Project Highway without the prior written consent of the NHAI;

e) project completion date does not occur within the period specified in the YATL Concession Agreement;

f) the punch list items have not been completed within the period set forth in the YATL Concession Agreement;

g) YATL is in breach of the maintenance requirements or the safety requirements as the case may be;

h) YATL has failed to make any payment to the NHAI within the period specified in the YATL Concession Agreement;

i) an escrow default has occurred and YATL fails to cure the default within a cure period of 15 days;

j) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and YATL fails to cure the default within the cure period specified hereinabove;

k) a breach of the project agreements by YATL has caused a material adverse effect;

l) YATL creates an encumbrance in breach of the YATL Concession Agreement;

m) YATL repudiates the YATL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the YATL Concession Agreement;

n) a change in ownership has occurred in breach of the YATL Concession Agreement;

o) there is a transfer, pursuant to law either of (i) the rights and/or obligations of YATL under any of the project agreements, or of (ii) all or part of the assets or undertaking of YATL, and such transfer causes a material adverse effect;

p) an execution levied on any of the assets of YATL has caused a material adverse effect;

q) YATL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for YATL or for the whole or material part of its assets that has a material bearing on the YATL Project;

r) YATL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

s) a resolution for winding up of YATL is passed, or any petition for winding up of YATL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or YATL is ordered to be wound up by Court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of YATL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of YATL under the YATL Concession Agreement and the project agreements; provided that:

   i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the YATL Concession Agreement and the project agreements;

   ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the YATL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of YATL as at the YATL Appointed Date; and

   iii) each of the project agreements remains in full force and effect;

t) any representation or warranty of YATL which is, as of the date hereof, found to be materially false, incorrect or misleading or YATL is at any time hereafter found to be in breach thereof;

u) YATL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

v) YATL has failed to fulfil any obligation, for which failure termination has been specified in the YATL Concession Agreement; or

w) YATL commits a default in complying with any other provision of the YATL Concession Agreement if such default causes a material adverse effect on the NHAI.

Without prejudice to any other rights or remedies which the NHAI may have under the YATL Concession Agreement, upon the occurrence of a YATL Default, the NHAI shall be entitled to terminate the YATL Concession Agreement by issuing a termination notice to YATL. Before issuing the termination notice, the NHAI shall, by notice, inform YATL of its intention to issue a termination notice and grant 15 days to YATL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the YATL Concession Agreement.

If there are senior lenders, the NHAI shall send a copy of its notice of intention to issue a termination notice to inform the lenders' representative and grant 15 days to the lenders' representative for making a representation on behalf of the senior lenders stating the intention to substitute YATL in accordance with the Substitution Agreement. If the NHAI receives a representation on behalf of the senior lenders, it shall, in its discretion, either withhold termination for a period not exceeding 180 days from the date of the representation, or exercise its right of suspension, as the case may be, to enable the lenders' representative to exercise the senior lenders' right of substitution in accordance with the Substitution Agreement. The lenders' representative may, instead of exercising the senior lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid 180 days, and upon the curing, the NHAI shall withdraw its notice and restore the rights of YATL. On a written request from the lenders' representative and YATL, the NHAI shall extend the period of 180 days by a further period not exceeding 90 days as it may deem appropriate.

Termination by YATL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the YATL Concession Agreement, the NHAI shall be deemed to be in default of the YATL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the YATL Concession Agreement by YATL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the YATL Concession Agreement and such default has a material adverse effect on YATL;

b) the NHAI has failed to make any payment to YATL within the period specified in the YATL Concession Agreement;

c) the NHAI repudiates the YATL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the YATL Concession Agreement; or

d) the State of Maharashtra commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on YATL and the breach continues for a period of 90 days from the date of notice given in this behalf by YATL to the NHAI.

Without prejudice to any other rights or remedies which YATL may have under the YATL Concession Agreement, upon the occurrence of an NHAI Default, YATL shall be entitled to terminate the YATL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, YATL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 15 days to the NHAI to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of a YATL Default during the operation period, the NHAI shall pay to YATL, by way of termination payment, an amount equal to 90% of the YATL Debt Due less insurance cover. If any insurance claims forming part of the insurance cover are not admitted and paid, then 80% of such unpaid claims shall be included in the computation of YATL Debt Due.

Upon termination on account of an NHAI Default, the NHAI shall pay to YATL, by way of termination payment, an amount equal to:

a) YATL Debt Due; and
b) 150% of the adjusted equity.

Termination payment shall become due and payable to YATL within 15 days of a demand being made by YATL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the YATL Concession Agreement shall constitute a full and final settlement of all claims of YATL on account of termination of the YATL Concession Agreement for any reason whatsoever and YATL, or any shareholder thereof, shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

YATL shall be responsible for all defects and deficiencies in the YATL Project Highway for a period of 120 days after termination. YATL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the YATL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the YATL Concession Agreement shall be retained in the Escrow Account for a period of 120 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

10. Concession Agreement between PDTPL and the NHAI dated June 14, 2021

PDTPL has entered into a concession agreement for the six-laning of National Corridor NH-19 from Palsit to Dankuni (upto NH-6 Connector) from KM 588.870 to KM 652.700 (total design length 63.830 km) in the State of West Bengal under Bharatmala Pariyojana to be executed on BOT (Toll) basis (the "**PDTPL Concession Agreement**"), for a period of 17 years, from April 2, 2022 ("**PDTPL Appointed Date**") or until such date on which the PDTPL Concession Agreement is terminated by a termination notice ("**PDTPL Termination Date**", and the period between the PDTPL Appointed Date and the PDTPL Termination Date, the "**PDTPL Concession Period**").

Certain Definitions

"**PDTPL Debt Due**" shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the transfer date:

a) the principal amount of the debt provided by the senior lenders under the financing agreements for financing the total project cost (the "**Principa**l") but excluding any part of the Principal that had fallen due for repayment two years prior to the transfer date;

b) all accrued interest, financing fees and charges payable under the financing agreements on, or in respect of, the debt referred to in the sub-clause above until the transfer date but excluding (i) any interest, fees or charges that had fallen due one year prior to the transfer date, (ii) any penal interest or charges payable under the financing agreements to any senior lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to an NHAI Default (as defined below); and

c) any subordinated debt which is included in the financing package and disbursed by lenders for financing the total project cost;

If all, or any part of the PDTPL Debt Due is convertible into equity at the option of the senior lenders and/or PDTPL, it shall, for the purposes of the PDTPL Concession Agreement, be deemed to be PDTPL Debt Due even after the conversion and the Principal thereof shall be dealt with as if such conversion had not been undertaken;

"**PDTPL Debt Service**" shall mean the sum of all payments on account of principal, interest, financing fees and charges due and payable in an accounting year to the senior lenders under the financing agreements;

"**PDTPL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems,

communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) project facilities situated on the site; (d) all rights of PDTPL under the project agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) applicable permits and authorizations relating to or in respect of the PDTPL Project Highway (as defined below), but does not include additional facilities;

"**PDTPL Project Highway**" shall mean the site comprising the existing road comprising NH-19 from km 588.870 to km 652.700 and all PDTPL Project Assets, and its subsequent development and augmentation in accordance with the PDTPL Concession Agreement;

"**PDTPL Project**" shall mean the construction, operation, and maintenance of the PDTPL Project Highway in accordance with the provisions of the PDTPL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

"**Premium**" shall mean an amount payable to the NHAI by PDTPL in the form of an additional concession fee, as set forth in the bid for each year of the PDTPL Concession Period.

Grant of Concession

Subject to, and in accordance with the provisions set out in the PDTPL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to PDTPL, and PDTPL has accepted the concession, including the exclusive right, license, and authority during the subsistence of the PDTPL Concession Agreement, to construct, operate and maintain the PDTPL Project for a period of 17 years from the PDTPL Appointed Date.

Subject to, and in accordance with the provisions of the PDTPL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, PDTPL to:

h) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the PDTPL Concession Agreement;

i) finance and construct the PDTPL Project Highway;

j) manage, operate, and maintain the PDTPL Project Highway and regulate the use thereof by third parties;

k) demand, collect, and appropriate fee from vehicles and persons liable for payment of fee for using the PDTPL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

l) perform and fulfil all of PDTPL's obligations under and in accordance with the PDTPL Concession Agreement;

m) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of PDTPL under the PDTPL Concession Agreement; and

n) neither assign, transfer or sublet, or create any lien or encumbrance on the PDTPL Concession Agreement, or the concession granted, or on the whole or any part of the PDTPL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the PDTPL Concession Agreement or the agreement for the substitution of PDTPL entered into by PDTPL, the NHAI, and the lenders' representative on behalf of the senior lenders (the "**Substitution Agreement**").

Fees

On and from the commercial operation date ("**COD**") till the transfer date, PDTPL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the PDTPL Concession Agreement and the applicable rules and regulations, provided that for ease of payment and collection, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated from time to time. Further, PDTPL may determine and collect fee at such lower rates as it may, by public notice to the users, specify in respect of all or any category of users or vehicles. In accordance with the PDTPL Concession Agreement, PDTPL shall not collect any fees in relation to exempted vehicles.

PDTPL shall not collect any fee from a local user for non-commercial use of the PDTPL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the PDTPL Project Highway as specified in the

pass and for crossing the toll plaza specified therein. For carrying out these provisions, PDTPL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, PDTPL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the PDTPL Project Highway and does not cross a toll plaza.

Concession Fee

In consideration of the grant of concession, PDTPL shall pay to the NHAI by way of concession fee a sum of ₹1 per annum.

Additionally, immediately after the first anniversary of the project completion date, a premium in the form of an additional concession fee for every year of the remaining concession period is payable by PDTPL. The premium to be paid for the second year after the project completion date is equal to 10.8% of the realisable fee and is required to be paid by PDTPL as due to the NHAI during that year. For subsequent years, the premium will be determined based on the total realisable fee in the respective year at the percentage to be arrived at by increasing the percentage of premium in the respective year by an additional 1% as compared to the immediately preceding year.

The concession fee payable under the provisions of the PDTPL Concession Agreement shall be due and payable in monthly instalments within seven days of the close of each month.

Escrow Account

PDTPL was required to, prior to the PDTPL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the PDTPL Concession Agreement read with the escrow agreement entered into among PDTPL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

PDTPL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;
b) all fee and any other revenues from or in respect of the PDTPL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and
c) all payments by the NHAI, after deducting any outstanding concession fee.

The senior lenders may make direct disbursements to the EPC contractor in accordance with the express provisions contained in this behalf in the financing agreements.

Withdrawals during Concession Period

PDTPL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by PDTPL for and in respect of the PDTPL Project Highway;

b) all payments relating to construction of the PDTPL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) operation and management ("**O&M**") expenses, subject to the ceiling, if any, set forth in the financing agreements;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the PDTPL Concession Agreement, and certified by the NHAI as due and payable to it;

e) concession fee and premium due and payable to the NHAI;

f) monthly proportionate provision of PDTPL Debt Service due in an accounting year;

g) premium due and payable to the NHAI;

h) all payments and damages certified by the NHAI as due and payable to it by PDTPL, including repayment of revenue shortfall loan. PDTPL has agreed to give irrevocable instructions to the Escrow Bank to make payments from the Escrow Account in accordance with the instructions of the NHAI under the PDTPL Concession Agreement and debit the payment to O&M expenses;

i) monthly proportionate provision of PDTPL Debt Service payments due in an accounting year in respect of subordinated debt;

j) any reserve requirements set forth in the financing agreements; and

k) balance, if any, in accordance with the instructions of PDTPL.

PDTPL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the PDTPL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by PDTPL for and in respect of the PDTPL Project Highway;

b) 90% of the PDTPL Debt Due excluding the subordinated debt;

c) outstanding concession fee;

d) all payments and damages certified by the NHAI as due and payable to it by PDTPL, including the repayment of the revenue shortfall loan. PDTPL has agreed to give irrevocable instruction to the Escrow Bank to make payment from the Escrow Account in accordance with the instructions of the NHAI under the PDTPL Concession Agreement and debit the payment to O&M expenses.

e) retention and payments relating to the liability for defects and deficiencies set forth in the PDTPL Concession Agreement;

f) outstanding PDTPL Debt Service including balance of PDTPL Debt Due;

g) outstanding subordinated debt;

h) incurred or accrued O&M expenses;

i) any other payments required to be made under the PDTPL Concession Agreement; and

j) balance, if any, in accordance with the instructions of PDTPL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the PDTPL Concession Agreement, require the provision of additional works and services which are not included in the scope of the project as contemplated by the PDTPL Concession Agreement. Any such change of scope shall be made in accordance with the provisions of the PDTPL Concession Agreement and the costs thereof shall be expended by PDTPL and reimbursed by the NHAI in accordance with the PDTPL Concession Agreement.

If PDTPL determines at any time that a change in scope is necessary for providing safer and improved services to the users, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 60 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the PDTPL Concession Agreement, or inform PDTPL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of PDTPL being in material default or breach of the PDTPL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the PDTPL Concession Agreement.

In the event of the NHAI being in material default or breach of the PDTPL Concession Agreement at any time after the PDTPL Appointed Date, it shall pay to PDTPL by way of compensation, all direct costs suffered or incurred by PDTPL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the PDTPL Concession Agreement.

In the event that a material default or breach of the PDTPL Concession Agreement causes a delay in achieving COD or leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the PDTPL Concession Period as provided in the PDTPL Concession Agreement. In the event that an additional toll way or a competing road, as the case may be, is opened to traffic in breach of the PDTPL Concession Agreement, the NHAI shall pay to PDTPL, for each day of the breach, compensation as provided in the PDTPL Concession Agreement, until the breach is cured. The payment of compensation by the NHAI shall be deemed to cure the breach of the PDTPL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Effects of Variation in Traffic Growth

Subject to the provisions of the PDTPL Concession Agreement, in the event actual average traffic shall have fallen short of the target traffic by more than 5% (five percent), then for every 1% (one percent) shortfall as compared to the target traffic, the PDTPL Concession Period shall, subject to payment of concession fee and additional concession fee in accordance with the PDTPL Concession Agreement, be increased by 1% (one percent) thereof; provided that such increase in PDTPL Concession Period shall not in any case exceed 20% (twenty percent) of the PDTPL Concession Period.

Subject to the provisions of the PDTPL Concession Agreement, in the event actual average traffic shall have exceeded the target traffic by more than 5% (five percent), then for every 1% (one percent) increase as compared to the target traffic, the PDTPL Concession Period shall be reduced by 1% (one percent) thereof; provided that such reduction in PDTPL Concession Period shall not in any case exceed 20% (twenty percent) of the PDTPL Concession Period.

Notwithstanding anything to the contrary contained in the PDTPL Concession Agreement, if the average daily traffic of PCUs in any accounting year shall exceed the designed capacity of the PDTPL Project Highway, an indirect political event under the PDTPL Concession Agreement will be deemed to have occurred and the NHAI may, at its discretion, terminate the PDTPL Concession Agreement. If PDTPL has completed the construction works necessary for augmenting the capacity of the PDTPL Project Highway such that its capacity has increased sufficiently for carrying the then current traffic in accordance with the corresponding provisions of the relevant Indian Roads Congress publication, prior to the issue of a termination notice by the NHAI, the indirect political event will deemed to have been cured.

Termination of the PDTPL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the PDTPL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and PDTPL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, PDTPL shall be deemed to be in default of the PDTPL Concession Agreement ("**PDTPL Default**"), unless the default has occurred solely as a result of any breach of the PDTPL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the PDTPL Concession Agreement and PDTPL fails to replenish or provide fresh performance security within a cure period of 30 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the PDTPL Concession Agreement, PDTPL fails to cure, within a cure period of 90 days, the PDTPL Default for which whole or part of the performance security was appropriated;

c) PDTPL does not achieve the latest outstanding project milestone due in accordance with the PDTPL Concession Agreement and continues to be in default for 90 days;

d) PDTPL abandons or manifests intention to abandon the construction or operation of the PDTPL Project Highway without the prior written consent of the NHAI;

e) project completion date does not occur within the period specified in the PDTPL Concession Agreement;

f) the punch list items have not been completed within the period set forth in the PDTPL Concession Agreement;

g) PDTPL is in breach of the maintenance requirements or the safety requirements as the case may be;

h) PDTPL has failed to make any payment to the NHAI within the period specified in the PDTPL Concession Agreement;

i) an escrow default has occurred and PDTPL fails to cure the default within a cure period of 15 days;

j) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and PDTPL fails to cure the default within the cure period specified hereinabove;

k) a breach of the project agreements by PDTPL has caused a material adverse effect;

l) PDTPL creates an encumbrance in breach of the PDTPL Concession Agreement;

m) PDTPL repudiates the PDTPL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the PDTPL Concession Agreement;

n) a change in ownership has occurred in breach of the PDTPL Concession Agreement;

o) there is a transfer, pursuant to law either of (i) the rights and/or obligations of PDTPL under any of the project agreements, or of (ii) all or part of the assets or undertaking of PDTPL, and such transfer causes a material adverse effect;

p) an execution levied on any of the assets of PDTPL has caused a material adverse effect;

q) PDTPL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for PDTPL or for the whole or material part of its assets that has a material bearing on the PDTPL Project;

r) PDTPL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

s) a resolution for winding up of PDTPL is passed, or any petition for winding up of PDTPL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or PDTPL is ordered to be wound up by a court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction,

the entire property, assets and undertaking of PDTPL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of PDTPL under the PDTPL Concession Agreement and the project agreements; provided that:

i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the PDTPL Concession Agreement and the project agreements;

ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the PDTPL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of PDTPL as at the PDTPL Appointed Date; and

iii) each of the project agreements remains in full force and effect;

t) any representation or warranty of PDTPL which is, as of the date hereof, found to be materially false, incorrect or misleading or PDTPL is at any time hereafter found to be in breach thereof;

u) PDTPL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

v) PDTPL has failed to fulfil any obligation, for which failure termination has been specified in the PDTPL Concession Agreement; or

w) PDTPL commits a default in complying with any other provision of the PDTPL Concession Agreement if such default causes a material adverse effect on the NHAI.

Without prejudice to any other rights or remedies which the NHAI may have under the PDTPL Concession Agreement, upon the occurrence of a PDTPL Default, the NHAI shall be entitled to terminate the PDTPL Concession Agreement by issuing a termination notice to PDTPL. Before issuing the termination notice, the NHAI shall, by notice, inform PDTPL of its intention to issue a termination notice and grant 15 days to PDTPL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the PDTPL Concession Agreement.

If there are senior lenders, the NHAI shall send a copy of its notice of intention to issue a termination notice to inform the lenders' representative and grant 30 days to the lenders' representative for making a representation on behalf of the senior lenders stating the intention to substitute PDTPL in accordance with the Substitution Agreement. If the NHAI receives a representation on behalf of the senior lenders, it shall, in its discretion, either withhold termination for a period not exceeding 180 days from the date of the representation, or exercise its right of suspension, as the case may be, to enable the lenders' representative to exercise the senior lenders' right of substitution in accordance with the Substitution Agreement. The lenders' representative may, instead of exercising the senior lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid 180 days, and upon the curing, the NHAI shall withdraw its notice and restore the rights of PDTPL. On a written request from the lenders' representative and PDTPL, the NHAI shall extend the period of 180 days by a further period not exceeding 90 days as it may deem appropriate.

Termination by PDTPL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the PDTPL Concession Agreement, the NHAI shall be deemed to be in default of the PDTPL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the PDTPL Concession Agreement by PDTPL, or due to force majeure. The default referred to herein shall include:

e) the NHAI commits a material default in complying with any of the provisions of the PDTPL Concession Agreement and such default has a material adverse effect on PDTPL;

f) the NHAI has failed to make any payment to PDTPL within the period specified in the PDTPL Concession Agreement;

g) the NHAI repudiates the PDTPL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the PDTPL Concession Agreement; or

h) the State of West Bengal commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on PDTPL and the breach continues for a period of 90 days from the date of notice given in this behalf by PDTPL to the NHAI.

Without prejudice to any other rights or remedies which PDTPL may have under the PDTPL Concession Agreement, upon the occurrence of an NHAI Default, PDTPL shall be entitled to terminate the PDTPL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, PDTPL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 30 days to the NHAI to make a representation, and may, after the expiry of the 30 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of a PDTPL Default during the operation period, the NHAI shall pay to PDTPL, by way of termination payment, an amount equal to 90% of the PDTPL Debt Due less insurance cover. If any insurance claims forming part of the insurance cover are not admitted and paid, then 80% of such unpaid claims shall be included in the computation of PDTPL Debt Due.

Upon termination on account of an NHAI Default, the NHAI shall pay to PDTPL, by way of termination payment, an amount equal to:

a) PDTPL Debt Due; and
b) 150% of the adjusted equity.

The termination payment shall not be less than an amount equal to the product of six and the average monthly fee actually realized 12 months prior to the transfer date.

Termination payment shall become due and payable to PDTPL within 30 days of a demand being made by PDTPL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the PDTPL Concession Agreement shall constitute a full and final settlement of all claims of PDTPL on account of termination of the PDTPL Concession Agreement for any reason whatsoever and PDTPL shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

PDTPL shall be responsible for all defects and deficiencies in the PDTPL Project Highway for a period of 120 days after termination. PDTPL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the PDTPL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the PDTPL Concession Agreement shall be retained in the Escrow Account for a period of 120 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

11. Concession Agreement among IRB GEPL, IRB, HMDA and HGCL dated May 26, 2023

IRB GEPL has entered into a concession agreement for development, operation, maintenance, and management of Nehru Outer Ring Road from km 0+000 to km 158+000, in Hyderabad, Telangana on toll operate transfer ("**TOT**") basis (the "**IRB GEPL Concession Agreement**"), for a period of 30 years, from August 12, 2023, the appointed date under the IRB GEPL Concession Agreement ("**IRB GEPL Appointed Date**") or until such date on which the IRB GEPL Concession Agreement is terminated by a termination notice ("**IRB GEPL Termination Date**", and the period between the IRB GEPL Appointed Date and the IRB GEPL Termination Date, the "**IRB GEPL Concession Period**").

Certain Definitions

"**IRB GEPL Debt**" shall mean the financial assistance provided by lenders in terms of the financial agreement, relevant financial package, towards meeting the debt component of the concession fee amount that is paid by IRB GEPL to HMDA in terms hereof.

"**IRB GEPL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) all rights of IRB GEPL under the project agreements; (d) security deposits (e) insurance proceeds; and (f) applicable permits and authorizations relating to or in respect of the IRB GEPL Project Road (as defined below) but does not include additional facilities;

"**IRB GEPL Project Road**" shall mean the site comprising the existing road comprising the following:

Stretch	State	Start (KM)	End (KM)	Length (KM)
Nehru Outer Ring Road	Telangana	0.000	158.010	158.010

and all IRB GEPL Project Assets, and its operation and maintenance subject to and in accordance with IRB GEPL Concession Agreement;

"**IRB GEPL Project**" shall mean the operation, and maintenance of the IRB GEPL Project Road in accordance with the provisions of the IRB GEPL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

"**Substitution Agreement**" shall mean the agreement to be entered into between HMDA, IRB GEPL and the lenders in the form set in IRB GEPL Concession Agreement.

Grant of Concession

Subject to, and in accordance with the provisions set out in the IRB GEPL Concession Agreement, the applicable laws and the applicable permits, the HMDA has granted to IRB GEPL, and IRB GEPL has accepted the concession, including the exclusive right, license, and authority during the subsistence of the IRB GEPL Concession Agreement, to collect and demand appropriate fee, operate, manage and maintain the IRB GEPL Project for a period of 30 years from the IRB GEPL Appointed Date.

Subject to, and in accordance with the provisions of the IRB GEPL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, IRB GEPL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the IRB GEPL Concession Agreement;

b) manage, operate, and maintain IRB GEPL Project Road and regulate the use thereof by third parties in accordance with the terms of the IRB GEPL Concession Agreement;

c) demand, collect, and appropriate fee from vehicles and persons liable for payment of fee for using the IRB GEPL Project Road or any part thereof and refuse entry of any vehicle if the fee due is not paid;

d) perform and fulfil all of IRB GEPL's obligations under and in accordance with the IRB GEPL Concession Agreement;

e) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of IRB GEPL under the IRB GEPL Concession Agreement; and

f) neither assign, transfer or sublet, or create any lien or encumbrance on IRB GEPL Concession Agreement, or the concession granted, or on the whole or any part of IRB GEPL Project Road, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the IRB GEPL Concession Agreement

Fees

On and from the IRB GEPL Appointed Date till the transfer date (as defined under the IRB GEPL Concession Agreement), IRB GEPL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the IRB GEPL Concession Agreement and the applicable rules and regulations, provided that IRB GEPL may determine and collect fee at such lower rates as it may, by public notice to the users, specify in respect of all or any category of users or vehicles. In accordance with the IRB GEPL Concession Agreement, IRB GEPL shall not collect any fees in relation to exempted vehicles.

IRB GEPL acknowledges and agrees that upon payment of fee, any user shall be entitled to use IRB GEPL Project Road and IRB GEPL shall not place, or cause to be placed, any restriction on such use, except to the extent specified in any applicable law, applicable permit or provisions of the IRB GEPL Concession Agreement.

Concession Fee

In consideration of the grant of concession, IRB GEPL has paid to the HMDA in accordance with terms of the IRB GEPL Concession Agreement and prior to the IRB GEPL Appointed Date, the lumpsum upfront concession fee of an amount equivalent to ₹73.80 billion.

Escrow Account

IRB GEPL is required to, prior to the IRB GEPL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the IRB GEPL Concession Agreement read with the escrow agreement entered into amongst IRB GEPL, the HMDA, the Escrow Bank and the lenders through the lenders' representative (the "**Escrow Agreement**").

IRB GEPL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;

b) all fee and any other revenues from or in respect of the IRB GEPL Project Road, including the proceeds of any deposits, capital receipts or insurance claims; and

c) all payments by the HMDA including, if any, in relation to the change of scope in the IRB GEPL Project Road.

Withdrawals during Concession Period

IRB GEPL is required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, inter alia, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by IRB GEPL for and in respect of the IRB GEPL Project Road;

b) all payments relating to construction of the IRB GEPL Project Road, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) Operation and Management ("**O&M**") expenses;

d) O&M expenses and other costs and expenses incurred by the HMDA in accordance with the provisions of the IRB GEPL Concession Agreement, and certified by the HMDA as due and payable to it;

e) monthly proportionate provision of debt service payment due in an accounting year;

f) all payments and damages certified by the HMDA as due and payable to it by IRB GEPL,

g) balance, if any, in accordance with the instructions of IRB GEPL.

IRB GEPL shall not, in any manner, modify the order of payment specified except with prior written approval from the HMDA and the lenders.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the IRB GEPL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by IRB GEPL for and in respect of the IRB GEPL Project Road;

b) payment due to lenders;

c) all payments and damages certified by the HMDA as due and payable to it by IRB GEPL;

d) retention and payments relating to the liability for defects and deficiencies set forth in the IRB GEPL Concession Agreement;

e) incurred or accrued O&M expenses;

f) any other payments required to be made under the IRB GEPL Concession Agreement; and

g) balance, if any, in accordance with the instructions of IRB GEPL.

No appropriations shall be made until a vesting certificate has been issued by the HMDA.

Change of Scope

The HMDA and/or HGCL may, notwithstanding anything to the contrary contained in the IRB GEPL Concession Agreement, but subject to provisions on 'restriction on certain works' in the IRB GEPL Concession Agreement, require IRB GEPL to alterations/modifications in the scope of IRB GEPL Project. Any such change of scope shall be made in accordance with the provisions of the IRB GEPL Concession Agreement and the costs thereof shall be expended by IRB GEPL and reimbursed by the HMDA.

If IRB GEPL determines at any time that a change in scope is necessary, it shall, by notice in writing, require the HMDA to consider such change of scope. The HMDA and/or HGCL shall, within 60 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the IRB GEPL Concession Agreement, or inform IRB GEPL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of IRB GEPL being in material default or breach of the IRB GEPL Concession Agreement, it shall pay to the HMDA by way of compensation, all direct costs suffered or incurred by the HMDA as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the IRB GEPL Concession Agreement or for any consequential losses incurred by HMDA.

In the event of the HMDA being in material default of the IRB GEPL Concession Agreement at any time after the IRB GEPL Appointed Date, it shall pay to IRB GEPL by way of compensation, all direct costs suffered or incurred by IRB GEPL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the IRB GEPL Concession Agreement. Compensation payable may include O&M Expenses and all other costs directly attributable to such material breach or default but shall not include loss of fee revenues or debt repayment or other consequential losses. In the event that a material default or breach of the IRB GEPL Concession Agreement leads to suspension of, or reduction in collection of fee, as the case may be, the HMDA shall, in addition to the payment of compensation, extend the IRB GEPL Concession Period as provided in the IRB GEPL Concession Agreement

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Termination of the IRB GEPL Concession Agreement

Termination by the HMDA

Save as otherwise provided in the IRB GEPL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and IRB GEPL fails to cure the default within the specified cure period, or where no cure period is specified, then within a cure period of 60 days, IRB GEPL shall be deemed to be in default of the IRB GEPL Concession Agreement ("**IRB GEPL Default**"), unless the default has occurred solely as a result of any breach of the IRB GEPL Concession Agreement by the HMDA and/or HGCL or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the IRB GEPL Concession Agreement and IRB GEPL fails to replenish or provide fresh performance security within a cure period of 15 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the IRB GEPL Concession Agreement, IRB GEPL fails to cure, within a cure period of 60 days, the IRB GEPL Default for which whole or part of the performance security was appropriated;

c) IRB GEPL abandons or manifests intention to abandon the operation and maintenance of IRB GEPL Project Road/additional facilities without the prior written consent of HMDA

d) IRB GEPL fails/omits to facilitate HMDA and / or HGCL during construction/development of the additional facilities in terms IRB GEPL Concession Agreement;

e) IRB GEPL fails to roll over, renew and furnish new bank guarantee performance security subject to and in accordance with IRB GEPL Concession Agreement, at least three months prior to expiry of subsisting bank guarantee;

f) IRB GEPL is in breach of the maintenance requirements or the safety requirements as the case may be;

g) IRB GEPL fails to do additional operations & maintenance in terms of IRB GEPL Concession Agreement;

h) IRB GEPL has failed to make any payment to the HMDA and/or HGCL within the period specified in the IRB GEPL Concession Agreement;

i) upon occurrence of a financial default, the lenders' representative has, by notice, required the HMDA to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and IRB GEPL fails to cure the default within the cure period specified hereinabove;

j) a breach of the project agreements by IRB GEPL has caused a material adverse effect;

k) IRB GEPL creates an encumbrance in breach of the IRB GEPL Concession Agreement;

l) IRB GEPL repudiates the IRB GEPL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the IRB GEPL Concession Agreement;

m) a change in ownership has occurred in breach of the IRB GEPL Concession Agreement;

n) there is a transfer, pursuant to law either of (i) the rights and/or obligations of IRB GEPL under any of the project agreements, or of (ii) all or part of the assets or undertaking of IRB GEPL, and such transfer causes a material adverse effect;

o) an execution levied on any of the assets of IRB GEPL has caused a material adverse effect;

p) IRB GEPL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for IRB GEPL or for the whole or material part of its assets that has a material bearing on the IRB GEPL Project;

q) IRB GEPL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the HMDA, a material adverse effect;

r) a resolution for winding up of IRB GEPL is passed, or any petition for winding up of IRB GEPL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or IRB GEPL is ordered to be wound up by Court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of IRB GEPL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of IRB GEPL under the IRB GEPL Concession Agreement and the project agreements; provided that:

   i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the IRB GEPL Concession Agreement and the project agreements;

   ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the IRB GEPL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of IRB GEPL as at the IRB GEPL Appointed Date; and

   iii) each of the project agreements remains in full force and effect;

s) any representation or warranty of IRB GEPL which is, as of the date of execution of the IRB GEPL Concession Agreement, found to be materially false, incorrect or misleading

t) IRB GEPL submits to the HMDA and/or HGCL any statement, notice or other document, in written or electronic form, which has a material effect on the HMDA's and/or HGCL's rights, obligations or interests and which is false in material particulars;

u) IRB GEPL has failed to fulfil any obligation, for which failure termination has been specified in the IRB GEPL Concession Agreement; or

v) IRB GEPL commits a default in complying with any other provision of the IRB GEPL Concession Agreement if such default causes a material adverse effect on the HMDA and/or HGCL.

w) an escrow default has occurred and IRB GEPL fails to cure the default within a cure period of 15 days;

Without prejudice to any other rights or remedies which the HMDA may have under the IRB GEPL Concession Agreement, upon the occurrence of an IRB GEPL Default, the HMDA shall be entitled to issue a notice of its intention to terminate the IRB GEPL Concession Agreement with a copy thereof to the lenders.

Immediately upon the issue by Authority of the notice of intention to terminate, the lenders shall have the right to nominate an entity to replace IRB GEPL and perform IRB GEPL's obligations hereunder (the "**Substitute Entity**"). IRB GEPL shall procure that lenders shall notify HMDA about whether they are exercising their right of substitution within 60 days of receipt of notice of intention to terminate, or the lenders' notice of Default (as defined in the Substitution Agreement). Any such Substitute Entity shall have the legal, financial and technical capability reasonably necessary to perform the obligations of IRB GEPL in accordance with the terms of IRB GEPL Concession Agreement. Any such Substitute Entity shall be nominated in accordance with the procedure as set out in the Substitution Agreement.

Termination by IRB GEPL

In the event that any of the defaults specified below shall have occurred, and the HMDA fails to cure the default within a cure period of 90 days or such longer period as provided in the IRB GEPL Concession Agreement, the HMDA shall be deemed to be in default of the IRB GEPL Concession Agreement ("**HMDA Default**"), unless the default has occurred as a result of a breach of the IRB GEPL Concession Agreement by IRB GEPL, or due to force majeure. The default referred to herein shall include:

a) the HMDA commits a material default in complying with any of the provisions of the IRB GEPL Concession Agreement and such default has a material adverse effect on IRB GEPL;

b) the HMDA repudiates the IRB GEPL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the IRB GEPL Concession Agreement; or

c) the State commits a material default in complying with the provisions of the state's letter of comfort, if such default has a material adverse effect on IRB GEPL and the breach continues for a period of 90 days from the date of notice given in this behalf by IRB GEPL to the HMDA.

Without prejudice to any other rights or remedies which IRB GEPL may have under the IRB GEPL Concession Agreement, upon the occurrence of an HMDA Default, IRB GEPL shall be entitled to terminate the IRB GEPL Concession Agreement by issuing a termination notice to the HMDA. Before issuing the termination notice, IRB GEPL shall, by notice, inform the HMDA of its intention to issue a termination notice and grant 15 days to the HMDA to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of an IRB GEPL Default during the IRB GEPL Concession Period, the performance security shall be forfeited and IRB GEPL would continue to be liable towards any antecedent liability, all obligations accrued before the effective date of the termination and also for the obligations including divestment requirements that must be fulfilled in terms hereof after termination. In addition to this, HMDA shall pay to IRB GEPL 70% of the unexpired cash flow.

Upon termination on account of an HMDA Default, the HMDA shall pay to IRB GEPL, by way of termination payment, an amount equal to 105% of the unexpired cash flow.

IRB GEPL shall be entitled to receive termination payment only upon furnishing to HMDA no objection certificate issued by lenders/lenders' representative recording/effecting release; vacation/discharge of the charge on IRB GEPL Project receivables (if any) created by IRB GEPL for securing repayment of IRB GEPL Debt.

Without prejudice to the respective rights or remedy of the HMDA and IRB GEPL, the termination payment shall become due and payable to IRB GEPL within 15 days of a demand being made by IRB GEPL to the HMDA with the necessary particulars, and in the event of any delay, the HMDA shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the IRB GEPL Concession Agreement shall constitute a full and final settlement of all claims of IRB GEPL on account of termination of the IRB GEPL Concession Agreement for any reason whatsoever and IRB GEPL shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

IRB GEPL shall be responsible for all defects and deficiencies in the IRB GEPL Project Road for a period of 60 days after termination. IRB GEPL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the IRB GEPL Project Road as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the HMDA and/or HGCLin this behalf. A sum equal to the performance security shall be retained in the Escrow Account for a period of 90 days after termination for meeting the liabilities, if any, arising out of, or in connection with the provisions governing 'defects liability after termination' in the IRB GEPL Concession Agreement.

12. Concession Agreement between STPL and the NHAI dated May 12, 2023

STPL has entered into a concession agreement in respect of the upgradation to six lane with paved shoulder of NH-27 from Samakhiyali to Santalpur section from KM 339+200 to KM 430+100 in the state of Gujarat to be executed on a design, build, finance, operate and transfer basis (the "**STPL Concession Agreement**"), for a period of 20 years, from December 28, 2023 ("**STPL Appointed Date**") or until such date on which the STPL Concession Agreement is terminated by a termination notice ("**STPL Termination Date**", and the period between the STPL Appointed Date and the STPL Termination Date, the "**STPL Concession Period**").

Certain Definitions

"**STPL Debt Due**" shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the transfer date:

a) the principal amount of the debt provided by the senior lenders under the financing agreements for financing the total project cost (the "**Principa**l") but excluding any part of the Principal that had fallen due for repayment two years prior to the transfer date;

b) all accrued interest, financing fees and charges payable under the financing agreements on, or in respect of, the debt referred to in the sub-clause above until the transfer date but excluding (i) any interest, fees or charges that had fallen due one year prior to the transfer date, (ii) any penal interest or charges payable under the financing agreements to any senior lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to an NHAI Default (as defined below); and

c) any subordinated debt which is included in the financing package and disbursed by lenders for financing the total project cost;

If all, or any part of the STPL Debt Due is convertible into equity at the option of the senior lenders and/or STPL, it shall, for the purposes of the STPL Concession Agreement, be deemed to be STPL Debt Due even after the conversion and the Principal thereof shall be dealt with as if such conversion had not been undertaken;

"**STPL Debt Service**" shall mean the sum of all payments on account of principal, interest, financing fees and charges due and payable in an accounting year to the senior lenders under the financing agreements;

"**STPL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) project facilities situated on the site; (d) all rights of STPL under the project agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) applicable permits and authorizations relating to or in respect of the STPL Project Highway (as defined below), but does not include additional facilities;

"**STPL Project Highway**" shall mean the site comprising the existing road comprising NH-27 from 339+200 to 430+100 and all STPL Project Assets, and its subsequent development and augmentation in accordance with the STPL Concession Agreement;

"**STPL Project**" shall mean the construction, operation, and maintenance of the STPL Project Highway in accordance with the provisions of the STPL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

"**Premium**" shall mean an amount payable to the NHAI by STPL in the form of an additional concession fee, as set forth in the bid for each year of the STPL Concession Period.

Grant of Concession

Subject to, and in accordance with the provisions set out in the STPL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to STPL, and STPL has accepted the concession, including the exclusive right, license, and authority during the subsistence of the STPL Concession Agreement, to construct, operate and maintain the STPL Project for a period of 20 years from the STPL Appointed Date.

Subject to, and in accordance with the provisions of the STPL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, STPL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the STPL Concession Agreement;

b) finance and construct the STPL Project Highway;

c) manage, operate, and maintain the STPL Project Highway and regulate the use thereof by third parties;

d) demand, collect, and appropriate fee from vehicles and persons liable for payment of fee for using the STPL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

e) perform and fulfil all of STPL's obligations under and in accordance with the STPL Concession Agreement;

f) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of STPL under the STPL Concession Agreement; and

g) neither assign, transfer or sublet, or create any lien or encumbrance on the STPL Concession Agreement, or the concession granted, or on the whole or any part of the STPL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the STPL Concession Agreement or the agreement for the substitution of STPL entered into by STPL, the NHAI, and the lenders' representative on behalf of the senior lenders (the "**Substitution Agreement**").

Fees

On and from the commercial operation date ("**COD**") till the transfer date, STPL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the STPL Concession Agreement and the applicable rules and regulations, provided that for ease of payment and collection, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated from time to time. Further, STPL may determine and collect fee at such lower rates as it may, by public notice to the users, specify in respect of all or any category of users or vehicles. In accordance with the STPL Concession Agreement, STPL shall not collect any fees in relation to exempted vehicles.

STPL shall not collect any fee from a local user for non-commercial use of the STPL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the STPL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, STPL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, STPL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the STPL Project Highway and does not cross a toll plaza.

Concession Fee

In consideration of the grant of concession, STPL shall pay to the NHAI by way of concession fee a sum of ₹1 per annum.

Additionally, immediately after the first anniversary of the project completion date, a premium in the form of an additional concession fee for every year of the remaining concession period is payable by STPL. The premium to be paid for the second year after the project completion date is equal to 42.84% of the realisable fee and is required to be paid by STPL as due to the NHAI during that year. For subsequent years, the premium will be determined based on the total realisable fee in the respective year at the percentage to be arrived at by increasing the percentage of premium in the respective year by an additional 1% as compared to the immediately preceding year.

The concession fee payable under the provisions of the STPL Concession Agreement shall be due and payable in monthly instalments within seven days of the close of each month.

Escrow Account

STPL was required to, prior to the STPL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the STPL Concession Agreement read with the escrow agreement entered into among STPL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

STPL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;
b) all fee and any other revenues from or in respect of the STPL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and
c) all payments by the NHAI, after deducting any outstanding concession fee.

The senior lenders may make direct disbursements to the EPC contractor in accordance with the express provisions contained in this behalf in the financing agreements.

Withdrawals during Concession Period

STPL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by STPL for and in respect of the STPL Project Highway;

b) all payments relating to construction of the STPL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) operation and management ("**O&M**") expenses, subject to the ceiling, if any, set forth in the financing agreements;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the STPL Concession Agreement, and certified by the NHAI as due and payable to it;

e) concession fee and premium due and payable to the NHAI;

f) monthly proportionate provision of STPL Debt Service due in an accounting year;

g) premium due and payable to the NHAI;

h) all payments and damages certified by the NHAI as due and payable to it by STPL, including repayment of revenue shortfall loan. STPL has agreed to give irrevocable instructions to the Escrow Bank to make payments from the Escrow Account in accordance with the instructions of the NHAI under the STPL Concession Agreement and debit the payment to O&M expenses;

i) monthly proportionate provision of STPL Debt Service payments due in an accounting year in respect of subordinated debt;

j) any reserve requirements set forth in the financing agreements; and

k) balance, if any, in accordance with the instructions of STPL.

STPL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the STPL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by STPL for and in respect of the STPL Project Highway;

b) 90% of the STPL Debt Due excluding the subordinated debt;

c) outstanding concession fee;

d) all payments and damages certified by the NHAI as due and payable to it by STPL, including the repayment of the revenue shortfall loan. STPL has agreed to give irrevocable instruction to the Escrow Bank to make payment from the Escrow Account in accordance with the instructions of the NHAI under the STPL Concession Agreement and debit the payment to O&M expenses.

e) retention and payments relating to the liability for defects and deficiencies set forth in the STPL Concession Agreement;

f) outstanding STPL Debt Service including balance of STPL Debt Due;

g) outstanding subordinated debt;

h) incurred or accrued O&M expenses;

i) any other payments required to be made under the STPL Concession Agreement; and

j) balance, if any, in accordance with the instructions of STPL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the STPL Concession Agreement, require the provision of additional works and services which are not included in the scope of the project as contemplated by the STPL Concession Agreement. Any such change of scope shall be made in accordance with the provisions of the STPL Concession Agreement and the costs thereof shall be expended by STPL and reimbursed by the NHAI in accordance with the STPL Concession Agreement.

If STPL determines at any time that a change in scope is necessary for providing safer and improved services to the users, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 60 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the STPL Concession Agreement, or inform STPL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of STPL being in material default or breach of the STPL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the STPL Concession Agreement.

In the event of the NHAI being in material default or breach of the STPL Concession Agreement at any time after the STPL Appointed Date, it shall pay to STPL by way of compensation, all direct costs suffered or incurred by STPL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the STPL Concession Agreement.

In the event that a material default or breach of the STPL Concession Agreement causes a delay in achieving COD or leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the STPL Concession Period as provided in the STPL Concession Agreement. In the event that an additional toll way or a competing road, as the case may be, is opened to traffic in breach of the STPL Concession Agreement, the NHAI shall pay to STPL, for each day of the breach, compensation as provided in the STPL Concession Agreement, until the breach is cured. The payment of compensation by the NHAI shall be deemed to cure the breach of the STPL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Effects of Variation in Traffic Growth

Subject to the provisions of the STPL Concession Agreement, in the event actual average traffic shall have fallen short of the target traffic by more than 5% (five percent), then for every 1% (one percent) shortfall as compared to the target traffic, the STPL Concession Period shall, subject to payment of concession fee and additional concession fee in accordance with the STPL Concession Agreement, be increased by 1% (one percent) thereof; provided that such increase in STPL Concession Period shall not in any case exceed 20% (twenty percent) of the STPL Concession Period.

Subject to the provisions of the STPL Concession Agreement, in the event actual average traffic shall have exceeded the target traffic by more than 5% (five percent), then for every 1% (one percent) increase as compared to the target traffic, the STPL Concession Period shall be reduced by 1% (one percent) thereof; provided that such reduction in STPL Concession Period shall not in any case exceed 20% (twenty percent) of the STPL Concession Period.

Notwithstanding anything to the contrary contained in the STPL Concession Agreement, if the average daily traffic of PCUs in any accounting year shall exceed the designed capacity of the STPL Project Highway, an indirect political event under the STPL Concession Agreement will be deemed to have occurred and the NHAI may, at its discretion, terminate the STPL Concession Agreement. If STPL has completed the construction works necessary for augmenting the capacity of the STPL Project Highway such that its capacity has increased sufficiently for carrying the then current traffic in accordance with the corresponding provisions of the relevant Indian Roads Congress publication, prior to the issue of a termination notice by the NHAI, the indirect political event will deemed to have been cured.

Termination of the STPL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the STPL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and STPL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, STPL shall be deemed to be in default of the STPL Concession Agreement ("**STPL Default**"), unless the default has occurred solely as a result of any breach of the STPL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the STPL Concession Agreement and STPL fails to replenish or provide fresh performance security within a cure period of 30 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the STPL Concession Agreement, STPL fails to cure, within a cure period of 90 days, the STPL Default for which whole or part of the performance security was appropriated;

c) STPL does not achieve the latest outstanding project milestone due in accordance with the STPL Concession Agreement and continues to be in default for 90 days;

d) STPL abandons or manifests intention to abandon the construction or operation of the STPL Project Highway without the prior written consent of the NHAI;

e) project completion date does not occur within the period specified in the STPL Concession Agreement;

f) the punch list items have not been completed within the period set forth in the STPL Concession Agreement;

g) STPL is in breach of the maintenance requirements or the safety requirements as the case may be;

h) STPL has failed to make any payment to the NHAI within the period specified in the STPL Concession Agreement;

i) an escrow default has occurred and STPL fails to cure the default within a cure period of 15 days;

j) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and STPL fails to cure the default within the cure period specified hereinabove;

k) a breach of the project agreements by STPL has caused a material adverse effect;

l) STPL creates an encumbrance in breach of the STPL Concession Agreement;

m) STPL repudiates the STPL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the STPL Concession Agreement;

n) a change in ownership has occurred in breach of the STPL Concession Agreement;

o) there is a transfer, pursuant to law either of (i) the rights and/or obligations of STPL under any of the project agreements, or of (ii) all or part of the assets or undertaking of STPL, and such transfer causes a material adverse effect;

p) an execution levied on any of the assets of STPL has caused a material adverse effect;

q) STPL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for STPL or for the whole or material part of its assets that has a material bearing on the STPL Project;

r) STPL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

s) a resolution for winding up of STPL is passed, or any petition for winding up of STPL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or STPL is ordered to be wound up by a court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of STPL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of STPL under the STPL Concession Agreement and the project agreements; provided that:

   iv) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the STPL Concession Agreement and the project agreements;

   v) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the STPL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of STPL as at the STPL Appointed Date; and

   vi) each of the project agreements remains in full force and effect;

t) any representation or warranty of STPL which is, as of the date hereof, found to be materially false, incorrect or misleading or STPL is at any time hereafter found to be in breach thereof;

u) STPL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

v) STPL has failed to fulfil any obligation, for which failure termination has been specified in the STPL Concession Agreement; or

w) STPL commits a default in complying with any other provision of the STPL Concession Agreement if such default causes a material adverse effect on the NHAI.

Without prejudice to any other rights or remedies which the NHAI may have under the STPL Concession Agreement, upon the occurrence of a STPL Default, the NHAI shall be entitled to terminate the STPL Concession Agreement by issuing a termination notice to STPL. Before issuing the termination notice, the NHAI shall, by notice, inform STPL of its intention to issue a termination notice and grant 15 days to STPL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the STPL Concession Agreement.

If there are senior lenders, the NHAI shall send a copy of its notice of intention to issue a termination notice to inform the lenders' representative and grant 30 days to the lenders' representative for making a representation on behalf of the senior lenders stating the intention to substitute STPL in accordance with the Substitution Agreement. If the NHAI receives a representation on behalf of the senior lenders, it shall, in its discretion, either withhold termination for a period not exceeding 180 days from the date of the representation, or exercise its right of suspension, as the case may be, to enable the lenders' representative to exercise the senior lenders' right of substitution in accordance with the Substitution Agreement. The lenders' representative may, instead of exercising the senior lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid 180 days, and upon the curing, the NHAI shall withdraw its notice and restore the rights of STPL. On a written request from the lenders' representative and STPL, the NHAI shall extend the period of 180 days by a further period not exceeding 90 days as it may deem appropriate.

Termination by STPL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the STPL Concession Agreement, the NHAI shall be deemed to be in default of the STPL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the STPL Concession Agreement by STPL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the STPL Concession Agreement and such default has a material adverse effect on STPL;

b) the NHAI has failed to make any payment to STPL within the period specified in the STPL Concession Agreement;

c) the NHAI repudiates the STPL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the STPL Concession Agreement; or

d) the State commits a material default in complying with the provisions of the State Support Agreement if such default has a material adverse effect on STPL and the breach continues for a period of 90 days from the date of notice given in this behalf by STPL to the NHAI.

Without prejudice to any other rights or remedies which STPL may have under the STPL Concession Agreement, upon the occurrence of an NHAI Default, STPL shall be entitled to terminate the STPL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, STPL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 30 days to the NHAI to make a representation, and may, after the expiry of the 30 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of a STPL Default during the operation period, the NHAI shall pay to STPL, by way of termination payment, an amount equal to 90% of the STPL Debt Due less insurance cover. If any insurance claims forming part of the insurance cover are not admitted and paid, then 80% of such unpaid claims shall be included in the computation of STPL Debt Due.

Upon termination on account of an NHAI Default, the NHAI shall pay to STPL, by way of termination payment, an amount equal to:

a) STPL Debt Due; and
b) 150% of the adjusted equity.

The termination payment shall not be less than an amount equal to the product of six and the average monthly fee actually realized 12 months prior to the transfer date.

Termination payment shall become due and payable to STPL within 30 days of a demand being made by STPL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not

exceed 90 days. The termination payment under the STPL Concession Agreement shall constitute a full and final settlement of all claims of STPL on account of termination of the STPL Concession Agreement for any reason whatsoever and STPL shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

STPL shall be responsible for all defects and deficiencies in the STPL Project Highway for a period of 120 days after termination. STPL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the STPL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the STPL Concession Agreement shall be retained in the Escrow Account for a period of 120 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

13. Concession Agreement between IRB LTPL and the NHAI dated November 24, 2023

IRB LTPL has entered into a concession agreement in respect of the tolling, operation, management, maintenance and transfer of four lane Lalitpur-Sagar-Lakhnadon section of NH-26 (from Km 99.005 to Km 415.089) in Uttar Pradesh and Madhya Pradesh to be executed on a toll-operate-transfer basis (the "**IRB LTPL Concession Agreement**"), for a period of 20 years from the appointed date under the IRB LTPL Concession Agreement ("**IRB LTPL Appointed Date**") or until such date on which the IRB LTPL Concession Agreement is terminated by a termination notice ("**IRB LTPL Termination Date**", and the period between the IRB LTPL Appointed Date and the IRB LTPL Termination Date, the "**IRB LTPL Concession Period**").

Certain Definitions

"**IRB LTPL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) all rights of IRB LTPL under the project agreements; (d) financial assets, such as receivables, security deposits etc.; (e) insurance proceeds; and (f) applicable permits and authorizations relating to or in respect of the IRB LTPL Project Highway (as defined below), but does not include additional facilities;

"**IRB LTPL Project Highway**" shall mean the site comprising the following:

Stretch	State	Start (KM)	End (KM)	Length (KM)
Lalitpur-Sagar-Lakhnadon	Uttar Pradesh and Madhya Pradesh	99+005	415+089	316+084

and all IRB LTPL Project Assets, and its operation and maintenance in accordance with the IRB LTPL Concession Agreement;

"**IRB LTPL Project**" shall mean the operation and maintenance of the IRB LTPL Project Highway in accordance with the provisions of the IRB LTPL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

Grant of Concession

Subject to, and in accordance with the provisions set out in the IRB LTPL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to IRB LTPL, and IRB LTPL has accepted the concession, including the exclusive right, license, and authority during the subsistence of the IRB LTPL Concession Agreement, to operate and maintain the IRB LTPL Project for a period of 20 years from the IRB LTPL Appointed Date.

Subject to, and in accordance with the provisions of the IRB LTPL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, IRB LTPL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the IRB LTPL Concession Agreement;

b) manage, operate, and maintain the IRB LTPL Project Highway and regulate the use thereof by third parties;

c) demand, collect, and appropriate fee from vehicles and persons liable for payment of fee for using the IRB LTPL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

d) perform and fulfil all of IRB LTPL's obligations under and in accordance with the IRB LTPL Concession Agreement;

e) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of IRB LTPL under the IRB LTPL Concession Agreement; and

f) neither assign, transfer or sublet, or create any lien or encumbrance on the IRB LTPL Concession Agreement, or the concession granted, or on the whole or any part of the IRB LTPL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the IRB LTPL Concession Agreement.

Fees

On and from the appointed date till the transfer date, IRB LTPL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the IRB LTPL Concession Agreement and the applicable rules and regulations, provided that for ease of payment and collection, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated from time to time. Further, IRB LTPL may determine and collect fee at such lower rates as it may, by public notice to the users or vehicles.

IRB LTPL shall not collect any fee from a local user for non-commercial use of the IRB LTPL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the IRB LTPL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, IRB LTPL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, IRB LTPL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the IRB LTPL Project Highway and does not cross a toll plaza.

Concession Fee

In consideration of the grant of concession, IRB LTPL shall pay to the NHAI in accordance with terms of the IRB LTPL Concession Agreement and prior to the IRB LTPL Appointed Date, a lumpsum upfront concession fee of an amount equivalent to ₹44.28 billion.

Escrow Account

IRB LTPL was required to, prior to the IRB LTPL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the IRB LTPL Concession Agreement read with the escrow agreement entered into among IRB LTPL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

IRB LTPL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;
b) all fee and any other revenues from or in respect of the IRB LTPL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and
c) all payments by the NHAI, including, if any, in relation to the change of scope.

Withdrawals during Concession Period

IRB LTPL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by IRB LTPL for and in respect of the IRB LTPL Project Highway;

b) all payments relating to construction of the IRB LTPL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) operation and management ("**O&M**") expenses;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the IRB LTPL Concession Agreement, and certified by the NHAI as due and payable to it;

e) monthly proportionate provision of IRB LTPL Debt Service due in an accounting year;

f) all payments and damages certified by the NHAI as due and payable to it by IRB LTPL; and

g) balance, if any, in accordance with the instructions of IRB LTPL.

IRB LTPL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI and the lenders.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the IRB LTPL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by IRB LTPL for and in respect of the IRB LTPL Project Highway;

b) payment due to lenders;

c) all payments and damages certified by the NHAI as due and payable to it by IRB LTPL;

d) retention and payments relating to the liability for defects and deficiencies set forth in the IRB LTPL Concession Agreement;

e) incurred or accrued O&M expenses;

f) any other payments required to be made under the IRB LTPL Concession Agreement; and

g) balance, if any, in accordance with the instructions of IRB LTPL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the IRB LTPL Concession Agreement, require IRB LTPL to make alterations or modifications in the scope of the project. Any such change of scope shall be made in accordance with the provisions of the IRB LTPL Concession Agreement and the costs thereof shall be expended by IRB LTPL and reimbursed by the NHAI in accordance with the IRB LTPL Concession Agreement.

If IRB LTPL determines at any time that a change in scope is necessary, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 60 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions

of the IRB LTPL Concession Agreement, or inform IRB LTPL in writing of its reasons for not accepting such change of scope request.

Compensation for Breach of Agreement

In the event of IRB LTPL being in material default or breach of the IRB LTPL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the IRB LTPL Concession Agreement. Compensation payable may include operation and maintenance expenses and all other costs directly attributable to such material breach or default but does not include loss of fee revenues or debt repayment or other consequential losses

In the event of the NHAI being in material default or breach of the IRB LTPL Concession Agreement at any time after the IRB LTPL Appointed Date, it shall pay to IRB LTPL by way of compensation, all direct costs suffered or incurred by IRB LTPL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the IRB LTPL Concession Agreement.

In the event that a material default or breach of the IRB LTPL Concession Agreement leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the IRB LTPL Concession Period as provided in the IRB LTPL Concession Agreement. The payment of compensation by the NHAI shall be deemed to cure the breach of the IRB LTPL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Termination of the IRB LTPL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the IRB LTPL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and IRB LTPL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, IRB LTPL shall be deemed to be in default of the IRB LTPL Concession Agreement ("**IRB LTPL Default**"), unless the default has occurred solely as a result of any breach of the IRB LTPL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the IRB LTPL Concession Agreement and IRB LTPL fails to replenish or provide fresh performance security within a cure period of 15 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the IRB LTPL Concession Agreement, IRB LTPL fails to cure, within a cure period of 60 days, the IRB LTPL Default for which whole or part of the performance security was appropriated;

c) IRB LTPL abandons or manifests intention to abandon the operation and maintenance of the IRB LTPL Project Highway without the prior written consent of the NHAI;

d) IRB LTPL fails to roll over, renew and furnish new bank guarantee performance security subject to and in accordance with the IRB LTPL Concession Agreement, at least three months prior to expiry of subsisting bank guarantee;

e) IRB LTPL is in breach of the maintenance requirements or the safety requirements as the case may be;

f) IRB LTPL has failed to make any payment to the NHAI within the period specified in the IRB LTPL Concession Agreement;

g) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and IRB LTPL fails to cure the default within the cure period specified hereinabove;

h) a breach of the project agreements by IRB LTPL has caused a material adverse effect;

i) IRB LTPL creates an encumbrance in breach of the IRB LTPL Concession Agreement;

j) IRB LTPL repudiates the IRB LTPL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the IRB LTPL Concession Agreement;

k) a change in ownership has occurred in breach of the IRB LTPL Concession Agreement;

l) there is a transfer, pursuant to law either of (i) the rights and/or obligations of IRB LTPL under any of the project agreements, or of (ii) all or part of the assets or undertaking of IRB LTPL, and such transfer causes a material adverse effect;

m) an execution levied on any of the assets of IRB LTPL has caused a material adverse effect;

n) IRB LTPL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for IRB LTPL or for the whole or material part of its assets that has a material bearing on the IRB LTPL Project;

o) IRB LTPL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

p) a resolution for winding up of IRB LTPL is passed, or any petition for winding up of IRB LTPL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or IRB LTPL is ordered to be wound up by a court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of IRB LTPL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of IRB LTPL under the IRB LTPL Concession Agreement and the project agreements; provided that:

    i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the IRB LTPL Concession Agreement and the project agreements;

    ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the IRB LTPL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of IRB LTPL as at the IRB LTPL Appointed Date; and

    iii) each of the project agreements remains in full force and effect;

q) any representation or warranty of IRB LTPL which is, as of the date hereof, found to be materially false, incorrect or misleading or IRB LTPL is at any time hereafter found to be in breach thereof;

r) IRB LTPL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

s) IRB LTPL has failed to fulfil any obligation, for which failure termination has been specified in the IRB LTPL Concession Agreement; or

t) IRB LTPL commits a default in complying with any other provision of the IRB LTPL Concession Agreement if such default causes a material adverse effect on the NHAI.; or

u) an escrow default has occurred and IRB LTPL fails to cure the default within a cure period of 15 days.

Without prejudice to any other rights or remedies which the NHAI may have under the IRB LTPL Concession Agreement, upon the occurrence of a IRB LTPL Default, the NHAI shall be entitled to issue a notice of its intention to terminate the IRB LTPL Concession Agreement, with a copy therof to the lenders. Immediately upon

the issue by the NHAI of the notice of intention to terminate, the lenders shall have the right to nominate an entity to replace IRB LTPL and perform IRB LTPL's obligations under the IRB LTPL Concession Agreement. IRB LTPL shall procure that lenders shall notify the NHAI about whether they are exercising their right of substitution within 60 days of receipt of notice of intention to terminate, or the lender's notice of default. Any such substitute entity shall have the legal, financial and technical capability reasonably necessary to perform the obligations of IRB LTPL in accordance with the procedure as set out in the Substitution Agreement.

Termination by IRB LTPL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the IRB LTPL Concession Agreement, the NHAI shall be deemed to be in default of the IRB LTPL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the IRB LTPL Concession Agreement by IRB LTPL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the IRB LTPL Concession Agreement and such default has a material adverse effect on IRB LTPL;

b) the NHAI repudiates the IRB LTPL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the IRB LTPL Concession Agreement; or

c) the State commits a material default in complying with the provisions of the State Support Agreemenr if such default has a material adverse effect on IRB LTPL and the breach continues for a period of 90 days from the date of notice given in this behalf by IRB LTPL to the NHAI.

Without prejudice to any other rights or remedies which IRB LTPL may have under the IRB LTPL Concession Agreement, upon the occurrence of an NHAI Default, IRB LTPL shall be entitled to terminate the IRB LTPL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, IRB LTPL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 15 days to the NHAI to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of IRB LTPL Default during the operation period, the performance security shall be forfeited and IRB LTPL would continue to be liable towards any antecedent liability, all obligations accrued before the effective date of the termination and also the obligations including divestment requirements that must be fulfilled in terms hereof after termination. In the event of the NHAI terminating the IRB LTPL Concession Agreement on account of IRB LTPL Default and in addition to the NHAI forfeiting the performance security, the NHAI shall pay IRB LTPL 70% of the unexpired cash flow.

Upon termination on account of an NHAI Default, the NHAI shall pay to IRB LTPL, by way of termination payment, an amount equal to 105% of the unexpired cash flow.

Termination payment shall become due and payable to IRB LTPL within 15 days of a demand being made by IRB LTPL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the IRB LTPL Concession Agreement shall constitute a full and final settlement of all claims of IRB LTPL on account of termination of the IRB LTPL Concession Agreement for any reason whatsoever and IRB LTPL shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

IRB LTPL shall be responsible for all defects and deficiencies in the IRB LTPL Project Highway for a period of 60 days after termination. IRB LTPL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the IRB LTPL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the IRB LTPL Concession Agreement shall be retained in the Escrow Account

for a period of 90 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

14. Concession Agreement between IRB GTPL and the NHAI dated January 12, 2024

IRB GTPL has entered into a concession agreement in respect of the tolling, operation, management, maintenance and transfer of Gwalior Jhansi section from km 0.00 (revised km 16.00) to km 103.00 (revised km 98.455) in the State of Madhya Pradesh and Uttar Pradesh to be executed on a toll-operate-transfer basis (the "**IRB GTPL Concession Agreement**"), for a period of 20 years from the appointed date under the IRB GTPL Concession Agreement ("**IRB GTPL Appointed Date**") or until such date on which the IRB GTPL Concession Agreement is terminated by a termination notice ("**IRB GTPL Termination Date**", and the period between the IRB GTPL Appointed Date and the IRB GTPL Termination Date, the "**IRB GTPL Concession Period**").

Certain Definitions

"**IRB GTPL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) all rights of IRB GTPL under the project agreements; (d) financial assets, such as receivables, security deposits etc.; (e) insurance proceeds; and (f) applicable permits and authorizations relating to or in respect of the IRB GTPL Project Highway (as defined below), but does not include additional facilities;

"**IRB GTPL Project Highway**" shall mean the site comprising the following:

Stretch	State	Start (KM)	End (KM)	Length (KM)
Gwalior Jhansi section	Madhya Pradesh and Uttar Pradesh	0.000 (revised 16.000)	103.000 (revised 98.455)	82.455

and all IRB GTPL Project Assets, and its operation and maintenance in accordance with the IRB GTPL Concession Agreement;

"**IRB GTPL Project**" shall mean the operation and maintenance of the IRB GTPL Project Highway in accordance with the provisions of the IRB GTPL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

Grant of Concession

Subject to, and in accordance with the provisions set out in the IRB GTPL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to IRB GTPL, and IRB GTPL have accepted the concession, including the exclusive right, license, and authority during the subsistence of the IRB GTPL Concession Agreement, to operate and maintain the IRB GTPL Project for a period of 20 years from the IRB GTPL Appointed Date.

Subject to, and in accordance with the provisions of the IRB GTPL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, IRB GTPL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the IRB GTPL Concession Agreement;

b) manage, operate, and maintain the IRB GTPL Project Highway and regulate the use thereof by third parties;

c) demand, collect, and appropriate fee from vehicles and persons liable for payment of fee for using the IRB GTPL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

d) perform and fulfil all of IRB GTPL's obligations under and in accordance with the IRB GTPL Concession Agreement;

e) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of IRB GTPL under the IRB GTPL Concession Agreement; and

f) neither assign, transfer or sublet, or create any lien or encumbrance on the IRB GTPL Concession Agreement, or the concession granted, or on the whole or any part of the IRB GTPL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the IRB GTPL Concession Agreement.

Fees

On and from the appointed date till the transfer date, IRB GTPL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the IRB GTPL Concession Agreement and the applicable rules and regulations. In accordance with the IRB GTPL Concession Agreement, IRB GTPL shall not collect any fees in relation to exempted vehicles.

IRB GTPL shall not collect any fee from a local user for non-commercial use of the IRB GTPL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the IRB GTPL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, IRB GTPL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, IRB GTPL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the IRB GTPL Project Highway and does not cross a toll plaza.

Concession Fee

In consideration of the grant of concession, IRB GTPL shall pay to the NHAI in accordance with terms of the IRB GTPL Concession Agreement and prior to the IRB GTPL Appointed Date, a lumpsum upfront concession fee of an amount equivalent to ₹11.61 billion.

Escrow Account

IRB GTPL were required to, prior to the IRB GTPL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the IRB GTPL Concession Agreement read with the escrow agreement entered into among IRB GTPL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

IRB GTPL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;
b) all fee and any other revenues from or in respect of the IRB GTPL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and
c) all payments by the NHAI including, if any, in relation to the change in scope in the IRB GTPL Project.

Withdrawals during Concession Period

IRB GTPL were required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by IRB GTPL for and in respect of the IRB GTPL Project Highway;

b) all payments relating to construction of the IRB GTPL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) operation and management ("**O&M**") expenses;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the IRB GTPL Concession Agreement, and certified by the NHAI as due and payable to it;

e) monthly proportionate provision of IRB GTPL Debt Service due in an accounting year;

f) all payments and damages certified by the NHAI as due and payable to it by IRB GTPL; and

g) balance, if any, in accordance with the instructions of IRB GTPL.

IRB GTPL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI and the lenders.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the IRB GTPL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by IRB GTPL for and in respect of the IRB GTPL Project Highway;

b) payment due to lenders;

c) all payments and damages certified by the NHAI as due and payable to it by IRB GTPL;

d) retention and payments relating to the liability for defects and deficiencies set forth in the IRB GTPL Concession Agreement;

e) incurred or accrued O&M expenses;

f) any other payments required to be made under the IRB GTPL Concession Agreement; and

g) balance, if any, in accordance with the instructions of IRB GTPL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the IRB GTPL Concession Agreement, require IRB GTPL to make alterations or modifications in the scope of the project. Any such change of scope shall be made in accordance with the provisions of the IRB GTPL Concession Agreement and the costs thereof shall be expended by IRB GTPL and reimbursed by the NHAI in accordance with the IRB GTPL Concession Agreement.

If IRB GTPL determine at any time that a change in scope is necessary, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 60 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the IRB GTPL Concession Agreement, or inform IRB GTPL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of IRB GTPL being in material default or breach of the IRB GTPL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the IRB GTPL Concession Agreement.

In the event of the NHAI being in material default or breach of the IRB GTPL Concession Agreement at any time after the IRB GTPL Appointed Date, it shall pay to IRB GTPL by way of compensation, all direct costs suffered or incurred by IRB GTPL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or

default in respect of which damages have been expressly specified in the IRB GTPL Concession Agreement. Compensation payable may include operation and maintenance expenses and all other costs directly attributable to such material breach or default but does not include loss of fee revenues or debt repayment or other consequential losses.

In the event that a material default or breach of the IRB GTPL Concession Agreement leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the IRB GTPL Concession Period as provided in the IRB GTPL Concession Agreement. The payment of compensation by the NHAI shall be deemed to cure the breach of the IRB GTPL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Termination of the IRB GTPL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the IRB GTPL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and IRB GTPL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, IRB GTPL shall be deemed to be in default of the IRB GTPL Concession Agreement ("**IRB GTPL Default**"), unless the default has occurred solely as a result of any breach of the IRB GTPL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the IRB GTPL Concession Agreement and IRB GTPL fail to replenish or provide fresh performance security within a cure period of 15 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the IRB GTPL Concession Agreement, IRB GTPL fail to cure, within a cure period of 60 days, the IRB GTPL Default for which whole or part of the performance security was appropriated;

c) IRB GTPL abandon or manifest intention to abandon the operation and maintenance of the IRB GTPL Project Highway without the prior written consent of the NHAI;

d) IRB GTPL fails to roll over, renew and furnish new bank guarantee performance security subject to and in accordance with the IRB LTPL Concession Agreement, at least three months prior to expiry of subsiting bank guarantee;

e) IRB GTPL is in breach of the maintenance requirements or the safety requirements as the case may be;

f) IRB GTPL has failed to make any payment to the NHAI within the period specified in the IRB GTPL Concession Agreement;

g) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and IRB GTPL fails to cure the default within the cure period specified hereinabove;

h) a breach of the project agreements by IRB GTPL has caused a material adverse effect;

i) IRB GTPL create an encumbrance in breach of the IRB GTPL Concession Agreement;

j) IRB GTPL repudiate the IRB GTPL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the IRB GTPL Concession Agreement;

k) a change in ownership has occurred in breach of the IRB GTPL Concession Agreement;

l) there is a transfer, pursuant to law either of (i) the rights and/or obligations of IRB GTPL under any of the project agreements, or of (ii) all or part of the assets or undertaking of IRB GTPL, and such transfer causes a material adverse effect;

m) an execution levied on any of the assets of IRB GTPL has caused a material adverse effect;

n) IRB GTPL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for IRB GTPL or for the whole or material part of its assets that has a material bearing on the IRB GTPL Project;

o) IRB GTPL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

p) a resolution for winding up of IRB GTPL is passed, or any petition for winding up of IRB GTPL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, IRB GTPL is ordered to be wound up by a court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of IRB GTPL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of IRB GTPL under the IRB GTPL Concession Agreement and the project agreements; provided that:

   i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the IRB GTPL Concession Agreement and the project agreements;

   ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the IRB GTPL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of IRB GTPL as at the IRB GTPL Appointed Date; and

   iii) each of the project agreements remains in full force and effect;

q) any representation or warranty of IRB GTPL which is, as of the date hereof, found to be materially false, incorrect or misleading or IRB GTPL is at any time hereafter found to be in breach thereof;

r) IRB GTPL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

s) IRB GTPL has failed to fulfil any obligation, for which failure termination has been specified in the IRB GTPL Concession Agreement;

t) IRB GTPL commit a default in complying with any other provision of the IRB GTPL Concession Agreement if such default causes a material adverse effect on the NHAI; or

u) an escrow default has occurred and IRB GTPL fail to cure the default within a cure period of 15 days.

Without prejudice to any other rights or remedies which the NHAI may have under the IRB GTPL Concession Agreement, upon the occurrence of a IRB GTPL Default, the NHAI shall be entitled to terminate the IRB GTPL Concession Agreement by issuing a termination notice to IRB GTPL, with a copy therof to the lenders. Immediately upon the issue by the NHAI of the notice of intention to terminate, the lenders shall have the right to nominate an entity to replace IRB GTPL and perform IRB GTPL's obligations under the IRB GTPL Concession Agreement. IRB GTPL shall procure that lenders shall notify the NHAI about whether they are exercising their right of substitution within 60 days of receipt of notice of intention to terminate, or the lender's notice of default. Any such substitute entity shall have the legal, financial and technical capability reasonably necessary to perform the obligations of IRB GTPL in accordance with the procedure as set out in the Substitution Agreement.

Termination by IRB GTPL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the IRB GTPL Concession Agreement, the NHAI shall be deemed to be in default of the IRB GTPL Concession Agreement ("**NHAI Default**"), unless the

default has occurred as a result of a breach of the IRB GTPL Concession Agreement by IRB GTPL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the IRB GTPL Concession Agreement and such default has a material adverse effect on IRB GTPL;

b) the NHAI repudiates the IRB GTPL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the IRB GTPL Concession Agreement; or

c) the State commits a material default in complying with the prvisions of the State Support Agreement if such default has a material adverse effect on IRB GTPL and the breach continues for a period of 90 days from the date of notice given in this behalf by IRB GTPL to the NHAI.

Without prejudice to any other rights or remedies which IRB GTPL may have under the IRB GTPL Concession Agreement, upon the occurrence of an NHAI Default, IRB GTPL shall be entitled to terminate the IRB GTPL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, IRB GTPL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 15 days to the NHAI to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of a IRB GTPL Default during the operation period, the performance security shall be forfeited and IRB GTPL would continue to be liable towards any antecedent liability, all obligations accrued before the effective date of the termination and also the obligations including divestment requirements that must be fulfilled in terms hereof after termination. In the event of the NHAI terminating the IRB GTPL Concession Agreement on account of IRB GTPL Default and in addition to the NHAI forfeiting the performance security, the NHAI shall pay to IRB GTPL 70% of the unexpired cash flow.

Upon termination on account of an NHAI Default, the NHAI shall pay to IRB GTPL, by way of termination payment, an amount equal to 105% of the unexpired cash flow.

Termination payment shall become due and payable to IRB GTPL within 15 days of a demand being made by IRB GTPL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the IRB GTPL Concession Agreement shall constitute a full and final settlement of all claims of IRB GTPL on account of termination of the IRB GTPL Concession Agreement for any reason whatsoever and IRB GTPL shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

IRB GTPL shall be responsible for all defects and deficiencies in the IRB GTPL Project Highway for a period of 60 days after termination. IRB GTPL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the IRB GTPL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the IRB GTPL Concession Agreement shall be retained in the Escrow Account for a period of 90 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

15. Concession Agreement between IRB KTPL and the NHAI, each dated January 12, 2024

IRB KTPL has entered into a concession agreement in respect of the tolling, operation, management, maintenance and transfer of Kota Bypass from 1055.217 km to 1059.350 km in state of Rajasthan to be executed on a toll-operate-transfer basis (the "**IRB KTPL Concession Agreement**"), for a period of 20 years from the appointed date under the IRB KTPL Concession Agreement ("**IRB KTPL Appointed Date**") or until such date on which the IRB KTPL Concession Agreement is terminated by a termination notice ("**IRB KTPL Termination Date**", and the period between the IRB KTPL Appointed Date and the IRB KTPL Termination Date, the "**IRB KTPL Concession Period**").

Certain Definitions

"**IRB KTPL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) all rights of IRB KTPL under the project agreements; (d) financial assets, such as receivables, security deposits etc.; (e) insurance proceeds; and (f) applicable permits and authorizations relating to or in respect of the IRB KTPL Project Highway (as defined below), but does not include additional facilities;

"**IRB KTPL Project Highway**" shall mean the site comprising the following:

Stretch	State	Start (KM)	End (KM)	Length (KM)
Kota Bypass	Rajasthan	1055.217	1059.350	27.820

and all IRB KTPL Project Assets, and its operation and maintenance in accordance with the IRB KTPL Concession Agreement;

"**IRB KTPL Project**" shall mean the operation and maintenance of the IRB KTPL Project Highway in accordance with the provisions of the IRB KTPL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

Grant of Concession

Subject to, and in accordance with the provisions set out in the IRB KTPL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to IRB KTPL, and IRB KTPL have accepted the concession, including the exclusive right, license, and authority during the subsistence of the IRB KTPL Concession Agreement, to operate and maintain the IRB KTPL Project for a period of 20 years from the IRB KTPL Appointed Date.

Subject to, and in accordance with the provisions of the IRB KTPL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, IRB KTPL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the IRB KTPL Concession Agreement;

b) manage, operate, and maintain the IRB KTPL Project Highway and regulate the use thereof by third parties;

c) demand, collect, and appropriate fee from vehicles and persons liable for payment of fee for using the IRB KTPL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

d) perform and fulfil all of IRB KTPL's obligations under and in accordance with the IRB KTPL Concession Agreement;

e) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of IRB KTPL under the IRB KTPL Concession Agreement; and

f) neither assign, transfer or sublet, or create any lien or encumbrance on the IRB KTPL Concession Agreement, or the concession granted, or on the whole or any part of the IRB KTPL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the IRB KTPL Concession Agreement.

Fees

On and from the appointed date till the transfer date, IRB KTPL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the IRB KTPL Concession Agreement and the applicable rules and regulations. In accordance with the IRB KTPL Concession Agreement, IRB KTPL shall not collect any fees in relation to exempted vehicles.

IRB KTPL shall not collect any fee from a local user for non-commercial use of the IRB KTPL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the IRB KTPL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, IRB KTPL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, IRB KTPL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the IRB KTPL Project Highway and does not cross a toll plaza.

Concession Fee

In consideration of the grant of concession, IRB KTPL shall pay to the NHAI in accordance with terms of the IRB KTPL Concession Agreement and prior to the IRB KTPL Appointed Date, a lumpsum upfront concession fee of an amount equivalent to ₹5.22 billion.

Escrow Account

IRB KTPL were required to, prior to the IRB KTPL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the IRB KTPL Concession Agreement read with the escrow agreement entered into among IRB KTPL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

IRB KTPL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;
b) all fee and any other revenues from or in respect of the IRB KTPL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and
c) all payments by the NHAI including, if any, in relation to the change in scope in the IRB KTPL Project.

Withdrawals during Concession Period

IRB KTPL were required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by IRB KTPL for and in respect of the IRB KTPL Project Highway;

b) all payments relating to construction of the IRB KTPL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) operation and management ("**O&M**") expenses;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the IRB KTPL Concession Agreement, and certified by the NHAI as due and payable to it;

e) monthly proportionate provision of IRB KTPL Debt Service due in an accounting year;

f) all payments and damages certified by the NHAI as due and payable to it by IRB KTPL; and

g) balance, if any, in accordance with the instructions of IRB KTPL.

IRB KTPL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI and the lenders.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the IRB KTPL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by IRB KTPL for and in respect of the IRB KTPL Project Highway;

b) payment due to lenders;

c) all payments and damages certified by the NHAI as due and payable to it by IRB KTPL;

d) retention and payments relating to the liability for defects and deficiencies set forth in the IRB KTPL Concession Agreement;

e) incurred or accrued O&M expenses;

f) any other payments required to be made under the IRB KTPL Concession Agreement; and

g) balance, if any, in accordance with the instructions of IRB KTPL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the IRB KTPL Concession Agreement, require IRB KTPL to make alterations or modifications in the scope of the project. Any such change of scope shall be made in accordance with the provisions of the IRB KTPL Concession Agreement and the costs thereof shall be expended by IRB KTPL and reimbursed by the NHAI in accordance with the IRB KTPL Concession Agreement.

If IRB KTPL determine at any time that a change in scope is necessary, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 60 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the IRB KTPL Concession Agreement, or inform IRB KTPL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of IRB KTPL being in material default or breach of the IRB KTPL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the IRB KTPL Concession Agreement.

In the event of the NHAI being in material default or breach of the IRB KTPL Concession Agreement at any time after the IRB KTPL Appointed Date, it shall pay to IRB KTPL by way of compensation, all direct costs suffered or incurred by IRB KTPL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the IRB KTPL Concession Agreement. Compensation payable may include operation and maintenance expenses and all other costs directly attributable to such material breach or default but does not include loss of fee revenues or debt repayment or other consequential losses.

In the event that a material default or breach of the IRB KTPL Concession Agreement leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the IRB KTPL Concession Period as provided in the IRB KTPL Concession Agreement. The payment of compensation by the NHAI shall be deemed to cure the breach of the IRB KTPL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Termination of the IRB KTPL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the IRB KTPL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and IRB KTPL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, IRB KTPL shall be deemed to be in default of the IRB KTPL Concession Agreement ("**IRB KTPL Default**"), unless the default has occurred solely as a result of any breach of the IRB KTPL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the IRB KTPL Concession Agreement and IRB KTPL fail to replenish or provide fresh performance security within a cure period of 15 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the IRB KTPL Concession Agreement, IRB KTPL fail to cure, within a cure period of 60 days, the IRB KTPL Default for which whole or part of the performance security was appropriated;

c) IRB KTPL abandon or manifest intention to abandon the operation and maintenance of the IRB KTPL Project Highway without the prior written consent of the NHAI;

d) IRB KTPL fails to roll over, renew and furnish new bank guarantee performance security subject to and in accordance with the IRB LTPL Concession Agreement, at least three months prior to expiry of subsiting bank guarantee;

e) IRB KTPL is in breach of the maintenance requirements or the safety requirements as the case may be;

f) IRB KTPL has failed to make any payment to the NHAI within the period specified in the IRB KTPL Concession Agreement;

g) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and IRB KTPL fails to cure the default within the cure period specified hereinabove;

h) a breach of the project agreements by IRB KTPL has caused a material adverse effect;

i) IRB KTPL create an encumbrance in breach of the IRB KTPL Concession Agreement;

j) IRB KTPL repudiate the IRB KTPL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the IRB KTPL Concession Agreement;

k) a change in ownership has occurred in breach of the IRB KTPL Concession Agreement;

l) there is a transfer, pursuant to law either of (i) the rights and/or obligations of IRB KTPL under any of the project agreements, or of (ii) all or part of the assets or undertaking of IRB KTPL, and such transfer causes a material adverse effect;

m) an execution levied on any of the assets of IRB KTPL has caused a material adverse effect;

n) IRB KTPL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for IRB KTPL or for the whole or material part of its assets that has a material bearing on the IRB KTPL Project;

o) IRB KTPL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

p) a resolution for winding up of IRB KTPL is passed, or any petition for winding up of IRB KTPL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or IRB KTPL is ordered to be wound up by a court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of IRB KTPL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of IRB KTPL under the IRB KTPL Concession Agreement and the project agreements; provided that:

   i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the IRB KTPL Concession Agreement and the project agreements;

   ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the IRB KTPL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of IRB KTPL as at the IRB KTPL Appointed Date; and

   iii) each of the project agreements remains in full force and effect;

q) any representation or warranty of IRB KTPL which is, as of the date hereof, found to be materially false, incorrect or misleading or IRB KTPL is at any time hereafter found to be in breach thereof;

r) IRB KTPL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

s) IRB KTPL has failed to fulfil any obligation, for which failure termination has been specified in the IRB KTPL Concession Agreement;

t) IRB KTPL commit a default in complying with any other provision of the IRB KTPL Concession Agreement if such default causes a material adverse effect on the NHAI; or

u) an escrow default has occurred and IRB KTPL fail to cure the default within a cure period of 15 days.

Without prejudice to any other rights or remedies which the NHAI may have under the IRB KTPL Concession Agreement, upon the occurrence of a IRB KTPL Default, the NHAI shall be entitled to terminate the IRB KTPL Concession Agreement by issuing a termination notice to IRB KTPL, with a copy therof to the lenders. Immediately upon the issue by the NHAI of the notice of intention to terminate, the lenders shall have the right to nominate an entity to replace IRB KTPL and perform IRB KTPL's obligations under the IRB KTPL Concession Agreement. IRB KTPL shall procure that lenders shall notify the NHAI about whether they are exercising their right of substitution within 60 days of receipt of notice of intention to terminate, or the lender's notice of default. Any such substitute entity shall have the legal, financial and technical capability reasonably necessary to perform the obligations of IRB KTPL in accordance with the procedure as set out in the Substitution Agreement.

Termination by IRB KTPL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the IRB KTPL Concession Agreement, the NHAI shall be deemed to be in default of the IRB KTPL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the IRB KTPL Concession Agreement by IRB KTPL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the IRB KTPL Concession Agreement and such default has a material adverse effect on IRB KTPL;

b) the NHAI repudiates the IRB KTPL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the IRB KTPL Concession Agreement; or

c) the State commits a material default in complying with the prvisions of the State Support Agreement if such default has a material adverse effect on IRB KTPL and the breach continues for a period of 90 days from the date of notice given in this behalf by IRB KTPL to the NHAI.

Without prejudice to any other rights or remedies which IRB KTPL may have under the IRB KTPL Concession Agreement, upon the occurrence of an NHAI Default, IRB KTPL shall be entitled to terminate the IRB KTPL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, IRB KTPL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 15 days to the NHAI to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of a IRB KTPL Default during the operation period, the performance security shall be forfeited and IRB KTPL would continue to be liable towards any antecedent liability, all obligations accrued before the effective date of the termination and also the obligations including divestment requirements that must be fulfilled in terms hereof after termination. In the event of the NHAI terminating the IRB KTPL Concession Agreement on account of IRB KTPL Default and in addition to the NHAI forfeiting the performance security, the NHAI shall pay to IRB KTPL 70% of the unexpired cash flow.

Upon termination on account of an NHAI Default, the NHAI shall pay to IRB KTPL, by way of termination payment, an amount equal to 105% of the unexpired cash flow.

Termination payment shall become due and payable to IRB KTPL within 15 days of a demand being made by IRB KTPL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the IRB KTPL Concession Agreement shall constitute a full and final settlement of all claims of IRB KTPL on account of termination of the IRB KTPL Concession Agreement for any reason whatsoever and IRB KTPL shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

IRB KTPL shall be responsible for all defects and deficiencies in the IRB KTPL Project Highway for a period of 60 days after termination. IRB KTPL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the IRB KTPL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the IRB KTPL Concession Agreement shall be retained in the Escrow Account for a period of 90 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

Concession Agreement in relation to the Target SPV

Concession Agreement between MBEL and the UPEIDA dated January 6, 2022

MBEL has entered into a concession agreement for the development of access controlled six-lane (expandable to eight-lane) greenfield 'Ganga Expressway' from Bijoli, Meerut to Nagla Barah, Budaun from Km 7.900 to Km 137.600 (total design length 129.700 Km) in the state of Uttar Pradesh on design-build-finance-operate-transfer (toll) basis under public-private partnership (the "**MBEL Concession Agreement**"), for a period of 30 years, from October 12, 2022 ("**MBEL Appointed Date**") or until such date on which the MBEL Concession Agreement is terminated by a termination notice ("**MBEL Termination Date**", and the period between the MBEL Appointed Date and the MBEL Termination Date, the "**MBEL Concession Period**").

Certain Definitions

"**MBEL Debt Due**" shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the transfer date:

a) the principal amount of the debt provided by the senior lenders under the financing agreements for financing the total project cost (the "**Principa**l") but excluding any part of the Principal that had fallen due for repayment two years prior to the transfer date;

b) all accrued interest, financing fees and charges payable under the financing agreements on, or in respect of, the debt referred to in the sub-clause above until the transfer date but excluding (i) any interest, fees or charges

that had fallen due one year prior to the transfer date, (ii) any penal interest or charges payable under the financing agreements to any senior lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to an UPEIDA Default (as defined below); and

c) any subordinated debt which is included in the financing package and disbursed by lenders for financing the total project cost;

If all, or any part of the MBEL Debt Due is convertible into equity at the option of the senior lenders and/or MBEL, it shall, for the purposes of the MBEL Concession Agreement, be deemed to be MBEL Debt Due even after the conversion and the Principal thereof shall be dealt with as if such conversion had not been undertaken;

"**MBEL Debt Service**" shall mean the sum of all payments on account of principal, interest, financing fees and charges due and payable in an accounting year to the senior lenders under the financing agreements;

"**MBEL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) project facilities situated on the site; (d) all rights of MBEL under the project agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) applicable permits and authorizations relating to or in respect of the MBEL Project Expressway (as defined below), but does not include additional facilities;

"**MBEL Project Expressway**" shall mean the site of the MBEL Project and all MBEL Project Assets, and its subsequent development and augmentation in accordance with the MBEL Concession Agreement; and

"**MBEL Project**" shall mean the construction, operation, and maintenance of the MBEL Project Expressway in accordance with the provisions of the MBEL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project.

Grant of Concession

Subject to, and in accordance with the provisions set out in the MBEL Concession Agreement, the applicable laws and the applicable permits, the UPEIDA has granted to MBEL, and MBEL has accepted the concession, including the exclusive right, license, and authority during the subsistence of the MBEL Concession Agreement, to construct, operate and maintain the MBEL Project for a period of 30 years from the MBEL Appointed Date.

Subject to, and in accordance with the provisions of the MBEL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, MBEL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the MBEL Concession Agreement;

b) finance and construct the MBEL Project Expressway;

c) manage, operate, and maintain the MBEL Project Expressway and regulate the use thereof by third parties;

d) demand, collect, and appropriate fee from vehicles and users liable for payment of fee for using the MBEL Project Expressway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

e) perform and fulfil all of MBEL's obligations under and in accordance with the MBEL Concession Agreement;

f) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of MBEL under the MBEL Concession Agreement; and

g) neither assign, transfer or sublet, or create any lien or encumbrance on the MBEL Concession Agreement, or the concession granted, or on the whole or any part of the MBEL Project Expressway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the MBEL Concession Agreement or the

agreement for the substitution of MBEL entered into by MBEL, the UPEIDA, and the lenders' representative on behalf of the senior lenders (the "**Substitution Agreement**").

Fees

On and from the commercial operation date ("**COD**") till the transfer date, MBEL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the MBEL Concession Agreement and the applicable rules and regulations, provided that for ease of payment and collection, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated from time to time. Further, MBEL may determine and collect fee at such lower rates as it may, by public notice to the users, specify in respect of all or any category of users or vehicles. In accordance with the MBEL Concession Agreement, MBEL shall not collect any fees in relation to exempted vehicles.

Concession Fee

In consideration of the grant of concession, MBEL shall pay to the UPEIDA by way of concession fee a sum of ₹1 per annum.

Escrow Account

MBEL was required to, prior to the MBEL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the MBEL Concession Agreement read with the escrow agreement entered into among MBEL, the UPEIDA, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

MBEL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;
b) all fee and any other revenues from or in respect of the MBEL Project Expressway, including the proceeds of any deposits, capital receipts or insurance claims; and
c) all payments by the UPEIDA, after deducting any outstanding concession fee.

The senior lenders may make direct disbursements to the EPC contractor in accordance with the express provisions contained in this behalf in the financing agreements.

Withdrawals during Concession Period

MBEL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by MBEL for and in respect of the MBEL Project Expressway;

b) all payments relating to construction of the MBEL Project Expressway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) operation and management ("**O&M**") expenses, subject to the ceiling, if any, set forth in the financing agreements;

d) O&M expenses and other costs and expenses incurred by the UPEIDA in accordance with the provisions of the MBEL Concession Agreement, and certified by the UPEIDA as due and payable to it;

e) concession fee and premium due and payable to the UPEIDA;

f) monthly proportionate provision of MBEL Debt Service due in an accounting year;

g) all payments and damages certified by the UPEIDA as due and payable to it by MBEL, including repayment of revenue shortfall loan. MBEL has agreed to give irrevocable instructions to the Escrow Bank to make

payments from the Escrow Account in accordance with the instructions of the UPEIDA under the MBEL Concession Agreement and debit the payment to O&M expenses;

h) monthly proportionate provision of MBEL Debt Service payments due in an accounting year in respect of subordinated debt;

i) any reserve requirements set forth in the financing agreements; and

j) balance, if any, in accordance with the instructions of MBEL.

MBEL shall not, in any manner, modify the order of payment specified except with prior written approval from the UPEIDA.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the MBEL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by MBEL for and in respect of the MBEL Project Expressway;

b) 90% of the MBEL Debt Due excluding the subordinated debt;

c) outstanding concession fee;

d) all payments and damages certified by the UPEIDA as due and payable to it by MBEL, including the repayment of the revenue shortfall loan. MBEL has agreed to give irrevocable instruction to the Escrow Bank to make payment from the Escrow Account in accordance with the instructions of the UPEIDA under the MBEL Concession Agreement and debit the payment to O&M expenses.

e) retention and payments relating to the liability for defects and deficiencies set forth in the MBEL Concession Agreement;

f) outstanding MBEL Debt Service including balance of MBEL Debt Due;

g) outstanding subordinated debt;

h) incurred or accrued O&M expenses;

i) any other payments required to be made under the MBEL Concession Agreement; and

j) balance, if any, in accordance with the instructions of MBEL.

No appropriations shall be made until a vesting certificate has been issued by the UPEIDA.

Change of Scope

The UPEIDA may, notwithstanding anything to the contrary contained in the MBEL Concession Agreement, require the provision of additional works and services which are not included in the scope of the project as contemplated by the MBEL Concession Agreement. Any such change of scope shall be made in accordance with the provisions of the MBEL Concession Agreement and the costs thereof shall be expended by MBEL and reimbursed by the UPEIDA in accordance with the MBEL Concession Agreement.

If MBEL determines at any time that a change in scope is necessary for providing safer and improved services to the users, it shall, by notice in writing, require the UPEIDA to consider such change of scope. The UPEIDA shall, within 60 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the MBEL Concession Agreement, or inform MBEL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of MBEL being in material default or breach of the MBEL Concession Agreement, it shall pay to the UPEIDA by way of compensation, all direct costs suffered or incurred by the UPEIDA as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the MBEL Concession Agreement.

In the event of the UPEIDA being in material default or breach of the MBEL Concession Agreement at any time after the MBEL Appointed Date, it shall pay to MBEL by way of compensation, all direct costs suffered or incurred by MBEL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the MBEL Concession Agreement.

In the event that a material default or breach of the MBEL Concession Agreement causes a delay in achieving COD or leads to suspension of, or reduction in collection of fee, as the case may be, the UPEIDA shall, in addition to the payment of compensation, extend the MBEL Concession Period as provided in the MBEL Concession Agreement. In the event that an additional toll way or a competing road, as the case may be, is opened to traffic in breach of the MBEL Concession Agreement, the UPEIDA shall pay to MBEL, for each day of the breach, compensation as provided in the MBEL Concession Agreement, until the breach is cured. The payment of compensation by the UPEIDA shall be deemed to cure the breach of the MBEL Concession Agreement so long as the UPEIDA continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Effects of Variation in Traffic Growth

Subject to the provisions of the MBEL Concession Agreement, in the event actual average traffic shall have fallen short of the target traffic by more than 5% (five percent), then for every 1% (one percent) shortfall as compared to the target traffic, the remaining MBEL Concession Period shall, subject to payment of concession fee and additional concession fee in accordance with the MBEL Concession Agreement, be increased by 1% (one percent) thereof; provided that such increase in MBEL Concession Period shall not in any case exceed 20% (twenty percent) of the MBEL Concession Period.

Subject to the provisions of the MBEL Concession Agreement, in the event actual average traffic shall have exceeded the target traffic by more than 5% (five percent), then for every 1% (one percent) increase as compared to the target traffic, the MBEL Concession Period shall be reduced by 1% (one percent) thereof; provided that such reduction in MBEL Concession Period shall not in any case exceed 20% (twenty percent) of the MBEL Concession Period.

Notwithstanding anything to the contrary contained in the MBEL Concession Agreement, if the average daily traffic of PCUs in any accounting year shall exceed the designed capacity of the MBEL Project Expressway, an indirect political event under the MBEL Concession Agreement will be deemed to have occurred and the UPEIDA may, at its discretion, terminate the MBEL Concession Agreement. If MBEL has completed the construction works necessary for augmenting the capacity of the MBEL Project Expressway such that its capacity has increased sufficiently for carrying the then current traffic in accordance with the corresponding provisions of the relevant Indian Roads Congress publication, prior to the issue of a termination notice by the UPEIDA, the indirect political event will deemed to have been cured.

Termination of the MBEL Concession Agreement

Termination by the UPEIDA

Save as otherwise provided in the MBEL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and MBEL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, MBEL shall be deemed to be in default of the MBEL Concession Agreement ("**MBEL Default**"), unless the default has occurred solely as a result of any breach of the MBEL Concession Agreement by the UPEIDA or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the MBEL Concession Agreement and MBEL fails to replenish or provide fresh performance security within a cure period of 30 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the MBEL Concession Agreement, MBEL fails to cure, within a cure period of 90 days, the MBEL Default for which whole or part of the performance security was appropriated;

c) MBEL does not achieve the latest outstanding project milestone due in accordance with the MBEL Concession Agreement and continues to be in default for 120 days;

d) MBEL abandons or manifests intention to abandon the construction or operation of the MBEL Project Expressway without the prior written consent of the UPEIDA;

e) project completion date does not occur within the period specified in the MBEL Concession Agreement;

f) the punch list items have not been completed within the period set forth in the MBEL Concession Agreement;

g) MBEL is in breach of the maintenance requirements or the safety requirements as the case may be;

h) MBEL has failed to make any payment to the UPEIDA within the period specified in the MBEL Concession Agreement;

i) an escrow default has occurred and MBEL fails to cure the default within a cure period of 15 days;

j) upon occurrence of a financial default, the lenders' representative has, by notice, required the UPEIDA to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and MBEL fails to cure the default within the cure period specified hereinabove;

k) a breach of the project agreements by MBEL has caused a material adverse effect;

l) MBEL creates an encumbrance in breach of the MBEL Concession Agreement;

m) MBEL repudiates the MBEL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the MBEL Concession Agreement;

n) a change in ownership has occurred in breach of the MBEL Concession Agreement;

o) there is a transfer, pursuant to law either of (i) the rights and/or obligations of MBEL under any of the project agreements, or of (ii) all or part of the assets or undertaking of MBEL, and such transfer causes a material adverse effect;

p) an execution levied on any of the assets of MBEL has caused a material adverse effect;

q) MBEL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for MBEL or for the whole or material part of its assets that has a material bearing on the MBEL Project;

r) MBEL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the UPEIDA, a material adverse effect;

s) a resolution for winding up of MBEL is passed, or any petition for winding up of MBEL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or MBEL is ordered to be wound up by a court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of MBEL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of MBEL under the MBEL Concession Agreement and the project agreements; provided that:

    i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the MBEL Concession Agreement and the project agreements;

ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the MBEL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of MBEL as at the MBEL Appointed Date; and

iii) each of the project agreements remains in full force and effect;

t) any representation or warranty of MBEL which is, as of the date hereof, found to be materially false, incorrect or misleading or MBEL is at any time hereafter found to be in breach thereof;

u) MBEL submits to the UPEIDA any statement, notice or other document, in written or electronic form, which has a material effect on the UPEIDA's rights, obligations or interests and which is false in material particulars;

v) MBEL has failed to fulfil any obligation, for which failure termination has been specified in the MBEL Concession Agreement; or

w) MBEL commits a default in complying with any other provision of the MBEL Concession Agreement if such default causes a material adverse effect on the UPEIDA.

Without prejudice to any other rights or remedies which the UPEIDA may have under the MBEL Concession Agreement, upon the occurrence of a MBEL Default, the UPEIDA shall be entitled to terminate the MBEL Concession Agreement by issuing a termination notice to MBEL. Before issuing the termination notice, the UPEIDA shall, by notice, inform MBEL of its intention to issue a termination notice and grant 15 days to MBEL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the MBEL Concession Agreement.

If there are senior lenders, the UPEIDA shall send a copy of its notice of intention to issue a termination notice to inform the lenders' representative and grant 30 days to the lenders' representative for making a representation on behalf of the senior lenders stating the intention to substitute MBEL in accordance with the Substitution Agreement. If the UPEIDA receives a representation on behalf of the senior lenders, it shall, in its discretion, either withhold termination for a period not exceeding 180 days from the date of the representation, or exercise its right of suspension, as the case may be, to enable the lenders' representative to exercise the senior lenders' right of substitution in accordance with the Substitution Agreement. The lenders' representative may, instead of exercising the senior lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid 180 days, and upon the curing, the UPEIDA shall withdraw its notice and restore the rights of MBEL. On a written request from the lenders' representative and MBEL, the UPEIDA shall extend the period of 180 days by a further period not exceeding 90 days as it may deem appropriate.

Termination by MBEL

In the event that any of the defaults specified below shall have occurred, and the UPEIDA fails to cure the default within a cure period of 90 days or such longer period as provided in the MBEL Concession Agreement, the UPEIDA shall be deemed to be in default of the MBEL Concession Agreement ("**UPEIDA Default**"), unless the default has occurred as a result of a breach of the MBEL Concession Agreement by MBEL, or due to force majeure. The default referred to herein shall include:

a) the UPEIDA commits a material default in complying with any of the provisions of the MBEL Concession Agreement and such default has a material adverse effect on MBEL;

b) the UPEIDA has failed to make any payment to MBEL within the period specified in the MBEL Concession Agreement; or

c) the UPEIDA repudiates the MBEL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the MBEL Concession Agreement.

Without prejudice to any other rights or remedies which MBEL may have under the MBEL Concession Agreement, upon the occurrence of an UPEIDA Default, MBEL shall be entitled to terminate the MBEL Concession Agreement by issuing a termination notice to the UPEIDA. Before issuing the termination notice, MBEL shall, by notice, inform the UPEIDA of its intention to issue a termination notice and grant 30 days to the

UPEIDA to make a representation, and may, after the expiry of the 30 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of a MBEL Default during the operation period, the UPEIDA shall pay to MBEL, by way of termination payment, an amount equal to 90% of the MBEL Debt Due less insurance cover. If any insurance claims forming part of the insurance cover are not admitted and paid, then 80% of such unpaid claims shall be included in the computation of MBEL Debt Due.

Upon termination on account of an UPEIDA Default, the UPEIDA shall pay to MBEL, by way of termination payment, an amount equal to:

a) MBEL Debt Due; and
b) 150% of the adjusted equity.

The termination payment shall not be less than an amount equal to the product of six and the average monthly fee actually realized 12 months prior to the transfer date.

Termination payment shall become due and payable to MBEL within 30 days of a demand being made by MBEL to the UPEIDA with the necessary particulars, and in the event of any delay, the UPEIDA shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the MBEL Concession Agreement shall constitute a full and final settlement of all claims of MBEL on account of termination of the MBEL Concession Agreement for any reason whatsoever and MBEL shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

MBEL shall be responsible for all defects and deficiencies in the MBEL Project Expressway for a period of 120 days after termination. MBEL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the MBEL Project Expressway as observed by the independent engineer during the aforesaid period. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the UPEIDA in this behalf. A sum as specified in the MBEL Concession Agreement shall be retained in the Escrow Account for a period of 120 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision

REGULATIONS AND POLICIES

The following description is a summary of certain key regulations and policies which are applicable to the operations of the Trust, the Project SPVs and the Target SPV. The information detailed in this section has been obtained from publications available in the public domain. The regulations set out below may not be exhaustive, and are only intended to provide general information to the investors and are neither designed nor intended to substitute for professional legal advice. The information in this section is based on the current provisions of applicable law that are subject to change or modification by subsequent legislative, regulatory, administrative or judicial decisions in India.

Laws Relating to the Business and Operations of the Trust, the Project SPVs and the Target SPV

The primary central legislations governing the road sector are the National Highways Act, 1956 (the "**NH Act**") and the National Highways Authority of India Act, 1988 (the "**NHAI Act**").

The NH Act

In accordance with the NH Act, the GoI is vested with the power to declare a highway as a national highway and also to acquire land for this purpose. The GoI may, by notification, declare its intention to acquire any land when it is satisfied that, for a public purpose, such land is required for the building, maintenance, management or operation of a national highway, or part thereof. The NH Act prescribes the procedure for such land acquisition. Such procedure includes, *inter-alia,* a declaration of an intention to acquire, entering and inspecting such land, hearing of objections, a declaration of the acquisition and the power to take possession. The NH Act also provides for payment of compensation to owners and any other person whose right of enjoyment in the land has been affected.

The GoI is responsible for the development and maintenance of national highways. However, it may direct that such functions may also be exercised by the government of a state in which the highway is located or by any officer or authority subordinate to the GoI or to the state government. Further, the GoI has the power to enter into an agreement with any person for the development and maintenance of a part or whole of the highway. Such person would have the right to collect and retain fees at such rates as may be notified by the GoI and will also have the powers to regulate and control the traffic, for proper management of the highway, in accordance with the provisions of the Motor Vehicles Act, 1988, as amended. The GoI also has the power to make rules for carrying out the purposes of the NH Act.

National Highways Fee (Determination of Rates and Collection) Rules, 2008

The National Highways Fee (Determination of Rates and Collection) Rules, 2008 (the "**NH Fee Rules**"), regulates the collection of fees for the use of national highways. In accordance with the NH Fee Rules, the GoI may, by a notification, levy a fee for use of any section of a national highway, permanent bridge, bypass or tunnel forming part of a national highway, as the case may be. However, the GoI may, by notification, exempt any section of a national highway, permanent bridge, bypass or tunnel constructed through a public funded project from levy of such fee.

The NH Fee Rules supersede the National Highways (Temporary Bridges) Rules, 1964, the National Highways (Collection of Fees by any Person for the Use of Section of National Highways/ Permanent Bridge/ Temporary Bridge on National Highways) Rules, 1997, the National Highways (Fees for the use of National Highways Section and Permanent Bridges – Public Funded Project) Rules, 1997 and the National Highways (Rate of Fees) Rules, 1997 other than in respect of things done or omitted to be done under such rules prior to supersession. The NH Fee Rules do not apply to agreements and contracts executed or bids invited prior to the publication of such rules, i.e., prior to December 5, 2008.

The collection of fees in case of a public funded project shall commence within 45 days from the date of completion of the project. The NH Fee Rules further provide a base rate of fees applicable for the use of a section of the national highway for different categories of vehicles and the fees collected by the executing authority shall be remitted to the GoI. However, the GoI may, by notification, allow any or all of the executing authorities to appropriate the whole, or part of such fees for purposes as may be specified.

FASTag lanes on fee plazas is a policy initiative of the GoI in which there is an exclusive lane in the fee plaza for movement of vehicles fitted with FASTag. The FASTag is a device which is fitted on the front windscreen of

vehicles to indicate online toll payment. The amended NH Fee Rules impose a penalty equivalent to two times the fee applicable if a vehicle not fitted with FASTag enters the exclusive FASTag lane. However, in case a user is unable to pay, due to malfunctioning electronic toll collection infrastructure, the user will be permitted to pass the fee plaza without payment.

The NH Fee rules were also amended to provide that the driver or owner of a mechanical vehicle which is loaded in excess of permissible load specified for its category, (i) shall not be permitted to use the national highway or cross the fee plaza until the excess load has been removed, and (ii) shall be liable to pay a fee to the toll collection agency equal to ten times of the fee applicable to such category of mechanical vehicle. However, in case no weighbridge has been installed at the toll plaza, no fee for overloading shall be levied.

The National Highways Rules, 1957

The National Highway Rules, 1957 (the "**NH Rules**") provide that in situations where the estimate cost of the execution of any original work on a national highway exceeds ₹1,000,000, a detailed estimated of the cost is to be forwarded to the GoI. An application for allotment of funds for meeting expenditure on an original work on a national highway must also be made to the GoI. The executing agency of the highway is required to furnish monthly progress reports and a completion report on the conclusion of the work. The NH Rules also give the consulting engineer of the GoI the right to inspect the work while it is in progress or after completion.

The NHAI Act

NHAI

The National Highways Authority of India (the "**NHAI**") was constituted pursuant to the NHAI Act and became operational in 1995. The NHAI Act details the functions the NHAI, which primarily are the development, maintenance and management of national highways and any other highways vested in, or entrusted to it, by the GoI, and matters connected therewith or incidental thereto. In accordance with the NHAI Act, the GoI carries out development and maintenance of the national highway system through NHAI. Subject to the provisions of the NHAI Act, the NHAI has the power to enter into and perform any contract necessary for the discharge of its functions. The NHAI has the power to acquire any land to discharge its functions, and such acquired land will be deemed to be land needed for a public purpose. The NHAI Act prescribes a limit in relation to the value of the contracts that may be entered into by NHAI. However, the NHAI may enter into contracts exceeding the specified value, on obtaining prior approval of the GoI. The NHAI Act provides that the contracts for acquisition, sale, or lease of immovable property on behalf of the NHAI cannot exceed a term of 30 years unless previously approved by the GoI.

As per the NHAI Works Manual, 2006, NHAI's mandate is the time and cost bound implementation of the National Highways Development Project (the "**NHDP**"). The sources of finance available to the NHAI include fund assistance from external funding agencies like the World Bank and the Asian Development Bank. NHDP Phase – I also strives to provide road connectivity to major ports. NHAI's role encompasses involving the private sector in provision, maintenance and operation of the national highways.

Financing of the NHDP

The GoI, under the Central Road Fund Act, 2000 created a fund which is required to be utilized for the development and maintenance of national highways (the "**Central Road Fund**"). Section 18 of the NHAI Act also provides for the creation of a separate NHAI Fund. Any capital grant or aid received, loan taken, borrowing made, or any other sum received by the NHAI is credited to the NHAI Fund. Certain sources for financing of the NHDP are through dedicated accruals under the Central Road Fund by levy of cess on fuel as well as involving the private sector and encouraging public private partnerships. The NHDP is also financed through long-term external loans from the World Bank, the Asian Development Bank and the Japan Bank for International Cooperation as well as through tolling of roads for different projects undertaken by the NHAI.

Private Participation in NHDP

In an effort to attract private sector participation in the NHDP, the NHAI has formulated model concession agreements where a private entity being the concessionaire is awarded a concession to build, operate and collect toll on a road for a specified period of time, which is usually up to 30 years.

The bidding for the projects takes place in two stages as per the process provided below:

1. in the pre-qualification stage, the NHAI selects certain bidders on the basis of technical and financial expertise, prior experience in implementing similar projects and previous track record; and

2. in the second stage, the NHAI invites commercial bids from the pre-qualified bidders on the basis of which the right to develop the project is awarded.

In accordance with the model concession agreement for projects above ₹1,000 million, the concessionaire meets the upfront cost and expenditure on annual maintenance and recovers the entire cost along with the interest from toll collections during the concession period. As per the 'Guidelines for Investment in Road Sector' issued by the Ministry of Shipping, Road Transport and Highways ("**MoRTH**") in 2009, in order to increase the viability of projects, a capital grant of up to 40% of the project cost is provided by the NHAI or the GoI. The quantum of grant is determined on a case to case basis and typically constitutes the bid parameter in Build, Operate, Transfer ("**BOT**") projects which are generally not viable based on toll revenue alone. For certain projects with high traffic volumes, concessionaire also offers a negative grant (i.e., premium) to the NHAI. The concessionaire at the end of the concession period transfers the road back to the Government (free of charge and clear of all encumbrances). The concessionaire's investment in the road is recovered directly through user fees collected by way of tolls. As per the model concession agreement for annuity based projects, the concessionaire is required to meet the entire upfront cost (no grant is paid by the NHAI or the GoI) and the expenditure on annual maintenance for annuity based projects. The concessionaire recovers the entire investment through pre-determined annuity payments to be made by the NHAI or the GoI. Furthermore, MoRTH approved certain amendments to the model concession agreement, *inter-alia*, in relation to deferment of premium payments.

Exit Policy

The CCEA in May 2015 approved a comprehensive exit policy framework with the objective to mobilize funds in the market. This policy framework now permits divestment of 100% equity by concessionaires/developers after two years of completion of construction to facilitate unlocking of funds for new projects. The equity divested is required to be invested by promoters in their new projects. This comprehensive exit policy framework is expected to harmonize certain conditions across all concessions signed prior to 2009 with the policy framework for post 2009 contracts which permit divestment of equity up to 100%, two years after completion of construction.

In November 2020, the MoRTH in modified the change in ownership clause in the Hybrid Annuity Mode ("**HAM**") projects and permitted the bidders/consortium members to dilute their equity after a period of six months from the commercial operations date ("**COD**"). Prior to the relaxation, the concessionaire/bidders/consortium members had to retain their equity for a period of two years from COD. Further, MoRTH in May 2022 approved changes in the model concession agreements of Build-Operate-Transfer projects and permitted the change of ownership from the existing two years to one year after COD/issuance of completion certificate and completion of punch list items.

Rationalized Compensation

The CCEA in November 2015 approved a policy for rationalized compensation to concessionaires for languishing national highway projects in BOT mode for delays that are not attributable to the concessionaires. Under the policy, the NHAI is authorized to allow an extension of the concession period for BOT (Toll) projects while keeping the original operation period unchanged. The NHAI has also been authorised to pay compensatory annuities to the concessionaire corresponding to the actual period of delay that is not attributable to the concessionaire upon successful completion of the project. In these cases, the construction period will be enhanced but the tenure of the concession will remain unchanged.

One Time Fund Infusion

The CCEA in October 2015 gave its approval to the NHAI for a one-time infusion of funds with the purpose of reviving and physically completing stalled projects in the advanced stages of completion. As per the policy, the amount of funds required in each case shall be approved by NHAI on a case to case basis.

Bidder Information

MoRTH has developed the Bidder Information Management System ("**BIMS**") to streamline the process of pre-qualification of bidders for EPC mode of contracts for all national highway works, with enhanced transparency and objectivity. BIMS works as a data base of bidder information that covers basic details, civil works experience, cash accruals and networth, and annual turnover so that bidders' pre-qualification can be assessed based on evaluation parameters like threshold capacity and bid capacity from already stored data and the technical evaluation can be carried out in a faster manner.

Land Acquisition

While land is acquired for national highway projects under the NH Act, the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (the "**Land Acquisition Act**") must also be complied with. MoRTH has issued comprehensive guidelines on land acquisition for national highways taking into account the applicability of the Land Acquisition Act.

Arbitral Awards

CCEA on August 31, 2016 approved various measures to revive the construction sector. An office memorandum dated September 5, 2016 was issued by the National Institute for Transforming India with certain proposals. On November 20, 2019, the CCEA approved certain proposals in relation to the arbitrations by or against government entities, for the effective implementation of the CCEA's decision on August 31, 2016 on its initiatives to revive the construction sector. Initially, the CCEA had approved the proposal that government agencies will be required to pay 75% of the arbitral award to the concessionaire against a bank guarantee, in cases where the award already announced is challenged. However, pursuant to a press release dated November 20, 2019, the CCEA approved, *inter-alia*, that where a government entity has challenged an arbitral award, resultant of which the amount of the arbitral award has not been paid, 75% of such award will be paid by the government entity to the contractor or the concessionaire against a bank guarantee only for the said 75% and not for its interest component. In relation to interest payable to the government entity, if a subsequent court order required the refund of 75% of the amount, the payment of such amounts will be required to be made as per the court orders. On October 29, 2021, the Department of Expenditure inserted a new Rule 227A in the General Finance Rules, 2017 ("**GFR**") to incorporate the above decision of the CCEA. The above rule further requires payment to be made into a designated escrow account with the stipulation that the proceeds will be used: (i) for the payment of lenders' dues; (ii) for completion of the project, and (iii) for completion of other projects. The balance remaining in the escrow account may be used by the contractor/concessionaire with prior approval of the lead banker and the ministry/department. Retention money and other amounts withheld may also be released against the bank guarantee subject to eligibility conditions and applicable contractual provisions.

Indian Tolls Act, 1851

In accordance with the Indian Tolls Act, 1851 (the "**Tolls Act**"), state governments have been vested with the power to levy tolls at such rates as they deem fit, to be levied upon any road or bridge, made or repaired at the expense of the GoI or any state government. The tolls levied under the Tolls Act, are deemed to be 'public revenue' and the collection of tolls can be placed under the management of any person the state governments' may deem fit. Such persons are instructed with the same responsibilities as if they were employed in the collection of land revenue. Further, all police officers are bound to assist the toll collectors when required in the implementation of the Tolls Act. The Tolls Act further gives power for recovery of toll and exempts certain category of people from payment of toll.

Provisions under the Constitution of India and other legislations in relation to collection of toll

Entry 59, List II of Schedule VII read with Article 246 of the Constitution of India vests state governments with the power to levy tolls. Further, in accordance with the Tolls Act, state governments have been vested with the power to levy tolls at such rates as they deem fit.

Control of National Highways (Land and Traffic) Act, 2002

The Control of National Highways (Land and Traffic) Act, 2002 (the "**Control of NH Act**") provides for control of land within national highways, right of way and traffic moving on national highways and also for removal of unauthorised occupation thereon.

In accordance with the provisions of the Control of NH Act, the GoI has established the Highway Administration which is governed by Highway Administration Rules, 2004. Its functions include maintenance of land records and issuance of permits. Under the Control of NH Act, all land that forms part of a highway which vests in the GoI, or that which does not already vest in the GoI but has been acquired for the purpose of highways shall be deemed to be the property of the GoI. The Control of NH Act prohibits any person from occupying any highway land or discharging any material through drain on such land without the permission of the Highway Administration or any officer authorised by such administration. The Control of NH Act permits the grant of lease and license for use of highway land for temporary use.

Other Laws and Regulations

In addition to the aforementioned legislations which are applicable to the Trust, the Project SPVs and the Target SPV, certain other material legislations that are applicable to the operations of the Trust, the Project SPVs and the Target SPV are set out below.

In addition to such legislations, we are also required to comply with the provisions of various tax-related legislations, intellectual-property related legislations and other applicable law for our day-to-day operations.

Indian Trusts Act, 1882

The Indian Trusts Act, 1882 ("**Trusts Act**") governs all private trusts in India.

The Trusts Act sets out the purpose for which private trusts can be established, the manner in which they may be created, executed and extinguished. The person creating a trust under the Trusts Act is the author of such trust, the person to whom the author grants the power and authority to regulate the trust is the trustee and the persons for whose benefit such trust has been created are the beneficiaries of such trust. The Trust Act sets out the rights, duties, liabilities and powers of the trustees and the beneficiaries *vis-a-vis* the trust. The Trust has been settled in accordance with the provisions of the Trusts Act.

InvIT Regulations

The InvIT Regulations set out the framework for infrastructure investment trusts and the registration and regulation thereof. An infrastructure investment trust is required to obtain a certificate of registration from the SEBI. The InvIT Regulations prescribe, *inter-alia*, the eligibility criteria and the rights and responsibilities of the parties to an infrastructure investment trust, namely its sponsor, investment manager, trustee and project manager; and the rights and responsibilities of the valuer and auditor of an infrastructure investment trust. Parties to an infrastructure investment trust are required to maintain the eligibility conditions specified under the InvIT Regulations of the InvIT Regulations on an ongoing basis. Infrastructure investment trusts and parties to infrastructure investment trusts are also required to comply with the code of conduct prescribed under the InvIT Regulations.

Environment Regulation

Infrastructure projects must also ensure compliance with environmental legislation such as the Water (Prevention and Control of Pollution) Act, 1974 ("**Water Pollution Act**"), the Air (Prevention and Control of Pollution) Act, 1981 ("**Air Pollution Act**") and the Environment Protection Act, 1986 ("**Environment Act**"). The Water Pollution Act aims to prevent and control water pollution. This legislation provides for the constitution of a Central Pollution Control Board and State Pollution Control Boards. The functions of the Central Pollution Control Board include, *inter-alia*, coordination of activities of the State Pollution Control Boards, collecting data relating to water pollution and the measures devised for the prevention and control of water pollution and prescription of standards for streams or wells. The State Pollution Control Boards are responsible for, *inter-alia*, the planning for programmes for prevention and control of pollution of streams and wells, collecting and disseminating information relating to water pollution and its prevention and control, inspection of sewage or trade effluents, works and plants for their treatment and to review the specifications and data relating to plants set up for treatment and purification of water, laying down or annulling the effluent standards for trade effluents and for the quality of the receiving waters, and laying down standards for treatment of trade effluents to be discharged. This legislation prohibits any person from establishing any industry, operation or process or any treatment and disposal system, which is likely to discharge trade effluent into a stream, well or sewer, or bring into use any new or altered outlet

for discharge of sewage, or begin to make any new discharge of sewage without taking prior consent of the State Pollution Control Board.

The Central and State Pollution Control Boards constituted under the Water Pollution Act are also to perform functions as per the Air Pollution Act for the prevention and control of air pollution. The Air Pollution Act aims for the prevention, control and abatement of air pollution. It is mandated under this Act that no person can, without the previous consent of the State Pollution Control Board, establish or operate any industrial plant in an air pollution control area as notified by the State Government. The Environment Act has been enacted for the protection and improvement of the environment. The Environment Act empowers the GoI to take measures to protect and improve the environment such as by laying down standards for emission or discharge of pollutants, providing for restrictions regarding areas where industries may operate and so on. The GoI may make rules for regulating environmental pollution.

With respect to forest conservation, the Forest (Conservation) Act, 1980 ("**Forest Conservation Act**") applies to forest land in the country. The Lok Sabha has recently passed the Forest (Conservation) Amendment Bill, 2023, which seeks to the amend the provisions of the Forest Conservation Act, including, *inter-alia*, changing the name of the legislation to Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 and exemptions to strategic projects related to national security and public utility projects from the provisions of the Forest Conversation Act.

The Ministry of Environment and Forests (the "**MoEF**") mandates that Environment Impact Assessment ("**EIA**") must be conducted for specified projects. In the process, the MoEF receives proposals for the setting up of projects and assesses their impact on the environment before granting clearances to the projects. The EIA Notification S.O. 1533, issued on September 14, 2006 (the "**EIA Notification**") and amended from time to time, under the provisions of the Environment Act, prescribes that new construction of specified projects require prior environmental clearance from the MoEF. The environmental clearance must be obtained from the MoEF according to the procedure specified in the EIA Notification. No construction work or preparation of land by the project management except for securing the land, relating to the setting up of a specified project can be undertaken until such clearance is obtained. Under the EIA Notification, the environmental clearance process for new projects consists of four stages – screening, scoping, public consultation and appraisal. After completion of public consultation, the applicant is required to make appropriate changes in the draft 'EIA Report' and the 'Environment Management Plan.' The final EIA Report has to be submitted to the concerned regulatory authority for appraisal. The regulatory authority is required to give its decision within 105 days of the receipt of the final EIA Report. The EIA Guidance Manual for Highways, 2010 explains the four stages of the environmental clearance process and the contents of the EIA Report required to be submitted by highway projects.

Public Liability Insurance Act, 1991

The Public Liability Insurance Act, 1991 (the "**Public Liability Act**"), imposes liability on the owner or controller of hazardous substances for any damage arising out of an accident involving such hazardous substances. A list of 'hazardous substances' covered by the legislation has been enumerated by the Government by way of a notification. The owner or handler is also required to take out an insurance policy insuring against liability under the legislation. The rules made under the Public Liability Act mandate that the employer has to contribute towards the Environment Relief Fund, a sum equal to the premium paid on the insurance policies. This amount is payable to the insurer.

Green Highways (Plantation, Transplantation, Beautification and Maintenance) Policy, 2015

In September 2015, MoRTH has launched Green Highways (Plantation, Transplantation, Beautification and Maintenance) Policy, 2015 which will require road developers to earmark one per cent of a project's total cost for planting of trees and shrubs across the national highways. Under this policy, the maintenance of such plantations will be outsourced through a bidding process to plantation agencies. MoRTH/NHAI will appoint the authorized agency for empanelment of such plantation agencies.

Foreign Investment Regulations

Foreign investment in Indian securities is governed by the provisions of the FEMA, read with the applicable FEMA Rules, the FEMA (Mode of payment and Reporting of Non-Debt Instruments) Regulations, 2019 and the consolidated FDI Policy issued by the Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, Government. Foreign investment is permitted (except in the prohibited sectors) either through the automatic route or the approval route, depending upon the sector in which foreign investment is sought

to be made. Under the FEMA Rules and the current consolidated FDI Policy, effective from October 15, 2020, an infrastructure investment trust registered and regulated by the SEBI under the InvIT Regulations, being an 'investment vehicle', is permitted to receive foreign investment from a person resident outside India subject to the terms and conditions specified in the FEMA Rules.

All investments by entities of a country which shares land border with India or where the beneficial owner of an investment into India is situated in or is a citizen of any such country will require prior approval of the Government of India. Further, in the event of transfer of ownership of any existing or future foreign direct investment in an entity in India, directly or indirectly, resulting in the beneficial ownership falling within the purview of the above restriction, such subsequent change in the beneficial ownership will also require approval of the Government of India. A multilateral bank or fund, of which India is a member, shall not be treated as an entity of a particular country nor shall any country be treated as the beneficial owner of the investments of such bank or fund in India.

Downstream investment by an infrastructure investment trust shall be regarded as indirect foreign investment if either the sponsor or the investment manager of such an infrastructure investment trust is not Indian 'owned and controlled' as defined in FEMA Rules.

Downstream investment by an 'investment vehicle' is required to conform to the sectoral caps and conditions/restrictions, if any, as applicable to the company in which the downstream investment is made as per the FDI Policy. Foreign investment of up to 100% through the automatic route is permitted in the infrastructure sector in India. An infrastructure investment trust that receives foreign investment shall be required to make such report and in such format to the RBI or to the SEBI as may be prescribed by them from time to time.

The payment for the units of an infrastructure investment trust acquired by a person resident or registered/ incorporated outside India shall be made in accordance with the Foreign Exchange Management (Deposit) Regulations, 2016 and other applicable law.

Further, any person who is a non-resident and holds units of an infrastructure investment trust in accordance with the FEMA Rules may pledge such units (i) in favor of a bank in India to secure the credit facilities being extended to the Indian company for bona fide purposes; (ii) in favor of an overseas bank to secure the credit facilities being extended to the person, or a person resident outside India who is the promoter of the Indian company or the overseas group company of the Indian company; (iii) in favor of a Non-Banking Financial Company registered with the RBI to secure credit facilities being extended to the Indian company for bona fide purposes; and (iv) subject to the authorized dealer bank satisfying itself of the compliance of the conditions stipulated by the RBI in this regard.

Laws Relating to Employment

Certain other laws and regulations that may be applicable to the Trust, the Project SPVs and the Target SPV include the following:

- Contract Labour (Regulation and Abolition) Act, 1970;
- Payment of Wages Act, 1936;
- Payment of Bonus Act, 1965;
- Employees' State Insurance Act, 1948;
- Employees' Provident Funds and Miscellaneous Provisions Act, 1952;
- Equal Remuneration Act, 1976;
- Payment of Gratuity Act, 1972;
- Shops and Commercial Establishments Acts, where applicable;
- Minimum Wages Act 1948;
- Industrial Disputes Act, 1947;
- Employees Compensation Act, 1923;
- The Code of Wages, 2019;
- The Occupational Safety, Health and Working Conditions Code, 2020;
- The Industrial Relations Code, 2020; and
- The Code on Social Security, 2020

The Code on Wages, 2019 will come into force on such date as may be notified in the official gazette of India by the central government. Once effective, it will subsume the Equal Remuneration Act, 1976, the Minimum Wages

Act, 1948, the Payment of Bonus Act, 1965 and the Payment of Wages Act, 1936. However, certain provisions relating to the central advisory board have been brought into force by the Ministry of Labor and Employment. Further, the Occupational Safety, Health and Working Conditions Code, 2020, the Industrial Relations Code, 2020 and the Code on Social Security, 2020 will subsume various legislations including the Contract Labour (Regulation and Abolition) Act, 1970, the Industrial Disputes Act, 1947, the Employees Compensation Act, 1923, the Employees' State Insurance Act, 1948, the Employees' Provident Funds and Miscellaneous Provisions Act, 1952, the Maternity Benefit Act, 1961 and the Payment of Gratuity Act, 1972, upon being brought into force.

LEVERAGE

The following tables present (a) the capital structure of the Trust (including any borrowings or deferred payments) on a consolidated basis and a standalone basis as at September 30, 2024; (b) the capital structure of each of the Project SPVs (including any borrowings or deferred payments) on a standalone basis as at September 30, 2024; and (c) the capital structure of the Target SPV (including any borrowing or deferred payments) on a standalone basis as at September 30, 2024.

The information presented below should be read in conjunction with the sections "*Objects of the Issue*", "*Financial Statements*" and "*Management's Discussion and Analysis of Financial Condition and Results of Operations*" on pages 79, 347 and 777, respectively.

Consolidated capital structure of the Trust (including any borrowings or deferred payments)

Particulars	As at September 30, 2024	
	Pre-Issue (₹ in millions)	Post-Issue[(1)] (₹ in millions)
Equity:		
Unit Capital	134,645.74	151,794.97
Subordinate Debt	16,916.65	16,916.65
Other Equity		
Other reserves	(21,054.62)	(21,054.62)
Non -controlling interests	1.58	1.58
Total unit holder's equity	**130,509.35**	**147,658.58**
Borrowings*		
Loan from related parties (a)	-	-
Non-current Borrowings		
Indian rupee loan from banks (secured) (b)	148,963.07	148,963.07
Indian rupee loan from financial institutions (secured) (c)	47,699.63	47,699.63
Non-convertible debentures (secured) (d)	27,884.23	27,884.23
Total (e) = (b+c+d)	**224,546.93**	**224,546.93**
Current maturities of long term borrowings		
Indian rupee loan from banks (secured) (f)	1,352.53	1,352.53
Indian rupee loan from financial institutions (secured) (g)	455.00	455.00
Non-convertible debentures (secured) (h)	119.58	119.58
Total (i) = (f+g+h)	**1,927.11**	**1,927.11**
Total Debt (a+e+i)	**226,474.04**	**226,474.04**
Total Capitalization	**356,983.39**	**374,132.62**

(1) Assuming full subscription in the Issue. As adjusted to reflect the number of Units issued pursuant to the Issue and the use of proceeds from the Issue.

**Excludes interest accrued but not due and unamortised transaction cost.*

Standalone capital structure of the Trust (including any borrowings or deferred payments)

Particulars	As at September 30, 2024	
	Pre-Issue (₹ in millions)	Post-Issue[(1)] (₹ in millions)
Equity:		
Unit Capital	134,645.75	151,794.97
Other Equity	25,675.21	25,675.21
Total unit holder's equity	**160,320.96**	**177,470.18**

Particulars	As at September 30, 2024	
	Pre-Issue (₹ in millions)	Post-Issue[(1)] (₹ in millions)
Borrowings*		
Non - current Borrowings		
Indian rupee loan from banks (secured) (a)	33,725.09	33,725.09
Indian rupee loan from financial institutions (secured) (b)	28,029.63	28,029.63
Total (c) = (a+b)	**61,754.72**	61,754.72
Current maturities of long term borrowings		
Indian rupee loan from banks (secured) (d)	523.50	523.50
Indian rupee loan from financial institutions (secured) (e)	435.00	435.00
Unsecured Loan from Related Party (f)	1,000.00	1,000.00
Total (g) = (d + e + f)	**1,958.50**	1,958.50
Total Debt (c + g)	**63,713.22**	**63,713.22**
Total Capitalization	**2,24,034.18**	**2,41,183.40**

[(1)] Assuming full subscription in the Issue. As adjusted to reflect the number of Units issued pursuant to the Issue and the use of proceeds from the Issue.
[*]Excludes interest accrued but not due and unamortised transaction cost.

Standalone capital structure of the Project SPVs (including any borrowings or deferred payments)

AETL

Particulars	As at September 30, 2024	
	Pre-Issue (₹ in millions)	Post-Issue (₹ in millions)
Shareholders' Funds:		
Equity Share Capital	4,365.00	4,365.00
Other Equity	(10,464.21)	(10,464.21)
Total Shareholders' Funds	**(6,099.21)**	**(6,099.21)**
Borrowings*#		
Non - current Borrowings		
Secured loan from related parties (a)	6,610.54	6,610.54
Unsecured loan from related parties (b)	9,813.55	9,813.55
Unsecured loan from related parties- MMRA(c)	381.82	381.82
Subordinate Debt (d)	10,425.40	10,425.40
Total (e = a+b+c+d)	**27,231.31**	**27,231.31**
Current maturities of long term borrowings		
Secured loan from related parties (f)	119.79	119.79
Unsecured loan from related parties (g)	99.40	99.40
Unsecured loan from related parties - MMRA (h)	6.92	6.92
Total (i = f+g+h)	**226.11**	**226.11**
Current Borrowing from related parties (j)	**487.01**	**487.01**
Total Debt (e+i+j)	**27,944.43**	**27,944.43**
Total Capitalization	**21,845.22**	**21,845.22**

[*]Excludes interest accrued but not due.
[#] Includes Sub debt taken from Trust for the amount of Rs.10,425.40 million, reclassified on account of interest being charged from April 03, 2023.

CGTL

Particulars	As at September 30, 2024	
	Pre-Issue	Post-Issue
	(₹ in millions)	(₹ in millions)
Shareholders' Funds:		
Equity Share Capital	2,035.00	2,035.00
Subordinate Debt	5,305.85	5,305.85
Other Equity	(2,036.19)	(2,036.19)
Total Shareholders' Funds	**5,304.66**	**5,304.66**
Borrowings*		
Non - current Borrowings		
Indian rupee loan from banks (secured) (a)	13,402.32	13,402.32
Current maturities of long term borrowings		
Indian rupee loan from banks (secured) (b)	396.35	396.35
Total (c) = (a+b)	**13,798.67**	**13,798.67**
Current Borrowings from related parties (d)	1,571.17	1,571.17
Total Debt (c+d)	**15,369.84**	**15,369.84**
Total Capitalization	**20,674.50**	**20,674.50**

**Excludes interest accrued but not due and unamortized transaction cost.*

IRB HMTL

Particulars	As at September 30, 2024	
	Pre-Issue	Post-Issue
	(₹ in millions)	(₹ in millions)
Shareholders' Funds:		
Equity Share Capital	3,715.00	3,715.00
Subordinate Debt	2,347.32	2,347.32
Other Equity	(2,525.80)	(2,525.80)
Total Shareholders' Funds	**3,536.52**	**3,536.52**
Borrowings*#		
Non - current Borrowings		
Secured loan from related parties (a)	14,209.64	14,209.64
Unsecured loan from related parties (b)	30.23	30.23
Unsecured loan from related parties - MMRA (c)	41.37	41.37
Subordinate Debt (d)	9,712.69	9,712.69
Total (e = a+b+c+d)	**23,993.93**	**23,993.93**
Current maturities of long term borrowings		
Secured loan from related parties (f)	445.80	445.80
Unsecured loan from related parties (g)	0.95	0.95
Unsecured loan for MMRA from related parties (h)	1.30	1.30
Total (i = f+g+h)	**448.05**	**448.05**
Current Borrowings from related parties (j)	15.03	15.03
Total Debt (e+i+j)	**24,457.01**	**24,457.01**
Total Capitalization	**27,993.53**	**27,993.53**

**Excludes interest accrued but not due.*

[#] *Includes Sub debt taken from Trust for the amount of Rs. 9,712.69 million, reclassified on account of interest being charged from April 03, 2023.*

IRB WTL

Particulars	As at September 30, 2024	
	Pre-Issue	Post-Issue
	(₹ in millions)	(₹ in millions)
Shareholders' Funds:		
Equity Share Capital	1,741.94	1,741.94
Subordinate Debt	6,394.89	6,394.89
Other Equity	(7,788.44)	(7,788.44)
Total Shareholders' Funds	**348.39**	**348.39**
Borrowings[*#]		
Non - current Borrowings		
Secured loan from related parties (a)	8,743.69	8,743.69
Unsecured loan from related parties (b)	4,243.73	4,243.73
Unsecured loan from related parties - MMRA (c)	375.96	375.96
Subordinate Debt (d)	7,788.81	7,788.81
Total (e = a+b+c+d)	**21,151.59**	**21,151.59**
Current maturities of long term borrowings		
Secured loan from related parties (f)	518.21	518.21
Unsecured loan from related parties (g)	143.64	143.64
Unsecured loan from related parties - MMRA (h)	22.88	22.88
Total (i = f+g+h)	**684.73**	**684.73**
Current Borrowing from related parties (j)	2,428.08	2,428.08
Total Debt (e+i+j)	**24,264.40**	**24,264.40**
Total Capitalization	**24,612.79**	**24,612.79**

[*] *Excludes interest accrued but not due.*

[#] *Includes Sub debt taken from Trust for the amount of Rs.7,788.81 million, reclassified on account of interest being charged from April 03, 2023.*

KGTL

Particulars	As at September 30, 2024	
	Pre-Issue	Post-Issue
	(₹ in millions)	(₹ in millions)
Shareholders' Funds:		
Equity Share Capital	1,555.00	1,555.00
Subordinate Debt	2,930.74	2,930.74
Other Equity	(3,271.83)	(3,271.83)
Total Shareholders' Funds	**1,213.91**	**1,213.91**
Borrowings*#		
Non - current Borrowings		
Secured loan from related parties (a)	8,944.41	8,944.41
Unsecured loan from related parties (b)	177.96	177.96
Subordinate Debt (c)	2,399.43	2,399.43
Total (d = a+b+c)	**11,521.80**	**11,521.80**
Current maturities of long term borrowings		
Secured loan from related parties (e)	692.22	692.22
Unsecured loan from related parties (f)	13.77	13.77
Total (g = e+f)	**706.99**	**706.99**
Current Borrowing from related parties (h)	370.41	370.41
Total Debt (d+g+h)	**12,598.20**	**12,598.20**
Total Capitalization	**13,812.11**	**13,812.11**

**Excludes interest accrued but not due.*

Includes Sub debt taken from Trust for the amount of Rs.2,399.43 million, reclassified on account of interest being charged from April 03, 2023.

KTL

Particulars	As at September 30, 2024	
	Pre-Issue	Post-Issue
	(₹ in millions)	(₹ in millions)
Shareholders' Funds:		
Equity Share Capital	3,280.00	3,280.00
Other Equity	(8,032.38)	(8,032.38)
Total Shareholders' Funds	**(4,752.38)**	**(4,752.38)**
Borrowings*#		
Non - current Borrowings		
Secured loan from related parties (a)	4,468.96	4,468.96
Unsecured loan from related parties (b)	8,589.94	8,589.94
Unsecured loan for MMRA from related parties (c)	418.72	418.72
Subordinate Debt (d)	4,472.86	4,472.86
Total (e = a+b+c+d)	**17,950.48**	**17,950.48**
Current maturities of long term borrowings		
Secured loan from related parties (f)	217.72	217.72
Unsecured loan from related parties (g)	230.84	230.84
Unsecured loan for MMRA from related parties (h)	20.40	20.40
Total (i = f+g+h)	**468.96**	**468.96**
Current Borrowing from related parties (j)	**1,237.30**	**1,237.30**
Total Debt (e+i+j)	**19,656.74**	**19,656.74**

Total Capitalization	**14,904.36**	**14,904.36**

*Excludes interest accrued but not due.

Includes Sub debt taken from Trust for the amount of Rs.4,472.86 million, reclassified on account of interest being charged from April 03, 2023.

SYTL

Particulars	As at September 30, 2024	
	Pre-Issue (₹ in millions)	Post-Issue (₹ in millions)
Shareholders' Funds:		
Equity Share Capital	982.50	982.50
Other Equity	(3,571.53)	(3,571.53)
Total Shareholders' Funds	**(2,589.03)**	**(2,589.03)**
Borrowings*#		
Borrowings from related parties (a)	4,000.00	4,000.00
Non - current Borrowings		
Non-convertible debentures (secured) (b)	5,910.00	5,910.00
Subordinated debt (c)	3,927.17	3,927.17
Total (d) = (b+c)	**9,837.17**	**9,837.17**
Total Debt (a+d)	**13,837.17**	**13,837.17**
Total Capitalization	**11,248.14**	**11,248.14**

*Excludes interest accrued but not due and unamortized transaction cost.

Includes Sub debt taken from Trust for the amount of Rs. 3,927.17 million, reclassified on account of interest being charged from April 03, 2023.

UTL

Particulars	As at September 30, 2024	
	Pre-Issue (₹ in millions)	Post-Issue (₹ in millions)
Shareholders' Funds:		
Equity Share Capital	1,168.00	1,168.00
Subordinate Debt	11,727.52	11,727.52
Other Equity	(5,688.09)	(5,688.09)
Total Shareholders' Funds	**7,207.43**	**7,207.43**
Borrowings*		
Non - current Borrowings		
Indian rupee loan from banks (secured) (a)	8,095.39	8,095.39
Non-convertible debentures (secured) (b)	6,824.23	6,824.23
Total (c = a+b)	**14,919.62**	**14,919.62**
Current maturities of long term borrowings		
Indian rupee loan from banks (secured) (d)	159.55	159.55
Non-convertible debentures (secured) (e)	119.58	119.58
Total (f = d+e)	**279.13**	**279.13**
Current Borrowings from related parties (g)	2,533.41	2,533.41
Total Debt (c+f+g)	**17,732.16**	**17,732.16**
Total Capitalization	**24,939.59**	**24,939.59**

*Excludes interest accrued but not due and unamortized transaction cost.

YATL

Particulars	As at September 30, 2024	
	Pre-Issue	Post-Issue
	(₹ in millions)	(₹ in millions)
Shareholders' Funds:		
Equity Share Capital	2,157.57	2,157.57
Other Equity	(5,050.68)	(5,050.68)
Total Shareholders' Funds	**(2,893.11)**	**(2,893.11)**
Borrowings*#		
Borrowings from related parties (a)	4,000.00	4,000.00
Non - current Borrowings		
Non-convertible debentures (secured) (b)	15,150.00	15,150.00
Subordinated debt (c)	16,235.44	16,235.44
Total (d) = (b+c)	**31,385.44**	**31,385.44**
Current Borrowings from related parties (e)	64.02	64.02
Total Debt (a+d+e)	**35,449.46**	**35,449.46**
Total Capitalization	**32,556.35**	**32,556.35**

**Excludes interest accrued but not due and unamortized transaction cost.*

Includes Sub debt taken from Trust for the amount of Rs. 16,235.44 million, reclassified on account of interest being charged from April 03, 2023.

PDTPL

Particulars	As at September 30, 2024	
	Pre-Issue	Post-Issue
	(₹ in millions)	(₹ in millions)
Shareholders' Funds:		
Equity Share Capital	1,212.50	1,212.50
Subordinate Debt	3,637.50	3,637.50
Other Equity	1,745.64	1,745.64
Total Shareholders' Funds	**6,595.64**	**6,595.64**
Borrowings*		
Non - current Borrowings		
Indian rupee loan from banks (secured) (a)	1,956.73	1,956.73
Indian rupee loan from financial institutions (secured) (b)	10,425.80	10,425.80
Total Debt (c = a+b)	**12,382.53**	**12,382.53**
Total Capitalization	**18,978.17**	**18,978.17**

**Excludes unamortized transaction cost.*

IRB GEPL

Particulars	As at September 30, 2024	
	Pre-Issue (₹ in millions)	Post-Issue (₹ in millions)
Shareholders' Funds:		
Equity Share Capital	7,155.00	7,155.00
Other Equity	(2,314.30)	(2,314.30)
Total Shareholders' Funds	**4,840.70**	**4,840.70**
Borrowings*#		
Borrowings from related parties	**-**	**-**
Non - current Borrowings		
Indian rupee loan from banks (secured) (a)	54,793.41	54,793.41
Subordinated Debt (b)	21,465.00	21,465.00
Total (c) = (a+b)	**76,258.41**	**76,258.41**
Current maturities of long term borrowings		
Indian rupee loan from banks (secured) (d)	151.25	151.25
Total	**151.25**	**151.25**
Current Borrowing from related parties (e)	31.98	31.98
Total Debt (c+d+e)	**76,441.64**	**76,441.64**
Total Capitalization	**81,282.34**	**81,282.34**

**Excludes interest accrued but not due and unamortized transaction cost.*
Includes Sub debt taken from Trust for the amount of Rs.21,465 million.

STPL

Particulars	As at September 30, 2024	
	Pre-Issue (₹ in millions)	Post-Issue (₹ in millions)
Shareholders' Funds:		
Equity Share Capital	1,162.50	1,162.50
Subordinate Debt	1,268.00	1,268.00
Other Equity	828.16	828.16
Total Shareholders' Funds	**3,258.66**	**3,258.66**
Borrowings*		
Non-current Borrowings		
Indian rupee loan from banks (secured) (a)	1,244.35	1,244.35
Total Debt	**1,244.35**	**1,244.35**
Total Capitalization	**4,503.01**	**4,503.01**

**Excludes unamortised transaction cost*

IRB LTPL

Particulars	As at September 30, 2024	
	Pre-Issue	Post-Issue
	(₹ in millions)	(₹ in millions)
Shareholders' Funds:		
Equity Share Capital	4,205.80	4,205.80
Other Equity	(878.40)	(878.40)
Total Shareholders' Funds	**3,327.40**	**3,327.40**
Borrowings*#		
Non-current Borrowings		
Indian rupee loan from banks (secured) (a)	23,109.16	23,109.16
Indian rupee loan from financial institutions (secured) (b)	9,244.20	9,244.20
Subordinated debt (c)	12,617.40	12,617.40
Total (d) = (a+b+c)	**44,970.76**	**44,970.76**
Current maturities of long term borrowings		
Indian rupee loan from banks (secured) (e)	50.00	50.00
Indian rupee loan from financial institutions (secured) (f)	20.00	20.00
Total (g) = (e+f)	**70.00**	**70.00**
Total Debt (d+g)	**45,040.76**	**45,040.76**
Total Capitalization	**48,368.16**	**48,368.16**

**Excludes interest accrued but not due and unamortized transaction cost.*
Includes Sub debt taken from Trust for the amount of Rs.12,617.40 million.

IRB GTPL

Particulars	As at September 30, 2024	
	Pre-Issue	Post-Issue
	(₹ in millions)	(₹ in millions)
Shareholders' Funds:		
Equity Share Capital	1,032.85	1,032.85
Other Equity	(176.57)	(176.57)
Total Shareholders' Funds	**856.28**	**856.28**
Borrowings*#		
Non-current borrowings		
Indian rupee loan from banks (secured) (a)	8,403.39	8,403.39
Subordinated debt (b)	3,098.55	3,098.55
Total (c) = (a+b)	11,501.94	11,501.94
Current maturities of long term borrowings		
Indian rupee loan from banks (secured) (d)	47.36	47.36
Total Debt (c+d)	**11,549.30**	**11,549.30**
Total Capitalization	**12,405.58**	**12,405.58**

**Excludes interest accrued but not due and unamortized transaction cost*
Includes Sub debt taken from Trust for the amount of Rs.3,098.55 million.

IRB KTPL

Particulars	As at September 30, 2024	
	Pre-Issue	Post-Issue
	(₹ in millions)	(₹ in millions)
Shareholders' Funds:		
Equity Share Capital	393.48	393.48
Subordinate Debt	-	-
Other Equity	(50.14)	(50.14)
Total Shareholders' Funds	**343.34**	**343.34**
Borrowings*#		
Non-current borrowings		
Indian rupee loan from banks (secured) (a)	4,233.24	4,233.24
Subordinated debt (b)	1,180.43	1,180.43
Total (c) = (a+b)	5,413.67	5,413.67
Current maturities of long term borrowings		
Indian rupee loan from banks (secured) (d)	24.52	24.52
Total Debt (c+d)	**5,438.19**	**5,438.19**
Total Capitalization	**5,781.53**	**5,781.53**

** Excludes interest accrued but not due and unamortized transaction cost*
Includes Sub debt taken from Trust for the amount of Rs.1,180.43 million.

Target SPV

Particulars	As at September 30, 2024	
	Pre-Issue	Post-Issue
	(₹ in millions)	(₹ in millions)
Shareholders' Funds:		
Equity Share Capital	5,332.50	5,332.50
Other Equity	962.82	962.82
Total Shareholders' Funds	**6,295.32**	**6,295.32**
Borrowings		
Non-current Borrowings		
Secured		
Indian rupee loan from banks (secured) (a)	11,738.20	11,738.20
Indian rupee loan from financial institutions (secured) (b)	5,224.77	5,224.77
Total (c) = (a+b)	**16,962.97**	**16,962.97**
Unsecured*		
Unlisted Redeemable non-convertible debentures-Others (d)	7,838.70	7,838.70
Unlisted Redeemable non-convertible debentures-Associates (e)	8,158.80	8,158.80
Total (f) = (d+e)	**15,997.50**	**15,997.50**
Current Borrowings		
Borrowings from related parties (h)	604.93	604.93
Total Debt (c+f+h)	**33,565.40**	**33,565.40**

Total Capitalization	**39,860.72**	**39,860.72**

***Unlisted Redeemable non-convertible debentures as on September 30, 2024 excludes EIR impact of Rs.2,079.96 million.*
** Excludes unamortised transaction cost on Debentures.*

Leverage Policy

This policy sets out the framework for selection and repayment of borrowings by the Manager Group. The policy should be read together with a letter dated February 28, 2023 issued by the SEBI, pursuant to which the SEBI has exempted us from the requirement to have a mandatory 'AAA' credit rating and a track record of six distributions to raise debt above 49% of the value of the Trust Assets and up to 70% of the value of the Trust Assets, subject to obtaining a credit rating, disclosure of such credit rating and obtaining unitholder approval.

The key terms of the Leverage Policy include, *inter-alia*:

(i) The Manager Group Members may avail additional borrowings or debt from time to time in accordance with the Annual Budget and Business Plan of the respective Manager Group Members, the Transaction Documents, and the InvIT Regulations. Any additional borrowing or creation of security that is not in accordance with the Annual Budget and Business Plan will require the prior approval of the shareholders of the Investment Manager.

(ii) In accordance with Regulation 20 of the InvIT Regulations, if the aggregate consolidated borrowings and deferred payments of the Trust, holdco, and the SPVs, net of cash and cash equivalents exceeds 25% of the value of the Trust Assets, then for any further borrowing:

a. Up to 49% of the value of the Trust Assets, the Trust shall:

- obtain credit rating from a credit rating agency registered with the SEBI; and
- seek approval of the Unitholders in the manner as specified in Regulation 22 of the InvIT Regulations.

b. Above 49% of the value of the Trust Assets and up to 70% of the value of the Trust Assets, the Trust shall:

- obtain a credit rating from a credit rating agency registered with the SEBI and disclose it to the stock exchange(s);
- utilize the funds only for acquisition or development of infrastructure projects;
- obtain the one-time approval of Unitholders;
- have a track record of atleast six distributions, in terms of sub-regulation (6) of regulation 18, on a continuous basis, post listing, in the years preceding the financial year in which the enhanced borrowings are proposed to be made

(iii) If either of the conditions specified above are breached on account of market movements of the price of the underlying assets or securities, the Investment Manager shall inform the Trustee at the earliest and ensure that the condition is satisfied within six months of the breach, in accordance with the InvIT Regulations.

(iv) The limits in relation to the aggregate consolidated borrowings and deferred payments of the Trust, any Holdcos and the SPVs, net of cash and cash equivalents, shall be as approved by at least 60% of the Unitholders from time to time, unless otherwise provided under the InvIT Regulations.

(v) In no event will the aggregate borrowings exceed 70% of the value of the Trust Assets, or such other limit as provided under the InvIT Regulations.

(vi) The Trust shall be permitted to borrow monies through any permitted means, by any instrument, in Indian or foreign currency, as permitted by applicable law.

(vii) The Investment Manager shall be permitted to borrow monies on behalf of the Trust, subject to the approval of its board of directors or such other committee of the board of directors of the Investment Manager as may be constituted in this regard.

(viii) Any borrowing and/or creation of security for any borrowing by the Manager Group Members incorporated under the Companies Act, 1956 or the Companies Act, 2013, will be in accordance with the conditions prescribed therein.

(ix) The Investment Manager may secure the payment of any sum of money for and on behalf of the Manager Group Member in such manner and upon such terms and conditions in all respects as set out in the Annual Budget or the Business Plan, including by mortgage or pledge or charge upon all or any Trust Assets (present or future).

RELATED PARTY TRANSACTIONS

Under Regulation 2(1)(zv) of the InvIT Regulations, a 'related party' will be as defined under the Companies Act, 2013 or under the applicable accounting standards (i.e., Ind AS 24 on "Related Party Disclosures") and will also include (i) the Parties to the Trust and (ii) the promoters, directors and partners of the Parties to the Trust. Further, any transaction between the Trust and one or more infrastructure investment trusts having a common investment manager or sponsor, or a transaction where the Investment Manager or the Sponsor is an Associate of the investment manager or sponsor of the other infrastructure investment trust, will be deemed to be related party transactions for such parties. Also see "*Financial Statements*" on page 347.

A. Procedure for dealing with Related Party Transactions

General Requirements

In accordance with relevant provisions of the InvIT Regulations, all related party transactions will be on an arms' length basis, in compliance with applicable accounting standards and any other guidelines issued by the SEBI from time to time. Such related party transactions shall be in the best interest of the Unitholders, must be consistent with the strategy and investment objectives of the Trust and must be disclosed to the Stock Exchange in accordance with the requirements of the InvIT Regulations.

Approval of the Unitholders

In the case of related party transactions proposed to be entered into, if such related party transaction is a Reserved Matter, approval from all eligible Unitholders (as defined under the Framework Agreement) at a validly convened Unitholding meeting will be obtained, provided that if the InvIT Regulations specify a different threshold for the approval by Unitholders of such matter, the threshold specified in the InvIT Regulations will prevail. Further, if such related party transaction is a Reserved Matter and does not require the approval of the Unitholders to be obtained at a Unitholders meeting under the InvIT Regulations, then, a meeting of the Unitholders shall not be required if the prior approval in writing of the Eligible Unitholders has been obtained by IRB in respect of such Reserved Matter. For details of the Reserved Matters, see "*Corporate Governance*" and "*Rights of Unitholders*" on pages 162 and 320, respectively.

Voting by any person who is a related party with respect to any transaction as well as the voting by the Associates of such person will not be considered on the specific issue.

Role of the Investment Manager

The Investment Manager is responsible for formulating and maintaining all such internal processes and relevant controls with respect to related party transactions, so as to ensure compliance with the InvIT Regulations and applicable accounting standards. Further, the Investment Manager will convene meetings of the Unitholders in accordance with Regulation 22 of the InvIT Regulations and maintain records pertaining to such meetings in the manner prescribed. The Investment Manager will also ensure compliance with any additional guidelines, circulars or regulations with respect to related party transactions issued by the SEBI or the stock exchanges in the future.

The Investment Manager or its Associates will not obtain any commission, rebate or any other remuneration, by whatever name called, arising out of transactions pertaining to the Trust, other than as specified in the relevant documents for any offering of Units or any other document as may be specified by the SEBI for the issue of Units.

Disclosure and Reporting

The Investment Manager will submit quarterly reports on the activities of the Trust, including the status of compliance with the requirements specified under the InvIT Regulations in relation to related party transactions to the Trustee within 30 days of the end of each quarter.

Further, in accordance with the InvIT Regulations, the Investment Manager will submit an annual report and a half-yearly report to the Trustee, the Unitholders and the stock exchanges, electronically or through physical copies within the timelines specified under the InvIT Regulations, which will contain, *inter-alia*, details of all related party transactions, including acquisitions or disposal of any projects, directly or through SPVs during the year, the value of which exceeded 5% of the value of the Trust Assets.

B. Details of Related Party Transactions undertaken prior to the filing of this Letter of Offer

The Trust (acting through the Trustee) has entered into, *inter-alia*, the following related party transactions prior to the filing of this Letter of Offer:

S. No.	Name of the Related Party	Nature of Relationship with the Trust	Nature of Transaction
1.	IRB Infrastructure Developers Limited	Sponsor	The Trust was settled with an initial settlement amount of ₹1,000.00 by the Sponsor.
2.	MMK Toll Road Private Limited	Investment Manager	The Trustee (acting on behalf of the Trust) has entered into the Investment Management Agreement dated August 27, 2019, as amended on September 16, 2019 and May 31, 2023, with the Investment Manager for managing and administering the Trust, in accordance with the InvIT Regulations. The Investment Manager will be paid Management Fees in accordance with the terms of the Investment Management Agreement. For details, see "*Background and Structure of the Trust – Fees and Expenses – Fees and expenses of the Investment Manager*" and "*The Investment Manager*" on pages 120 and 331, respectively.
3.	IRB Infrastructure Developers Limited	Project Manager	The Trustee (on behalf of the Trust) has entered into the Project Implementation Agreements with the Project Manager, with respect to each of the Project SPVs, which set out the obligations of the Project Manager with respect to the execution of each of the projects, in accordance with the InvIT Regulations. The Project Manager will be paid EPC Payments and O&M Payments, as applicable, by the respective Project SPVs in accordance with the terms of the Project Implementation Agreements. For details, see "*Background and Structure of the Trust – Fees and Expenses – Fees and expenses of the Project Manager*" and "*The Sponsor and Project Manager*" on pages 120 and 327, respectively.
4.	IRB Infrastructure Developers Limited	Sponsor	Pursuant to the Name Licensing Agreement dated February 13, 2020, as amended, the Sponsor has granted to the Trust, each of the Project SPVs and the Investment Manager, the non-transferable and non-assignable right to use the "IRB" trademark as part of their respective corporate names, if applicable, as well as the "IRB" logo in connection with their respective businesses, on a non-exclusive basis. No licensing fee is payable to the Sponsor under the Name Licensing Agreement.
5.	IRB Infrastructure Developers Limited and its Associates	Sponsor and its Associates	The Project SPVs (except PDTPL, IRB GEPL, STPL, IRB LTPL, IRB KTPL and IRB GTPL) were transferred to the Trust on February 25, 2020 by the Sponsor pursuant to the Formation Transactions undertaken as part of the initial offer through private placement of Units. The Subordinated Debt and Unsecured Loans were also novated in favor of the Trust. The Trust acquired PDTPL through subscription to 99.96% of the equity share capital of PDTPL on April 2, 2022. The Trust acquired IRB GEPL through subscription to 99.99% of the equity share capital of IRB GEPL on August 2, 2023. The Trust acquired STPL on December 28, 2023 and subscribed to 99.96% of the equity share capital of STPL on January 3, 2024.

For details of the related party transactions entered into by the Project SPVs during the six-month period ended September 30, 2024 and the Financial Years 2024, 2023 and 2022, see "*Financial Statements*" on page 347.

C. Details of Related Party Transactions proposed to be undertaken

Pursuant to the Framework Agreement, the Sponsor has agreed that prior to the submission of a Bid (as defined under the Framework Agreement) for any Potential Project (as defined under the Framework Agreement), being eligible in accordance with the Investment and Procurement Policy, it will consult the Financial Investors in good faith and make best efforts to bid for the Potential Project on behalf of the Trust on such terms as agreed between Sponsor and the Financial Investors. If the Sponsor and any one or more Agreeable Investors (as defined in the Framework Agreement) agree to bid for Potential Project in a manner not in accordance with the Investment and Procurement Policy or none of the Financial Investors agreed to the terms of the Bid within a reasonable period or do not agree to bid for the Potential Projects on behalf of the Trust, in each case, the Sponsor or the Sponsor and the relevant Agreeable Investor, as the case may be, will be free to submit a Bid (independent and outside the Trust), as it deems fit for the Potential Project subject to the conditions set out in the Framework Agreement.

The proceeds of the Issue are proposed to be utilized for the payment of the purchase of 80.40% of the equity share capital of MBEL and 80.40% of the outstanding non-convertible debentures of MBEL from the Sponsor and Anahera under the MBEL Securities Purchase Agreement. The Project Manager is also proposed to be appointed as the project manager with respect to MBEL pursuant to the MBEL Project Imeplementation Agreement. These are related party transactions under the InvIT Regulations. Unitholder approval for such related party transactions has been obtained pursuant to a resolution dated February 6, 2024. The MBEL Acquisition also involves certain other agreements with related parties, including amendments to the Framework Agreement and the Name Licensing Agreement. For further details, see "*Objects of the Issue*" and "*Background and Structure of the Trust – The MBEL Acquisition*" on pages 79 and 106, respectively.

In order to conduct its business, the Trust may enter into transactions with related parties in the future, which will be carried out in compliance with the above policy for dealing with related party transactions, applicable accounting standards and the provisions of the InvIT Regulations.

D. Potential Conflicts of Interest

We may be subject to potential conflicts of interest arising out of our relationship with our Sponsor and its respective Associates, and we will enter into transactions with related parties in the future. Details in relation to our policies for dealing with related party transactions are provided above. Also see "*Risk Factors – Risks Related to the Trust's Relationships with the Sponsor and the Investment Manager*" on page 36.

While the Sponsor operates various road infrastructure projects and accordingly, has interests in road infrastructure assets apart from those of the Project SPVs and the Target SPV, none of these other road infrastructure assets compete or are likely to compete, directly or indirectly, with the activities of the Trust. The Sponsor confirms that it shall perform its duty in relation to the Trust independent of its related business.

VALUATION

In relation to the valuation of the Current Portfolio of the Trust, the valuation report dated October 28, 2024 setting out the valuation of the Current Portfolio as of September 30, 2024 ("**Current Portfolio Valuation Report**"), is available on the website of the Trust at https://www.irbinfratrust.co.in/home/index.php/valuation-reports/. This is the last available valuation report for the Current Portfolio under the InvIT Regulations.

The Valuer has also undertaken valuations of the Target SPV as at September 30, 2024 and has issued a valuation report dated December 14, 2024 ("**Target Valuation Report**") which is included as "*Annexure B: Target Valuation Report*" on page B.

Summary of the Valuation and Valuation Methodology of the Current Portfolio of the Trust

Valuation methodology

Basis of Value

The Valuer has performed valuation on the basis of "Fair Value" as at Valuation Date. The generally accepted definition of "Fair Value" is the value as applied between a hypothetical willing vendor and a hypothetical willing prudent buyer in an open market and with access to all relevant information.

Premise of Value

Valuer has adopted "Going Concern Value" as the premise of value in the given circumstances. The generally accepted definition of Going Concern Value is the value of a business enterprise that is expected to continue to operate in the future.

The Valuer has performed valuation as per internationally accepted valuation methodologies and in cognizance of international valuation standards and ICAI Valuation Standards 2018 issued by the Institute of Chartered Accountants of India. The Valuer has carried out valuation of MBEL as at 30 September 2024.

A brief description of generally accepted valuation methodologies considered by the Valuer are set out below:

Income Approach

Discounted Cash Flows ("DCF")

- Under a DCF approach, forecast cash flows are discounted back to the present date, generating a net present value for the cash flow stream of the business. A terminal value at the end of the explicit forecast period is then determined and that value is also discounted back to the valuation date to give an overall value for the business.

- A discounted cash flow methodology typically requires the forecast period to be of such a length to enable the business to achieve a stabilized level of earnings, or to be reflective of an entire operation cycle for more cyclical industries.

- The rate at which the future cash flows are discounted ("the discount rate") should reflect not only the time value of money, but also the risk associated with the business' future operations. The discount rate most generally employed is weighted average cost of capital ("WACC"), reflecting an optimal as opposed to actual financing structure.

- In calculating the terminal value, regard must be had to the business' potential for further growth beyond the explicit forecast period. The "constant growth model", which applies an expected constant level of growth to the cash flow forecast in the last year of the forecast period and assumes such growth is achieved in perpetuity, is a common method. These results would be cross-checked, however, for reasonability to implied exit multiples.

- Due to the finite life of the concession period of Portfolio of the Trust we have not computed a terminal value for the valuation of Portfolio of the Trust.

- The rate at which future cash flows are discounted should reflect not only the time value of the cash flows but also the risk associated with the business' future operations. This means that in order for a DCF to produce a sensible valuation figure, the importance of the quality of the underlying cash flow forecasts is fundamental.

- The DCF approach has been applied in the valuation of Portfolio of the Trust.

- Under DCF Approach we have discounted Free Cash Flow to Firm to arrive at Enterprise Value of Portfolio of the Trust as required by Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014

Market Approach

Comparable Companies ("CoCo")

- Under comparable companies' method, the value of shares / business of a company is determined based on market multiples of publicly traded comparable companies. Although no two companies are entirely alike, the companies selected as comparable companies should be engaged in the same or a similar line of business as the subject company.

- The appropriate multiple is generally based on the performance of listed companies with similar business models and size.

- The CoCo methodology has not been applied in the valuation of Portfolio of the Trust.

- The list of companies in the road segment have mix of assets which are at different stages of operation / development / revenue mix/ leasing period. Therefore, comparable companies' method is not considered.

Comparable Transactions ("CoTrans")

- Under comparable transactions method, the value of shares / business of a company is determined based on market multiples of publicly disclosed transactions in the similar space as that of the subject company. Due to different purposes of investments, transaction rationale and synergy benefits, different control premiums and minority discounts are embedded in the transaction values.

- Multiples are generally based on data from recent transactions in a comparable sector, but with appropriate adjustment after consideration has been given to the specific characteristics of the business being valued.

- The list of transactions in the road segment have mix of assets which are at different stages of operation / development / revenue mix/ leasing period. Therefore, Therefore, comparable transactions method has not been considered for the valuation of Portfolio of the Trust.

Market Price Method

- Under this approach, the value of the business is arrived at considering the market price of the company based on the daily moving averages of the last six-month volume traded weighted average of closing price on the stock exchange where the company's shares are most frequently traded.

- The market price methodology has not been considered in the valuation of the Portfolio of the Trust as individual SPVs of the Trust are not publicly listed or traded on any stock exchange.

Cost Approach

Net Asset Value ("NAV") Method

- Under the net asset value approach, total value is based on the sum of net asset value as recorded on the balance sheet.

- A net asset methodology is most applicable for businesses where the value lies in the underlying assets and not the ongoing operations of the business.

- The net assets methodology has not been considered for the valuation of Portfolio of the Trust as theSPVs in the Portfolio of the Trust are operational and the financials are made on a going concern basis.

Replacement Cost Method

- The replacement cost of a business is the cost of acquiring similar assets employed in the business and/or reaching a similar level of development. A purchaser, faced with a build versus buy scenario, may be prepared to pay significantly over and above this cost to obtain advantages including time saved in developing a similar business, and risk of failure.

- The replacement cost method quantifies the cost and risk to reach the present stage of development.

- This approach is often used for start-up/non-mature technology or biotech businesses.

- Hence, the replacement cost method has not been considered.

Market Value of Assets or Realizable Value

- Under the market value methodology, total value is based on the sum of market value of asset value less market value of liabilities plus, the value of intangible assets not recorded on the balance sheet.

- This methodology is most applicable for businesses where the value lies in the underlying assets and not the ongoing operations of the business.

- Hence, the market value method has not been considered.

Valuation Summary

Valuation Conclusion 30 September 2024	INR Crore
IRB Golconda Expressway Private Limited	15,803
IRB Westcoast Tollway Limited	3,255
Solapur Yedeshi Tollway Limited	2,884
Yedeshi Aurangabad Tollway Limited	5,289
Kaithal Tollway Limited	2,354
AE Tollway Limited	3,441
Udaipur Tollway Limited	2,650
CG Tollway Limited	2,750
Kishangarh Gulabpura Tollway Limited	1,623
IRB Hapur Moradabad Tollway Limited	4,400
Palsit Dankuni Tollway Private Limited	2,003
Samakhiyali Tollway Private Limited	715
Lalitpur Tollway Private Limited	5,874
IRB Kota Tollway Private Limited	926
IRB Gwalior Tollway Private Limited	1,537
Enterprise Value of the SPVs	**55,505**
Cash and cash Equivalents	54
Surplus	241
Debt	(22,360)
PV of standalone expenses pertaining to IRBI Trust	(235)
Capital Creditors	(384)
Equity Value of IRBI Trust	**32,822**

Notes:

1. *Cash and cash equivalents comprise balance and deposits with banks as at 30 September 2024.*

2. *Surplus assets primarily comprise investment in mutual funds of INR 213 Cr and advance tax net of provisions of INR 19 Cr as at 30 September 2024.*
3. *Debt primarily represents loan from banks and financial institutions of INR 19,847 Cr and non-convertible debentures of INR 2,800 Cr as at 30 September 2024. The debt has been reduced by INR 288 Cr, which represents the present value of the release of DSRA, cash reserves and cash margin of INR 319 Cr as at 30 September 2024, maintained by the Management in the standalone books of the Trust. The release schedule of the DSRA, cash reserves and cash margin along with applicable interest earned on the balance has been provided by the Management.*
4. *Present value of standalone expenses of the IRBI Trust represent the present value of the investment manager fee in the books of the IRBI Trust. The expenses have been forecasted to increase by 10% each year till 11 August 2053 (FY2054).*
5. *Capital creditors of INR 384 Cr have been considered debt like in nature and adjusted from the Enterprise Value to arrive at the Equity Value of IRBI Trust. Management represented that they do not consider these liabilities as part of the working capital and thus they have not been considered as part of the forecast working capital.*
6. *We noted that other financial liabilities of INR 4,114 Cr and sub-debt of INR 1,692 Cr is outstanding in the consolidated financials of IRBI Trust is payable to IRBIDL as at 30 September 2024. These liabilities have not been considered as debt like in nature for the purpose of valuation analysis. We have been given to understand that SPV's have ongoing claims and litigations with NHAI for respective projects. IRBI Trust and its SPV's have entered into a debt novation agreement with IRBIDL pursuant to which any amount received by SPVs or Trust towards these NHAI claims will be paid to IRBIDL. Management has also confirmed that these claims and liabilities have no financial impact on the SPVs or the IRBI Trust and the claim amounts from NHAI are significantly higher than the liabilities recognized by the IRBI Trust. Based on the above, we have not considered any impact of these liabilities in our valuation analysis.*

B. Summary of the Valuation and Valuation Methodology of Meerut Budaun Expressway Limited

Valuation methodology

Basis of Value

The Valuer has performed valuation on the basis of "Fair Value" as at Valuation Date. The generally accepted definition of "Fair Value" is the value as applied between a hypothetical willing vendor and a hypothetical willing prudent buyer in an open market and with access to all relevant information.

Premise of Value

Valuer has adopted "Going Concern Value" as the premise of value in the given circumstances. The generally accepted definition of Going Concern Value is the value of a business enterprise that is expected to continue to operate in the future.

The Valuer has performed valuation as per internationally accepted valuation methodologies and in cognizance of international valuation standards and ICAI Valuation Standards 2018 issued by the Institute of Chartered Accountants of India. The Valuer has carried out valuation of MBEL as at 30 September 2024.

A brief description of generally accepted valuation methodologies considered by the Valuer are set out below:

Income Approach

Discounted Cash Flows ("DCF")

- Under a DCF approach, forecast cash flows are discounted back to the present date, generating a net present value for the cash flow stream of the business. A terminal value at the end of the explicit forecast period is then determined and that value is also discounted back to the valuation date to give an overall value for the business.

- A discounted cash flow methodology typically requires the forecast period to be of such a length to enable the business to achieve a stabilized level of earnings, or to be reflective of an entire operation cycle for more cyclical industries.

- The rate at which the future cash flows are discounted ("the discount rate") should reflect not only the time value of money, but also the risk associated with the business' future operations. The discount rate most generally employed is weighted average cost of capital ("WACC"), reflecting an optimal as opposed to actual financing structure.

- In calculating the terminal value, regard must be had to the business' potential for further growth beyond the explicit forecast period. The "constant growth model", which applies an expected constant level of growth to the cash flow forecast in the last year of the forecast period and assumes such growth is achieved in perpetuity, is a common method. These results would be cross-checked, however, for reasonability to implied exit multiples.

- Due to the finite life of the concession period of MBEL we have not computed a terminal value for the valuation of MBEL.

- The rate at which future cash flows are discounted should reflect not only the time value of the cash flows but also the risk associated with the business' future operations. This means that in order for a DCF to produce a sensible valuation figure, the importance of the quality of the underlying cash flow forecasts is fundamental.

- The DCF approach has been applied in the valuation of MBEL.

- Under DCF Approach we have discounted Free Cash Flow to Firm to arrive at Enterprise Value of MBEL as required by Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014

Market Approach

Comparable Companies ("CoCo")

- Under comparable companies' method, the value of shares / business of a company is determined based on market multiples of publicly traded comparable companies. Although no two companies are entirely alike, the companies selected as comparable companies should be engaged in the same or a similar line of business as the subject company.

- The appropriate multiple is generally based on the performance of listed companies with similar business models and size.

- The CoCo methodology has not been applied in the valuation of MBEL.

- The list of companies in the road segment have mix of assets which are at different stages of operation / development / revenue mix/ leasing period. Therefore, comparable companies' method is not considered.

Comparable Transactions ("CoTrans")

- Under comparable transactions method, the value of shares / business of a company is determined based on market multiples of publicly disclosed transactions in the similar space as that of the subject company. Due to different purposes of investments, transaction rationale and synergy benefits, different control premiums and minority discounts are embedded in the transaction values.

- Multiples are generally based on data from recent transactions in a comparable sector, but with appropriate adjustment after consideration has been given to the specific characteristics of the business being valued.

- The list of transactions in the road segment have mix of assets which are at different stages of operation / development / revenue mix/ leasing period. Therefore, Therefore, comparable transactions method has not been considered for the valuation of MBEL.

Market Price Method

- Under this approach, the value of the business is arrived at considering the market price of the company based on the daily moving averages of the last six-month volume traded weighted average of closing price on the stock exchange where the company's shares are most frequently traded.

- The market price methodology has not been considered in the valuation of MBEL as MBEL is not publicly listed or traded on any stock exchange.

Cost Approach

Net Asset Value ("NAV") Method

- Under the net asset value approach, total value is based on the sum of net asset value as recorded on the balance sheet.

- A net asset methodology is most applicable for businesses where the value lies in the underlying assets and not the ongoing operations of the business.

- The net assets methodology has not been considered for the valuation of MBEL as they are operational and the financials are made on a going concern basis.

Replacement Cost Method

- The replacement cost of a business is the cost of acquiring similar assets employed in the business and/or reaching a similar level of development. A purchaser, faced with a build versus buy scenario, may be prepared to pay significantly over and above this cost to obtain advantages including time saved in developing a similar business, and risk of failure.

- The replacement cost method quantifies the cost and risk to reach the present stage of development.

- This approach is often used for start-up/non-mature technology or biotech businesses.

- Hence, the replacement cost method has not been considered.

Market Value of Assets or Realizable Value

- Under the market value methodology, total value is based on the sum of market value of asset value less market value of liabilities plus, the value of intangible assets not recorded on the balance sheet.

- This methodology is most applicable for businesses where the value lies in the underlying assets and not the ongoing operations of the business.

- Hence, the market value method has not been considered.

Valuation Summary – Meerut Budaun Expressway Limited

Valuation Conclusion 30 September 2024	INR Crore
INR Crore	
Present value of cash flows	3,956
Present value of release of working capital	(0)
Enterprise Valuation	**3,955**
Less: Term loan from Bank & Financial Institutions	(1,696)
Less: Capital Creditors	(245)
Less: Unsecured loan from related party	(60)
Add: Surplus Asset	163
Add: Cash and Cash Equivalent	10
Equity Value (100% Stake) including NCD's	**2,127**
Equity Value (80.4% Stake) including NCD's	**1,710**

Notes:

1. *Cash and cash equivalents comprise balance and deposits with banks as at 30 September 2024.*
2. *Surplus assets primarily comprise grant receivable of INR 131.36 cr and receivable from concessionaire towards change in law on account of GST INR 31.96 cr as at 30 September 2024.*
3. *Debt primarily represents loan from banks and financial institutions of INR 1696 Cr as at 30 September 2024.*
4. *Unsecured loan from related party represent repayable loan taken from related parties to cover project cost against grant receivables.*

5. *Capital creditors of INR 245 Cr have been considered debt like in nature and adjusted from the Enterprise Value to arrive at the Equity Value of MBEL. Management represented that they do not consider these liabilities as part of the working capital and thus they have not been considered as part of the forecast working capital.*
6. *Our valuation conclusion assumes that outstanding non convertible debentures ("NCDs") of INR 1,599.75 cr issued to shareholders in proportion of their shareholding as part of their towards equity contribution are treated as quasi equity and not adjusted as debt like item in arriving from enterprise value to equity value. This assumption is based on assertion from Management of the Trust that the acquisition consideration will be inclusive of consideration towards debentures.*

A. Frequency of Valuation

In accordance with the InvIT Regulations, a full valuation of the Trust Assets (including physical inspection of each of the Trust's infrastructure projects) shall be conducted by the Valuer not less than once every financial year, and that such a full valuation shall be conducted at the end of each financial year, within two months from the end of such financial year. An updated valuation report taking into account any material developments during the previous half-year is also required to be issued by the Valuer as part of the half-yearly report to be submitted by the Investment Manager to the Trustee, the Unitholders and the Stock Exchange.

However, in case of any material development that may have an impact on the valuation of the Trust Assets, the Investment Manager will require the Valuer to undertake a full valuation of the infrastructure project under consideration, within not more than two months from the date of such event, and disclose the same to the Trustee within 15 days of such valuation. Any valuation reports received by the Investment Manager are required to be disclosed to the Stock Exchange within 15 days of receipt.

As a listed InvIT, in case the consolidated borrowings and deferred payments of the Trust are above 49% of the value of the Trust Assets, the valuation of the assets of the Trust is required to be conducted by the Valuer for the quarters ending June, September and December, for incorporating any key changes in the previous quarter and such quarterly reports are required to be prepared within one month of the end of such quarter.

B. Declaration of NAV

The Investment Manager will ensure that computation and declaration of NAV of the Trust is based on the valuation done by the Valuer, not later than 15 days from the date of valuation.

DISTRIBUTIONS

Distribution

Distributions shall be made by the Trust to the Unitholders, from time to time, in accordance with the Indenture of Trust and the InvIT Regulations. The Trustee shall make and shall ensure that the Investment Manager declares distributions in accordance with the InvIT Regulations. However, Unitholders should note that there is no assurance or guarantee that distributions will be made in any amount or at all.

The InvIT Regulations provide that not less than 90% of net distributable cash flows of each Project SPV, and any other SPV that may be acquired by the Trust, are required to be distributed to the Trust in proportion of its holding in each of the Project SPVs, and any other SPV that may be acquired by the Trust, subject to applicable provisions of the Companies Act. Further, not less than 90% of net distributable cash flows of the Trust shall be distributed to the Unitholders. Such distributions are required be declared and made not less than once every financial year and shall be made within five working days from the record date for such declaration. The record date for the payment of distribution shall be two working days from the date of the declaration of distribution, excluding the date of declaration and the record date

In the event distributions are not made within 5 working days from the record date for such declaration, the Investment Manager shall pay interest at the rate of 15% per annum until the distribution is made to the Unitholders. Such interest is not and will not be recoverable by the Investment Manager from the Trust in the form of fees or any other charges payable by the Trust to the Investment Manager. Any amount remaining unclaimed or unpaid out of the distributions declared by the Trust shall be dealt with and transferred to the "Investor Protection and Education Fund" constituted by the SEBI, in the manner specified by the SEBI pursuant to its circular bearing reference number SEBI/HO/DDHS/DDHS-RAC-1/P/CIR/2023/178 dated November 8, 2023.

Distributions shall be made *pro rata* to the total subscription amount of a Unitholder and in accordance with the provisions of the Indenture of Trust, the InvIT Regulations, the Distribution Policy, the preliminary placement memorandum and the placement memorandum.

The Trust's distribution policy is to distribute as per the Trust's net distributable cash flows (the "**Net Distributable Cash Flows**"). The Trust's distribution policy is to distribute at least 90% of the Net Distributable Cash Flows of the Trust. Unless otherwise decided by the Unitholders, the Trust shall declare 100% of the Net Distributable Cash Flows as distributions to the Unitholders.

See "*Risk Factors*" on page 16 for a description of factors that may adversely affect the ability of the Trust to make distributions to Unitholders.

The requirements in relation to distributions will become applicable with respect to the Target SPV upon completion of the MBEL Acquisition, in proportion to the Trust's shareholding in MBEL.

Distribution Policy of the Trust

In accordance with the InvIT Regulations, and the applicable guidelines, as may be issued by SEBI from time to time:

a) Each Project SPV, and any other SPV that may be acquired by the Trust, shall distribute its respective Net Distributable Cash Flows to the Trust, subject to the applicable provisions under Companies Act or any other applicable law, not less than once every three months; and

b) The Trust shall distribute at least 90% of the Net Distributable Cash Flows to the Unitholders not less than once every three months. Unless otheriwse decided by the Unitholders, the Trust shall declare 100% of the Net Distributable Cash Flows as distributions to the Unitholders.

The indicative framework for calculation of net distributable cash flows, as provided herein below, is subject to change, including pursuant to any amendments to the InvIT Regulations or by way of any circulars or guidelines issued by SEBI in this regard:

Computation of Net Distributable Cash Flow at HoldCo/ SPV level:

Particulars
Cash flow from operating activities as per Cash Flow Statement of HoldCo/ SPV
(+) Cash Flows received from SPV's which represent distributions of NDCF computed as per relevant framework ***(refer note 1 and 9 below) (relevant in case of HoldCos)***
(+) Treasury income / income from investing activities (interest income received from FD, tax refund, any other income in the nature of interest, profit on sale of Mutual funds, investments, assets etc., dividend income etc., excluding any Ind AS adjustments. Further clarified that these amounts will be considered on a cash receipt basis)
(+) Proceeds from sale of infrastructure investments, infrastructure assets or shares of SPVs or Investment Entity adjusted for the following • Applicable capital gains and other taxes • Related debts settled or due to be settled from sale proceeds • Directly attributable transaction costs • Proceeds reinvested or planned to be reinvested as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations
(+) Proceeds from sale of infrastructure investments, infrastructure assets or sale of shares of SPVs or Investment Entity not distributed pursuant to an earlier plan to reinvest as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations, if such proceeds are not intended to be invested subsequently
(-) Finance cost on Borrowings, excluding amortisation of any transaction costs as per Profit and Loss Account and any shareholder debt / loan from Trust
(-) Debt repayment (to include principal repayments as per scheduled EMI's except if refinanced through new debt including overdraft facilities and to exclude any debt repayments / debt refinanced through new debt, in any form or equity raise as well as repayment of any shareholder debt / loan from Trust)
(-) any reserve required to be created under the terms of, or pursuant to the obligations arising in accordance with, any: (i). loan agreement entered with banks / financial institution from whom the Trust or any of its SPVs/ HoldCos have availed debt, or (ii). terms and conditions, covenants or any other stipulations applicable to debt securities issued by the Trust or any of its SPVs/ HoldCos, or (iii). terms and conditions, covenants or any other stipulations applicable to external commercial borrowings availed by the Trust or any of its SPVs/ HoldCos, (iv). agreement pursuant to which the SPV/ HoldCo operates or owns the infrastructure asset, or generates revenue or cashflows from such asset (such as, concession agreement, transmission services agreement, power purchase agreement, lease agreement, and any other agreement of a like nature, by whatever name called); or (v). statutory, judicial, regulatory, or governmental stipulations; or – (**refer note 2 below**)
(-) any capital expenditure on existing assets owned / leased by the SPV or HoldCo, to the extent not funded by debt / equity or from reserves created in the earlier years (**refer note 10 below**)
NDCF for HoldCo/SPVs

Computation of Net Distributable Cash Flow at Trust level:

Particulars
Cashflows from operating activities of the Trust
(+) Cash flows received from SPV's / Investment entities which represent distributions of NDCF computed as per relevant framework ***(refer note 1 and 9 below)***
(+) Treasury income / income from investing activities of the Trust (interest income received from FD, any investment entities as defined in Regulation 18(5), tax refund, any other income in the nature of interest, profit on sale of Mutual funds, investments, assets etc., dividend income etc., excluding any Ind AS adjustments. Further clarified that these amounts will be considered on a cash receipt basis)
(+) Proceeds from sale of infrastructure investments, infrastructure assets or shares of SPVs/HoldCos or Investment Entity adjusted for the following • Applicable capital gains and other taxes • Related debts settled or due to be settled from sale proceeds • Directly attributable transaction costs • Proceeds reinvested or planned to be reinvested as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations
(+) Proceeds from sale of infrastructure investments, infrastructure assets or sale of shares of SPVs/ HoldCos or Investment Entity not distributed pursuant to an earlier plan to re-invest as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations, if such proceeds are not intended to be invested subsequently
(-) Finance cost on Borrowings, excluding amortisation of any transaction costs as per Profit and Loss account of the Trust
(-) Debt repayment at Trust level (to include principal repayments as per scheduled EMI's except if refinanced through new debt including overdraft facilities and to exclude any debt repayments / debt refinanced through new debt in any form or funds raised through issuance of units)

(-) any reserve required to be created under the terms of, or pursuant to the obligations arising in accordance with, any: (i). loan agreement entered with financial institution, or (ii). terms and conditions, covenants or any other stipulations applicable to debt securities issued by the Trust or any of its SPVs/ HoldCos, or (iii). terms and conditions, covenants or any other stipulations applicable to external commercial borrowings availed by the Trust or any of its SPVs/ HoldCos, or (iv). agreement pursuant to which the Trust operates or owns the infrastructure asset, or generates revenue or cashflows from such asset (such as, concession agreement, transmission services agreement, power purchase agreement, lease agreement, and any other agreement of a like nature, by whatever name called); or (v). statutory, judicial, regulatory, or governmental stipulations; or – (**refer note 2 below**)
(-) any capital expenditure on existing assets owned / leased by the InvIT, to the extent not funded by debt / equity or from contractual reserves created in the earlier years (**refer note 10 below**)
NDCF at Trust Level

Notes:

1. *Net Distributable Cash Flows (**"NDCF")** computed at SPV level for a particular period to be added under this line item, even if the actual cashflows from the SPV to the Trust has taken place post that particular period, but before finalization and adoption of accounts of the Trust.*

2. *The specified agreements could be for either PPP or non-PPP projects. The Trust retains the option to distribute any surplus amounts, unless such surplus is required to create reserves for any subsequent period.*

3. *The option to retain 10% distribution under Regulation 18(6) of the InvIT Regulations needs to be computed by taking together the retention done at the SPV level and Trust level.*

4. *Further, Trust along with the SPVs needs to ensure that minimum 90% distribution of NDCF be met for a given financial year on a cumulative periodic basis as specified for mandatory distributions in the InvIT regulations (subject to provisions of Note 1 above).*

5. *Surplus cash available in SPVs due to:*
   i. *10% of NDCF withheld in line with the InvIT Regulations in any earlier year or half year or;*
   ii. *Such surplus being available in a new SPV on acquisition of such SPV by the Trust;*
   iii. *Any other reason, excluding if such surplus cash is available due to any debt raise could be considered for distribution by the SPV to the Trust, or by the Trust to its Unitholders in part or in full, but needs to be disclosed separately in the NDCF computation and distribution.*

6. *Similarly, any restricted cash (disclosed as such) should not be considered for NDCF computation by the SPV or Trust (e.g. unspent corporate social responsibility balance for any year deposited in a separate account as per the Companies Act, 2013 which will be utilized in subsequent years, DSRA reserve, major maintenance reserve, etc.)*

7. *Further, it is expressly provided that neither the Trust nor SPVs can distribute any cashflows by obtaining external debt, except to the extent clarified in Note 2 above (this will exclude any working capital/OD facilities obtained by the Trust/SPVs as part of treasury management/working capital purposes as long as they are squared off within the quarter).*

8. *Further, the proceeds from sale of infrastructure investments, infrastructure assets or shares of SPVs or Investment Entity adjusted for transaction costs or repayment of debt taken for such assets or other items as mentioned above which is intended to be reinvested or planned to be reinvested as per Regulation 18(7) of the InvIT Regulations, could be temporarily parked in Overdraft accounts or used to repay any additional / unrelated debt. Further if such proceeds are not intended to be reinvested as per the timeline provided in the InvIT Regulations and such net proceeds are to be distributed back to Unitholders, then redrawing such temporarily parked funds to distribute such net proceeds will not be considered as a contravention of Note 7 above.*

9. *Cash flows received from the SPV's/Investment entities which represent distributions of NDCF computed as per relevant framework at the Trust level for further distribution to Unitholders shall exclude any such cash flows used by the Trust for onward lending to any other SPVs / Investment entities to meet operational / interest expenses or debt servicing of such other SPVs / Investment entities.*

10. *Capital expenditure include amounts incurred and paid towards asset enhancement and are capitalized to asset value in the financial statements including lease payments. It is further clarified that existing assets as referred to in this line item includes any new structure/building/other infrastructure constructed on an existing infrastructure asset which is already a part of the Trust.*

Distribution on Disposition

Subject to the InvIT Regulations, if (i) any asset is sold by the Trust or (ii) if the equity shares or interest in the Trust Assets are sold by the Trust then (a) if the Trust proposes to re-invest the sale proceeds into another infrastructure asset, it shall not be required to distribute any sale proceeds to the Trust or the Unitholders; but (b) if the Trust proposes not to invest the sales proceeds into any other infrastructure Assets, then such sales proceeds shall be regarded as Net Distributable Cash Flows and the Trust shall be required to distribute such proceeds in accordance with the Distribution Policy.

Distribution on Dissolution

In the event of dissolution or winding up of the Trust, all of the Trust Assets or the proceeds therefrom shall be distributed or used as follows and in the following order of priority:

a) First, towards the payment of the debts and liabilities of the Trust, including, any amounts due to the Investment Manager, or the Project Manager and the expenses of liquidation;

b) Second, towards the setting up of any reserves which the Trustee, in consultation with the Investment Manager, or the authority in-charge of the dissolution of the Trust may deem reasonably necessary for any contingent or unforeseen liabilities or obligations of the Trust; and

c) Third, towards the Unitholders in accordance with the terms of the Distribution Policy, the Indenture of Trust, and applicable law.

In-specie Distribution

Subject to the provisions of applicable law and the Trust Documents, the Trustee, in consultation with the Investment Manager, may anytime during the life of the Trust make *in-specie* distributions of the Trust Assets.

History of Distributions

The Trust was listed on the NSE on April 3, 2023. Details of the distributions declared by the Trust since listing are set out below.

Particulars	For the Financial Year 2024			For the Financial Year 2025	
	First Distribution	Second Distribution	Third Distribution	First Distribution	Second Distribution
Interest payment	₹449.55 million/₹0.44 per Unit	-	₹267.29 million/₹0.24 per Unit	₹278.42 million/₹0.25 per Unit	₹44.55 million/₹0.04 per Unit
Return of capital	₹1,103.43 million/₹1.08 per Unit	₹2,881.18 million/₹2.82 per Unit	-	₹445.48 million/₹0.40 per Unit	₹590.26 million/₹0.53 per Unit

RIGHTS OF UNITHOLDERS

The rights and interests of the Unitholders are included in this Letter of Offer and the InvIT Regulations. Under the Indenture of Trust and the Investment Management Agreement, these rights and interests are safeguarded by the Trustee and the Investment Manager respectively. Any rights and interests of Unitholders as specified in this Letter of Offer would be deemed to be amended to the extent of any amendment to the InvIT Regulations.

Please note that nothing contained in this Letter of Offer (including any declarations provided by the directors of the Investment Manager) will relieve any party of its rights or obligations under the Framework Agreement and the IM SHA.

Beneficial Interest

Each Unit represents an undivided beneficial interest in the Trust. A Unitholder has no equitable or proprietary interest in the Trust Assets and is not entitled to transfer of the Trust Assets (or any part thereof) or any interest in the Trust Assets (or any part thereof). A Unitholder's right is limited to the right to require due administration of the Trust in accordance with the provisions of the Indenture of Trust and the Investment Management Agreement.

Ranking

No Unitholder of the Trust shall enjoy superior voting or any other rights over another Unitholder. Further, the Units shall not have multiple classes, except any subordinate Units that may be issued only to the Sponsor and its Associates, where such subordinate units carry only inferior voting or any other rights compared to other Units in the future, in accordance with Regulation 4(2)(h) of the InvIT Regulations.

Distribution

The Trustee shall ensure that the Investment Manager makes timely declaration of distributions to the Unitholders in accordance with the InvIT Regulations. If the distributions are not made within 15 days of declaration, then the Investment Manager shall be liable to pay interest to the Unitholders at the rate of 15% per annum till the distribution is made. The Investment Manager shall maintain records of the distributions declared and made to the Unitholders. For details, see "*Distributions*" on page 303.

Rights of Unitholders

Subject to the provisions of the InvIT Regulations, the Indenture of Trust, and applicable rules, regulations and guidelines, the rights of the Unitholders include:

a) right to receive income or distributions with respect to the Units held in accordance with the InvIT Regulations and in the manner set forth in the preliminary placement memorandum and the placement memorandum;

b) right to attend the annual general meeting and other meetings of the Unitholders of the Trust;

c) right to vote upon any matters/resolutions proposed in relation to the Trust;

d) right to receive periodic information having a bearing on the operation or performance of the Trust in accordance with the InvIT Regulations;

e) right to apply to the Trustee to take up certain issues at meetings for Unitholders approval; and

f) the right to appoint a nominee director on the Board, subject to the conditions specified under the InvIT Regulations.

Pre-emptive rights: In addition, the Investment Manager (on behalf of the Trust) will ensure that Unitholders will have the right to subscribe to their respective proportionate share of the proposed issue of Units at the same price to maintain their respective proportionate ownership in the Trust if the Trust proposes to issue any new units after the completion of the initial offer of Units to any person (except as contemplated in any business plan). The

Investment Manager and the Trustee will also ensure that Unitholders exercise their rights in relation to Reserved Matters and Events of Default.

For details of Reserved Matters, see "*Corporate Governance*" and "*– Approval of Unitholders*" on pages 162 and 322, respectively. For details of Events of Default, see "*– Arrangements between the Sponsor and the Financial Investors*" below.

The Trustee shall hold the Trust Assets in the name of the Trust for the benefit of the Unitholders in accordance with the Indenture of Trust and the InvIT Regulations and shall oversee the activities of the Investment Manager in the interest of the Unitholders. All related party transactions shall be on an arms' length basis in accordance with the relevant accounting standards, and in the best interests of the Unitholders. Further, the Trustee shall maintain records relating to the notices and agenda sent to the Unitholders for meetings held and the disclosures made to the Unitholders.

The rights given by the Sponsor to the Financial Investors will be made available to any new Unitholder that acquires Units of the Trust. Pursuant to a letter dated February 28, 2023, the SEBI has permitted *inter-se* rights among the existing Unitholders of the Trust to continue post-Listing, provided that such rights are extended to all Unitholders other than the Sponsor and its Associates post-Listing.

Arrangements between the Sponsor and the Financial Investors

In addition to the rights set out above, pursuant to the Framework Agreement, the Sponsor and the Financial Investors have agreed to certain *inter-se* arrangements in relation to their Unitholding in the Trust. Pursuant to the completion of the Cintra Transaction, certain arrangements include Cintra InvIT Investor as a Financial Investor. Key terms of such arrangements are set out below:

Put option: The Financial Investors had the right to require the Sponsor to purchase the Units held by them in the Trust upon the occurrence of certain events within the period of 12 months from the date of allotment in the initial offer of Units.

Right of first offer: Each of the Unitholders have a right of first offer over Units proposed to be transferred by any Unitholder, on such terms and conditions as set out in the Framework Agreement.

Tag along right: If the Sponsor proposes to transfer the Units held by it to a third party buyer (which is not a subsidiary of the Sponsor), the Financial Investors have a right to require such buyer to purchase from the Financial Investors, (i) the entire Unitholding of the Financial Investors, if the Sponsor proposes to transfer in excess of 20% of the total outstanding Units or (ii) up to such percentage of Units held by the Financial Investors that are *pro rata* to the percentage of Units proposed to be transferred by the Sponsor if the Sponsor proposes to transfer 20% or less of the total outstanding Units.

Reserved Matters: See *" – Approval of Unitholders*" below.

Encumbrances on the Sponsor's Units: The Sponsor is restricted from creating any encumbrances on its Units until the expiry of five years from the date of allotment of Units in the initial offer of Units. However, the Sponsor can pledge up to a certain percentage of its Units in favor of permitted lenders, the Financial Investors or their affiliates subject to certain conditions as agreed between the Sponsor and the Financial Investors.

Transfer of Units by the Sponsor: The Sponsor will only sell its Units to a person that is willing to be bound by the existing arrangements between Sponsor and the Financial Investors.

Event of Default and Consequences

The Financial Investors have the right to call an event of default ("**Event of Default**") under the Framework Agreement under certain circumstances.

If an Event of Default is declared by the Financial Investors:

- *Credit of distributions into an escrow account controlled by the Investment Manager*: The Sponsor and the Investors will cause any distributions that are to be made to them to be credited into the escrow account. The

Trustee and the Investment Manager will ensure compliance with obligations in relation to distributions under Regulation 18(6) of the InvIT Regulations.

- *Operations of the Trust*: Other than operating in the ordinary course of business, no action shall be taken by any Manager Group Member in relation to the operations and business of the Trust without the unanimous consent of the Unitholders. However, if the InvIT Regulations specify a different threshold for the approval by Unitholders of such matter, the threshold specified in the InvIT Regulations will be followed instead of the unanimous consent requirement. If the Financial Investors vote against a resolution on any such matter for which a different threshold is specified under the InvIT Regulations, the Sponsor has agreed that it will also vote against the resolution on such matter.

The Sponsor may elect to dispute the event of default notice within a specified time period. If the Sponsor does not dispute such notice or the dispute is decided in favour of the Financial Investors:

- *Default call option and default put option*: The Financial Investors will have the right to require (i) the Sponsor to sell its Unitholding to them or (ii) the Sponsor to purchase the Investors' Unitholding in accordance with the conditions specified in the Framework Agreement.

- *Right to cause the Sponsor to take actions*: The Financial Investors will have the right to require the Sponsor to require the Trustee to call for a meeting of the Unitholders for change of the investment manager and the project manager. The Sponsor will vote in favor of the appointment of any entity proposed by the Financial Investors as the new investment manager of the Trust as per the InvIT Regulations. The Sponsor and its affiliates will forfeit all their rights under the transaction documents. This will not impact any responsibilities of the Sponsor under the InvIT Regulations.

- *Resolution of dispute relating to an Event of Default*: Upon the resolution of the dispute relating to the event of default, the distributions in the escrow account will immediately be released to the relevant party, i.e., Sponsor and Financial Investors. The party (against whom the dispute has been resolved unfavorably) shall be required to pay interest to the other party on the distributions credited to the escrow account for the delayed period.

Meetings of Unitholders

Subject to the provisions of the IM SHA, the Investment Manager shall convene meetings of the Unitholders in accordance with Regulation 22 of the InvIT Regulations, including at the written request of the Unitholders as specified therein, and maintain records pertaining to the meetings in accordance with Regulation 26 of the InvIT Regulations.

A Unitholder may be present at and may vote at any Unitholders' meeting in person, electronically, by proxy or attorney or by a duly authorized representative, and any such proxy, attorney or representative shall be counted for the purposes of constituting a quorum, to the extent permissible under applicable law. Voting on all matters to be considered at a Unitholders meeting shall be by poll, in proportion of the Units held by each Unitholder. Each Unit shall carry one vote. The Unitholders shall be entitled to participate, be counted towards quorum and vote in Unitholders' meetings by e-voting, postal ballot or any other means, subject to applicable law.

Approval of Unitholders

The Investment Manager and the Trustee are required to ensure that no resolution is passed in respect of any of the Reserved Matters without the approval of Unitholders such that the votes cast by Unitholders so entitled and voting in favor of the resolution are not less than one-and-a-half times the votes cast against such resolution at a validly convened Unitholders meeting (i.e., Unitholders holding at least 60% of the Unitholding of the Trust), provided that if the InvIT Regulations specify a different threshold for approval by Unitholders of any Reserved Matter, the threshold specified in the InvIT Regulations will prevail. If the Financial Investors vote against a resolution on a Reserved Matter for which the particular threshold is specified under the InvIT Regulations, the Sponsor has agreed that it will also vote against the resolution on such matter. If a Reserved Matter does not require the approval of the Unitholders to be obtained at a Unitholders meeting under the InvIT Regulations, then, a meeting of the Unitholders shall not be required if the written consent of equity shareholders holding a certain agreed percentage of the equity shareholding has been obtained, depending on whether the relevant matter is an Ordinary Reserved Matter (as specified in the IM SHA) or a Special Reserved Matter (as specified in the IM SHA).

After the allotment of Units pursuant to the initial offer of Units, where any act under any Trust Document requires a 'consultation with the Trustee' or involves the exercise of powers by the Trustee which have not or cannot be delegated to the Investment Manager, then the performance of such act shall be deemed to include the obligation to obtain the approval of the Unitholders such that the votes cast in favor of the resolution shall be at least 60% of total votes cast for the resolution.

The limits in relation to the aggregate consolidated borrowings and deferred payments of the Trust and its Project SPVs, net of cash and cash equivalents (which includes investments in overnight mutual funds, characterized by their investments in overnight securities, having maturity of one day), shall be up to 70% of the Trust Assets. Also see "*Leverage*" on page 294 for details of the leverage policy of the Trust.

Reserved Matters

Certain Reserved Matters relating to the operations of the Trust, the Investment Manager, the Project SPVs and any other Manager Group Members which would require the approval of the board of directors, shareholders and Unitholders of the relevant entities, as applicable, have been identified and agreed under the Framework Agreement and the IM SHA. Such Reserved Matters include, *inter-alia*, matters in relation to:

- changes to the capital structure of any Manager Group Member;
- amendments to the charter documents of any Manager Group Member;
- listing of any Manager Group Member;
- approval of annual budgets and business plans;
- acquisition or divestment of road assets by the Trust;
- replacement or removal of certain managerial personnel;
- distributions in deviation from the Distribution Policy;
- indebtedness and encumbrances of assets of any Manager Group Member;
- amendment or termination of material contracts;
- major transactions;
- accounting and tax matters; and
- litigation and delegation of authority.

The reserved matters listed above have been classified into Ordinary Reserved Matters and Special Reserved Matters, as specified in the IM SHA, copy of which will be available for will be available for inspection to Eligible Unitholders from the date of this Letter of Offer until the Issue Closing Date. See "*Material Contracts and Material Documents for Inspection*" on page 848.

Also see "*Corporate Governance – Reserved Matters*" on page 163.

Matters for Approval under the InvIT Regulations

Under the InvIT Regulations, with respect to any matter requiring approval of the Unitholders:

a) a resolution shall be considered as passed when the votes cast by Unitholders, so entitled and voting, in favor of the resolution exceed a certain percentage (as specified in InvIT Regulations) of total votes cast;

b) the voting may also be done by postal ballot or electronic mode;

c) the voting threshold specified under these regulations shall be calculated on the basis of unit holders present and voting;

   The unitholders voting through the electronic voting facility and postal ballot shall be counted for the determination of unitholders present and voting;

d) a notice of not less than 21 days (or such other time period specified under the InvIT Regulations) shall be provided to the Unitholders. Provided that a meeting of Unitholders may be called after giving shorter notice than if consent, in writing or by electronic mode is obtianed (as specified in InvIT Regulations); and

e) voting by any person who is a related party in such transaction as well as the voting by any Associates of such person(s), shall not be considered on the specific issue; and

f) for all unitholder meetings, the investment manager shall provide an option to the unitholders to attend the meeting through video conferencing or other audio visual means and the option of remote electronic voting in the manner as may be specified by the SEBI.

The Investment Manager shall be responsible for all the activities relating to conducting of a meeting of the Unitholders, subject to the Trustee's oversight. However, in accordance with Regulation 22(2) of the InvIT Regulations, the Trustee shall convene and handle all activities relating to the conduct of the meetings in respect of issues relating to the Investment Manager, such as change, removal or change in control of the Investment Manager. Further, in respect of issues pertaining to the Trustee, including any change in the Trustee, the Trustee shall not be involved in any manner in the conduct of the meetings of the Unitholders.

Under the InvIT Regulations, approval from the Unitholders shall be required where the votes cast in favor of the resolution shall be more than 50% of the total votes cast for the resolution, with respect to the resolutions of the Unitholders on, *inter-alia*, the following matters:

a) any approval from the unitholders required in terms of Regulation 18 (Investment Conditions and Dividend Policy), Regulation 19 (Related Party Transactions), and Regulation 21 (Valuation of Assets) of the InvIT Regulations, to the extent applicable;

b) any transaction, other than borrowing, the value of which is equal to or greater than the threshold prescribed under the InvIT Regulations (currently 25% of the Trust Assets);

c) any borrowing in terms of the limit specified under the InvIT Regulations;

d) any issue of Units after the initial offer by the Trust, in whatever form, other than any issue of Units which is considered by the SEBI under Regulation 22(5) of the InvIT Regulations;

e) increasing period for compliance with investment conditions to one year in accordance with Regulation 18(5)(c) of the InvIT Regulations;

f) any issue, which in the ordinary course of business, in the opinion of the Sponsor, the Trustee or the Investment Manager, is material and requires approval of the Unitholders;

g) any issue for which the SEBI or the stock exchanges require the approval of the Unitholders under Regulation 22(4) of the InvIT Regulations; and

h) any issue taken up at an annual meeting of the Unitholders under Regulation 22(3) of the InvIT Regulations, which requires approval of the Unitholders other than as specified in Regulation 22(6) of the InvIT Regulations.

Under the InvIT Regulations, approval from the Unitholders shall be required where the votes cast in favor of the resolution shall be 60% of total votes cast for the resolution, with respect to the resolutions of the Unitholders on, *inter-alia*, the following matters:

a) any change in the Investment Manager, including removal or change in control of the Investment Manager;

b) any material change in the investment strategy of the Trust or its management fees;

c) the Trustee and the Investment Manager proposing to seek delisting of the Units of the Trust under Regulation 17(1)(e) of the InvIT Regulations;

d) any issue, not in the ordinary course of business, which in the opinion of the Sponsor, the Investment Manager or the Trustee, requires approval of the Unitholders;

e) any issue for which SEBI or the stock exchanges require the approval of the Unitholders under Regulation 22(5) of the InvIT Regulations;

f) any issue taken up at the request of the Unitholders, including:

i) removal of the Investment Manager, and the appointment of another investment manager to the Trust;

ii) removal of the Auditor, and appointment of another auditor with respect to the Trust;

iii) removal of the Valuer, and appointment of another valuer with respect to the Trust;

iv) delisting of the Trust, if the Unitholders have sufficient reason to believe that such delisting would act in their interest;

v) any issue which the Unitholders have sufficient reason to believe is detrimental to their interest; or

vi) a change in the Trustee if the Unitholders have sufficient reason to believe that the acts of the Trustee are detrimental to their interests.

In relation to any issue taken up at the request of the Unitholders as described above, the Trustee will require the Investment Manager to place the issue for voting in the manner specified in the InvIT Regulations on receipt of such applications.

Redressal of Grievances

The Investment Manager shall ensure adequate and timely redressal of all Unitholders' grievances pertaining to the activities of the Trust, and the Trustee shall periodically review the status of Unitholders' complaints and their redressal undertaken by the Investment Manager. The Investment Manager shall maintain records of the Unitholders' grievances and the actions taken thereon, including copies of correspondences made with the Unitholders. The Trust has obtained authentication on the SEBI Complaints Redress System (SCORES).

All claims, differences or disputes between investors and the Investment Manager arising out of or in relation to the activities of the Investment Manager in the securities market shall be submitted to a resolution mechanism that includes mediation and/or conciliation and/or arbitration, in accordance with the procedure specified by the SEBI pursuant to the Master Circular for Online Resolution of Disputes in the Indian Securities Market dated July 31, 2023 issued by the SEBI, as amended, to the extent applicable.

No loss or damage or expenses incurred by the Investment Manager or officers of the Investment Manager, including those in relation to resolution of claims or disputes of investors, shall be met out of the Trust property.

Limitation of the Liability of the Unitholders

The liability of each Unitholder towards the payment of any amount (that may arise in relation to the Trust including any taxes, duties, fines, levies, liabilities, costs or expenses) shall be limited only to the extent of the Capital Contribution of such Unitholder and after such capital contribution shall have been paid in full by the Unitholder, the Unitholder shall not be obligated to make any further payments.

Periodic Information and Disclosures

The Investment Manager shall submit an annual report to all Unitholders and the stock exchanges, electronically or by physical copies. In addition, the Investment Manager shall submit a half-yearly report, and if the Trust's consolidated borrowings and deferred payments in terms of Regulation 20 of the InvIT Regulations is above 49%, a quarterly report and valuation report to the stock exchanges.

The Investment Manager shall disclose to the stock exchanges any information having bearing on the operation or performance of the Trust as well as price sensitive information which includes, but is not restricted to the following:

a) acquisition or disposal of any projects, directly or through a holdco or SPV, the value of which exceeds 5% of the value of the Trust Assets;

b) additional borrowing, at level of holdco or SPV or the Trust, exceeding 15% of value of the Trust assets;

c) additional issue of Units by the Trust;

d) details of any credit rating obtained by the Trust and any change in such rating;

e) any issue which requires the approval of the Unitholders;

f) any legal proceedings which may have significant bearing on the functioning of the Trust;

g) notices and results of meetings of the Unitholders;

h) any instance of non-compliance with the InvIT Regulations, including any breach of limits specified under the InvIT Regulations; and

i) any material issue that, in the opinion of the Investment Manager or Trustee, needs to be disclosed to the Unitholders.

The Investment Manager (on behalf of the Trust) shall submit such information to the Unitholders and the Designated Stock Exchange on a periodic basis as may be required under the InvIT Regulations and applicable law, including an annual secretarial compliance report and the quarterly report on corporate governance compliance. Further, the Investment Manager (on behalf of the Trust) shall disclose to the Unitholders, the Designated Stock Exchange and SEBI, all such information, in the manner as may be specified by SEBI. For details of the responsibilities of the Investment Manager in relation to making periodic disclosures with respect to the valuation of the Trust Assets and the computation and declaration of NAV of the Trust, see "*Valuation*" on page 309.

SECTION V – PARTIES TO THE TRUST

THE SPONSOR AND PROJECT MANAGER

The Sponsor of the Trust is IRB Infrastructure Developers Limited. The Sponsor has settled the Trust pursuant to the Indenture of Trust dated August 27, 2019, as amended, and has appointed the Trustee in accordance with the provisions of the InvIT Regulations.

The Sponsor has also been appointed as the Project Manager pursuant to the Project Implementation Agreements.

The details of the Sponsor, Sponsor Group and Project Manager are as follows:

A. Details of the Sponsor and Project Manager

a) **Name:** IRB Infrastructure Developers Limited;

b) **Registered Office:** Off No-11th Floor/1101, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India;

c) **Correspondence Address:** Off No-11th Floor/1101, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India;

d) **Telephone Number:** +91 22 6640 4220;

e) **Website:** www.irb.co.in

f) **E-mail:** info@irb.co.in

B. Details of the Contact Person of the Sponsor

a) **Name:** Mr. Mehul Patel;

b) **Telephone Number:** +91 22 6640 4220; and

c) **E-mail:** mehul.patel@irb.co.in

C. Background and Past Experience of the Sponsor and Project Manager

The Sponsor is one of the largest infrastructure development and construction companies in India in terms of net worth in the roads and highways sector according to the NHAI's annual prequalification for public private partnerships in national highway projects report for 2016. As at September 30, 2024, the Sponsor had six road projects of which two were operational and four were under-construction.

The Sponsor also acts as the Project Manager for all the projects of the Trust. The Sponsor's BOT project portfolio includes the Ahmedabad Vadodara section of NH 8 and the Ahmedabad Vadodara Expressway and the Meerut Budaun (Group-I) section of Ganga Expressway. The Sponsor's HAM project portfolio includes the under construction Gandeva to Ena project on the Vadodara-Mumbai eight lane expressway, four-laning of Punjab/Himachal Border to Mo Section of NH-154 and the six-laning of Chittoor Thachur road. The Sponsor's TOT project includes the Yashwantrao Chavan Expressway (Mumbai Pune Expressway) and Mumbai – Pune section of NH-48 (old NH-4). The Sponsor has experience in developing road and highway infrastructure and has received various industry awards and recognitions.

The Sponsor/Project Manager has experience in the execution of construction work for roads, highways, and other relevant structures and had a track record of constructing over 18,000 Lane Kilometres of roads and highways as of September 30, 2024.

The Sponsor is listed on the Stock Exchanges with a market capitalization of ₹354.79 billion as at December 10, 2024. As at September 30, 2024, the Sponsor has a consolidated net worth of ₹139.36 billion. The Sponsor recorded a consolidated turnover of ₹82.02 billion in the Financial Year 2024 with a profit after

tax of ₹6.06 billion.

D. Sponsor Group

The Sponsor/Project Manager, IRB Holding Private Limited, Virendra D. Mhaiskar, Deepali V. Mhaiskar and Virendra D. Mhaiskar (HUF) form the Sponsor Group.

E. Other Confirmations

In accordance with the eligibility criteria specified under the InvIT Regulations, the Sponsor had a net worth of ₹94.84 billion as on March 31, 2024, on a standalone basis. As at September 30, 2024, the Sponsor has a consolidated networth of ₹139.36 billion. The Sponsor has an experience of more than 20 years as a developer in the infrastructure sector.

Further, none of the members of the Sponsor Group or their respective promoters or directors:

a) is debarred from accessing the securities market by the SEBI; or

b) is a promoter, director or person in control of any other company or a sponsor, investment manager or trustee of any other infrastructure investment trust which is debarred from accessing the capital market under any order or directions made by the SEBI.

None of the promoters or directors of any of the members of the Sponsor Group is a fugitive economic offender declared under Section 12 of the Fugitive Economic Offenders Act, 2018.

F. Details of the Holding or the Proposed Holding by Sponsor and the Sponsor Group in the Trust

The Sponsor currently holds 51.02% of the units of the Trust. The Sponsor has undertaken to subscribe to its entire Rights Entitlement in the Issue and proposes to subscribe to additional Units in the Issue such that its maximum post-Issue unitholding is 51.02%.

G. Summary of the Consolidated Financial Statements of the Sponsor

For a summary of the financial statements of the Sponsor, as derived from the consolidated financial statements of the Sponsor, prepared in accordance with Ind AS and the Companies Act, as of and for the Financial Years 2024, 2023 and 2022, see "*Summary Financial Statements*" on page 44.

H. Functions, Duties and Responsibilities of the Project Manager

The Project Manager has agreed to provide professional services to carry out engineering, procurement, construction, operations and maintenance of the Project SPVs, including making arrangements for the appropriate maintenance, either directly or through sub-contractors, in accordance with the terms and conditions of the relevant project agreements, the InvIT Regulations, other applicable law and good industry practice (the "**Works**"). CGTL, IRB HMTL, KGTL, IRB WTL and UTL have also executed addenda dated May 6, 2021 to their respective Project Implementation Agreements, in connection with the payment of certain additional costs to the Project Manager. IRB GEPL has entered into a project implementation agreement dated August 2, 2023 with the Project Manager for the provision of initial upgradation works and operation and maintenance works for the project operated by IRB GEPL. STPL has entered into a project implementation agreement dated October 12, 2023 with the Project Manager for the provision of the Works for its project. Each of IRB LTPL, IRB KTPL and IRB GTPL has entered into a project implementation agreement dated March 13, 2024 with the Project Manager for the provision of initial upgradation works and operation and maintenance works for their respective projects.

Under the terms of the Project Implementation Agreements, the Project Manager is required to, *inter-alia*, provide the following Works:

a. engineering, procurement and construction works in relation to the project as required under the project agreements;

b. operations and maintenance for the project as stipulated under the project agreements, including tolling, which shall include procuring, operating and maintaining the toll management system at its toll plazas, including employing staff for toll collection, security arrangements at toll plazas and printing of toll tickets;

c. any and all activities required to be performed by the Project SPVs pursuant to the project agreements or pursuant to any communication from NHAI or any other governmental authority, including in relation to shifting of utilities, associated roads, felling of trees and related works with respect to the project site or any work to be undertaken pursuant to a change of scope order based on a determination of change of scope by the NHAI under the relevant concession agreement; and

d. other administrative services such as software usage support services, information technology support services, support services for legal matters, support services for accounting and tax matters, support services for general administration and investor relations, and support services and payroll and related services.

The Project Manager may engage duly qualified third-party service providers including but not limited to architects, surveyors and technical consultants for provision of the Works. If more than 50% of the Works are sub-contracted to any person other than Modern Road Makers Private Limited or any other affiliate of the Project Manager, then such sub-contract will be subject to prior approval of the Investment Manager (as confirmed by Unitholders of the Trust).

The Project Manager will inform the Investment Manager about any transactions between the Project Manager and its Associates which may involve a conflict of interest and where the Project Manager has advised that there may be a conflict of interest, and will obtain confirmation from the practicing chartered accountant or the valuer, as applicable, that such transaction is on an arms' length basis.

The Project Manager will ensure that it provides a compliance certificate to the Investment Manager and the Trustee on a quarterly basis or such other intervals as required in accordance with the InvIT Regulations with a copy to the Financial Investors.

The Project Manager has confirmed that it will provide the Works to the Project SPVs on a most preferred basis and if the Project Manager offers same or similar works to any person on better terms than offered to a Project SPV, then the Project SPV will be automatically entitled to the such better terms, and the Project Manager will ensure that the such better terms are forthwith made applicable to the Project SPV.

The Project Manager has also agreed to indemnify the Investment Manager, the Project SPVs and their respective officers, directors, shareholders, partners, members and employees subject to the terms, conditions and limitations specified in the Project Implementation Agreements.

The Project Implementation Agreements are valid for an initial period of 10 years. The Project Implementation Agreements may be terminated by the Investment Manager, *inter-alia,* with prior written notice of a specified period, provided that such right shall not be exercisable by the Investment Manager until the later of (i) the completion of the first major maintenance cycle in relation to the first Project SPV that undergoes a major maintenance cycle; or (ii) the commencement of the fifth year of the initial term. The above right of termination shall be exercisable by the Investment Manager collectively in relation to all the Project Implementation Agreements and not selectively in relation to one or more (but less than all) Project Implementation Agreements, provided that selective termination in respect of a Project SPV shall be permitted if (a) the Project Implementation is terminated pursuant to the other provisions of the agreement; or (b) if the Project SPV is undergoing a major maintenance or the construction period or any EPC Work, in which case, unless otherwise required by the Investment Manager for such Project SPV, the other Project Implementation Agreements shall stand terminated. The Investment Manager shall obtain approvals from the Unitholders and any governmental authority as may be applicable, in relation to such termination.

The Investment Manager also has the right to terminate the Project Implementation Agreements by issuing a notice of termination in case of certain events, including breach of the agreement by the Project Manager and the breach is not remedied within 60 days, occurrence of an Event of Default under the Framework Agreement, change in control of the Project Manager, occurrence of an insolvency event in relation to the Project Manager or a force majeure event continues for a period of 180 days or more within a continuous period of 365 days.

The MBEL Project Implementation Agreement will be effective from the date of closing under the MBEL Securities Purchase Agreement. The Project Manager will provide Works to the Target SPV under the MBEL Project Implementation Agreement similar to the Project SPVs under their respective Project Implementation Agreements. Also see "*Background and Structure of the Trust – Fees and Expenses – Fees and expenses of the Project Manager*" on page 120.

Also see "*Background and Structure of the Trust – Fees and Expenses – Fees and expenses of the Project Manager*" on page 120.

THE INVESTMENT MANAGER

MMK Toll Road Private Limited is the Investment Manager of the Trust, and has been designated as such pursuant to the Investment Management Agreement. The Investment Manager is responsible for making investment decisions with respect to the underlying assets or projects of the Trust, including any further investment or divestment of its assets, in accordance with the InvIT Regulations and the Investment Management Agreement.

The details of the Invesment Manager are as follows:

A. Details of the Investment Manager

a) **Name:** MMK Toll Road Private Limited;

b) **Registered Office:** Off No-11th Floor/1101, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India;

c) **Correspondence Address:** Off No-11th Floor/1101, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India;

d) **Telephone Number:** +91 22 6733 6400; and

e) **E-mail:** dhananjay.joshi@irb.co.in

B. Details of the Contact Person of the Investment Manager

a) **Name:** Mr. Dhananjay Joshi;

b) **Telephone Number:** +91 22 6733 6400; and

c) **Email:** dhananjay.joshi@irb.co.in

C. Background and Past Experience of the Investment Manager

MMK Toll Road Private Limited ("**Investment Manager**") was incorporated on April 12, 2002. The Investment Manager has experience in operating a road BOT project for a period of 13 years and in developing, operating and maintaining toll roads in the infrastructure sector.

The Investment Manager has executed the BOT project of improving and strengthening the Mohol – Kurul – Kamti – Mandrup Road in Solapur District (length: 33 km). The cost of the project was ₹180 million, which was financed by equity of ₹70.00 million and rupee term loan of ₹110.00 million. The commercial operations date of the project was in May 2002 and the concession period was 13 years which expired in May 2015.

Being part of the IRB group, the Investment Manager has the infrastructure for acting as the Investment Manager for managing the assets and investments of the Trust.

The net worth of the Investment Manager as on September 30, 2024 stood at ₹126.53 million on a standalone basis. The key managerial personnel of the Investment Manager have over five years of experience each, in providing advisory services to a developer in the infrastructure sector. One such key managerial personnel has experience of over five years in the roads sector which is the relevant sub-sector in which the Trust primarily proposes to invest.

The Investment Manager confirms that it has, and undertakes to ensure that it will at all times maintain, adequate infrastructure, personnel and resources to perform its functions, duties and responsibilities with respect to the management of the Trust, in accordance with the InvIT Regulations, the Investment Management Agreement and other applicable law.

Further, neither the Investment Manager, nor its promoters or directors:

a) is debarred from accessing the securities market by the SEBI; or

b) is a promoter, director or person in control of any other company or a sponsor, investment manager or trustee of any other infrastructure investment trust or infrastructure investment trust which is debarred from accessing the capital market under any order or directions made by the SEBI.

None of the promoters or directors of the Investment Manager is a fugitive economic offender declared under Section 12 of the Fugitive Economic Offenders Act, 2018.

The Investment Manager conducts the operations of the Trust from its offices in Mumbai and New Delhi.

D. Brief Profiles of the Investment Manager's Directors

a) **Mr. Virendra D. Mhaiskar**

Mr. Virendra D. Mhaiskar, is a non-independent director of the Investment Manager. He holds a Diploma in Civil Engineering from Shriram Polytechnic, Navi Mumbai. Mr. Mhaiskar has over 30 years of experience in the construction and infrastructure industry. He joined the IRB group in June 1990 and is responsible for leading and directing the IRB group's strategy in BOT and funded projects.

b) **Mr. Boon Chin Hau**

Mr. Boon Chin Hau is a non-independent director of the Investment Manager. He is the Managing Director, Head, Asia & Emerging Markets, Infrastructure - GIC Infrastructure Group. He joined the GIC Infrastructure Group in 2008. He has degrees from Imperial College London and the University of Chicago.

c) **Mr. Aryan Mhaiskar**

Mr. Aryan Mhaiskar is a non-independent director of the Investment Manager. He holds a bachelors degree of science in economics and finance. He is associated with Avener Capital as a senior analyst. He was a management intern with IRB Infrastructure Developers Limited. Presently, he is associated with ADVent Partners LLP as a designated partner. He is an FIDE-rated international chess player and provides chess coaching to underprivileged children. He is also involved in animal welfare initiatives.

d) **Mr. Victor Carretero Arbona**

Mr. Víctor Carretero is a non-independent director of the Investment Manager. He is currently the Head of Business Development – Global M&A at Cintra. With more than 12 years of experience in the infrastructure investment industry, Víctor has closed about 16 transactions worth more than 2 bn$ across multiple sectors (transport, renewable energy and water). He joined Cintra in 2015 and has since occupied different positions such as Project Manager, Project Manager (USA) and Asset Management Director India. Prior to Cintra, Víctor worked in Ferrovial Agroman and Element Power. Víctor holds a double degree in Business Administration and Law from Universidad Autónoma de Madrid and an MBA from IESE Business School.

e) **Mr. K G Krishnamurthy**

Mr. K.G. Krishnamurthy, is an independent director of the Investment Manager. He was the Managing Director and CEO of HDFC Property Ventures Limited. He holds a degree in Bachelor of Architecture from Indian Institute of Technology Kharagpur. He was associated with Housing Development Finance Corporation ("**HDFC**") for more than two decades and held various leadership positions during his tenure with HDFC. He was also deputed to HDFC Venture Capital Limited (a subsidiary of HDFC) as Managing Director and CEO in the year 2005.

f) **Mrs. Ranjana Paranjape**

Mrs. Ranjana Paranjape, is an independent director of the Investment Manager. She holds a Diploma in Financial Management and a master's degree of Commerce from the University of Mumbai. She is also a Certified Associate of the Indian Institute of Bankers. She was associated with IDBI Bank for over 38 years and retired in October 2016 as a Chief General Manager.

g) **Mr. Nagendraa Parakh**

Mr. Nagendraa Parakh is an independent director of the Investment Manager. He is a rank holder chartered accountant and company secretary by professional qualification having more than 36 years of varied experiences. He retired as an executive director of the SEBI in October 2022. He played a key role in in development and regulation of securities and commodities markets. He was instrumental in introduction of equity derivatives markets, T+2 Rolling settlements and derivatives risk management system. He was exposed to many other departments including regulation of intermediaries like brokers, depository participants, credit ratings agencies, debenture trustees etc, and also worked extensively for Investor education and protection. He was also instrumental in introduction of pledge-repledge system to deposit client's margin in form of securities and resolution of defaults by Brokers. He was appointed as a Member of the Forward Market Commission during July 2012 to September 2015. He has also represented SEBI on various committees, international forums and on councils of exchanges and clearing corporations.

h) **Ms. Rajni Sekhri Sibal**

Ms. Rajni Sekhri Sibal is an independent director of the Investment Manager. She is a retired Indian Administrative Service Government Officer of the Haryana Cadre and the first lady to top the Civil Services Examination in 1986. During her tenure she held various roles in State Government o Haryana and Government of Indialike Secretary to the Ministry of Fisheries, Secretary Ministry of Fisheries, Additional Secretary Ministry of Home Affairs, Ministry of Entrepreneurship and Skill Development, Additional Chief Secretary to Government of Haryana and Deputy Director at Lal Bahadur Shastri National Academy of Administration. She has received Indian of the Year award (2012-2013) and has authored several articles and books.

The directors are not directors or members of the governing board of an investment manager of another infrastructure investment trust.

E. Brief Profiles of the Investment Manager's Key Personnel

a) **Mr. Dhananjay K. Joshi, Chief Executive Officer**

Mr. Dhananjay K. Joshi, joined the IRB group in November 1998. He was appointed as the Chief Executive Officer of MMK Toll Road Private Limited with effect from February 10, 2020. He holds a bachelor's degree in commerce and a bachelor's degree in law from the University of Mumbai. He also holds a post-graduate diploma in business management and a masters in business administration from Shivaji University, Kolhapur. He has been a part of the IRB group for over 22 years.

b) **Ms. Shilpa C. Todankar, Chief Financial Officer**

Ms. Shilpa C. Todankar, joined the IRB group in September 2009. She is a member of the Institute of Chartered Accountants of India since 2011. She holds a diploma in Information System Audit from Institute of Chartered Accountants of India. She has more than 10 years of experience in the fields of accountancy, audit and taxation in the IRB group. She is also a director on the board of the Project SPVs.

c) **Mr. Kaustubh Shevade, Company Secretary and Compliance Officer**

Mr. Kaustubh Shevade, joined the IRB group in December 2019. He is an associate member of the Institute of Company Secretaries of India. He holds a bachelor of legal sciences degree and a bachelor of laws degree from the University of Mumbai. He also holds a master of business laws degree from the National Law School of India University, Bengaluru. Prior to joining the Investment Manager, he was associated with Tata Realty and Infrastructure Limited and Reliance Infrastructure Limited.

F. Details of the Holding or the Proposed Holding by the Investment Manager and its Directors in the Trust

The Investment Manager and its directors do not hold any Units as on date. None of the directors of the Investment Manager or the Investment Manager propose to hold any Units in the Trust.

G. Summary of the Standalone Financial Statements of the Investment Manager

For a summary of the financial statements of the Investment Manager, as derived from the standalone financial statements of the Investment Manager, prepared in accordance with Ind AS and the Companies Act, as of and for the Financial Years 2024, 2023 and 2022, see "*Summary Financial Information*" on page 44.

H. Functions, Duties and Responsibilities of the Investment Manager

Below is the brief description of the functions, duties and responsibilities of the Investment Manager provided in the Investment Management Agreement in accordance with the InvIT Regulations, which *inter-alia*, include:

a) Coordinating with the Trustee, as may be necessary, with respect to the operations of the Trust.

b) Ensuring that the valuation of the Trust Assets is done by the Valuer in accordance with the InvIT Regulations.

c) Arranging for adequate insurance coverage for the Trust Assets in accordance with the InvIT Regulations.

d) Maintaining proper books of accounts, documents and records with respect to the Trust, in the manner set out in the Indenture of Trust and in accordance with Applicable Law.

e) Ensuring that the audit of the accounts of the Trust by the Auditor is undertaken in accordance with the InvIT Regulations.

f) Making Distributions to Unitholders in accordance with Regulations 9(8) and 18 of the InvIT Regulations, the Trust Documents and the Investment Strategy. Subject to the Trust Documents, Applicable Law and the Investment Strategy, at least such percentage of the net distributable cash flows of the SPVs and Holdcos (as applicable) shall be distributed to the InvIT, as prescribed in the InvIT Regulations. The Distributions shall be made not less than once every year or at such other intervals as may be specified in the relevant Trust Documents or applicable under the InvIT Regulations;

g) To convene meetings of the Unitholders in accordance with Regulation 22 of the InvIT Regulations, including at the written request of the Unitholders as specified therein, and maintain records pertaining to the meetings in accordance with Regulation 26 of the InvIT Regulations.

h) To intimate the Trustee prior to any change in control of the Investment Manager to enable the Trustee to seek prior approval from the Unitholders (and the SEBI or any other governmental authority, if applicable) and ensuring that no such change is given effect to, until the approval of the Unitholders (and the SEBI or any other governmental authority, as applicable) has been obtained, or the Investemnt Management Agreement is terminated and a new investment manager has been appointed in accordance with the terms in the Investment Management Agreement, or in compliance with any other requirement under the InvIT Regulations, other applicable law and the Trust Documents.

i) To place before the board of directors, a report on the activity and performance of the Trust in accordance with the InvIT Regulations. To designate an appropriately qualified employee to act as the compliance officer for monitoring of compliance with the InvIT Regulations and any circulars or guidelines issued thereunder and intimating the SEBI in case of non-compliance.

j) Maintaining records pertaining to the activity of the Trust in terms of Regulation 26 of the InvIT Regulations.

k) To manage the Trust in accordance with applicable law (including the InvIT Regulations) and the Trust Documents and the investment strategy, to make all investment decisions with respect to the Trust Assets and ensure that the investments made by the Trust are in accordance with the investment conditions specified in the applicable provisions of the InvIT Regulations and in accordance with the investment strategy as specified in the Investment Management Agreement.

l) To appoint, in consultation with the Trustee, the Valuer, Auditor (for a period of not more than five consecutive years or such other period as may be prescribed under the InvIT Regulations), registrar and transfer agent, merchant bankers, custodians, credit rating agencies, and any other intermediaries or service providers.

m) To ensure all activities of the intermediaries, agents, or service providers appointed by the Investment Manager are in accordance with the InvIT Regulations and guidelines and circulars issued thereunder, as applicable.

n) Overseeing the activities of the Project Manager, ensuring that the Project Manager conplies with the InvIT Regulations, and reviewing the transactions carried out between the Project Manager and its Associates and where the Project Manager has advised that there may be a conflict of interest, to obtain confirmation from a practicing chartered accountant or valuer, as applicable, that such transaction is on an arms' length basis.

o) To ensure adequate and timely redressal of Unitholders' grievances pertaining to the activities of the Trust in accordance with the InvIT Regulations. The Investment Manager is required to submit quarterly reports on Unitholders' grievances to the Trustee, as applicable.

p) To provide to the SEBI, the stock exchanges and other governmental authorities, as applicable, information as may be requested or required under applicable law by the SEBI, the stock exchanges or other governmental authorities, as applicable, in relation to the activities of the Trust

q) To ensure that disclosures and reporting to the Unitholders, SEBI, the Trustee, and the stock exchanges are in accordance with the applicable provisions of the InvIT Regulations (including disclosure to the Trustee and the Unitholders of any information having a bearing on the operation or performance of the Trust) in accordance with the timelines specified in the InvIT Regulations.

r) To intimate the Trustee and the Unitholders on the occurrence of any event that may have a material impact on the Investment Manager and its ability to perform its obligations under the Trust Documents, including any change in control of the Investment Manager.

s) To be responsible for all activities pertaining to the issue of Units including filing of any placement memorandum, final placement memorandum, draft offer document, offer document or final offer document with the SEBI and dealing with all matters relating to the allotment of Units to Unitholders.

t) To ensure that disclosures in the placement memorandum or offer document are material, true, correct and adequate and in accordance with the InvIT Regulations. The Trust may list its Units on one or more stock exchanges subject to compliance with the conditions specified under the InvIT Regulations and directions issued by the SEBI or the stock exchanges, as applicable.

u) Fulfiling its obligations under the applicable provisions of the InvIT Regulations and the Trust Documents.

v) The Investment Manager is required to submit to the Trustee:

   i. quarterly reports on the activities of the Trust including receipts for all funds received by it and for all payments made, status of compliance with the InvIT Regulations, specifically Regulations 18, 19 and 20 of the InvIT Regulations, performance report, status of development of under-construction projects, within time period specified under the InvIT Regulations, whichever is earlier;

ii. valuation reports as required under the InvIT Regulations within the time period specified under the InvIT Regulations;

iii. decision to acquire or sell or develop or bid for any Trust Asset or project or expand existing completed Trust Assets or projects along with rationale for the same;

iv. details of any action which requires approval from the Unitholders as may be required under the InvIT Regulations; and

v. details of any other material fact including change in its directors, change in its shareholding, any legal proceedings that may have a significant bearing on the activity of the Trust, within the time period specified under the InvIT Regulations.

w) To submit within the time period prescribed under the InvIT Regulations, annual reports and half yearly reports to all the Unitholders electronically or provide physical copies and, if applicable, to the stock exchanges.

x) To keep segregated at all times the assets and liabilities of the Trust from the assets and liabilities of the Investment Manager and the assets and liabilities of any other trusts managed by the Investment Manager. The assets held under the Trust shall be held for the exclusive benefit of the Unitholders and such assets shall not be subject to the claims of any creditor or any person claiming under any other fund or trust administered or managed by the Investment Manager.

y) To be responsible for monitoring, administering and giving effect to all claims and adjustments arising out of the share purchase agreements executed in respect of the acquisition of Trust Assets and any payments required to be made by or to the Trust.

z) Other duties include:

i. ensuring that computation of the net asset value of the Trust is based on the valuation done by the Valuer in accordance with the InvIT Regulations;

ii. maintaining regular interaction with the Trustee on performance of the Trust and providing the Trustee with any information in relation to the operations of the Trust as may be required;

iii. conducting its affairs and the affairs of the Trust in such a manner that Unitholders will not have personal liability with respect to liabilities or obligations of the Trust;

iv. collecting all dividends, fees, property and other payments due and receivable by the Trust in the manner set out in the Indenture and in terms of the InvIT Regulations;

v. ensuring that no commission or rebate or any other remuneration, arising out of transaction pertaining to the Trust is collected by the Investment Manager or its Associates, other than as specified in the offer document or any other document as may be specified by SEBI for the purpose of the issue of the units of the Trust;

vi. ensuring that the Trust Assets have proper and legal marketable titles and that all the material contracts entered into or on behalf of the Trust or the Trust Assets or the SPVs, or the Holdcos are legal, valid, binding and enforceable by and on behalf of the Trust or the Trust Assets or the SPVs or the Holdcos, as applicable;

vii. keeping the Unitholders informed and updated on investment activities of the Trust in accordance with the Trust Documents;

viii. ensuring that any possible conflict of interest involving its role as an Investment Manager is reported to the Trustee and the Unitholders;

ix. ensuring that disclosures and reporting to the Unitholders, SEBI and the Trustee are in accordance with applicable law and InvIT Regulations;

x. to immediately notify the Trustee and the Unitholders of any act which is detrimental to the interest of the Unitholders;

xi. informing the Trustee and Unitholders in writing about any change in the representations and warranties provided by the Investment Manager under the Investment Management Agreement or any of the Trust Documents;

xii. providing assistance to the Trustee as may be required in fulfilling its obligations towards the Trustee and the Unitholders, under applicable law, by any governmental authority or under the Trust Documents;

xiii. providing to the SEBI, the Trustee and if applicable, the stock exchanges, such information as may be sought by the SEBI, the Trustee or the stock exchanges in relation to the activities of the Trust, and providing, in parallel, to the Unitholders a copy of all reports and submissions made hereunder;

xiv. taking any other actions incidental to any of the foregoing or necessary or convenient in order to fully effect or evidence any action or transaction contemplated under the Investment Management Agreement; and

xv. to perform any other duties specified in the InvIT Regulations and the Trust Documents.

I. Rights in relation to shareholding in the Investment Manager

Pursuant to the terms of the IM SHA, the Sponsor, Croxley and Cintra IM Investor have agreed to the following arrangements in relation to their shareholding in the Investment Manager:

- ***Put option***: Croxley and Cintra IM Investor had the right to require the Sponsor to purchase the equity shares held by it in the Investment Manager upon the occurrence of certain events within the period of 12 months from the date of allotment in the initial offer of Units.

- ***Right of first refusal***: Croxley and Cintra IM Investor has a right of first refusal over equity shares of the Investment Manager proposed to be transferred by the Sponsor to any person other than the subsidiaries of the Sponsor.

- ***Tag along right***: Subject to lock-in below, if the Sponsor proposes to transfer equity shares of the Investment Manager held by it to a third party buyer (which is not a subsidiary of the Sponsor), Croxley and Cintra IM Investor has a right to require such buyer to purchase from the Investors, (i) the entire shareholding of Croxley if the Sponsor proposes to transfer in excess of 20% of the total outstanding equity shares or (ii) up to such percentage of equity shares held by Croxley and Cintra IM Investor that is *pro rata* to the percentage of equity shares proposed to be transferred by the Sponsor if the Sponsor proposes to transfer 20% or less of the total outstanding equity shares.

- ***Lock-in***: The Sponsor is not permitted to transfer the equity shares held by in the Investment Manager to any person, including to its affiliates without the prior written permission of Croxley and Cintra IM Investor.

- ***Deed of Adherence***: The Sponsor has agreed that any transfer of its shareholding to any person will be valid only if such person executes a deed of adherence and agrees to be bound by the terms and conditions of the IM SHA.

- ***Pre-emptive rights***: If the Investment Manager proposes to issue any new equity shares to any person including an existing shareholder, including by way of a preferential allotment, subject to certain exceptions specified in the IM SHA, then until the date of completion of any initial public offering of the Investment Manager, the Investment Manager will provide a right to the existing shareholders to subscribe to their respective proportionate share (in the proportion of their shareholding in the Investment Manager) of such proposed issuance at the same price as is offered to the proposed recipient, so as to maintain their respective proportionate ownership in the Investment Manager.

- ***Events of Default and consequences***: See "*Rights of Unitholders – Arrangements between the Sponsor and the Financial Investors*" on page 321.

THE TRUSTEE

The Sponsor has settled the Trust pursuant to the Indenture of Trust and appointed IDBI Trusteeship Services Limited in accordance with the provisions of the InvIT Regulations.

The details of the Trustee are as follows:

A. Details of the Trustee

a) **Name:** IDBI Trusteeship Services Limited;

b) **Registered Office:** Ground Floor, Universal Insurance Building, Sir Phirozshah Mehta Road, Fort, Mumbai – 400001;

c) **Telephone Number:** +91 22 4080 7000;

d) **Fax Number:** +91 22 6631 1776

B. Details of the Contact Persons of the Trustee

Ms. Sheetal Mehta
+91 22 4080 7062
sheetal@idbitrustee.com

Mr. Munjal G. Dhanani
+91 22 4080 7060
munjal@idbitrustee.com

C. Details of Trustee's Registration with SEBI

The Trustee is registered with SEBI as a debenture trustee with registration number IND000000460.

D. Background of the Trustee

The Trustee is a trusteeship company which has been registered with SEBI, and has been jointly promoted by IDBI Bank Limited, Life Insurance Corporation and General Insurance Corporation for providing corporate and other trusteeship services.

The Trustee is permitted to engage in the following activities.

a) Debenture / bond trustee;

b) Security trustee/ facility agent;

c) Securitization trustee;

d) Share pledge trustee / share monitoring agent;

e) Escrow agent;

f) VCF trustees/ AIF Trustees;

g) Safe keeping / lockers services;

h) Management of private trusts / execution of wills; and

i) Special corporate services (e.g. provision of nominee directors)

The Trustee has experience in providing trusteeship services to a range of corporates and institutions.

The Trustee is not an Associate of the Sponsor/Project Manager or the Investment Manager. Further, the Trustee is not and has not been (i) not debarred from accessing the securities market by the SEBI; or (ii) a promoter, director or person in control of any other company or a sponsor, investment manager or trustee of any other infrastructure investment trust or infrastructure investment trust which is debarred from accessing the capital market under any order or directions made by the SEBI.

None of the promoters or directors of the Trustee are or have been (i) declared as a fugitive economic offender under Section 12 of the Fugitive Economic Offenders Act, 2018; (ii) debarred from accessing the securities market by SEBI; (iii) a promoter, director or person in control of any other company or a sponsor, investment manager or trustee of any other infrastructure investment trust or an infrastructure investment trust which is debarred from accessing the capital market under any order or direction made by SEBI; and/or (iv) declared a wilful defaulter by any bank or financial institution or consortium thereof in accordance with the guidelines on wilful defaulters issued by the Reserve Bank of India.

E. Names and Profiles of the Directors of the Trustee

The names and profiles of board of directors of the Trustee, are as follows:

S. No.	Name	Designation	DIN
1.	Mr. Pradeep Kumar Jain	Director	07829987
2.	Mr. Pradeep Kumar Malhotra	Managing Director and Chief Executive Officer	09817764
3.	Ms. Jayashree Ranade	Director	09320683
4.	Ms. Baljinder Kaur Mandal	Director	06652016
5.	Mr. Jayakumar S. Pillai	Director and Chairman	10041362
6.	Mr. Arun Kumar Agarwal	Independent Director	00063359
7.	Mr. Hare Krushna Dandapani Panda	Independent Director	00479786

The Trustee confirms that it has, and undertakes to ensure that it will at all times maintain, adequate infrastructure, personnel and resources to perform its functions, duties and responsibilities with respect to the Trust, in accordance with the InvIT Regulations, the Indenture of Trust and applicable law.

F. Functions, Duties and Responsibilities of the Trustee

a) Interests of the Unitholders

The Trustee shall carry on and conduct its business in a proper and efficient manner in the best interest of the Unitholders in accordance with the Trust Documents. The Trustee shall duly perform all its duties, responsibilities and powers as set out in the InvIT Regulations in the interest of the Unitholders and in accordance with the provisions of the Trust Documents.

b) Appointment of the Investment Manager, the Project Manager and enter into the Investment Management Agreement and the Project Implementation Agreements

The Trustee, on behalf of the Trust, shall within a reasonable time from the date of execution of the Indenture of Trust, appoint an Investment Manager and a Project Manager (in consultation with the Investment Manager) and enter into an Investment Management Agreement and the Project Implementation Agreements. The Trustee shall have the power to execute the Project Implementation Agreement or any other agreement or arrangement, from time to time, with the Project Manager, any holding company or the SPV in this regard. The Trustee shall obtain a compliance certificate from the Investment Manager and the Project Manager on a quarterly basis, or such other time and in the form as may be prescribed under the InvIT Regulations.

c) Supervision of the Investment Manager

i. The Trustee shall ensure that the Investment Manager complies with reporting and disclosure requirements in accordance with the InvIT Regulations and in case of any delay or discrepancy, the Trustee shall require the Investment Manager to rectify such delay or discrepancy on an urgent basis.

ii. The Trustee shall oversee the activities of the Investment Manager in the interest of the Unitholders, ensure that the Investment Manager complies with the applicable provisions of the InvIT Regulations, including in relation to reporting and disclosure requirements and shall obtain a compliance certificate from the Investment Manager on a quarterly basis.

iii. The Trustee shall review transactions between the Investment Manager and its Associates and where the Investment Manager has advised that there may be a conflict of interest, obtain a confirmation that such transaction is on an arm's length basis from a practicing chartered account, a valuer or as may be otherwise prescribed under the InvIT Regulations, as applicable.

iv. The Trustee shall ensure that the Investment Manager reviews the valuation reports issued by the valuer and submitted to the Trustee by the Investment Manager in accordance with the InvIT Regulations.

v. The Trustee shall require the Investment Manager to set up such systems and procedures and submit such reports to the Trustee, as may be necessary for effective monitoring of the functioning of the Trust.

vi. The Trustee shall ensure that the Investment Manager convenes meetings of the Unitholders in accordance with the InvIT Regulations and oversees voting by the Unitholders and declaration of results (except where the Trustee is required to carry out such functions under the InvIT Regulations). The Trustee shall ensure that the Investment Manager convenes meetings of Unitholders within the period prescribed under the InvIT Regulations and the period between such meetings shall not exceed the period prescribed under the InvIT Regulations.

d) Providing information to the SEBI

The Trustee shall ensure that the Investment Manager shall provide to the SEBI and other governmental authorities, as applicable, information as may be requested or required under applicable law by the SEBI or other governmental authorities, as applicable, in relation to the activities of the Trust. The Trustee shall comply with the information and intimation requirements under the InvIT Regulations. The Trustee shall ensure that the activity of the Trust is operated in accordance with the provisions of the Indenture of Trust, the InvIT Regulations, other applicable law and the Trust Documents.

e) Documents and information to be provided to Unitholders

The Trustee shall, and shall ensure that the Investment Manager shall, provide documents and information to the Unitholders with respect to the activities carried on by the Trust, as may be required by the SEBI or other governmental authority, as applicable, under applicable law.

f) Change in Control

The Trustee shall obtain approvals, if required under the Trust Documents, the InvIT Regulations, other applicable law and any concession agreement, for any proposed change in control of the Trustee, the Investment Manager or the Project Manager, as applicable.

g) Change in Investment Manager or Project Manager

In the event of any proposed change or termination in the investment manager or project manager, the Trustee shall ensure that all conditions in connection with the removal of such investment manager or project manager and appointment of a new investment manager or project manager prescribed under the InvIT Regulations, the Trust Documents and other applicable law are complied with. The previous investment manager or project manager shall continue to act as such at the

discretion of the Trustee until such time as the new investment manager or project manager is appointed. The Trustee shall ensure that the new investment manager or project manager shall stand substituted as a party in all the documents (to the extent applicable) to which the earlier investment manager or project manager was a party. The Trustee shall also ensure that the earlier investment manager or project manager continues to be liable for all its acts of omissions and commissions for the period during which it served as investment manager or project manager, notwithstanding its change or termination.

h) Subscription amounts

The Trustee shall and shall ensure that the Investment Manager ensures that subscription amounts in case of any offering by the Trust (including the Issue) are collected and utilized in accordance with the InvIT Regulations, the relevant Trust Documents and conditions specified by the SEBI, as applicable.

i) Distribution

The Trustee shall make Distributions and ensure that the Investment Manager makes timely declarations of Distributions to the Unitholders in accordance with the InvIT Regulations.

j) Maintenance of books of accounts and other records

The Trustee shall cause the books of accounts and other records of the Trust to be maintained in accordance with the Indenture of Trust, the Trust Documents and applicable law.

k) Payment of statutory charges, operation of bank accounts etc.

i. The Trustee shall ensure that the Investment Manager shall make payments of all taxes, duties and any other statutory charges or levies that may be payable by the Trust or on behalf of the Unitholders from the Trust Assets, subject to the provisions of the Trust Documents and applicable law.

ii. The Trustee shall be responsible for opening and operating bank accounts and demat accounts on behalf of the Trust.

l) Attainment of objects of the Trust

The Trustee shall ensure that all acts, deeds and things are done for the fulfilment of the investment objectives of the Trust in accordance with the InvIT Regulations, the Trust Documents and to secure the best interests of the Unitholders.

m) Reports to be filed by the Trust

The Trustee shall file such reports as may be required by the SEBI or any other governmental authority or as required under applicable law in relation to the activities carried on by the Trust.

n) Unitholder Complaints

The Trustee shall periodically review the status of Unitholders' complaints and their redressal by the Investment Manager. The Investment Manager shall provide quarterly reports on Unitholders' grievances to the Trustee, as applicable.

o) Segregation of assets and liabilities

The assets and liabilities of the Trust shall at all times be segregated from the assets and liabilities of the Trustee and the assets and liabilities of other trusts managed by the Trustee. The Trust Assets shall be held for the exclusive benefit of the Unitholders and such assets shall not be subject to the claims of any creditor or any Person claiming under any other fund or trust administered or managed by the Trustee or the Investment Manager.

p) Valuer

i. The Trustee shall ensure that the valuer is not an Associate of the Sponsor, the Investment Manager or the Trustee.

ii. The Trustee shall ensure that the Investment Manager ensures that a detailed valuation is undertaken of the Trust Assets by the valuer at such intervals and in the manner specified under the InvIT Regulations and the Trust Documents.

iii. The Trustee shall ensure that the remuneration of the valuer is not linked to or based on the value of the asset being valued.

q) Investment by Trustee

The Trustee shall invest in Units only if permitted under Applicable Law and such investments shall be in accordance with applicable law.

r) Compliance with the InvIT Regulations

The Trustee shall fulfil its obligations under applicable provisions of the InvIT Regulations.

s) Delegation to the Investment Manager

The Trustee shall delegate all such powers to the Investment Manager as may be required by the Investment Manager to carry out its obligations under the Investment Management Agreement and Applicable Law and as may be required for the benefit of the Unitholders. Also see "*Rights of Unitholders – Approval of Unitholders*"on page 322.

t) Related Party Transactions

The Trustee shall review the transactions carried out between the Investment Manager and its Associates and obtain a certificate from a practising chartered accountant or a valuer, as applicable with respect to any related party transactions involving the Investment Manager and its Associates, where the Investment Manager has advised that there may be a conflict of interest, stating that such transactions have been done at an arms-length basis.

u) Monitoring

The Trustee shall require the Investment Manager to set up such systems and procedures and submit such reports to the Trustee, as may be necessary for the effective monitoring or the functioning of the Trust. The Trustee shall oversee activities of the Investment Manager in the interest of the Unitholders, shall ensure that the Investment Manager is in compliance with the provisions of the InvIT Regulations at all times and shall obtain a compliance certificate from the Investment Manager on a quarterly basis. Further, the Trustee shall ensure that the Investment Manager complies with reporting and disclosure requirements in accordance with the InvIT Regulations and in case of any delay or discrepancy, the Trustee will ensure that the Investment Manager rectifies such delay or discrepancy on an urgent basis.

v) Unitholders Meeting

The Trustee shall ensure that the Investment Manager convenes meetings of the Unitholders in accordance with the InvIT Regulations and shall also oversee the voting by the Unitholders and the declaration of results (excpet where the Trustee is required to carry out such functions under the InvIt Regulations). The Trustee shall ensure that the Investment Manager convenes meetings of Unitholders within the period prescribed under the InvIT Regulations and the period between such meetings shall not exceed the period prescribed under the InvIT Regulations.

w) Others

The Trustee shall ensure that the activity of the Trust is operated in accordance with the Indenture of Trust, InvIT Regulations, other applicable law and the Trust Documents. In the event, any discrepancy is noticed by the Trustee, then the Trustee shall promptly inform the SEBI in writing. The Trustee shall provide to the SEBI such information as may be sought by the SEBI pertaining to the activity of the Trust.

The Trustee shall have the power to take up with SEBI or with the stock exchanges, as applicable, any matter which has been approved in any meeting of Unitholders post the initial offer by the Trust, if the matter requires such action.

x) Compliance Certificate

The Trustee shall obtain a compliance certificate in the form and manner prescribed under applicable law on a quarterly basis, from each of the Investment Manager and the Project Manager.

SECTION VI – OTHER PARTIES

AUDITORS

The Investment Manager, in consultation with the Trustee, and pursuant to the approval of the Unitholders, has appointed Gokhale & Sathe, Chartered Accountants and M S K A & Associates, Chartered Accountants as the Trust's Auditors until the conclusion of the ninth annual meeting of Unitholders of the Trust. The Auditors have audited the Consolidated Financial Information for the financial year 2024, 2023 and 2022 and their reports thereon have been included in this Letter of Offer.

Policy for Appointment of Auditor

The Investment Manager shall appoint an auditor of the Trust to hold office from the date of conclusion of the annual meeting in which the auditor is appointed until the date of conclusion of the sixth annual meeting of the unitholders thereafter in accordance with the procedure for selection of auditors as may be specified by the SEBI. The Investment Manager is not permitted to appoint or re-appoint an individual as the auditor for more than one term of five consecutive years, and an audit firm as the auditor for more than two terms of five consecutive years, subject to a cooling-off period of five years. With respect to the appointment of the auditor of the Trust and the fees of such an auditor, an approval from the Unitholders shall be required at the annual meeting in accordance with Regulation 22 of the InvIT Regulations.

The Investment Manager shall ensure that the auditor carries out an audit of the accounts of the Trust at such intervals as may be required under the InvIT Regulations.

In accordance with the InvIT Regulations, the auditor of the Trust shall:

a) conduct an audit of the accounts of the Trust and draft the audit report based on the accounts examined, after taking into account the relevant accounting and auditing standards, as may be specified by SEBI in this regard;

b) to the best of its information and knowledge, ensure that the accounts and financial statements give a true and fair view of the state of the affairs of the Trust, including profit or loss and cash flow for the period and such other matters as may be specified;

c) have a right of access at all times to the books of accounts and vouchers pertaining to activities of the Trust;

d) have a right to require such information and explanation pertaining to activities of the Trust, as it may consider necessary for the performance of its duties as auditor from the employees of Trust or the Sponsor, the Investment Manager, the Project Manager or the Trustee or the SPVs or any other person in possession of such information; and

e) undertake a limited review of the audit of all the entities or companies whose accounts are to be consolidated with the accounts of the Trust as per the applicable Indian Accounting Standards (Ind AS) and any addendum thereto as defined in Rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015, in such manner as may be specified by the SEBI.

Auditing Standards

The Auditor shall conduct an audit of the accounts of the Trust and issue the audit report based on the accounts examined, after taking into account the relevant accounting and auditing standards, as may be specified by SEBI and/or the ICAI, from time to time, in this regard. Further, the Auditor shall undertake a limited review of the audit of all the entities or companies whose accounts are to be consolidated with the accounts of the Trust, in accordance with the relevant accounting standards, in such manner as may be specified by the SEBI.

VALUER

The Investment Manager, in consultation with the Trustee, appointed KPMG Valuation Services LLP as the Valuer of the Trust for the Financial Year 2025. For details in relation to the availability of the latest valuation report for the Current Portfolio, see "*Valuation*" on page 309. KPMG Valuation Services LLP has also undertaken a full valuation of the Target SPV and the Target Valuation Report dated December 14, 2024 has been included in this Letter of Offer.

The Valuer is not an Associate of the Sponsor, the Investment Manager or the Trustee, and has not less than five years of experience in the valuation of infrastructure assets.

SECTION VII – FINANCIAL INFORMATION

FINANCIAL STATEMENTS

A. PRO FORMA FINANCIAL INFORMATION

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Gokhale & Sathe
Chartered Accountants
304/308/309, Udyog Mandir No.1,
7-C, Bhagoji Keer Marg,
Mahim, Mumbai 400 016.
Telephone + 91 (22) 43484242
Fax + 91 (22) 43484241

M S K A & Associates
Chartered Accountants
602, Floor 6, Raheja Titanium
Western Express Highway,
Geetanjali Railway Colony,
Ram Nagar, Goregaon (E),
Mumbai 400063, India
Tel: +91 22 6238 0519

INDEPENDENT AUDITORS REPORT ON THE COMPILATION OF CONSOLIDATED PROFORMA FINANCIAL INFORMATION INCLUDED IN LETTER OF OFFER IN CONNECTION WITH THE PROPOSED RIGHT ISSUE OF UNITS OF IRB INFRASTRUCTURE TRUST

To,
The Board of Directors
MMK Toll Road Private Limited (as the Investment Manager of the Trust)
Office No. 11th Floor/1101
Hiranandani Knowledge Park
Technology Street, Hill Side Avenue,
Powai, Mumbai – 400076.

Report on the Compilation of Consolidated Proforma Financial Information Included in the Letter of Offer (LOF)

1. We have completed our assurance engagement to report on the compilation of Consolidated Proforma Financial Information of Project SPV Group of IRB Infrastructure Trust ("the Trust") and Meerut Budaun Expressway Limited by the management of MMK Toll Road Private Limited (as the Investment Manager of the Trust) ("The Management"). The Consolidated Proforma Financial Information consists of the Proforma Balance Sheet as at March 31, 2024 and as at September 30, 2024, the Proforma Statement of Profit and Loss for the year ended March 31, 2024 and for the six months period ended September 30, 2024 and related notes to the Consolidated Proforma Financial Information. The applicable criteria on the basis of which the Management has compiled the Consolidated Proforma financial information are in accordance with basis of preparation described in Note 2 to the Consolidated Proforma Financial Information.

2. The Consolidated Proforma Financial Information has been compiled by the Management to illustrate the impact of the proposed acquisition set out in Note 2 on the Trust's financial position as at March 31, 2024 and as at September 30, 2024 as if the aforesaid acquisition had taken place as at March 31, 2024 and September 30, 2024 respectively and the Trust's financial performance for the year ended March 31, 2024 and six months period ended September 30, 2024 as if the aforesaid acquisition of the business had taken place at April 1, 2023.

3. As part of this process, information about the Trust's financial position and financial performance has been extracted by the Management from:

    a) the Trust's Audited Consolidated Financial Statements as at and for the year ended March 31, 2024, on which we have expressed an unmodified opinion vide our report dated May 03, 2024; and
    b) Trust's Unaudited Interim Consolidated Financial Information as at and for the six months period ended September 30, 2024, on which we have expressed an unmodified conclusion vide our review report dated December 09, 2024 respectively.

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Mumbai 400063, India
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Managements' Responsibility for the Consolidated Proforma Financial Information

4. The Management is responsible for compiling the Consolidated Proforma Financial Information on the basis set out in Note 2 to the Consolidated Proforma Financial Information. This responsibility includes the responsibility for designing, implementing and maintaining internal control relevant for compiling the Consolidated Proforma Financial Information on the basis set out in Note 2 to the Consolidated Proforma Financial Information that is free from material misstatement, whether due to fraud or error. The Management is also responsible for identifying and ensuring that the Trust complies with the laws and regulations applicable to its activities, including compliance with the provisions of the laws and regulations for the compilation of Consolidated Proforma Financial Information.

Auditors' Responsibilities

5. Our responsibility is to express an opinion, as required by paragraph 7 to Annexure 5 of Chapter 9 of Master circular SEBI/HO/DDHS-PoD-2/P/CIR/2024/44 dated May 15, 2024, as amended, about whether the Consolidated Proforma Financial Information has been compiled, in all material respects, by the management on the basis set out in Note 2 to the Consolidated Proforma Financial Information ("Applicable Criteria").

6. We conducted our engagement in accordance with Standard on Assurance Engagements (SAE) 3420, Assurance Engagements to Report on the Compilation of Proforma Financial Information Included in a Prospectus, issued by the Institute of Chartered Accountants of India. This Standard requires that the auditors comply with ethical requirements and plan and perform procedures to obtain reasonable assurance about whether the management has compiled, in all material respects, the Consolidated Proforma Financial Information on the basis set out in Applicable Criteria.

7. The Consolidated Proforma Financial Information as at and for the year ended March 31, 2024 and as at and for the six months period ended September 30, 2024 includes the Trust and the following entities :

Sr No	Name of Entity	Relationship with Trust
1	AE Tollway Limited	Subsidiary
2	Yedeshi Aurangabad Tollway Limited	Subsidiary
3	IRB Westcoast Tollway Limited	Subsidiary
4	Kaithal Tollway Limited	Subsidiary
5	Solapur Yedeshi Tollway Limited	Subsidiary
6	CG Tollway Limited	Subsidiary
7	Udaipur Tollway Limited	Subsidiary
8	Kishangarh Gulabpura Tollway Limited	Subsidiary
9	IRB Hapur Moradabad Tollway Limited	Subsidiary
10	Palsit Dankuni Tollway Private Limited	Subsidiary
11	IRB Golconda Expressway Private Limited (w.e.f. 11 August 2023)	Subsidiary
12	IRB Lalitpur Tollway Private Limited (w.e.f. 10 November 2023)	Subsidiary
13	Samakhiyali Tollway Private Limited (w.e.f. 28 December 2023)	Subsidiary

Gokhale & Sathe
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Mumbai 400063, India
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14	IRB Kota Tollway Private Limited (w.e.f. 1 January 2024)	Subsidiary
15	IRB Gwalior Tollway Private Limited (w.e.f. 1 January 2024)	Subsidiary

8. For purposes of this engagement, we are not responsible for updating or reissuing any reports or opinions on any historical financial information used in compiling the Consolidated Proforma Financial Information, nor have we, in the course of this engagement, performed an audit or review of the financial information used in compiling the Consolidated Proforma Financial Information.

9. For our assurance engagement, we have placed reliance on the following:

    a) the jointly Audited Consolidated Financial Statement of the Trust as at and for the year ended March 31, 2024;
    b) the jointly Reviewed Unaudited Interim Consolidated Financial Information of the Trust as at and for the six months period ended September 30, 2024;
    c) the Audited Financial Statements of Meerut Budaun Expressway Limited for the year ended March 31, 2024, audited by Gokhale & Sathe, one of the joint auditor of Trust; and
    d) the Audited Interim Special Purpose Financial Statements of Meerut Budaun Expressway Limited for the six months period ended September 30, 2024, audited by Gokhale & Sathe, one of the joint auditor of Trust.

    The purpose of Consolidated Proforma Financial Information included in the Letter of Offer is solely to illustrate the impact of a significant event or transaction on unadjusted financial information of the Trust as if the event had occurred or the transaction had been undertaken at an earlier date selected for purposes of the illustration. Accordingly, we do not provide any assurance that the actual outcome of the event or transaction as at March 31, 2024 and as at September 30, 2024 or for the period then ended would have been as presented.

10. A reasonable assurance engagement to report on whether the Consolidated Proforma Financial Information has been compiled, in all material respects, on the basis of the applicable criteria involves performing procedures to assess whether the applicable criteria used by the management in the compilation of the Consolidated Proforma Financial Information provide a reasonable basis for presenting the significant effects directly attributable to the event or transaction, and to obtain sufficient appropriate evidence about whether:

    a) The related pro forma adjustments give appropriate effect to those criteria; and
    b) The Consolidated Proforma Financial Information reflects the proper application of those adjustments to the unadjusted financial information.

    The procedures selected depend on the auditor's judgment, having regard to the auditor's understanding of the nature of the Trust, the event or transaction in respect of which the Consolidated Proforma Financial Information has been compiled, and other relevant engagement circumstances.

The engagement also involves evaluating the overall presentation of the Consolidated Proforma Financial Information.

11. Our work has not been carried out in accordance with auditing and other standards and practices generally accepted in other jurisdictions and accordingly should not be relied upon as if it had been carried out in accordance with those standards and practices

12. We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Opinion

13. In our opinion, the Consolidated Proforma Financial Information has been compiled, in all material respects, on the basis set out in the Note 2 to the Consolidated Proforma Financial Information.

Emphasis of Matter

14. We draw reference to the matter of emphasis given by the joint auditors in the audited Consolidated Financial Statements for the year ended March 31,2024 which is reproduced as below:

    We draw attention to Note 13 of the accompanying consolidated financial statements, which describes the presentation of 'Unit Capital' as 'Equity' to comply with InvIT Regulations.

    Our opinion is not modified in respect of this matter.

15. We draw reference to the matter of emphasis given by the joint auditors in the Unaudited Interim Consolidated Financial Statements for the six months period ended September 30,2024 which is reproduced as below:

    We draw attention to Note 13 of the accompanying Unaudited Interim Consolidated Financial Information, which describes the presentation of 'Unit Capital' as 'Equity' to comply with the InvIT Regulations.

    Our conclusion is not modified in respect of this matter.

16. We draw attention to Note 3(c)(i) & 3(c)(ii) of Note 3 of Proforma Adjustments, since the right issue has not been consummated, the initial effect on cash and cash equivalent and unit holders' equity of the Trust has not been assumed in the Proforma Adjustment. Consequently, as the transaction relating to acquisition of equity/ NCDs ("investment") in MBEL has not consummated, which is dependent upon the right issue of unit holders of trust to complete, the management has also not assumed the adjustments out of the said transaction.

    Our opinion is not modified in respect of this matter.

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Tel: +91 22 6238 0519

Other Matter

17. As indicated in the review report for six months period ended September 30, 2024 referred to in paragraph 3 above

    We did not review the Unaudited Interim Financial Information of five subsidiaries included in the Unaudited Interim Consolidated Financial information, whose unaudited interim financial information reflects total assets of Rs 113,206.73 millions (before consolidation adjustment) as at September 30, 2024, total revenues of Rs. 9,473.55 million (before consolidation adjustment), for the period April 01, 2024 to September 30, 2024, and net cash inflows of Rs 21.22 million for the period from April 01, 2024 to September 30, 2024, as considered in the Unaudited Interim Consolidated Financial Information. This interim financial information have been reviewed by other auditors whose reports have been furnished to us by the Management and our conclusion on the Unaudited Interim Consolidated Financial Information, in so far as it relates to the amounts and disclosures included in respect of these subsidiaries is based solely on the report of the other auditors.

    Our conclusion is not modified in respect of the above matter with respect to our reliance on the work done by and report of the other auditor.

18. As indicated in the audit report for year ended March 31, 2024 referred to in paragraph 3 above

    We did not audit the financial statements of six subsidiaries, whose financial statements reflect total assets of Rs. 1,22,334.50 million (before consolidation adjustments) as at March 31, 2024, total revenues of Rs. 20,960.13 million (before consolidation adjustments) and net cash outflows amounting to Rs. 157.30 million for the year ended on that date, as considered in the Consolidated Proforma financial statements. These financial statements have been audited by other auditor whose reports have been furnished to us by the Management and our opinion on the Proforma consolidated financial statements, in so far as it relates to the amounts and disclosures included in respect of these subsidiaries, is based solely on the reports of the other auditor.

    Our opinion is not modified in respect of the above matter with respect to our reliance on the work done by and report of the other auditor.

19. The Financial Statements of Meerut Budaun Expressway Limited for the year ended March 31, 2024, and for the six-month period ended September 30, 2024, used by the management for compilation of Consolidated Proforma Financial Information was audited by Gokhale & Sathe, Chartered Accountants, one of the joint auditors of the Trust.

    M S K A & Associates' opinion is not modified in respect of the above matters with respect to our reliance on the work done by and report of the other auditors.

Gokhale & Sathe
Chartered Accountants
304/308/309, Udyog Mandir No.1,
7-C, Bhagoji Keer Marg,
Mahim, Mumbai 400 016.
Telephone + 91 (22) 43484242
Fax + 91 (22) 43484241

M S K A & Associates
Chartered Accountants
602, Floor 6, Raheja Titanium
Western Express Highway,
Geetanjali Railway Colony,
Ram Nagar, Goregaon (E),
Mumbai 400063, India
Tel: +91 22 6238 0519

Restriction on Use

20. This report should not in any way be construed as a reissuance or re-auditing or re-examination of any of the previous audit reports issued by us or other auditors. We have no responsibility to update our report for events and circumstances occurring after the date of the report.

21. Our report is intended solely for use of the Management for inclusion in the Letter of Offer to be filed with the National Stock Exchange of India Limited and submitted to the Securities Exchange Board of India ("SEBI") in connection with the Proposed Right Issue offering of the units of the Trust and is not to be used, referred to or distributed for any other purpose.

    Accordingly, we do not accept or assume any liability or any duty of care for any other purpose or any other person to whom this report is shown or into whose hands it may come without our prior consent in writing.

For Gokhale & Sathe
Chartered Accountants
ICAI Registration Number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011
UDIN: 24121011BKAAWP9646

Place: Mumbai
Date: December 14, 2024.

For M S K A & Associates
Chartered Accountants
ICAI Registration Number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No. 118894
UDIN: 24118894BKGQLN2277

Place: Mumbai
Date: December 14, 2024.

IRB Infrastructure Trust
Proforma Consolidated Balance Sheet as at September 30, 2024
(All amounts in Rs. million unless otherwise stated)

	Consolidated Trust (A)	MBEL (B)	Proforma adjustments (C)	Proforma information (A)+(B)+(C)
ASSETS				
Non-current assets				
Property, Plant and Equipment	6.25	-	-	6.25
Goodwill	604.54	-	-	604.54
Other Intangible assets	3,84,011.09	-	-	3,84,011.09
Intangible assets under development	4,017.34	42,587.09		46,604.43
Financial assets				-
i) Others	107.43	-	-	107.43
Deferred tax assets	2,587.29	-	-	2,587.29
Other non-current assets	-	-	-	-
	3,91,333.94	**42,587.09**	**-**	**4,33,921.03**
Current assets				
Financial assets				
i) Investments	2,134.16	19.29	-	2,153.45
ii) Trade receivables	123.23	-	-	123.23
iii) Cash and cash equivalents	543.41	84.26		627.67
iv) Bank balance other than Cash and cash equivalents	9,995.20	-	-	9,995.20
v) Others	2,380.35	1,633.20		4,013.55
Current tax assets (net)	193.74	-	-	193.74
Other current assets	984.14	199.31	-	1,183.45
	16,354.23	**1,936.06**	**-**	**18,290.29**
Total assets	**4,07,688.17**	**44,523.15**	**-**	**4,52,211.32**
EQUITY AND LIABILITIES				
Equity				
Unit capital	1,34,645.74	5,332.50	-	**1,39,978.24**
Subordinate Debt	16,916.65	-	-	**16,916.65**
Other equity	(21,054.62)	962.82	-	**(20,091.80)**
Total Equity	**1,30,507.77**	**6,295.32**	**-**	**1,36,803.09**
Non-controlling interests	1.58			1.58
Total unit holder's equity	**1,30,509.35**	**6,295.32**	**-**	**1,36,804.67**

IRB Infrastructure Trust
Proforma Consolidated Balance Sheet as at September 30, 2024
(All amounts in Rs. million unless otherwise stated)

	Consolidated Trust (A)	MBEL (B)	Proforma adjustments (C)	Proforma information (A)+(B)+(C)
Non-current liabilities				
Financial liabilities				
i) Borrowings	2,20,433.93	34,658.02	-	**2,55,091.95**
ii) Other financial liabilities	42,016.93	-	-	**42,016.93**
Provisions	1,251.53	-	-	**1,251.53**
Deferred tax liabilities (net)	294.55	315.66	-	**610.21**
	2,63,996.94	**34,973.69**	**-**	**2,98,970.62**
Current liabilities				
Financial liabilities				
i) Borrowings	1,940.23	604.93	-	**2,545.16**
ii) Trade payables			-	
a) total outstanding dues of micro enterprises and small enterprises	1.83	-	-	**1.83**
b) total outstanding dues of creditors other than micro enterprises and small enterprises	6,781.42	2,648.72	-	**9,430.14**
iii) Other financial liabilities	1,850.20		-	**1,850.20**
Other current liabilities	87.46	0.04	-	**87.50**
Provisions	2,520.74		-	**2,520.74**
Current tax liabilities (net)	-	0.46	-	**0.46**
	13,181.88	**3,254.15**	**-**	**16,436.03**
Total liabilities	**2,77,178.82**	**38,227.83**	**-**	**3,15,406.65**
Total equity and liabilities	**4,07,688.17**	**44,523.15**	**-**	**4,52,211.32**

The above statement should be read with notes to proforma consolidated financial information.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Kaustubh Deshpande
Partner
Membership No. 121011

SD/-
Virendra D. Mhaiskar
Chairman
DIN:00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

For M S K A & Associates
Chartered Accountants
ICAI registration number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No. 118894

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No. A27833

Place: Mumbai
Date: December 14, 2024

Place: Mumbai
Date: December 14, 2024

IRB Infrastructure Trust
Proforma Consolidated Statement of Profit & Loss for the six months period ended September 30, 2024
(All amounts in Rs. million unless otherwise stated)

	Consolidated Trust (A)	MBEL (B)	Proforma adjustments (C)	Proforma information (A)+(B)+(C)
Income				
Revenue from operations	23,606.82	7,631.19	-	31,238.01
Other income	476.66	2.02	-	478.68
Total income	**24,083.48**	**7,633.21**	**-**	**31,716.69**
Expenses				
Operating expenses (Road work and site expenses)	10,098.74	5,599.70	-	15,698.44
Project Management Fees	2,625.90	-	-	2,625.90
Valuation Expenses	2.12	-	-	2.12
Insurance and Security Expenses	64.99	-	-	64.99
Trustee fees	0.65	-	-	0.65
Depreciation on Property, Plant and Equipment	0.38	-	-	0.38
Amortisation of Intangible Assets	2,505.73	-	-	2,505.73
Finance costs (Interest)	10,081.30	1,767.31	-	11,848.61
Finance costs (Others)	397.62	8.02	-	405.64
Audit fees	9.40	-	-	9.40
Legal & Professional Fees	66.32	-	-	66.32
Investment Manager Fees	52.65	-	-	52.65
Custodian Fees	3.42	-	-	3.42
Fair value loss on measurement of other payable	1,227.70	-	-	1,227.70
Other expenses	18.83	39.43	-	58.26
Total expenses	**27,155.75**	**7,414.46**	**-**	**34,570.21**
Profit/(loss) before tax	**(3,072.27)**	**218.75**	**-**	**(2,853.52)**
Tax expenses				
Current tax	140.36	0.48	-	140.84
Deferred tax	(343.86)	54.57	-	(289.29)
MAT Credit utilisation / (Entitlement)	-	-	-	-
Total tax expenses	**(203.50)**	**55.05**	**-**	**(148.45)**
Profit/(loss) after tax	**(2,868.77)**	**163.70**	**-**	**(2,705.07)**
Other comprehensive income				
Item that will not be reclassified to profit or loss: Re-measurement (loss)/gain on defined benefit plans (net of taxes)	-	-	-	-
Other comprehensive (loss) for the period, net of tax	**-**	**-**	**-**	**-**
Total comprehensive income for the period	**(2,868.77)**	**163.70**	**-**	**(2,705.07)**

The above statement should be read with notes to proforma consolidated financial information.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
Kaustubh Deshpande
Partner
Membership No. 121011

For M S K A & Associates
Chartered Accountants
ICAI registration number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No. 118894

Place: Mumbai
Date: December 14, 2024

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN:00183554

SD/-
Shilpa Todankar
Chief Financial Officer

Place: Mumbai
Date: December 14, 2024

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No. A27833

IRB Infrastructure Trust
Proforma Consolidated Balance Sheet as at March 31, 2024
(All amounts in Rs. million unless otherwise stated)

	Consolidated Trust (A)	MBEL (B)	Proforma adjustments (C)	Proforma information (A)+(B)+(C)
ASSETS				
Non-current assets				
Property, Plant and Equipment	6.63	-	-	6.63
Goodwill	604.54	-	-	604.54
Other Intangible assets	3,17,031.32	-	-	3,17,031.32
Intangible assets under development	64,816.48	39,305.19	-	1,04,121.67
Financial assets		-	-	-
i) Others	4,408.10	-	-	4,408.10
Deferred tax assets	2,229.78	-	-	2,229.78
Other non-current assets	12.00	-	-	12.00
	3,89,108.85	**39,305.19**	**-**	**4,28,414.04**
Current assets				
Financial assets				
i) Investments	1,523.07	-	-	1,523.07
ii) Trade receivables	68.15	-	-	68.15
iii) Cash and cash equivalents	1,605.67	0.16	-	1,605.83
iv) Bank balance other than Cash and cash equivalents	6,672.40	-	-	6,672.40
v) Others	2,346.30	406.21	-	2,752.51
Current tax assets (net)	174.41	-	-	174.41
Other current assets	537.93	21.82	-	559.75
	12,927.93	**428.19**	**-**	**13,356.12**
Total assets	**4,02,036.78**	**39,733.38**	**-**	**4,41,770.16**
EQUITY AND LIABILITIES				
Equity				
Unit capital	1,35,091.22	5,332.50	-	**1,40,423.72**
Subordinate Debt	16,916.65	-	-	**16,916.65**
Other equity	(17,640.04)	799.12	-	**(16,840.92)**
Total Equity	**1,34,367.83**	**6,131.62**	**-**	**1,40,499.45**
Non-controlling interests	1.49	-	-	1.49
Total unit holder's equity	**1,34,369.32**	**6,131.62**	**-**	**1,40,500.94**

IRB Infrastructure Trust
Proforma Consolidated Balance Sheet as at March 31, 2024
(All amounts in Rs. million unless otherwise stated)

	Consolidated Trust (A)	MBEL (B)	Proforma adjustments (C)	Proforma information (A)+(B)+(C)
Non-current liabilities				
Financial liabilities				
i) Borrowings	2,14,136.34	29,171.14	-	**2,43,307.48**
ii) Other financial liabilities	40,765.03	-	-	**40,765.03**
Provisions	1,336.98	-	-	**1,336.98**
Deferred tax liabilities	280.89	261.09	-	**541.98**
	2,56,519.24	**29,432.23**	**-**	**2,85,951.47**
Current liabilities				
Financial liabilities				
i) Borrowings	1,178.93	708.49	-	**1,887.42**
ii) Trade payables				
a) total outstanding dues of micro enterprises and small enterprises	2.41	-	-	**2.41**
b) total outstanding dues of creditors other than micro enterprises and small enterprises	5,611.71	3,406.32	-	**9,018.03**
iii) Other financial liabilities	1,883.60	0.04	-	**1,883.64**
Other current liabilities	235.99	53.32	-	**289.31**
Provisions	2,235.58	-	-	**2,235.58**
Current tax liabilities (net)	-	1.36		**1.36**
	11,148.22	**4,169.53**	**-**	**15,317.75**
Total liabilities	**2,67,667.46**	**33,601.76**	**-**	**3,01,269.22**
Total equity and liabilities	**4,02,036.78**	**39,733.38**	**-**	**4,41,770.16**

The above statement should be read with notes to proforma consolidated financial information.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Kaustubh Deshpande
Partner
Membership No. 121011

SD/-
Virendra D. Mhaiskar
Chairman
DIN:00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

For M S K A & Associates
Chartered Accountants
ICAI registration number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No. 118894

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No. A27833

Place: Mumbai
Date: December 14, 2024

Place: Mumbai
Date: December 14, 2024

IRB Infrastructure Trust
Proforma Consolidated Statement of Profit & Loss for the year ended March 31, 2024
(All amounts in Rs. million unless otherwise stated)

	Consolidated Trust (A)	MBEL (B)	Proforma adjustments (C)	Proforma information (A)+(B)+(C)
Income				
Revenue from operations	38,930.75	20,884.70	-	59,815.45
Other income	839.83	5.42	-	845.25
Total income	**39,770.58**	**20,890.12**	**-**	**60,660.70**
Expenses				
Operating expenses (Road work and site expenses)	19,876.05	18,305.72	-	38,181.77
Project Management Fees	3,573.20	-	-	3,573.20
Valuation Expenses	5.41	-	-	5.41
Insurance and Security Expenses	94.71	-	-	94.71
Trustee fees	14.97	-	-	14.97
Depreciation on Property, Plant and Equipment	0.95	-	-	0.95
Amortisation of Intangible Assets	3,648.04	-	-	3,648.04
Finance costs (Interest)	13,449.23	1,893.04	-	15,342.27
Finance costs (Others)	1,007.87	15.77	-	1,023.64
Audit fees	12.48	-	-	12.48
Legal & Professional Fees	726.17	-	-	726.17
Investment Manager Fees	146.32	-	-	146.32
Custodian Fees	1.21	-	-	1.21
Fair value loss on measurement of other payable	4,935.37	-	-	4,935.37
Other expenses	116.58	62.98	-	179.56
Total expenses	**47,608.56**	**20,277.51**	**-**	**67,886.07**
Profit/(loss) before tax	**(7,837.98)**	**612.61**	**-**	**(7,225.37)**
Tax expenses				
Current tax	5.25	1.23	-	6.48
Deferred tax	(1,193.08)	152.82	-	(1,040.26)
MAT Credit utilisation / (Entitlement)	-	-	-	-
Total tax expenses	**(1,187.83)**	**154.05**	**-**	**(1,033.78)**
Profit/(loss) after tax	**(6,650.15)**	**458.56**	**-**	**(6,191.59)**
Other comprehensive income				
Item that will not be reclassified to profit or loss:				
Re-measurement (loss)/gain on defined benefit plans (net of taxes)	-	-	-	-
Other comprehensive (loss) for the year, net of tax	**-**	**-**	**-**	**-**
Total comprehensive income for the year	**(6,650.15)**	**458.56**	**-**	**(6,191.59)**

The above statement should be read with notes to proforma consolidated financial information.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Kaustubh Deshpande
Partner
Membership No. 121011

SD/-
Virendra D. Mhaiskar
Chairman
DIN:00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

For M S K A & Associates
Chartered Accountants
ICAI registration number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No. 118894

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No. A27833

Place: Mumbai
Date: December 14, 2024

Place: Mumbai
Date: December 14, 2024

IRB Infrastructure Trust
Notes to the proforma consolidated financial information as at and for the year ended March 31, 2024 and as at and for the six months period ended September 30, 2024

1. **Background**

The IRB Infrastructure Trust (the "Trust") is a trust settled pursuant to the indenture of trust dated August 27, 2019 which is registered under the Registration Act, 1908 and under the Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time. The Trust is settled by the Sponsor, IRB Infrastructure Developers Limited ("IRB" or the "Sponsor"), an infrastructure development company in India. The Trustee to the Trust is IDBI Trusteeship Services Limited (the "Trustee"). Investment manager for the Trust is MMK Toll Road Private Limited (the "Investment Manager"). The Trust has received registration certificate from SEBI on November 25, 2019.

The Trust has been formed to invest in infrastructure assets primarily being in the road sector in India. The Trust's road projects are eligible infrastructure projects under the InvIT Regulations and held through special purpose vehicles ("Project SPVs" together as "Project SPV Group").

As resolved and approved by the respective Boards of MBEL vide resolution dated December 9, 2024 and the Investment Manager vide resolution dated December 14, 2024 the Trust proposes to acquire 80.40% of paid up equity share capital and 80.40% of Non-Convertible Debenture of Meerut Budaun Expressway Limited (MBEL) ("proposed acquisition"). In this regard, the Investment Manager of the Trust proposes to raise fund by way of a rights issue of Units to the eligible unitholders of the Trust as on the record date. Pursuant to this proposed acquisition, the Trust will consolidate MBEL in its consolidated financial statements.

Trust portfolio subsequent to completion of proposed offering and acquisition will comprise of sixteen road projects as listed below:-

1. IRB Westcoast Tollway Limited (IRBWTL)
2. Solapur Yedeshi Tollway Limited (SYTL)
3. Yedeshi Aurangabad Tollway Limited (YATL)
4. Kaithal Tollway Limited (KTL)
5. AE Tollway Limited (AETL)
6. Udaipur Tollway Limited (UTL)
7. CG Tollway Limited (CGTL)
8. Kishangarh Gulabpura Tollway Limited (KGTL)
9. IRB Hapur Moradabad Tollway Limited (IRBHMTL)
10. Palsit Dankuni Tollway Private Limited (PDTPL)
11. IRB Golconda Expressway Private Limited (IGEPL)
12. Samakhiyali Tollway Private Limited (STPL)
13. IRB Lalitpur Tollway Private Limited (ILTPL)
14. IRB Kota Tollway Private Limited (IKTPL)
15. IRB Gwalior Tollway Private Limited (IGTPL)
16. Meerut Budaun Expressway Limited (MBEL)

MBEL was incorporated on January 5, 2022. The Company has been awarded the work of development of Access Controlled Six Lane (Expandable to Eight Lane) Greenfield 'Ganga Expressway' [Group-I, from Km. 7+900 (Village: Bijoli, Distt: Meerut) to Km. 137+600, (Village: Nagla Barah, Distt: Budaun), Design length 129.700 Km] in the State of Uttar Pradesh on DBFOT (Toll) basis under PPP ('the Project').

2. Basis of preparation

The proforma consolidated financial information has been prepared by the Management of the Investment Manager specifically for the purpose of the proposed rights issue and for inclusion in the Letter of Offer (hereinafter referred as "LOF") to be filed by IRB Infrastructure Trust in accordance with the requirements of paragraph 7 to Annexure 5 of Chapter 9 of Master circular SEBI/HO/DDHS-PoD-2/P/CIR/2024/44 dated May 15, 2024 as amended. The Proforma Consolidated Financial Information were adopted by the Board of Directors of the Investment Manager on behalf of the Trust on December 14, 2024.

Management of the Investment Manager has adjusted the historical consolidated financial information in proforma consolidated financial information to give effect to proforma events, in the adjustment column if any, that are directly attributable to proposed acquisition and factually supportable.

The proforma consolidated financial information has been prepared by the Trust to illustrate the impact of proposed acquisition and factually supportable undertaken as if the acquisition had taken place:

1. as at March 31, 2024 and September 30, 2024 respectively for the purpose of proforma Consolidated Balance Sheet
2. as at April 1, 2023 for the purpose of Proforma Consolidated Statement of Profit and Loss for the year ended March 31, 2024 and six month period ended September 30, 2024.

The proforma consolidated financial information has been prepared taking into consideration:

a) The consolidated financial statements of the Project SPV Group as at and for the year ended March 31, 2024 and as at and for the six months period ended September 30, 2024.
b) The financial statement of MBEL as at and for the year ended March 31, 2024 and as at and for the six months period ended September 30, 2024
c) Adjustments to recognise the impact of allocation of purchase consideration paid/payable by the Trust.

The financial statements at (a) and (b) above have been prepared in accordance with Indian Accounting Standards (Ind AS) notified under the Companies (Indian Accounting Standards) Rules, 2015 (as amended from time to time).

Because of their nature, the proforma financial information addresses a hypothetical situation and does not represent the Group's actual consolidated financial condition or results of operations. Accordingly, the proforma financial information does not necessarily indicate the results of operations that would have resulted had the acquisition been completed at the beginning of the year/period presented and the financial position had the acquisition been completed as at year end/period end and is also not intended to be indicative of expected results or operations in the future periods or the future financial position of the Group.

The adjustments set forth in the proforma financial information are based upon available information and assumptions that the Management believes to be reasonable. If the assumptions underlying the preparation of such information do not occur, the actual results could be materially different from those indicated in the information. Such proforma financial information has not been prepared in accordance with auditing or other standards and practices generally accepted in any other jurisdictions and accordingly should not be relied upon as if it had been carried out in accordance with those standards and practices. Accordingly, the degree of reliance placed by anyone in other jurisdictions on such proforma information should be limited. In addition, the rules and regulations related to the preparation

of proforma financial information in other jurisdictions may also vary significantly from the basis of preparation as set out in paragraphs above to prepare these proforma financial information.

3. Proforma Adjustments:

The following adjustments have been made to present the proforma consolidated financial information:

a) **Accounting Policy adjustments and GAAP adjustments:**
There are no accounting policy adjustments or GAAP adjustments between the Project SPV Group and the MBEL.

b) **Intra group elimination adjustments:**
There are no intragroup transactions between the Project SPV Group and MBEL.

c) **Acquisition related adjustments:**
The proforma consolidated financial information includes various assumptions to give effect to all of the following events. Accordingly, the proforma adjustments are preliminary and have been made solely for illustrative purpose. Following are the assumptions –

i. Pursuant to execution of Securities Purchase Agreement ("SPA") prior to filling of LOF and proposed right issue of Trust, the Trust will utilize the proceeds of the rights issue for the payment of cash consideration to the sellers for the acquisition of 80.40% of the equity share capital and 80.40% of the outstanding non-convertible debentures of MBEL by the Trust. It is assumed that the proposed acquisition of 80.40% of paid-up equity share capital and 80.40% of the outstanding non-convertible debentures of MBEL took place with effect from April 1, 2023.

Proforma acquisition related adjustments – Key notes
Proforma adjustment to Balance Sheet

3c. (i) Cash and cash equivalents

For the purpose of the Proforma Consolidated Balance Sheet as at September 30, 2024, cash & cash equivalents available out of proposed right issue of Trust aggregating to INR 17,149.23 millions is not assumed since the same will be paid as consideration by the Trust to the sellers for the acquisition of 80.40% of the equity share capital and 80.40% of the outstanding non-convertible debentures of MBEL by the Trust pursuant to execution of Securities Purchase agreement prior to filling of LOF..

3c. (ii) Equity attributable to unit holders

As explained in Note 1 above and as approved and resolved by the respective Boards of MBEL vide resolution dated December 9, 2024 and Investment Manager vide resolution dated December 14, 2024, upon successful completion of right issue, the Trust shall utilize an amount of Rs. 17,149.23 million for the payment of consideration to the sellers for the acquisition of 80.40% of paid up equity share capital and 80.40% of Non-Convertible Debenture of Meerut Budaun Expressway Limited (MBEL). The said funds shall be utilized to acquire to 428,733,000 equity shares and 128,619 units of Non-Convertible Debentures of MBEL. Pursuant to the completion of this acquisition , the Trust will consolidate MBEL in its consolidated financial statements.

Since the transaction relating to infusion of equity/ NCDs ("investment") in MBEL has not consummated, which is dependent upon the right issue of unit holders of trust to complete, the

management has not assumed the adjustments towards investment in MBEL(80.40%), equity share capital of MBEL and resultant Non-Controlling Interest (19.60%) out of the said transaction.

Other than as mentioned above, no additional material adjustments have been made to the proforma consolidated balance sheet or the proforma consolidated statement of profit and loss to reflect any results or other transactions of the Trust entered into subsequent to March 31, 2024 and September 30, 2024 respectively.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

For M S K A & Associates
Chartered Accountants
ICAI Regsitration number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No. 118894

Place: Mumbai
Date: December 14, 2024

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN:00183554

SD/-
Shilpa Todankar
Chief Financial Officer

Place: Mumbai
Date: December 14, 2024

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Kaustubh Shevade
Company Secretary

Membership No. A27833

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Gokhale & Sathe
Chartered Accountants
304/308/309, Udyog Mandir No.1,
7-C, Bhagoji Keer Marg,
Mahim, Mumbai 400 016.
Telephone + 91 (22) 43484242
Fax + 91 (22) 43484241

M S K A & Associates
Chartered Accountants
602, Floor 6, Raheja Titanium
Western Express Highway,
Geetanjali Railway Colony,
Ram Nagar, Goregaon (E),
Mumbai 400063, India
Tel: +91 22 6238 0519

Independent Auditors' Review Report on Unaudited Interim Consolidated Financial Information for the six months period ended September 30, 2024 of IRB Infrastructure Trust.

To
The Board of Directors,
MMK Toll Road Private Limited
The Investment Manager of the IRB Infrastructure Trust ("the Investment Manager")

1. We have jointly reviewed the accompanying Unaudited Interim Consolidated Financial Information of IRB Infrastructure Trust ("the Trust") and its subsidiaries (the Trust and its subsidiaries together referred to as "the Group") which comprises Unaudited Interim Consolidated Balance Sheet as on September 30, 2024, Unaudited Interim Consolidated Statement of Profit and Loss, including other comprehensive income, Unaudited Interim Consolidated Statement of Cash Flow, Unaudited Interim Consolidated Statement of Changes in Unitholders Equity, Unaudited Interim Consolidated statement of Net Assets at Fair Value, Unaudited Interim Consolidated Statement of Total Return at Fair Value and Net Distributable cashflows ('NDCF') of the Trust and each of its subsidiaries as an additional disclosure in accordance with the Securities and Exchange Board of India ("SEBI") Master Circular SEBI/ HO/DDHS-PoD-2/P/CIR/2024/44 dated May 15, 2024, as amended for the six months period then ended and notes to the consolidated financial information including material accounting policies and other explanatory notes (together hereinafter referred to as the "Unaudited Interim Consolidated Financial Information"). These Unaudited Interim Consolidated Financial Information for the period from April 01, 2024 to September 30, 2024 have been prepared solely for inclusion in the Letter of Offer ("LOF") in connection with the proposed right issue of units of the Trust.

2. The Unaudited Interim Consolidated Financial Information, which is the responsibility of the Investment Manager and approved by the Investment Manager's Board of Directors, has been prepared in accordance with the requirements of SEBI (Infrastructure Investment Trusts) Regulations, 2014, as amended from time to time read with the Paragraph 3.21 of Chapter 3 and Paragraph 4.6 of Chapter 4 of the Securities and Exchange Board of India ("SEBI") Master Circular No. SEBI/HO/DDHS-PoD-2/P/CIR/2024/44 dated May 15, 2024, as amended ("SEBI Circular"), together known as ("InvIT Regulations"), and principles laid down in Indian Accounting Standard 34, Interim Financial Reporting ('Ind AS 34') prescribed under rule 2(1)(a) of Companies (Indian Accounting Standards) Rules 2015, as amended and other recognised accounting principles generally accepted in India, to the extent not inconsistent with the InvIT Regulations.

3. We conducted our review in accordance with the Standard on Review Engagements (SRE) 2410 Review of Interim Financial Information Performed by the Independent Auditor of the Entity" issued by the Institute of Chartered Accountants of India. A review consists of making inquiries, primarily of Investment Manager's personnel responsible for financial and accounting matters and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with Standards on Auditing and consequently does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

Gokhale & Sathe
Chartered Accountants
304/308/309, Udyog Mandir No.1,
7-C, Bhagoji Keer Marg,
Mahim, Mumbai 400 016.
Telephone + 91 (22) 43484242
Fax + 91 (22) 43484241

M S K A & Associates
Chartered Accountants
602, Floor 6, Raheja Titanium
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Geetanjali Railway Colony,
Ram Nagar, Goregaon (E),
Mumbai 400063, India
Tel: +91 22 6238 0519

4. This information includes the Unaudited Interim Financial information of the Trust and the following entities:

Sr No	Name of Entity	Relationship with the Trust
1	AE Tollway Limited	Subsidiary
2	Yedeshi Aurangabad Tollway Limited	Subsidiary
3	IRB Westcoast Tollway Limited	Subsidiary
4	Kaithal Tollway Limited	Subsidiary
5	Solapur Yedeshi Tollway Limited	Subsidiary
6	CG Tollway Limited	Subsidiary
7	Udaipur Tollway Limited	Subsidiary
8	Kishangarh Gulabpura Tollway Limited	Subsidiary
9	IRB Hapur Moradabad Tollway Limited	Subsidiary
10	Palsit Dankuni Tollway Private Limited	Subsidiary
11	IRB Golconda Expressway Private Limited (w.e.f. 11 August 2023)	Subsidiary
12	IRB Lalitpur Tollway Private Limited (w.e.f. 10 November 2023)	Subsidiary
13	Samakhiyali Tollway Private Limited (w.e.f. 28 December 2023)	Subsidiary
14	IRB Kota Tollway Private Limited (w.e.f. 1 January 2024)	Subsidiary
15	IRB Gwalior Tollway Private Limited (w.e.f. 1 January 2024)	Subsidiary

5. Based on our review conducted and procedures performed as stated in paragraph 3 above and based on the consideration of review reports of other auditors as stated in paragraph 7 and 8 below, nothing has come to our attention that causes us to believe that the accompanying Unaudited Interim Consolidated Financial Information, prepared in accordance with the principles laid down in the aforesaid Indian Accounting Standards and other recognised accounting principles generally accepted in India, to the extent not inconsistent with InvIT Regulations, has not disclosed the information required to be disclosed in terms of the Regulations 23 of the SEBI (Infrastructure Investments Trust) Regulation, 2014, as amended, read with SEBI Circular, including the manner in which it is to be disclosed, or that it contains any material misstatement.

6. We draw attention to Note 13 of the accompanying Unaudited Interim Consolidated Financial Information, which describes the presentation of 'Unit Capital' as 'Equity' to comply with the InvIT Regulations. Our conclusion is not modified in respect of this matter.

7. We did not review the Unaudited Interim Financial Information of five subsidiaries included in the Unaudited Interim Consolidated Financial information, whose unaudited interim financial information reflects total assets of Rs 113,206.73 millions (before consolidation adjustment) as at September 30, 2024, total revenues of Rs. 9,473.55 million (before consolidation adjustment), for the period April 01, 2024 to September 30, 2024, and net cash inflows of Rs 21.22 million for the period from April 01, 2024 to September 30, 2024, as considered in the Unaudited Interim Consolidated Financial Information. This interim financial information have been reviewed by other auditors whose reports have been furnished to us by the Management and our conclusion on the Unaudited Interim Consolidated Financial Information, in so far as it relates to the amounts and disclosures included in respect of these subsidiaries is based solely on the report of the other auditors and the procedures performed by us as stated in paragraph 3 above.

Gokhale & Sathe
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Ram Nagar, Goregaon (E),
Mumbai 400063, India
Tel: +91 22 6238 0519

Our conclusion is not modified in respect of the above matter with respect to our reliance on the work done by and report of the other auditor.

8. The Unaudited Interim Consolidated Financial Information of the Trust for the period April 01, 2023 to September 30, 2023 included in the Unaudited Interim Consolidated Financial Information, were reviewed by Gokhale & Sathe, one of the Joint Auditor of the Trust, whose report dated December 09, 2024 expressed an unmodified conclusion of those Unaudited Interim Consolidated Financial Information.

   M S K A & Associates conclusion is not modified in respect of this matter.

9. The report is addressed to the Board of Directors of the Investment Manager and submitted solely for inclusion in the LOF in connection with the proposed rights issue of units of the Trust.

   Accordingly, do not accept or assume any liability or any duty of care for any other purpose or to any other person to whom this report is shown or into whose hands it may come without our prior consent in writing.

   Our conclusion is not modified in respect of this matter.

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration No.103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No.: 121011
UDIN: 24121011BKAAVT6730

Place: Mumbai
Date: December 09, 2024

For M S K A & Associates
Chartered Accountants
ICAI Firm Registration No.105047W

SD/-
Nitin Tiwari
Partner
Membership No.: 118894
UDIN: 24118894BKGQLG6496

Place: Mumbai
Date: December 09, 2024

IRB Infrastructure Trust
Unaudited Interim Consolidated Balance Sheet as on September 30, 2024

(Rs. in million)

	Notes	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)
ASSETS			
Non-current assets			
Property, Plant and equipment	4.1	6.25	6.63
Goodwill		604.54	604.54
Other Intangible assets	4.2	3,84,011.09	3,17,031.32
Intangible assets under development	4.2	4,017.34	64,816.48
Financial assets			
i) Others	7	107.43	4,408.10
Deferred tax assets	8	2,587.29	2,229.78
Other non-current assets	9	-	12.00
Total non-current assets (A)		**3,91,333.94**	**3,89,108.85**
Current assets			
Financial assets			
i) Investments	5	2,134.16	1,523.07
ii) Trade receivables	6	123.23	68.15
iii Cash and cash equivalents	10	543.41	1,605.67
iv Bank balance other than Cash and cash equivalents	11	9,995.20	6,672.40
v) Others	7	2,380.35	2,346.30
Current tax assets (net)	12	193.74	174.41
Other current assets	9	984.14	537.93
Total current assets (B)		**16,354.23**	**12,927.93**
Total assets (A+B)		**4,07,688.17**	**4,02,036.78**
EQUITY AND LIABILITIES			
Equity			
Unit capital	13	1,34,645.74	1,35,091.22
Subordinate debt	14	16,916.65	16,916.65
Other equity	15	(21,054.62)	(17,640.04)
Total equity (A)		**1,30,507.77**	**1,34,367.83**
Non-controlling interests		1.58	1.49
Total unit holder's equity		**1,30,509.35**	**1,34,369.32**
LIABILITIES			
Non-current liabilities			
Financial liabilities			
i) Borrowings	16	2,20,433.93	2,14,136.34
ii) Other financial liabilities	18	42,016.93	40,765.03
Provisions	20	1,251.53	1,336.98
Deferred tax liabilities	8	294.55	280.89
Total non-current liabilities (B)		**2,63,996.94**	**2,56,519.24**
Current liabilities			
Financial liabilities			
i) Borrowings	16	1,940.23	1,178.93
ii) Trade payables	17		
a) total outstanding dues of micro enterprises and small enterprises		1.83	2.41
b) total outstanding dues of creditors other than micro enterprises and small enterprises		6,781.42	5,611.71
iii Other financial liabilities	18	1,850.20	1,883.60
Other current liabilities	19	87.46	235.99
Provisions	20	2,520.74	2,235.58
Total current liabilities (C)		**13,181.88**	**11,148.22**
Total liabilities (B+C)		**2,77,178.82**	**2,67,667.46**
TOTAL EQUITY AND LIABILITIES (A+B+C)		**4,07,688.17**	**4,02,036.78**
Summary of material accounting policies	**3**		

The accompanying notes are an integral part of Unaudited Interim Consolidated Financial Information.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No.: 121011

For M S K A & Associates
Chartered Accountants
ICAI registration number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No.: 118894

Place: Mumbai
Date: December 09, 2024

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN: U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN: 00183554

SD/-
Dhananjay K. Joshi
Chief Executive Officer

SD/-
Shilpa Todankar
Chief Financial Officer

Place: Mumbai
Date: December 09, 2024

SD/-
Kaustubh Shevade
Company Secretary
Membership No.:A27833

IRB Infrastructure Trust

Unaudited Interim Consolidated Statement of Profit and Loss for the period April 01, 2024 to September 30, 2024

(Rs. in million)

	Notes	Six months ended September 30, 2024 (Unaudited)	Six months ended September 30, 2023 (Unaudited)
Income			
Revenue from operations	21	23,606.82	15,131.67
Other income	22	476.66	261.46
Total income		**24,083.48**	**15,393.13**
Expenses			
Operating expenses	23	10,098.74	7,198.20
Project Management Fees		2,625.90	1,955.49
Valuation Expenses		2.12	0.77
Insurance and Security Expenses		64.99	29.55
Trustee fees		0.65	3.97
Depreciation on Property, Plant and Equipment	25	0.38	0.48
Amortisation of Intangible Assets	25	2,505.73	1,658.92
Finance costs (Interest)	24	10,081.30	5,636.42
Finance costs (Others)	24	397.62	481.21
Audit fees	27	9.40	2.45
Legal & Professional Fees		66.32	72.75
Investment Manager Fees		52.65	87.56
Custodian Fees		3.42	0.98
Fair value loss on measurement of other payable		1,227.70	1,178.97
Other expenses	26	18.83	9.12
Total expenses		**27,155.75**	**18,316.84**
Loss before tax		**(3,072.27)**	**(2,923.71)**
Tax expenses	28		
Current tax		140.36	4.85
Deferred tax		(343.86)	(207.32)
Total tax expenses		**(203.50)**	**(202.46)**
Loss after tax		**(2,868.77)**	**(2,721.24)**
Other comprehensive income			
Item that will not be reclassified to statement of profit and loss in subsequent year:			
Re-measurement gain/ (loss) on defined benefit plans (net of taxes)		-	-
Other comprehensive income/(loss) for the period, net of tax		-	-
Total comprehensive income/(loss) for the period		**(2,868.77)**	**(2,721.24)**
Loss after tax for the period attributable to:			
Unitholders		(2,868.86)	(2,721.21)
Non-controlling interests		0.09	(0.03)
Total comprehensive income for the period attributable to:			
Unitholders		(2,868.86)	(2,721.21)
Non-controlling interests		0.09	(0.03)
Earnings per equity share (of Rs. 10 each)	41		
Basic		(2.58)	(2.96)
Diluted		(2.58)	(2.96)
Summary of material accounting policies	3		

The accompanying notes are an integral part of Unaudited Interim Consolidated Financial Information.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No.: 121011

For M S K A & Associates
Chartered Accountants
ICAI registration number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No.: 118894

Place: Mumbai
Date: December 09, 2024

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN: U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN: 00183554

SD/-
Dhananjay K. Joshi
Chief Executive Officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.: A27833

Place: Mumbai
Date: December 09, 2024

IRB Infrastructure Trust
Unaudited Interim Consolidated Statement of Cash Flow for the period April 01, 2024 to September 30, 2024

(Rs. in million)

Particulars	Six months ended September 30, 2024 (Unaudited)	Six months ended September 30, 2023 (Unaudited)
Cash flow from operating activities		
Profit/(loss) before tax	**(3,072.27)**	**(2,923.71)**
Adjustment to reconcile loss before tax to net cash flows:		
Depreciation and amortisation	2,506.11	1,659.40
Resurfacing expenses	1,562.91	1,219.32
Fair value gain on mutual funds	5.34	(3.95)
Net (gain) on sale of current Investment	(85.02)	(36.32)
Dividend income on current investments	-	(0.03)
Notional Contract Revenue Margin	(234.77)	(179.86)
Finance costs	10,269.70	5,962.58
Interest income	(373.03)	(208.52)
Gain/(loss) on fair value measurement of other payable	1,252.12	1,178.97
Operating profit before working capital changes	**11,831.08**	**6,667.88**
Movement in working capital:		
Increase/ (Decrease) in trade payables	1,169.13	(11,479.70)
Increase/ (Decrease) in other financial liabilities	(33.63)	(84.99)
Increase/ (Decrease) in other liabilities & provision	(1,511.72)	(985.80)
(Increase) / Decrease in trade receivables	(55.08)	(238.14)
Decrease / (Increase) in other financial assets	4,279.94	(248.38)
Decrease / (Increase) in other assets	(434.21)	1,426.78
Cash generated from operations	**15,245.52**	**(4,942.35)**
Taxes paid (net of refunds)	(159.68)	(63.56)
Net cash flows (used in)/generated from operating activities (A)	**15,085.84**	**(5,005.91)**
Cash flows from investing activities		
Purchase of property, plant and equipment including CWIP, intangible assets including intangible assets under development	(8,451.58)	(80,472.06)
Proceeds from sale/ (purchase) of current investments (net)	(531.41)	651.64
Investments in bank deposits (having maturity of more than three months) (net)	(3,322.80)	(2,620.67)
Dividend Income		0.03
Interest received	359.70	156.85
Net cash flows (used in) investing activities (B)	**(11,946.10)**	**(82,284.21)**
Cash flows from financing activities		
Proceeds from non-current borrowings	7,717.30	81,076.86
Repayment of non convertible debentures	(32.08)	(5,386.42)
Repayment of non-current borrowings	(785.70)	(10,338.47)
Proceed of current borrowings	-	250.00
Repayment of current borrowings	(0.02)	-
Issue of Unit capital	-	28,619.50
Distribution made to unit holders	(445.49)	-
Issue of Subordinate Debt	-	12,044.08
Unit issue expenses	-	(85.13)
Finance cost paid	(10,110.31)	(5,653.84)
Transaction cost paid	-	(1,614.80)
Interest distribution to unitholders	(545.71)	-
Net cash flows generated from financing activities (C)	**(4,202.01)**	**98,911.78**
Net increase / (decrease) in cash and cash equivalents (A+B+C)	**(1,062.26)**	**11,621.66**
Cash and cash equivalents at the beginning of the year	1,605.67	731.31
Add: Cash acquired on transfer of SPV's		1.62
Cash and cash equivalents at the end of the period	**543.41**	**12,354.59**
Components of cash and cash equivalents		
Balances with scheduled banks:		
- Trust, retention and other escrow accounts	358.32	8,997.62
- Others	165.59	2,276.08
- In deposit accounts with original maturity less than 3 months	-	1,067.60
Cash on hand	19.50	13.29
Total cash and cash equivalents	**543.41**	**12,354.59**

Debt reconciliation statement in accordance with Ind AS 7		
Opening balances		
Long term borrowing	2,19,244.66	1,01,369.83
Short term borrowing	0.02	5,350.72
Movements		
Cash Flows		
Long term borrowing	7,229.38	66,209.47
Short term borrowing	(0.02)	250.00
Non-cash changes		
Long term borrowing	-	-
Short term borrowing	-	-
Closing balances		
Long term borrowing	2,26,474.04	1,67,579.31
Short term borrowing	-	5,600.72

Notes :
1. All figures in bracket are outflow.
2. Taxes paid are treated as arising from operating activities and are not bifurcated between investing and financing activities.
3. The Consolidated Cash Flow Statement has been prepared under Indirect Method as per Ind AS 7 "Statement of Cash Flows".
4. The Borrowings reflected in above Debt Reconciliation Statement are gross of Unamortised Transaction Cost.

Summary of material accounting policies 3
The accompanying notes are an integral part of Unaudited Interim Consolidated Financial Information.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No.: 121011

For M S K A & Associates
Chartered Accountants
ICAI registration number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No.: 118894

Place: Mumbai
Date: December 09, 2024

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN: U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN: 00183554

SD/-
Dhananjay K. Joshi
Chief Executive Officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.:A27833

Place: Mumbai
Date: December 09, 2024

IRB Infrastructure Trust
Unaudited Interim Consolidated Statement of Changes in Unitholder's Equity for the period April 01, 2024 to September 30, 2024

Statement of changes in Unitholders equity
A. Unit capital:

(Rs. in millions)

	As at September 30, 2024 (Unaudited)		As at March 31, 2024 (Audited)	
Units issued, subscribed and fully paid	**No.**	**Rs.**	**No.**	**Rs.**
Balance at the beginning of the year	1,11,36,93,265	1,35,091.22	87,92,93,265	87,929.33
Issue of Unit capital	-	-	23,44,00,000	51,146.50
Return of Unit capital (refer note 37)	-	(445.48)	-	(3,984.60)
Balance at the end of the period / year	**1,11,36,93,265**	**1,34,645.74**	**1,11,36,93,265**	**1,35,091.22**

B. Other equity

(Rs. in millions)

	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)
Retained earnings		
Balance at the beginning of the year	(17,640.04)	(10,395.80)
Loss for the period / year	(2,868.86)	(6,650.38)
Interest Distribution (refer note 37)	(545.71)	(449.55)
Unit Issue expenses	-	(144.31)
Balance at the end of the period / year	**(21,054.61)**	**(17,640.04)**

C. Movement of NCI	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)
Balance at the beginning of the year	1.49	0.81
Add: NCI on acquisition	-	0.45
Add: Profit Attributable for the period / year	0.09	0.23
Balance at the end of the period / year	**1.58**	**1.49**

The accompanying notes are an integral part of Unaudited Interim Consolidated Financial Information.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

For M S K A & Associates
Chartered Accountants
ICAI registration number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No. 118894

Place: Mumbai
Date: December 09, 2024

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Shilpa Todankar
Chief Financial Officer

Place: Mumbai
Date: December 09, 2024

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

IRB Infrastructure Trust
DISCLOSURES PURSUANT TO SEBI CIRCULARS
(SEBI Circular No. SEBI/HO/DDHS-PoD-2/P/CIR/2024/44 dated May 15, 2024)

A. Unaudited Interim Consolidated Statement of Net Asset at Fair Value

(Rs. in Million)

	September 30, 2024		**March 31, 2024**	
Particulars	**Book value**	**Fair value**	**Book value**	**Fair value**
A. Assets	4,07,688.17	6,05,406.50	4,02,036.78	5,67,707.56
B. Liabilities (at book value)	2,77,178.82	2,77,178.82	2,67,667.46	2,67,667.46
C. Net Assets (A-B)	1,30,509.35	3,28,227.68	1,34,369.32	3,00,040.10
D. Number of units (in millions)	1,113.69	1,113.69	1,113.69	1,113.69
E. NAV (C/D) (Amount in Rs.)	**117.19**	**294.72**	**120.65**	**269.41**

Project wise break up of fair value of total assets: **(Rs. in Million)**

Name of the project	**September 30, 2024**	**March 31, 2024**
IRB Westcoast Tollway Limited (IRBWTL)	32,552.74	34,349.80
Solapur Yedeshi Tollway Limited (SYTL)	28,841.46	26,098.85
Yedeshi Aurangabad Tollway Limited (YATL)	52,890.05	43,959.36
Kaithal Tollway Limited (KTL)	23,543.63	23,729.03
AE Tollway Limited (AETL)	34,414.54	35,515.99
Udaipur Tollway Limited (UTL)	26,497.08	26,471.47
CG Tollway Limited (CGTL)	27,498.40	28,272.18
Kishangarh Gulabpura Tollway Limited (KGTL)	16,229.02	20,525.91
IRB Hapur Moradabad Tollway Limited (IRBHMTL)	43,998.27	43,182.42
Palsit Dankuni Tollway Private Limited (PDTPL)	20,029.71	17,954.33
IRB Golconda Expressway Private Limited (IGEPL)	1,58,032.83	1,44,280.42
Samakhiyali Tollway Private Limited (STPL)	7,153.39	4,966.03
IRB Lalitpur Tollway Private Limited(ILTPL)	58,736.51	49,878.83
IRB Kota Tollway Private Limited(IKTPL)	9,262.56	7,190.66
IRB Gwalior Tollway Private Limited(IGTPL)	15,370.42	13,416.72
Subtotal	**5,55,050.61**	**5,19,792.00**
Add: Net Assets adjusted for Deferred consideration (Refer Note 1)	42,013.09	40,760.96
Add: As per Valuation Report	2,955.00	3,380.52
Add: Other Adjustments at Trust level	5,387.80	3,774.08
Total assets	**6,05,406.50**	**5,67,707.56**

B. Unaudited Interim Consolidated Statement of Total Returns at Fair Value

(Rs. in Million)

Particulars	**For the period ended September 30, 2024**	**For the year ended March 31, 2024**
Total Comprehensive Income (As per the Statement of Profit and Loss)	(2,868.77)	(6,650.15)
Add/Less: other changes in fair value (e.g., in investment property, property, plant & equipment (if cost model is followed)) not recognized in total comprehensive income	1,97,718.33	1,65,670.78
Total Return	**1,94,849.56**	**1,59,020.63**

Note 1: Liability as per books includes deferred consideration of INR 42,013 Million (PY: 40,761 Million) (Refer Note No.18). Corresponding adjustements carried out in the Fair value of Assets, which is not considered in the valuation reports issued by independent valuers appointed under the InvIT Regulations. Adjustement will not have a impact on Net Assets determined by independent valuer.

Note 2: Fair value of assets as at September 30, 2024 and March 31, 2024 and other changes in fair value for the year then ended as disclosed in the above tables are derived based on the fair valuation reports issued by the independent valuer appointed under the InvIT Regulations.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

For M S K A & Associates
Chartered Accountants
ICAI registration number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No. 118894

Place: Mumbai
Date: December 09, 2024

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D.Mhaiskar
Chairman
DIN : 00183554

SD/-
Shilpa Todankar
Chief Financial Officer

Place: Mumbai
Date: December 09, 2024

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Additional disclosures as required by paragraph 6 of chapter 4 to the master circular no. SEBI/HO/DDHS-POD-2/P/CIR/2024/44 dated 15th May 2024 as amended including any guidelines and circulars issued thereunder ("SEBI circulars")

Net Distributable Cash Flow for the six months ended September 30, 2024

(i) IRB Infrastructure Trust

(Rs. in million)

Sr No.	Particulars	Six months ended September 30, 2024
1	Cashflows from operating activities as per Cash Flow Statement of the Trust	(102.49)
2	(+) Cash flows received from SPV's / Investment entities which represent distributions of NDCF computed as per relevant framework	4,977.23
3	(+) Treasury income / income from investing activities of the Trust (interest income received from FD, any investment entities as defined in Regulation 18(5), tax refund, any other income in interest, profit on sale of Mutual funds, investments, assets etc., dividend income etc., excluding any Ind AS adjustments. Further clarified that these amounts will be considered on a cash receipt basis)	112.14
4	(+) Proceeds from sale of infrastructure investments, infrastructure assets or shares of SPVs/Holdcos or Investment Entity adjusted for the following: • Applicable capital gains and other taxes • Related debts settled or due to be settled from sale proceeds • Directly attributable transaction costs • Proceeds reinvested or planned to be reinvested as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations	-
5	(+) Proceeds from sale of infrastructure investments, infrastructure assets or sale of shares of SPVs or Investment Entity not distributed pursuant to an earlier plan to re invest as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations, if such proceeds are not intended to be invested subsequently	-
6	(-) Finance cost on Borrowings, excluding amortisation of any transaction costs as per Profit and Loss Account of the Trust	(2,732.65)
7	(-) Debt repayment at Trust level (to include principal repayments as per scheduled EMI's except if refinanced through new debt including overdraft facilities and to exclude any debt repayments / debt refinanced through new debt, in any form or funds raised through issuance of units)	(317.44)
8	(-) Any reserve required to be created under the terms of, or pursuant to the obligations arising in accordance with, any: (i). loan agreement entered with financial institution or (ii). terms and conditions, covenants or any other stipulations applicable to debt securities issued by the Trust or any of its SPVs/ HoldCos, or (iii). terms and conditions, covenants or any other stipulations applicable to external commercial borrowings availed by the Trust or any of its SPVs/ HoldCos,or (iv). agreement pursuant to which the SPV/ HoldCo operates or owns the infrastructure asset, or generates revenue or cashflows from such asset (such as, concession agreement, transmission services agreement, power purchase agreement, lease agreement, and any other agreement of a like nature, by whatever name called); or (v). statutory, judicial, regulatory, or governmental stipulations;	(445.10)
9	(-) any capital expenditure on existing assets owned / leased by the InvIT, to the extent not funded by debt / equity or from contractual reserves created in the earlier years	-
10	**NDCF at Trust Level**	**1,491.69**

Notes:

1. As per the master circular SEBI/HO/DDHS-PoD-2/P/CIR/2024/44 dated May 15, 2024, details of NDCF distributable is as below:

Particulars	Rs. (in million)
NDCF of Trust (A)	1,491.69
(+) NDCF of SPV's (B)#	4,994.36
(-) Amount distributed by SPV's (C)	4,977.23
Amount of NDCF Distributable D=(A+B-C)	**1,508.82**

NDCF of SPV's excludes NDCF for certain SPVs, where funds are not available for distribution on account of restrictions placed vide the terms of the Facility Agreement.

Trust has ensured that minimum 90% of the above amount will be distributed as NDCF.

(ii) IRB Westcoast Tollway Limited (IRBWC)

(Rs. in million)

Sr No.	Particulars	Six months ended September 30, 2024
1	Cash flow from operating activities as per Cash Flow Statement of SPV	368.55
2	(+) Cash Flows received from SPV's which represent distributions of NDCF computed as per relevant framework	-
3	(+) Treasury income / income from investing activities (interest income received from FD, tax refund, any other income in the nature of interest, profit on sale of Mutual funds, investments, assets etc., dividend income etc., excluding any Ind AS adjustments. Further clarified that these amounts will be considered on a cash receipt basis)	2.72
4	(+) Proceeds from sale of infrastructure investments, infrastructure assets or shares of SPVs/Holdcos or Investment Entity adjusted for the following: • Applicable capital gains and other taxes • Related debts settled or due to be settled from sale proceeds • Directly attributable transaction costs • Proceeds reinvested or planned to be reinvested as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations	-
5	(+) Proceeds from sale of infrastructure investments, infrastructure assets or sale of shares of SPVs or Investment Entity not distributed pursuant to an earlier plan to re invest as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations, if such proceeds are not intended to be invested subsequently	-
6	(-) Finance cost on Borrowings, excluding amortisation of any transaction costs as per Profit and Loss Account and any shareholder debt / loan from Trust	(0.11)
7	(-) Debt repayment (to include principal repayments as per scheduled EMI's except if refinanced through new debt including overdraft facilities and to exclude any debt repayments / debt refinanced through new debt, in any form or equity raise as well as repayment of any shareholder debt / loan from Trust)	-
8	(-) Any reserve required to be created under the terms of, or pursuant to the obligations arising in accordance with, any: (i). loan agreement entered with banks / financial institution from whom the Trust or any of its SPVs have availed debt, or (ii). terms and conditions, covenants or any other stipulations applicable to debt securities issued by the Trust or any of its SPVs, or (iii). terms and conditions, covenants or any other stipulations applicable to external commercial borrowings availed by the Trust or any of its SPVs, (iv). agreement pursuant to which the SPV operates or owns the infrastructure asset, or generates revenue or cashflows from such asset (such as, concession agreement, transmission services agreement, power purchase agreement, lease agreement, and any other agreement of a like nature, by whatever name called); or (v). statutory, judicial, regulatory, or governmental stipulations;	-
9	(-) Any capital expenditure on existing assets owned / leased by the SPV to the extent not funded by debt / equity or from reserves created in the earlier years	-
10	**NDCF for SPV**	**371.16**

(iii) Yedeshi Aurangabad Tollway Limited (YATL)

(Rs. in million)

Sr No.	Particulars	Six months ended September 30, 2024
1	Cash flow from operating activities as per Cash Flow Statement of SPV	823.75
2	(+) Cash Flows received from SPV's which represent distributions of NDCF computed as per relevant framework	-
3	(+) Treasury income / income from investing activities (interest income received from FD, tax refund, any other income in the nature of interest, profit on sale of Mutual funds, investments, assets etc., dividend income etc., excluding any Ind AS adjustments. Further clarified that these amounts will be considered on a cash receipt basis)	30.08
4	(+) Proceeds from sale of infrastructure investments, infrastructure assets or shares of SPVs/Holdcos or Investment Entity adjusted for the following: • Applicable capital gains and other taxes • Related debts settled or due to be settled from sale proceeds • Directly attributable transaction costs • Proceeds reinvested or planned to be reinvested as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations	-
5	(+) Proceeds from sale of infrastructure investments, infrastructure assets or sale of shares of SPVs or Investment Entity not distributed pursuant to an earlier plan to re invest as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations, if such proceeds are not intended to be invested subsequently	-
6	(-) Finance cost on Borrowings, excluding amortisation of any transaction costs as per Profit and Loss Account and any shareholder debt / loan from Trust	(662.45)
7	(-) Debt repayment (to include principal repayments as per scheduled EMI's except if refinanced through new debt including overdraft facilities and to exclude any debt repayments / debt refinanced through new debt, in any form or equity raise as well as repayment of any shareholder debt / loan from Trust)	-
8	(-) Any reserve required to be created under the terms of, or pursuant to the obligations arising in accordance with, any: (i). loan agreement entered with banks / financial institution from whom the Trust or any of its SPVs have availed debt, or (ii). terms and conditions, covenants or any other stipulations applicable to debt securities issued by the Trust or any of its SPVs, or (iii). terms and conditions, covenants or any other stipulations applicable to external commercial borrowings availed by the Trust or any of its SPVs, (iv). agreement pursuant to which the SPV operates or owns the infrastructure asset, or generates revenue or cashflows from such asset (such as, concession agreement, transmission services agreement, power purchase agreement, lease agreement, and any other agreement of a like nature, by whatever name called); or (v). statutory, judicial, regulatory, or governmental stipulations;	335.15
9	(-) Any capital expenditure on existing assets owned / leased by the SPV to the extent not funded by debt / equity or from reserves created in the earlier years	-
10	**NDCF for SPV**	**526.53**

(iv) Solpaur Yedeshi Tollway Limited (SYTL)

(Rs. in million)

Sr No.	Particulars	Six months ended September 30, 2024
1	Cash flow from operating activities as per Cash Flow Statement of SPV	383.34
2	(+) Cash Flows received from SPV's which represent distributions of NDCF computed as per relevant framework	-
3	(+) Treasury income / income from investing activities (interest income received from FD, tax refund, any other income in the nature of interest, profit on sale of Mutual funds, investments, assets etc., dividend income etc., excluding any Ind AS adjustments. Further clarified that these amounts will be considered on a cash receipt basis)	18.27
4	(+) Proceeds from sale of infrastructure investments, infrastructure assets or shares of SPVs/Holdcos or Investment Entity adjusted for the following: • Applicable capital gains and other taxes • Related debts settled or due to be settled from sale proceeds • Directly attributable transaction costs • Proceeds reinvested or planned to be reinvested as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations	-
5	(+) Proceeds from sale of infrastructure investments, infrastructure assets or sale of shares of SPVs or Investment Entity not distributed pursuant to an earlier plan to re invest as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations, if such proceeds are not intended to be invested subsequently	-
6	(-) Finance cost on Borrowings, excluding amortisation of any transaction costs as per Profit and Loss Account and any shareholder debt / loan from Trust	(257.91)
7	(-) Debt repayment (to include principal repayments as per scheduled EMI's except if refinanced through new debt including overdraft facilities and to exclude any debt repayments / debt refinanced through new debt, in any form or equity raise as well as repayment of any shareholder debt / loan from Trust)	-
8	(-) Any reserve required to be created under the terms of, or pursuant to the obligations arising in accordance with, any: (i). loan agreement entered with banks / financial institution from whom the Trust or any of its SPVs have availed debt, or (ii). terms and conditions, covenants or any other stipulations applicable to debt securities issued by the Trust or any of its SPVs, or (iii). terms and conditions, covenants or any other stipulations applicable to external commercial borrowings availed by the Trust or any of its SPVs, (iv). agreement pursuant to which the SPV operates or owns the infrastructure asset, or generates revenue or cashflows from such asset (such as, concession agreement, transmission services agreement, power purchase agreement, lease agreement, and any other agreement of a like nature, by whatever name called); or (v). statutory, judicial, regulatory, or governmental stipulations;	91.95
9	(-) Any capital expenditure on existing assets owned / leased by the SPV to the extent not funded by debt / equity or from reserves created in the earlier years	-
10	**NDCF for SPV**	**235.65**

(v) Kaithal Tollway Limited (KTL)

(Rs. in million)

Sr No.	Particulars	Six months ended September 30, 2024
1	Cash flow from operating activities as per Cash Flow Statement of SPV	466.91
2	(+) Cash Flows received from SPV's which represent distributions of NDCF computed as per relevant framework	-
3	(+) Treasury income / income from investing activities (interest income received from FD, tax refund, any other income in the nature of interest, profit on sale of Mutual funds, investments, assets etc., dividend income etc., excluding any Ind AS adjustments. Further clarified that these amounts will be considered on a cash receipt basis)	18.77
4	(+) Proceeds from sale of infrastructure investments, infrastructure assets or shares of SPVs/Holdcos or Investment Entity adjusted for the following: • Applicable capital gains and other taxes • Related debts settled or due to be settled from sale proceeds • Directly attributable transaction costs • Proceeds reinvested or planned to be reinvested as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations	-
5	(+) Proceeds from sale of infrastructure investments, infrastructure assets or sale of shares of SPVs or Investment Entity not distributed pursuant to an earlier plan to re invest as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations, if such proceeds are not intended to be invested subsequently	-
6	(-) Finance cost on Borrowings, excluding amortisation of any transaction costs as per Profit and Loss Account and any shareholder debt / loan from Trust	(0.02)
7	(-) Debt repayment (to include principal repayments as per scheduled EMI's except if refinanced through new debt including overdraft facilities and to exclude any debt repayments / debt refinanced through new debt, in any form or equity raise as well as repayment of any shareholder debt / loan from Trust)	-
8	(-) Any reserve required to be created under the terms of, or pursuant to the obligations arising in accordance with, any: (i). loan agreement entered with banks / financial institution from whom the Trust or any of its SPVs have availed debt, or (ii). terms and conditions, covenants or any other stipulations applicable to debt securities issued by the Trust or any of its SPVs, or (iii). terms and conditions, covenants or any other stipulations applicable to external commercial borrowings availed by the Trust or any of its SPVs, (iv). agreement pursuant to which the SPV operates or owns the infrastructure asset, or generates revenue or cashflows from such asset (such as, concession agreement, transmission services agreement, power purchase agreement, lease agreement, and any other agreement of a like nature, by whatever name called); or (v). statutory, judicial, regulatory, or governmental stipulations;	-
9	(-) Any capital expenditure on existing assets owned / leased by the SPV to the extent not funded by debt / equity or from reserves created in the earlier years	-
10	**NDCF for SPV**	**485.66**

(vi) AE Tollway Limited (AETL)

(Rs. in million)

Sr No.	Particulars	Six months ended September 30, 2024
1	Cash flow from operating activities as per Cash Flow Statement of SPV	323.87
2	(+) Cash Flows received from SPV's which represent distributions of NDCF computed as per relevant framework	-
3	(+) Treasury income / income from investing activities (interest income received from FD, tax refund, any other income in the nature of interest, profit on sale of Mutual funds, investments, assets etc., dividend income etc., excluding any Ind AS adjustments. Further clarified that these amounts will be considered on a cash receipt basis)	3.77
4	(+) Proceeds from sale of infrastructure investments, infrastructure assets or shares of SPVs/Holdcos or Investment Entity adjusted for the following: • Applicable capital gains and other taxes • Related debts settled or due to be settled from sale proceeds • Directly attributable transaction costs • Proceeds reinvested or planned to be reinvested as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations	-
5	(+) Proceeds from sale of infrastructure investments, infrastructure assets or sale of shares of SPVs or Investment Entity not distributed pursuant to an earlier plan to re invest as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations, if such proceeds are not intended to be invested subsequently	-
6	(-) Finance cost on Borrowings, excluding amortisation of any transaction costs as per Profit and Loss Account and any shareholder debt / loan from Trust	(3.73)
7	(-) Debt repayment (to include principal repayments as per scheduled EMI's except if refinanced through new debt including overdraft facilities and to exclude any debt repayments / debt refinanced through new debt, in any form or equity raise as well as repayment of any shareholder debt / loan from Trust)	-
8	(-) Any reserve required to be created under the terms of, or pursuant to the obligations arising in accordance with, any: (i). loan agreement entered with banks / financial institution from whom the Trust or any of its SPVs have availed debt, or (ii). terms and conditions, covenants or any other stipulations applicable to debt securities issued by the Trust or any of its SPVs, or (iii). terms and conditions, covenants or any other stipulations applicable to external commercial borrowings availed by the Trust or any of its SPVs, (iv). agreement pursuant to which the SPV operates or owns the infrastructure asset, or generates revenue or cashflows from such asset (such as, concession agreement, transmission services agreement, power purchase agreement, lease agreement, and any other agreement of a like nature, by whatever name called); or (v). statutory, judicial, regulatory, or governmental stipulations;	-
9	(-) Any capital expenditure on existing assets owned / leased by the SPV to the extent not funded by debt / equity or from reserves created in the earlier years	-
10	**NDCF for SPV**	**323.91**

(vii) Udaipur Tollway Limited (UTL)

(Rs. in million)

Sr No.	Particulars	Six months ended September 30, 2024
1	Cash flow from operating activities as per Cash Flow Statement of SPV	468.40
2	(+) Cash Flows received from SPV's which represent distributions of NDCF computed as per relevant framework	-
3	(+) Treasury income / income from investing activities (interest income received from FD, tax refund, any other income in the nature of interest, profit on sale of Mutual funds, investments, assets etc., dividend income etc., excluding any Ind AS adjustments. Further clarified that these amounts will be considered on a cash receipt basis)	16.92
4	(+) Proceeds from sale of infrastructure investments, infrastructure assets or shares of SPVs/Holdcos or Investment Entity adjusted for the following: • Applicable capital gains and other taxes • Related debts settled or due to be settled from sale proceeds • Directly attributable transaction costs • Proceeds reinvested or planned to be reinvested as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations	-
5	(+) Proceeds from sale of infrastructure investments, infrastructure assets or sale of shares of SPVs or Investment Entity not distributed pursuant to an earlier plan to re invest as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations, if such proceeds are not intended to be invested subsequently	-
6	(-) Finance cost on Borrowings, excluding amortisation of any transaction costs as per Profit and Loss Account and any shareholder debt / loan from Trust	(733.61)
7	(-) Debt repayment (to include principal repayments as per scheduled EMI's except if refinanced through new debt including overdraft facilities and to exclude any debt repayments / debt refinanced through new debt, in any form or equity raise as well as repayment of any shareholder debt / loan from Trust)	(55.69)
8	(-) Any reserve required to be created under the terms of, or pursuant to the obligations arising in accordance with, any: (i). loan agreement entered with banks / financial institution from whom the Trust or any of its SPVs have availed debt, or (ii). terms and conditions, covenants or any other stipulations applicable to debt securities issued by the Trust or any of its SPVs, or (iii). terms and conditions, covenants or any other stipulations applicable to external commercial borrowings availed by the Trust or any of its SPVs, (iv). agreement pursuant to which the SPV operates or owns the infrastructure asset, or generates revenue or cashflows from such asset (such as, concession agreement, transmission services agreement, power purchase agreement, lease agreement, and any other agreement of a like nature, by whatever name called); or (v). statutory, judicial, regulatory, or governmental stipulations;	-
9	(-) Any capital expenditure on existing assets owned / leased by the SPV to the extent not funded by debt / equity or from reserves created in the earlier years	-
10	**NDCF for SPV**	**(303.98)**

(viii) CG Tollway Limited (CGTL)

(Rs. in million)

Sr No.	Particulars	Six months ended September 30, 2024
1	Cash flow from operating activities as per Cash Flow Statement of SPV	348.51
2	(+) Cash Flows received from SPV's which represent distributions of NDCF computed as per relevant framework	-
3	(+) Treasury income / income from investing activities (interest income received from FD, tax refund, any other income in the nature of interest, profit on sale of Mutual funds, investments, assets etc., dividend income etc., excluding any Ind AS adjustments. Further clarified that these amounts will be considered on a cash receipt basis)	14.56
4	(+) Proceeds from sale of infrastructure investments, infrastructure assets or shares of SPVs/Holdcos or Investment Entity adjusted for the following: • Applicable capital gains and other taxes • Related debts settled or due to be settled from sale proceeds • Directly attributable transaction costs • Proceeds reinvested or planned to be reinvested as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations	-
5	(+) Proceeds from sale of infrastructure investments, infrastructure assets or sale of shares of SPVs or Investment Entity not distributed pursuant to an earlier plan to re invest as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations, if such proceeds are not intended to be invested subsequently	-
6	(-) Finance cost on Borrowings, excluding amortisation of any transaction costs as per Profit and Loss Account and any shareholder debt / loan from Trust	(740.48)
7	(-) Debt repayment (to include principal repayments as per scheduled EMI's except if refinanced through new debt including overdraft facilities and to exclude any debt repayments / debt refinanced through new debt, in any form or equity raise as well as repayment of any shareholder debt / loan from Trust)	(70.83)
8	(-) Any reserve required to be created under the terms of, or pursuant to the obligations arising in accordance with, any: (i). loan agreement entered with banks / financial institution from whom the Trust or any of its SPVs have availed debt, or (ii). terms and conditions, covenants or any other stipulations applicable to debt securities issued by the Trust or any of its SPVs, or (iii). terms and conditions, covenants or any other stipulations applicable to external commercial borrowings availed by the Trust or any of its SPVs, (iv). agreement pursuant to which the SPV operates or owns the infrastructure asset, or generates revenue or cashflows from such asset (such as, concession agreement, transmission services agreement, power purchase agreement, lease agreement, and any other agreement of a like nature, by whatever name called); or (v). statutory, judicial, regulatory, or governmental stipulations;	-
9	(-) Any capital expenditure on existing assets owned / leased by the SPV to the extent not funded by debt / equity or from reserves created in the earlier years	-
10	**NDCF for SPV**	**(448.24)**

(ix) Kishangarh Gulabpura Tollway Limited (KGTL)

(Rs. in million)

Sr No.	Particulars	Six months ended September 30, 2024
1	Cash flow from operating activities as per Cash Flow Statement of SPV	(41.49)
2	(+) Cash Flows received from SPV's which represent distributions of NDCF computed as per relevant framework	-
3	(+) Treasury income / income from investing activities (interest income received from FD, tax refund, any other income in the nature of interest, profit on sale of Mutual funds, investments, assets etc., dividend income etc., excluding any Ind AS adjustments. Further clarified that these amounts will be considered on a cash receipt basis)	3.04
4	(+) Proceeds from sale of infrastructure investments, infrastructure assets or shares of SPVs/Holdcos or Investment Entity adjusted for the following: • Applicable capital gains and other taxes • Related debts settled or due to be settled from sale proceeds • Directly attributable transaction costs • Proceeds reinvested or planned to be reinvested as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations	-
5	(+) Proceeds from sale of infrastructure investments, infrastructure assets or sale of shares of SPVs or Investment Entity not distributed pursuant to an earlier plan to re invest as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations, if such proceeds are not intended to be invested subsequently	-
6	(-) Finance cost on Borrowings, excluding amortisation of any transaction costs as per Profit and Loss Account and any shareholder debt / loan from Trust	(0.02)
7	(-) Debt repayment (to include principal repayments as per scheduled EMI's except if refinanced through new debt including overdraft facilities and to exclude any debt repayments / debt refinanced through new debt, in any form or equity raise as well as repayment of any shareholder debt / loan from Trust)	-
8	(-) Any reserve required to be created under the terms of, or pursuant to the obligations arising in accordance with, any: (i). loan agreement entered with banks / financial institution from whom the Trust or any of its SPVs have availed debt, or (ii). terms and conditions, covenants or any other stipulations applicable to debt securities issued by the Trust or any of its SPVs, or (iii). terms and conditions, covenants or any other stipulations applicable to external commercial borrowings availed by the Trust or any of its SPVs, (iv). agreement pursuant to which the SPV operates or owns the infrastructure asset, or generates revenue or cashflows from such asset (such as, concession agreement, transmission services agreement, power purchase agreement, lease agreement, and any other agreement of a like nature, by whatever name called); or (v). statutory, judicial, regulatory, or governmental stipulations;	-
9	(-) Any capital expenditure on existing assets owned / leased by the SPV to the extent not funded by debt / equity or from reserves created in the earlier years	-
10	**NDCF for SPV**	**(38.47)**

(x) IRB Hapur Moradabad Tollway Limited (IRBHM)

(Rs. in million)

Sr No.	Particulars	Six months ended September 30, 2024
1	Cash flow from operating activities as per Cash Flow Statement of SPV	1,288.79
2	(+) Cash Flows received from SPV's which represent distributions of NDCF computed as per relevant framework	-
3	(+) Treasury income / income from investing activities (interest income received from FD, tax refund, any other income in the nature of interest, profit on sale of Mutual funds, investments, assets etc., dividend income etc., excluding any Ind AS adjustments. Further clarified that these amounts will be considered on a cash receipt basis)	3.39
4	(+) Proceeds from sale of infrastructure investments, infrastructure assets or shares of SPVs/Holdcos or Investment Entity adjusted for the following: • Applicable capital gains and other taxes • Related debts settled or due to be settled from sale proceeds • Directly attributable transaction costs • Proceeds reinvested or planned to be reinvested as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations	-
5	(+) Proceeds from sale of infrastructure investments, infrastructure assets or sale of shares of SPVs or Investment Entity not distributed pursuant to an earlier plan to re invest as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations, if such proceeds are not intended to be invested subsequently	-
6	(-) Finance cost on Borrowings, excluding amortisation of any transaction costs as per Profit and Loss Account and any shareholder debt / loan from Trust	(0.05)
7	(-) Debt repayment (to include principal repayments as per scheduled EMI's except if refinanced through new debt including overdraft facilities and to exclude any debt repayments / debt refinanced through new debt, in any form or equity raise as well as repayment of any shareholder debt / loan from Trust)	-
8	(-) Any reserve required to be created under the terms of, or pursuant to the obligations arising in accordance with, any: (i). loan agreement entered with banks / financial institution from whom the Trust or any of its SPVs have availed debt, or (ii). terms and conditions, covenants or any other stipulations applicable to debt securities issued by the Trust or any of its SPVs, or (iii). terms and conditions, covenants or any other stipulations applicable to external commercial borrowings availed by the Trust or any of its SPVs, (iv). agreement pursuant to which the SPV operates or owns the infrastructure asset, or generates revenue or cashflows from such asset (such as, concession agreement, transmission services agreement, power purchase agreement, lease agreement, and any other agreement of a like nature, by whatever name called); or (v). statutory, judicial, regulatory, or governmental stipulations;	-
9	(-) Any capital expenditure on existing assets owned / leased by the SPV to the extent not funded by debt / equity or from reserves created in the earlier years	-
10	**NDCF for SPV**	**1,292.13**

(xi) Palsit Dankuni Tollway Private Limited (PDTPL)

(Rs. in million)

Sr No.	Particulars	Six months ended September 30, 2024
1	Cash flow from operating activities as per Cash Flow Statement of SPV	592.90
2	(+) Cash Flows received from SPV's which represent distributions of NDCF computed as per relevant framework	-
3	(+) Treasury income / income from investing activities (interest income received from FD, tax refund, any other income in the nature of interest, profit on sale of Mutual funds, investments, assets etc., dividend income etc., excluding any Ind AS adjustments. Further clarified that these amounts will be considered on a cash receipt basis)	5.52
4	(+) Proceeds from sale of infrastructure investments, infrastructure assets or shares of SPVs/Holdcos or Investment Entity adjusted for the following: • Applicable capital gains and other taxes • Related debts settled or due to be settled from sale proceeds • Directly attributable transaction costs • Proceeds reinvested or planned to be reinvested as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations	-
5	(+) Proceeds from sale of infrastructure investments, infrastructure assets or sale of shares of SPVs or Investment Entity not distributed pursuant to an earlier plan to re invest as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations, if such proceeds are not intended to be invested subsequently	-
6	(-) Finance cost on Borrowings, excluding amortisation of any transaction costs as per Profit and Loss Account and any shareholder debt / loan from Trust	(568.07)
7	(-) Debt repayment (to include principal repayments as per scheduled EMI's except if refinanced through new debt including overdraft facilities and to exclude any debt repayments / debt refinanced through new debt, in any form or equity raise as well as repayment of any shareholder debt / loan from Trust)	(0.78)
8	(-) Any reserve required to be created under the terms of, or pursuant to the obligations arising in accordance with, any: (i). loan agreement entered with banks / financial institution from whom the Trust or any of its SPVs have availed debt, or (ii). terms and conditions, covenants or any other stipulations applicable to debt securities issued by the Trust or any of its SPVs, or (iii). terms and conditions, covenants or any other stipulations applicable to external commercial borrowings availed by the Trust or any of its SPVs, (iv). agreement pursuant to which the SPV operates or owns the infrastructure asset, or generates revenue or cashflows from such asset (such as, concession agreement, transmission services agreement, power purchase agreement, lease agreement, and any other agreement of a like nature, by whatever name called); or (v). statutory, judicial, regulatory, or governmental stipulations;	-
9	(-) Any capital expenditure on existing assets owned / leased by the SPV to the extent not funded by debt / equity or from reserves created in the earlier years	-
10	**NDCF for SPV**	**29.57**

Note:

1. On account of restrictions in Facility Agreement, the said funds are not available for distribution.

(xii) IRB Golconda Expressway Private Limited (IGEPL)

(Rs. in million)

Sr No.	Particulars	Six months ended September 30, 2024
1	Cash flow from operating activities as per Cash Flow Statement of SPV	3,098.44
2	(+) Cash Flows received from SPV's which represent distributions of NDCF computed as per relevant framework	-
3	(+) Treasury income / income from investing activities (interest income received from FD, tax refund, any other income in the nature of interest, profit on sale of Mutual funds, investments, assets etc., dividend income etc., excluding any Ind AS adjustments. Further clarified that these amounts will be considered on a cash receipt basis)	120.98
4	(+) Proceeds from sale of infrastructure investments, infrastructure assets or shares of SPVs/Holdcos or Investment Entity adjusted for the following: • Applicable capital gains and other taxes • Related debts settled or due to be settled from sale proceeds • Directly attributable transaction costs • Proceeds reinvested or planned to be reinvested as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations	-
5	(+) Proceeds from sale of infrastructure investments, infrastructure assets or sale of shares of SPVs or Investment Entity not distributed pursuant to an earlier plan to re invest as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations, if such proceeds are not intended to be invested subsequently	-
6	(-) Finance cost on Borrowings, excluding amortisation of any transaction costs as per Profit and Loss Account and any shareholder debt / loan from Trust	(2,423.15)
7	(-) Debt repayment (to include principal repayments as per scheduled EMI's except if refinanced through new debt including overdraft facilities and to exclude any debt repayments / debt refinanced through new debt, in any form or equity raise as well as repayment of any shareholder debt / loan from Trust)	(23.76)
8	(-) Any reserve required to be created under the terms of, or pursuant to the obligations arising in accordance with, any: (i). loan agreement entered with banks / financial institution from whom the Trust or any of its SPVs have availed debt, or (ii). terms and conditions, covenants or any other stipulations applicable to debt securities issued by the Trust or any of its SPVs, or (iii). terms and conditions, covenants or any other stipulations applicable to external commercial borrowings availed by the Trust or any of its SPVs, (iv). agreement pursuant to which the SPV operates or owns the infrastructure asset, or generates revenue or cashflows from such asset (such as, concession agreement, transmission services agreement, power purchase agreement, lease agreement, and any other agreement of a like nature, by whatever name called); or (v). statutory, judicial, regulatory, or governmental stipulations;	1,166.00
9	(-) Any capital expenditure on existing assets owned / leased by the SPV to the extent not funded by debt / equity or from reserves created in the earlier years	-
10	**NDCF for SPV**	**1,938.51**

Note :

1. On account of restrictions in Facility Agreement, part of the funds are not available for distribution.
2. The SPV has distributed Rs.772.22 million pertaining FY24 in H1FY25, pursuant to receipt of approval from its Senior Lenders.

(xiii) Samakhiyali Tollway Private Limited (STPL)

(Rs. in million)

Sr No.	Particulars	Six months ended September 30, 2024
1	Cash flow from operating activities as per Cash Flow Statement of SPV	554.29
2	(+) Cash Flows received from SPV's which represent distributions of NDCF computed as per relevant framework	-
3	(+) Treasury income / income from investing activities (interest income received from FD, tax refund, any other income in the nature of interest, profit on sale of Mutual funds, investments, assets etc., dividend income etc., excluding any Ind AS adjustments. Further clarified that these amounts will be considered on a cash receipt basis)	4.38
4	(+) Proceeds from sale of infrastructure investments, infrastructure assets or shares of SPVs/Holdcos or Investment Entity adjusted for the following: • Applicable capital gains and other taxes • Related debts settled or due to be settled from sale proceeds • Directly attributable transaction costs • Proceeds reinvested or planned to be reinvested as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations	-
5	(+) Proceeds from sale of infrastructure investments, infrastructure assets or sale of shares of SPVs or Investment Entity not distributed pursuant to an earlier plan to re invest as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations, if such proceeds are not intended to be invested subsequently	-
6	(-) Finance cost on Borrowings, excluding amortisation of any transaction costs as per Profit and Loss Account and any shareholder debt / loan from Trust	(32.26)
7	(-) Debt repayment (to include principal repayments as per scheduled EMI's except if refinanced through new debt including overdraft facilities and to exclude any debt repayments / debt refinanced through new debt, in any form or equity raise as well as repayment of any shareholder debt / loan from Trust)	(0.29)
8	(-) Any reserve required to be created under the terms of, or pursuant to the obligations arising in accordance with, any: (i). loan agreement entered with banks / financial institution from whom the Trust or any of its SPVs have availed debt, or (ii). terms and conditions, covenants or any other stipulations applicable to debt securities issued by the Trust or any of its SPVs, or (iii). terms and conditions, covenants or any other stipulations applicable to external commercial borrowings availed by the Trust or any of its SPVs, (iv). agreement pursuant to which the SPV operates or owns the infrastructure asset, or generates revenue or cashflows from such asset (such as, concession agreement, transmission services agreement, power purchase agreement, lease agreement, and any other agreement of a like nature, by whatever name called); or (v). statutory, judicial, regulatory, or governmental stipulations;	-
9	(-) Any capital expenditure on existing assets owned / leased by the SPV to the extent not funded by debt / equity or from reserves created in the earlier years	(512.01)
10	**NDCF for SPV**	**14.11**

Note :

1. On account of restrictions in Facility Agreement, the said funds are not available for distribution.

(xiv) IRB Lalitpur Tollway Private Limited (ILTPL)

(Rs. in million)

Sr No.	Particulars	Six months ended September 30, 2024
1	Cash flow from operating activities as per Cash Flow Statement of SPV	1,710.87
2	(+) Cash Flows received from SPV's which represent distributions of NDCF computed as per relevant framework	-
3	(+) Treasury income / income from investing activities (interest income received from FD, tax refund, any other income in the nature of interest, profit on sale of Mutual funds, investments, assets etc., dividend income etc., excluding any Ind AS adjustments. Further clarified that these amounts will be considered on a cash receipt basis)	65.96
4	(+) Proceeds from sale of infrastructure investments, infrastructure assets or shares of SPVs/Holdcos or Investment Entity adjusted for the following: • Applicable capital gains and other taxes • Related debts settled or due to be settled from sale proceeds • Directly attributable transaction costs • Proceeds reinvested or planned to be reinvested as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations	-
5	(+) Proceeds from sale of infrastructure investments, infrastructure assets or sale of shares of SPVs or Investment Entity not distributed pursuant to an earlier plan to re invest as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations, if such proceeds are not intended to be invested subsequently	-
6	(-) Finance cost on Borrowings, excluding amortisation of any transaction costs as per Profit and Loss Account and any shareholder debt / loan from Trust	(1,398.50)
7	(-) Debt repayment (to include principal repayments as per scheduled EMI's except if refinanced through new debt including overdraft facilities and to exclude any debt repayments / debt refinanced through new debt, in any form or equity raise as well as repayment of any shareholder debt / loan from Trust)	(18.74)
8	(-) Any reserve required to be created under the terms of, or pursuant to the obligations arising in accordance with, any: (i). loan agreement entered with banks / financial institution from whom the Trust or any of its SPVs have availed debt, or (ii). terms and conditions, covenants or any other stipulations applicable to debt securities issued by the Trust or any of its SPVs, or (iii). terms and conditions, covenants or any other stipulations applicable to external commercial borrowings availed by the Trust or any of its SPVs, (iv). agreement pursuant to which the SPV operates or owns the infrastructure asset, or generates revenue or cashflows from such asset (such as, concession agreement, transmission services agreement, power purchase agreement, lease agreement, and any other agreement of a like nature, by whatever name called); or (v). statutory, judicial, regulatory, or governmental stipulations;	-
9	(-) Any capital expenditure on existing assets owned / leased by the SPV to the extent not funded by debt / equity or from reserves created in the earlier years	-
10	**NDCF for SPV**	**359.59**

Note :

1. On account of restrictions in Facility Agreement, part of the funds are not available for distribution.

(xv) IRB Kota Tollway Private Limited (IKTPL)

(Rs. in million)

Sr No.	Particulars	Six months ended September 30, 2024
1	Cash flow from operating activities as per Cash Flow Statement of SPV	254.10
2	(+) Cash Flows received from SPV's which represent distributions of NDCF computed as per relevant framework	-
3	(+) Treasury income / income from investing activities (interest income received from FD, tax refund, any other income in the nature of interest, profit on sale of Mutual funds, investments, assets etc., dividend income etc., excluding any Ind AS adjustments. Further clarified that these amounts will be considered on a cash receipt basis)	8.44
4	(+) Proceeds from sale of infrastructure investments, infrastructure assets or shares of SPVs/Holdcos or Investment Entity adjusted for the following: • Applicable capital gains and other taxes • Related debts settled or due to be settled from sale proceeds • Directly attributable transaction costs • Proceeds reinvested or planned to be reinvested as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations	-
5	(+) Proceeds from sale of infrastructure investments, infrastructure assets or sale of shares of SPVs or Investment Entity not distributed pursuant to an earlier plan to re invest as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations, if such proceeds are not intended to be invested subsequently	-
6	(-) Finance cost on Borrowings, excluding amortisation of any transaction costs as per Profit and Loss Account and any shareholder debt / loan from Trust	(181.68)
7	(-) Debt repayment (to include principal repayments as per scheduled EMI's except if refinanced through new debt including overdraft facilities and to exclude any debt repayments / debt refinanced through new debt, in any form or equity raise as well as repayment of any shareholder debt / loan from Trust)	(0.14)
8	(-) Any reserve required to be created under the terms of, or pursuant to the obligations arising in accordance with, any: (i). loan agreement entered with banks / financial institution from whom the Trust or any of its SPVs have availed debt, or (ii). terms and conditions, covenants or any other stipulations applicable to debt securities issued by the Trust or any of its SPVs, or (iii). terms and conditions, covenants or any other stipulations applicable to external commercial borrowings availed by the Trust or any of its SPVs, (iv). agreement pursuant to which the SPV operates or owns the infrastructure asset, or generates revenue or cashflows from such asset (such as, concession agreement, transmission services agreement, power purchase agreement, lease agreement, and any other agreement of a like nature, by whatever name called); or (v). statutory, judicial, regulatory, or governmental stipulations;	-
9	(-) Any capital expenditure on existing assets owned / leased by the SPV to the extent not funded by debt / equity or from reserves created in the earlier years	-
10	**NDCF for SPV**	**80.72**

Note :

1. On account of restrictions in Facility Agreement, the said funds are not available for distribution.

(xvi) IRB Gwalior Tollway Private Limited (IGTPL)

(Rs. in million)

Sr No.	Particulars	Six months ended September 30, 2024
1	Cash flow from operating activities as per Cash Flow Statement of SPV	501.75
2	(+) Cash Flows received from SPV's which represent distributions of NDCF computed as per relevant framework	-
3	(+) Treasury income / income from investing activities (interest income received from FD, tax refund, any other income in the nature of interest, profit on sale of Mutual funds, investments, assets etc., dividend income etc., excluding any Ind AS adjustments. Further clarified that these amounts will be considered on a cash receipt basis)	15.81
4	(+) Proceeds from sale of infrastructure investments, infrastructure assets or shares of SPVs/Holdcos or Investment Entity adjusted for the following: • Applicable capital gains and other taxes • Related debts settled or due to be settled from sale proceeds • Directly attributable transaction costs • Proceeds reinvested or planned to be reinvested as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations	-
5	(+) Proceeds from sale of infrastructure investments, infrastructure assets or sale of shares of SPVs or Investment Entity not distributed pursuant to an earlier plan to re invest as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations, if such proceeds are not intended to be invested subsequently	-
6	(-) Finance cost on Borrowings, excluding amortisation of any transaction costs as per Profit and Loss Account and any shareholder debt / loan from Trust	(364.47)
7	(-) Debt repayment (to include principal repayments as per scheduled EMI's except if refinanced through new debt including overdraft facilities and to exclude any debt repayments / debt refinanced through new debt, in any form or equity raise as well as repayment of any shareholder debt / loan from Trust)	(0.25)
8	(-) Any reserve required to be created under the terms of, or pursuant to the obligations arising in accordance with, any: (i). loan agreement entered with banks / financial institution from whom the Trust or any of its SPVs have availed debt, or (ii). terms and conditions, covenants or any other stipulations applicable to debt securities issued by the Trust or any of its SPVs, or (iii). terms and conditions, covenants or any other stipulations applicable to external commercial borrowings availed by the Trust or any of its SPVs, (iv). agreement pursuant to which the SPV operates or owns the infrastructure asset, or generates revenue or cashflows from such asset (such as, concession agreement, transmission services agreement, power purchase agreement, lease agreement, and any other agreement of a like nature, by whatever name called); or (v). statutory, judicial, regulatory, or governmental stipulations;	-
9	(-) Any capital expenditure on existing assets owned / leased by the SPV to the extent not funded by debt / equity or from reserves created in the earlier years	-
10	**NDCF for SPV**	**152.84**

Note :

1. On account of restrictions in Facility Agreement, the said funds are not available for distribution.

➡ In accordance with the SEBI circular no SEBI/HO/DDHS-PoD-2/P/CIR/2024/44 dated May 15, 2024, the framework for computation of Net Distributable cash flows ("NDCF") is revised at Trust level for the period from April 01, 2024 to September 30, 2024. Accordingly, NDCF for the period April 01, 2024 to September 30, 2024 has been calculated and presented in accordance with the new framework. NDCF for the periods for on or before March 31, 2024, has been calculated and presented as per the earlier framework and has been disclosed / reproduced in Sr no. xvii to xxxii.

Additional Disclosures as required by paragraph 6 of chapter 4 to the master circular no. SEBI/HO/DDHS-PoD-2/P/CIR/2023/115 dated 06 July 2023 as amended for the comparable periods

(xvii) IRB Infrastructure Trust

(Rs. in Million)

Sr. No.	Particulars	Six months ended September 30, 2023	Six months ended March 31, 2024	Year ended March 31, 2024
1	Cash flows received from Project SPVs in the form of Interest[1]	1,325.00	2,423.20	3,748.20
2	Cash flows received from Project SPVs in the form of Dividend	-	-	-
3	Any other income accruing at the Trust level and not captured above, including but not limited to interest/return on surplus cash invested by the Trust	15.55	183.94	199.49
4	Cash flows received from the project SPVs towards the repayment (Net) of the debt issued to the Project SPVs by the Trust[2]	(752.80)	9,650.56	8,897.76
5	**Total cash inflow at the Trust level (A)**	**587.75**	**12,257.70**	**12,845.45**
	Less:			
6	Any payment of fees, interest and expense incurred at the Trust level, including but not limited to the fees of the Investment Manager	(115.06)	(2,519.48)	(2,634.54)
7	Income tax (if applicable) at the Standalone Trust Level	-	-	-
8	Repayment of external debt	-	(646.69)	(646.69)
9	Promoter contribution in under construction Project SPVs	-	(4,855.00)	(4,855.00)
10	**Total cash outflows / retention at the Trust level (B)**	**(115.06)**	**(8,021.17)**	**(8,136.23)**
11	**Net Distributable Cash Flows (C) = (A+B)**	**472.69**	**4,236.53**	**4,709.22**

Note :

1 Excludes interest due but not received of Rs. 5,009.88 millions, Rs.7,703.64 millions and Rs. 12,713.52 millions for the six months ended September 30, 2023, six months ended March 31, 2024 and year ended March 31, 2024.

2 Netted - off with disbursement of short-term unsecured loan to related parties. (Refer RPT disclosures of standalone financial results).

(xviii) IRB Westcoast Tollway Limited (IRBWC)

Sr. No.	Description	Six months ended September 30, 2023#	Six Months ended March 31, 2024	Year ended March 31, 2024*
1	Profit after tax as per profit and loss account (A)	(1,612.20)	(1,696.66)	(3,308.86)
2	Add: Depreciation and amortisation as per Statement of profit and loss	101.10	113.50	214.60
3	Add/Less: Decrease/(Increase) in Working capital	299.85	(538.64)	(238.79)
4	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	42.28	0.01	42.29
5	Add: Interest paid/payable to the Trust	1,295.66	1,862.94	3,158.60
6	Add :- Provision for resurfacing expenses (Net)	-	-	-
7	Less: Principal repayment of external debt	(121.51)	-	(121.51)
8	Less: Tax paid	-	-	-
9	Less: Creation of MMRA	322.00	-	322.00
10	Less: Capital expenditure towards the project	(10.88)	(13.68)	(24.56)
11	Total adjustments (B)	**1,928.51**	**1,424.13**	**3,352.64**
12	**Net Distributable Cash Flows (C) = (A+B)**	**316.31**	**(272.53)**	**43.78**

Notes:

Working capital adjustment has been carried out from the current period.

*The above NDCF is excluding amounts borrowed to repay debt availed from external lenders and Trust.

(xix) Yedeshi Aurangabad Tollway Limited (YATL)

(Rs. in Million)

Sr. No.	Description	Six months ended September 30, 2023[#]	Six Months ended March 31, 2024	Year ended March 31, 2024
1	Profit after tax as per profit and loss account (A)	(692.28)	(610.12)	(1,302.40)
2	Add: Depreciation and amortisation as per Statement of profit and loss	294.39	279.10	573.49
3	Add/Less: Decrease/(Increase) in Working capital	147.25	(684.66)	(537.41)
4	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	38.06	36.30	74.36
5	Add: Interest paid/payable to the Trust	875.44	646.61	1,522.05
6	Add :- Provision for resurfacing expenses (Net)	57.06	66.15	123.21
7	Less: Principal repayment of external debt	-	-	-
8	Less: Tax paid	-	-	-
9	Less: Creation of MMRA/ release of DSRA	-	460.00	460.00
10	Less: Capital expenditure towards the project	-	-	-
11	Total Adjustments (B)	**1,412.20**	**803.50**	**2,215.70**
12	**Net Distributable Cash Flows (C) = (A+B)**	**719.92**	**193.38**	**913.30**

Notes:

[#] Working capital adjustment has been carried out from the current period.

(xx) Solpaur Yedeshi Tollway Limited (SYTL)

(Rs. in Million)

Sr. No.	Description	Six months ended September 30, 2023#	Six Months ended March 31, 2024	Year ended March 31, 2024
1	Profit after tax as per profit and loss account (A)	(385.89)	(458.70)	(844.59)
2	Add: Depreciation and amortisation as per Statement of profit and loss	88.30	68.63	156.93
3	Add/Less: Decrease/(Increase) in Working capital	48.08	(157.98)	(109.90)
4	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	18.54	17.90	36.44
5	Add: Interest paid/payable to the Trust	587.94	604.31	1,192.25
6	Add :- Provision for resurfacing expenses (Net)	33.17	38.23	71.40
7	Less: Principal repayment of external debt	-	-	-
8	Less: Tax paid	-	-	-
9	Less: Creation of MMRA/release of DSRA	-	260.00	260.00
10	Less: Capital expenditure towards the project	-	-	-
11	Total Adjustments (B)	**776.03**	**831.09**	**1,607.12**
12	**Net Distributable Cash Flows (C) = (A+B)**	**390.14**	**372.39**	**762.53**

Notes:

Working capital adjustment has been carried out from the current

(xxi) Kaithal Tollway Limited (KTL)

(Rs. in Million)

Sr. No.	Description	Six months ended September 30, 2023#	Six Months ended March 31, 2024	Year ended March 31, 2024*
1	Profit after tax as per profit and loss account (A)	(851.29)	(1,044.36)	(1,895.65)
2	Add: Depreciation and amortisation as per Statement of profit and loss	100.85	116.16	217.01
3	Add/Less: Decrease/(Increase) in Working capital	252.32	381.16	633.48
4	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	127.35	56.66	184.01
5	Add: Interest paid/payable to the Trust	912.33	1,315.34	2,227.67
6	Add :- Provision for resurfacing expenses (Net)	(121.18)	(106.46)	(227.64)
7	Less: Principal repayment of external debt	(50.13)	0.00	(50.13)
8	Less: Tax paid	-	-	-
9	Less: Creation of MMRA	145.00	-	145.00
10	Less: Capital expenditure towards the project	-	-	-
11	Total Adjustments (B)	**1,366.53**	**1,762.87**	**3,129.40**
12	**Net Distributable Cash Flows (C) = (A+B)**	**515.24**	**718.51**	**1,233.75**

Notes:

Working capital adjustment has been carried out from the current period.

*The above NDCF is excluding amounts borrowed to repay debt availed from external lenders and Trust.

(xxii) AE Tollway Limited (AETL)

(Rs. in Million)

Sr. No.	Description	Six months ended September 30, 2023#	Six Months ended March 31, 2024	Year ended March 31, 2024*
1	Profit after tax as per profit and loss account (A)	(1,647.15)	(1,860.64)	(3,507.79)
2	Add: Depreciation and amortisation as per Statement of profit and loss	161.84	164.46	326.30
3	Add/Less: Decrease/(Increase) in Working capital	143.38	270.03	413.41
4	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	28.27	92.46	120.73
5	Add: Interest paid/payable to the Trust	1,411.53	1,854.63	3,266.16
6	Add :- Provision for resurfacing expenses (Net)	(74.51)	(59.02)	(133.53)
7	Less: Principal repayment of external debt	(23.23)	-	(23.23)
8	Less: Tax paid	-	-	-
9	Less: Creation of MMRA/ release of DSRA	-	424.30	424.30
10	Less: Capital expenditure towards the project	-	-	-
11	Total Adjustments (B)	**1,647.28**	**2,746.86**	**4,394.14**
12	**Net Distributable Cash Flows (C) = (A+B)**	**0.13**	**886.22**	**886.35**

Notes:

Working capital adjustment has been carried out from the current period.

*The above NDCF is excluding amounts borrowed to repay debt availed from external lenders and Trust.

(xxiii) Udaipur Tollway Limited (UTL)

(Rs. in Million)

Sr. No.	Description	Six months ended September 30, 2023[#]	Six Months ended March 31, 2024	Year ended March 31, 2024
1	Profit after tax as per profit and loss account (A)	(798.41)	(662.12)	(1,460.53)
2	Add: Depreciation and amortisation as per Statement of profit and loss	202.42	226.84	429.26
3	Add/Less: Decrease/(Increase) in Working capital	608.43	300.09	908.52
4	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	53.89	55.20	109.09
5	Add: Interest paid/payable to the Trust	-	-	-
6	Add :- Provision for resurfacing expenses (Net)	(61.53)	(25.52)	(87.05)
7	Less: Principal repayment of external debt	(4.67)	(30.74)	(35.41)
8	Less: Tax paid	-	-	-
9	Less: Creation of MMRA	-	-	-
10	Less: Capital expenditure towards the project	-	-	-
11	Total Adjustments (B)	**798.54**	**525.87**	**1,324.41**
12	**Net Distributable Cash Flows (C) = (A+B)**	**0.13**	**(136.25)**	**(136.12)**

Notes:

[#] Working capital adjustment has been carried out from the current period.

(xxiv) CG Tollway Limited (CGTL)

(Rs. in Million)

Sr. No.	Description	Six months ended September 30, 2023[#]	Six Months ended March 31, 2024	Year ended March 31, 2024
1	Profit after tax as per profit and loss account (A)	(570.25)	(561.17)	(1,131.42)
2	Add: Depreciation and amortisation as per Statement of profit and loss	198.05	200.36	398.41
3	Add/Less: Decrease/(Increase) in Working capital	61.57	(82.73)	(21.16)
4	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	18.38	18.31	36.69
5	Add: Interest paid/payable to the Trust	-	-	-
6	Add :- Provision for Resurfacing Expenses (Net)	63.82	74.34	138.16
7	Less: Repayment of external debt (principal)	(30.18)	(70.19)	(100.37)
8	Less: Tax paid	-	-	-
9	Less: Creation of MMRA	-	-	-
10	Less: Capital expenditure towards the project	-	-	-
11	Total Adjustments (B)	**311.64**	**140.09**	**451.73**
12	**Net Distributable Cash Flows (C) = (A+B)**	**(258.61)**	**(421.08)**	**(679.69)**

Notes:

[#] Working capital adjustment has been carried out from the current period.

(xxv) Kishangarh Gulabpura Tollway Limited (KGTL)

(Rs. in Million)

Sr. No.	Description	Six months ended September 30, 2023#	Six Months ended March 31, 2024	Year ended March 31, 2024*
1	Profit after tax as per profit and loss account (A)	(906.55)	(1,131.75)	(2,038.30)
2	Add: Depreciation and amortisation as per Statement of profit and loss	126.74	133.18	259.92
3	Add/Less: Decrease/(Increase) in Working capital	441.76	(442.49)	(0.73)
4	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	90.88	158.82	249.70
5	Add: Interest paid/payable to the Trust	172.97	769.48	942.45
6	Add :- Provision for Resurfacing Expenses (Net)	80.72	93.01	173.73
7	Less: Repayment of external debt (principal)	(7.96)	-	(7.96)
8	Less: Tax paid	-	-	-
9	Less: Creation of MMRA/release of DSRA	-	360.00	360.00
10	Less: Capital expenditure towards the project	-	-	-
11	Total Adjustments (B)	**905.10**	**1,072.00**	**1,977.11**
12	**Net Distributable Cash Flows (C) = (A+B)**	**(1.45)**	**(59.75)**	**(61.19)**

Notes:

Working capital adjustment has been carried out from the current period.

*The above NDCF is excluding amounts borrowed to repay debt availed from external lenders and Trust.

(xxvi) IRB Hapur Moradabad Tollway Limited (IRBHM)

(Rs. in Million)

Sr. No.	Description	Six months ended September 30, 2023#	Six Months ended March 31, 2024	Year ended March 31, 2024*
1	Profit after tax as per profit and loss account (A)	(733.00)	(1,111.84)	(1,844.84)
2	Add: Depreciation and amortisation as per Statement of profit and loss	214.17	267.22	481.39
3	Add/Less: Decrease/(Increase) in Working capital	(294.58)	(697.56)	(992.13)
4	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	84.93	249.18	334.11
5	Add: Interest paid/payable to the Trust	687.48	1,569.79	2,257.27
6	Add :- Provision for Resurfacing Expenses (Net)	171.17	201.20	372.37
7	Less: Repayment of external debt (principal)	(95.63)	(0.80)	(96.43)
8	Less: Tax paid	-	-	-
9	Less: Creation of MMRA/ release of DSRA	-	600.00	600.00
10	Less: Capital expenditure towards the project	-	(344.10)	(344.10)
11	Total Adjustments (B)	**767.54**	**1,844.93**	**2,612.48**
12	**Net Distributable Cash Flows (C) = (A+B)#**	**34.54**	**733.09**	**767.64**

Notes:

Working capital adjustment has been carried out from the current period.

*The above NDCF is excluding amounts borrowed to repay debt availed from external lenders and Trust.

(xxvii) Palsit Dankuni Tollway Private Limited (PDTPL)

(Rs. in Million)

Sr. No.	Description	Six months ended September 30, 2023#	Six Months ended March 31, 2024	Year ended March 31, 2024
1	Profit after tax as per profit and loss account (A)	279.11	114.75	393.86
2	Add: Depreciation and amortisation as per Statement of profit and loss	104.28	171.85	276.13
3	Add/Less: Decrease/(Increase) in Working capital	(124.30)	(20.17)	(144.47)
4	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	(52.63)	(26.32)	(78.95)
5	Add: Interest paid/payable to the Trust	-	-	
6	Add :- Provision for Resurfacing Expenses (Net)	-	-	-
7	Less: Repayment of external debt (principal)	-	-	-
8	Less: Tax paid	-	(5.28)	(5.28)
9	Less: Creation of MMRA	-	-	
10	Less: Capital expenditure towards the project	(368.16)	(88.84)	(457.00)
11	Total Adjustments (B)	**(440.80)**	**31.24**	**(409.57)**
12	**Net Distributable Cash Flows (C) = (A+B)**	**(161.69)**	**145.99**	**(15.71)**

Notes:

[#] Working capital adjustment has been carried out from the current period.

(xxviii) IRB Golconda Expressway Private Limited (IGEPL)

(Rs. in Million)

Sr. No.	Description	August 11, 2023 to September 30, 2023	Six Months ended March 31, 2024^	August 11, 2023 to March 31, 2024^
1	Profit after tax as per profit and loss account (A)	(267.92)	(740.32)	(1,008.24)
2	Add: Depreciation and amortisation as per Statement of profit and loss	67.25	244.87	312.12
3	Add/Less: Decrease/(Increase) in Working capital	-	(8.83)	(8.83)
4	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	(184.41)	64.19	(120.23)
5	Add: Interest paid/payable to the Trust	15.81	1,867.05	1,882.86
6	Add :- Provision for Resurfacing Expenses (Net)	388.74	(388.74)	-
7	Less: Repayment of external debt (principal)	-	-	-
8	Less: Tax paid	-	-	-
9	Less: Creation of MMRA	-	-	-
10	Less: Capital expenditure towards the project	-	-	-
11	Total Adjustments (B)	**287.39**	**1,778.54**	**2,065.92**
12	**Net Distributable Cash Flows (C) = (A+B)**	**19.47**	**1,038.22**	**1,057.68**

Note:

^The said funds would be released post meeting Restricted Payment conditions as stated in Facility Agreement.
The Company has been transferred to Trust from August 11, 2023.

(xxix) Samakhiyali Tollway Private Limited (STPL)

(Rs. in Million)

Sr. No.	Description	December 28, 2023 to March 31, 2024^
1	Profit after tax as per profit and loss account (A)	327.17
2	Add: Depreciation and amortisation as per Statement of profit and loss	3.43
3	Add/Less: Decrease/(Increase) in Working capital	9.15
4	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	6.92
5	Add: Interest paid/payable to the Trust	-
6	Add :- Provision for Resurfacing Expenses (Net)	-
7	Less: Repayment of external debt (principal)	-
8	Less: Tax paid	(83.40)
9	Less: Creation of MMRA	-
10	Less: Capital expenditure towards the project	(254.13)
11	Total Adjustments (B)	**(318.04)**
12	**Net Distributable Cash Flows (C) = (A+B)**	**9.13**

Note: ^ The said funds are earmarked towards balance Capex.
The Company has been transferred to Trust from December 28, 2023.

(xxx) IRB Lalitpur Tollway Private Limited (ILTPL)

(Rs. in Million)

Sr. No.	Description	November 10, 2023 to March 31, 2024
1	Profit after tax as per profit and loss account (A)	10.16
2	Add: Depreciation and amortisation as per Statement of profit and loss	-
3	Add/Less: Decrease/(Increase) in Working capital	98.93
4	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	(8.24)
5	Add: Interest paid/payable to the Trust	-
6	Add :- Provision for Resurfacing Expenses (Net)	-
7	Less: Repayment of external debt (principal)	-
8	Less: Tax paid	-
9	Less: Creation of MMRA	-
10	Less: Capital expenditure towards the project	-
11	Total Adjustments (B)	**90.69**
12	**Net Distributable Cash Flows (C) = (A+B)**	**100.85**

Note: The Company has been incorporated on November 10, 2023.

(xxxi) IRB Kota Tollway Private Limited (IKTPL)

(Rs. in Million)

Sr. No.	Description	January 01, 2024 to March 31, 2024
1	Profit after tax as per profit and loss account (A)	(0.87)
2	Add: Depreciation and amortisation as per Statement of profit and loss	-
3	Add/Less: Decrease/(Increase) in Working capital	5.28
4	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	(1.11)
5	Add: Interest paid/payable to the Trust	-
6	Add :- Provision for Resurfacing Expenses (Net)	-
7	Less: Repayment of external debt (principal)	-
8	Less: Tax paid	-
9	Less: Creation of MMRA	-
10	Less: Capital expenditure towards the project	-
11	Total Adjustments (B)	**4.16**
12	**Net Distributable Cash Flows (C) = (A+B)**	**3.29**

Note: The Company has been incorporated on January 01, 2024.

(xxxii) IRB Gwalior Tollway Private Limited (IGTPL)

(Rs. in Million)

Sr. No.	Description	January 01, 2024 to March 31, 2024
1	Profit after tax as per profit and loss account (A)	0.60
2	Add: Depreciation and amortisation as per Statement of profit and loss	-
3	Add/Less: Decrease/(Increase) in Working capital	10.70
4	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	(2.62)
5	Add: Interest paid/payable to the Trust	-
6	Add :- Provision for Resurfacing Expenses (Net)	-
7	Less: Repayment of external debt (principal)	-
8	Less: Tax paid	-
9	Less: Creation of MMRA	-
10	Less: Capital expenditure towards the project	-
11	Total Adjustments (B)	**8.08**
12	**Net Distributable Cash Flows (C) = (A+B)**	**8.68**

Note: The Company has been incorporated on January 01, 2024.

1 **Corporate Information**

The IRB Infrastructure Trust (the "Trust") is a trust settled pursuant to the indenture of trust dated August 27, 2019 which is registered under the Registration Act, 1908 and under the Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time. The Trust is settled by the Sponsor, IRB Infrastructure Developers Limited ("IRB" or the "Sponsor"), an infrastructure development company in India. The Trustee to the Trust is IDBI Trusteeship Services Limited (the "Trustee"). Investment manager for the Trust is MMK Toll Road Private Limited (the "Investment Manager"). The Trust has received registraion certificate from SEBI on November 25, 2019.

The Trust has been formed to invest in infrastructure assets primarily being in the road sector in India. The Trust's road projects are eligible infrastructure projects under the InvIT Regulations and held through special purpose vehicles ("Project SPVs" together as "Project SPV Group"). The Trust's portfolio comprises of fifteen road projects as listed below:-

Project SPV Name**	Residual Concession life*	Shareholding	Nature of Investment	Status	Principal Activities	Country of incorporation
IRB Westcoast Tollway Limited (IRBWTL)	17 years 5 Months 1 days	100%	Subsidiary	Tolling and Construction	Construction and operation of road including toll collection.	India
Solapur Yedeshi Tollway Limited (SYTL)	19 years 3 Months 21 days	100%	Subsidiary	Operating		India
Yedeshi Aurangabad Tollway Limited (YATL)	16 years 8 Months 29 days	100%	Subsidiary	Operating		India
Kaithal Tollway Limited (KTL)	17 years 9 Months 13 days	100%	Subsidiary	Operating		India
AE Tollway Limited (AETL)	15 years 9 Months 31 days	100%	Subsidiary	Operating		India
Udaipur Tollway Limited (UTL)	13 years 11 Months 2 days	100%	Subsidiary	Operating		India
CG Tollway Limited (CGTL)	13 years 1 Months 2 days	100%	Subsidiary	Operating		India
Kishangarh Gulabpura Tollway Limited (KGTL)	13 years 4 Months 22 days	100%	Subsidiary	Operating		India
IRB Hapur Moradabad Tollway Limited (IRBHMTL)	16 years 7 Months 25 days	100%	Subsidiary	Operating		India
Palsit Dankuni Tollway Private Limited (PDTPL) w.e.f 02.04.2022	14 years 6 Months 1 days	100%	Subsidiary	Tolling and Construction		India
IRB Golconda Expressway Private Limited(IGEPL) w.e.f 11.08.2023	28 years 10 Months 10 days	100%	Subsidiary	Operating		India
Samakhiyali Tollway Private Limited(STPL) w.e.f 28.12.2023	19 years 2 Months 28 days	100%	Subsidiary	Tolling and Construction		India
IRB Lalitpur Tollway Private Limited(ILTPL) w.e.f 10.11.2023	19 years 6 Months 1 days	100%	Subsidiary	Operating		India
IRB Kota Tollway Private Limited(IKTPL) w.e.f 01.01.2024	19 years 6 Months 1 days	100%	Subsidiary	Operating		India
IRB Gwalior Tollway Private Limited(IGTPL) w.e.f 01.01.2024	19 years 6 Months 1 days	100%	Subsidiary	Operating		India

* Represents residual concession life as at September 30, 2024 as per original concession period (without considering extension of concession period, if any).

** Of the above Project SPVs, IRBWTL, SYTL, YATL, AETL, CGTL, UTL and IRBHMTL have been converted to public companies on November 13, 2019 and KTLand KGTL on November 14, 2019 .

The registered office of the Investment Manager is Off No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai Mumbai 400076.
The Trust has been listed on NSE w.e.f. 03.04.2023.

2 **Basis of preparation of Consolidated Financial Information**

A. Basis of preparation of Consolidated Financial Information

The Unaudited Interim Consolidated Financial Information which comprises Unaudited Interim Consolidated Balance Sheet as on September 30, 2024, Unaudited Interim Consolidated Statement of Profit and Loss, including other comprehensive income, Unaudited Interim Consolidated Statement of Net Asset at Fair Value, Unaudited Interim Consolidated Statement of total returns at Fair Value, Unaudited Interim Consolidated Statement of Cash Flow, Unaudited Interim Consolidated Statement of Changes in Unitholders Equity and Net Distributable Cash Flows ('NDCF') of the Trust and each of it's subsidiaries for the six months period then ended and a summary of material accounting policies and other explanatory information (together hereinafter referred to as the "Unaudited Interim Consolidated Financial Information"). These unaudited interim consolidated financial information for the period from April 01, 2024 to September 30, 2024 have been prepared solely for inclusion in the Letter of Offer ("LOF") in connection with the proposed right issue of units of the Trust.

The Unaudited Interim Consolidated Financial Information has been prepared in accordance with the requirements of SEBI (Infrastructure Investment Trusts) Regulations, 2014, as amended from time to time read with the Paragraph 3.21 of Chapter 3 and Paragraph 4.6 of Chapter 4 of the SEBI Circular No. SEBI/HO/DDHS-PoD-2/P/CIR/2024/44 dated May 15, 2024 ("SEBI Circular"), together known as ("lnvIT Regulations"); recognition and measurement principles laid down in Indian Accounting Standard 34, Interim Financial Reporting (Ind AS 34) prescribed under rule 2(1)(a) of Companies (Indian Accounting Standards) Rules 2015, as amended and other recognised accounting principles generally accepted in India, to the extent not inconsistent with the InvIT Regulations, (refer note 13 below on presentation of "Unit Capital" as "Equity" instead of compound instruments under Ind AS 32 - Financial Instruments : Presentation).

These Unaudited Interim Consolidated Financial Information for the period from April 01, 2024 to September 30, 2024 have been prepared solely for inclusion in the Letter of Offer in connection with the proposed right issue of units of the Trust, and should not be relied upon for any other purpose.

These Unaudited Interim Consolidated Financial Information are not the statutory accounts for the purpose of any statutory compliances or for regulatory requirements in any jurisdiction. The Consolidated Financial Information of the Trust for the period from April 01, 2024 to September 30, 2024 were approved by the Board of Directors of the Investment Manager and authorised for inclusion in the Letter of Offer of the Trust on December 09, 2024.

The Consolidated Financial Statements are presented in Rs. in millions, except when otherwise indicated.Wherever the amount represented '0' (zero) construes value less than Rupees five thousand.

3 Summary of material accounting policies

3.01 Current versus non-current classification

The Project SPV Group has identified twelve months as its operating cycle. The operating cycle is the time between the acquisition of assets for processing and their realisation in cash and cash equivalents.

The Project SPV Group presents assets and liabilities in the balance sheet based on current/ non-current classification. An asset is treated as current when it is:

- Expected to be realised or intended to be sold or consumed in normal operating cycle
- Held primarily for the purpose of trading
- Expected to be realised within twelve months after the reporting period, or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

All other assets are classified as non-current.

A liability is current when:

- It is expected to be settled in normal operating cycle
- It is held primarily for the purpose of trading
- It is due to be settled within twelve months after the reporting period, or
- There is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period

The Project SPV Group classifies all other liabilities as non-current.

Deferred tax assets and liabilities are classified as non-current assets and liabilities respectively.

3.02 Use of estimates and judgements

The preparation of the Project SPV Group's financial statements requires management to make judgements, estimates and assumptions that affect the reported amounts of expenses, assets and liabilities, and the accompanying disclosures, and the disclosure of contingent liabilities. Uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of assets or liabilities affected in future years.

Estimates and assumptions

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the year in which the estimates are revised and future periods are affected.

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are described below. The Project SPV Group based its assumptions and estimates on parameters available when the financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising that are beyond the control of the Group. Such changes are reflected in the assumptions when they occur.

Fair value measurement of financial instruments (refer note 32)
Provision for major maintenance (refer note 20)
Impairment of non financial assets (refer note 3.17)

3.03 Business Combinations

Business combinations are accounted for using the acquisition method. The cost of an acquisition is measured as the aggregate of the consideration transferred measured at fair value on acquisition date and the amount of any non-controlling interests in the acquiree. For each business combination, the Group elects whether to measure the non-controlling interests in the acquiree at fair value or at the proportionate share of the acquiree's identifiable net assets.

At the acquisition date, the identifiable assets acquired and the liabilities assumed are recognised at their acquisition date fair values. For this purpose, the liabilities assumed include contingent liabilities representing present obligation and they are measured at their acquisition fair values irrespective of the fact that outflow of resources embodying economic benefits is not probable.

Goodwill is initially measured at cost, being the excess of the aggregate of the consideration transferred and the amount recognised for non-controlling interests, and any previous interest held, over the net identifiable assets acquired and liabilities assumed. If the fair value of the net assets acquired is in excess of the aggregate consideration transferred, the Group re-assesses whether it has correctly identified all of the assets acquired and all of the liabilities assumed and reviews the procedures used to measure the amounts to be recognised at the acquisition date. If the reassessment still results in an excess of the fair value of net assets acquired over the aggregate consideration transferred, then the gain is recognised in OCI and accumulated in equity as capital reserve. However, if there is no clear evidence of bargain purchase, the entity recognises the gain directly in equity as capital reserve, without routing the same through OCI.

After initial recognition, goodwill is measured at cost less any accumulated impairment losses. For the purpose of impairment testing, goodwill acquired in a business combination is, from the acquisition date, allocated to each of the Group's cash-generating units that are expected to benefit from the combination, irrespective of whether other assets or liabilities of the acquiree are assigned to those units.

A cash generating unit to which goodwill has been allocated is tested for impairment annually, or more frequently when there is an indication that the unit may be impaired. If the recoverable amount of the cash generating unit is less than its carrying amount, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then to the other assets of the unit pro rata based on the carrying amount of each asset in the unit.

Any impairment loss for goodwill is recognised in profit or loss. An impairment loss recognised for goodwill is not reversed in subsequent periods. Where goodwill has been allocated to a cashgenerating unit and part of the operation within that unit is disposed of, the goodwill associated with the disposed operation is included in the carrying amount of the operation when determining the gain or loss on disposal. Goodwill disposed in these circumstances is measured based on the relative values of the disposed operation and the portion of the cash-generating unit retained.

3.04 Asset acquisition

The acquisition of an asset or a group of assets that does not constitute a business. In such cases the acquirer shall identify and recognise the individual identifiable asset acquired including those assets that meet the definition of, and recognition criteria for, intangible asset in IND AS 38, Intangible Assets and Liabilities assumed. The cost of the group is allocated to the individual identifiable assets and liabilities on the basis of their relative fair values at the date of purchase. Such a transaction or event does not give rise to goodwill.

3.05 Fair value measurement

The Project SPV Group measures financial instruments, (refer note 32) at fair value at each balance sheet date.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:

- In the principal market for the asset or liability, or
- In the absence of a principal market, in the most advantageous market for the asset or liability

The principal or the most advantageous market must be accessible by the Project SPV Group.

The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The Project SPV Group uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

Level 1 - Quoted (unadjusted) market prices in active markets for identical assets or liabilities

Level 2- Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable

Level 3 -Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable

For assets and liabilities that are recognised in the financial statements on a recurring basis, the Project SPV Group determines whether transfers have occurred between levels in the hierarchy by re-assessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

The Project SPV Group's Management determines the policies and procedures for both recurring fair value measurement, such as derivative instruments and unquoted financial assets measured at fair value, and for non-recurring measurement, such as assets held for distribution in discontinued operations.

At each reporting date, the Management analyses the movements in the values of assets and liabilities which are required to be remeasured or re-assessed as per the Project SPV Group's accounting policies. For this analysis, the Management verifies the major inputs applied in the latest valuation by agreeing the information in the valuation computation to contracts and other relevant documents.

The management also compares the change in the fair value of each asset and liability with relevant external sources to determine whether the change is reasonable.

On an annual basis, the Management presents the valuation results to the Investment Manager and the Project SPV Group's independent auditors. This includes a discussion of the major assumptions used in the valuations.

For the purpose of fair value disclosures, the Project SPV Group has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy as explained above.

This note summarises accounting policy for fair value. Other fair value related disclosures are given in the relevant notes.

Disclosures for valuation methods, significant estimates and assumptions (note 3.02)

Financial instruments (including those carried at amortised cost) (note 5,6,7,16,17,18,32)

Quantative disclosure of fair value measurement hierarchy (note 33)

3.06 **Revenue recognition**

The Project SPV Group has applied the following accounting policy for revenue recognition:

Revenue from contracts with customers:

The Project SPV Group recognises revenue from contracts with customers based on a five step model as set out in Ind AS 115:

Step 1. Identify the contract(s) with a customer: A contract is defined as an agreement between two or more parties that creates enforceable rights and obligations and sets out the criteria for every contract that must be met.

Step 2. Identify the performance obligations in the contract: A performance obligation is a promise in a contract with a customer to transfer a good or service to the customer.

Step 3. Determine the transaction price: The transaction price is the amount of consideration to which the Company expects to be entitled in exchange for transferring promised goods or services to a customer, excluding amounts collected on behalf of third parties.

Step 4. Allocate the transaction price to the performance obligations in the contract: For a contract that has more than one performance obligation, the Company will allocate the transaction price to each performance obligation in an amount that depicts the amount of consideration to which the Company expects to be entitled in exchange for satisfying each performance obligation.

Step 5. Recognise revenue when (or as) the entity satisfies a performance obligation.

The Project SPV Group satisfies a performance obligation and recognises revenue over time, if one of the following criteria is met:

1. The customer simultaneously receives and consumes the benefits provided by the Project SPV Group's performance as the Project SPV Group performs; or
2. The Project SPV Group's performance creates or enhances an asset that the customer controls as the asset is created or enhanced; or
3. The Project SPV Group's performance does not create an asset with an alternative use to the Project SPV Group and the entity has an enforceable right to payment for performance completed to date.

Contract revenue

Contract revenue associated with the utility shifting incidental to construction of road are recognized as revenue by reference to the stage of completion of the projects at the balance sheet date. The stage of completion of project is determined by the proportion that contract cost incurred for work performed up to the balance sheet date bears to the estimated total contract costs.

Project SPVs operations involve levying of GST on the construction work. Goods and Service tax is not received by the project SPVs on its own account, rather, it is tax collected on value added to the commodity by the seller on behalf of the government. Accordingly, it is excluded from revenue.

Income from the concession arrangements earned under the intangible asset model consists of the (i) fair value of contract revenue, which is deemed to be fair value of consideration transferred to acquire the asset; and (ii) payments actually received from the users. The intangible asset is amortised over its expected useful life in a way that reflects the pattern in which the asset's economic benefits are consumed by the Project SPV Group, starting from the date when the right to operate starts to be used. Based on these principles, the intangible asset is amortised in line with the actual usage of the specific public utility facility, with a maximum of the duration of the concession.

Claim Revenue

Claims are recognised as revenue as per relevant terms of concession agreement with the authority when it is probable that such claims will be accepted by the customer that can be measured reliably.

Income from toll contracts

The income from Toll Contracts on BOT basis are recognised on actual collection of toll revenue (net of Premium and revenue share payable to NHAI) as per Concession Agreement. Revenue from electronic toll collection is recognised on accrual basis.

Interest income

For all financial assets measured either at amortised cost or at fair value through other comprehensive income, interest income is recorded using the effective interest rate (EIR). EIR is the rate that exactly discounts the estimated future cash payments or receipts over the expected life of the financial instrument or a shorter period, where appropriate, to the gross carrying amount of the financial asset or to the amortised cost of a financial liability. When calculating the effective interest rate, the Project SPV Group estimates the expected cash flows by considering all the contractual terms of the financial instrument (for example, prepayment, extension, call and similar options) but does not consider the expected credit losses. Interest income is included in finance income in the statement of profit and loss.

Dividends

Revenue is recognised when the Project SPV Group's right to receive the payment is established, which is generally when shareholders approve the dividend.

Trade receivables

A receivable represents the Project SPV Group's right to an amount of consideration that is unconditional i.e. only the passage of time is required before payment of consideration is due.

3.07 **Taxes**

Current income tax

Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities in accordance the Income Tax Act, 1961. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted at the reporting date in the country where the Company operates and generates taxable income.

Current income tax relating to items recognised outside profit or loss (either in other comprehensive income or in equity). Current tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity. Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

Deferred tax

Deferred tax is provided using the liability method on temporary differences between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date.

Deferred tax liabilities are recognised for all taxable temporary differences, except:

- When the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and at the time of the transaction, affects neither the accounting profit nor taxable profit or loss.

- In respect of taxable temporary differences associated with investments in subsidiaries, when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future

Deferred tax assets are recognised for all deductible temporary differences, the carry forward of unused tax credits and any unused tax losses. Deferred tax assets are recognised to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilised, except:

- When the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction affects neither the accounting profit nor taxable profit or loss.

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised. Unrecognised deferred tax assets are re-assessed at each reporting date and are recognised to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax relating to items recognised outside statement of profit and loss is recognised outside statement of profit and loss (either in other comprehensive income or in equity). Deferred tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity .

Deferred tax assets and deferred tax liabilities are offset if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

Tax benefits acquired as part of a business combination, but not satisfying the criteria for separate recognition at that date, are recognised subsequently if new information about facts and circumstances change. Acquired deferred tax benefits recognised within the measurement period reduce goodwill related to that acquisition if they result from new information obtained about facts and circumstances existing at the acquisition date. If the carrying amount of goodwill is zero, any remaining deferred tax benefits are recognised in OCI/ capital reserve depending on the principle explained for bargain purchase gains. All other acquired tax benefits realised are recognised in the consolidated statement of profit and loss. Deferred tax is recognised in consolidated statement of profit and loss on the consolidated adjustments.

Minimum Alternate Tax (MAT)

Minimum Alternate Tax (MAT) paid as per Indian Income Tax Act, 1961 is in the nature of unused tax credit which can be carried forward and utilised when the Project SPV Group will pay normal income tax during the specified period. Being DTA tax credit is recognised to the extent that it is probable that the unused tax credit can be utilised in the specified future period. The net amount of tax recoverable from, or payable to, the taxation authority is included as part of receivables or payables in the balance sheet.

Goods and service tax paid on acquisition of assets or on incurring expenses

Expenses and assets are recognised net of the amount of goods and service tax paid, except:

When the tax incurred on a purchase of assets or services is not recoverable from the tax authority, in which case, the tax paid is recognised as part of the cost of acquisition of the asset or as part of the expense item, as applicable.

When receivables and payables are stated with the amount of tax included. The net amount of tax recoverable from, or payable to, the tax authority is included as part of receivables or payables in the balance sheet.

3.08 **Property, plant and equipment**

Property, plant and equipment are stated at cost, less accumulated depreciation and impairment losses if any. Cost comprises the purchase price and any attributable cost of bringing the asset to its working condition for its intended use.Any trade discount or rebates are deducted in arriving at the purchase price.

Depreciation is calculated on written down value method (WDV) using the useful lives as prescribed under the Schedule II to the Companies Act, 2013 or re-assessed by the Project SPV Group based on technical evaluation. The Project SPV Group has estimated the following useful lives for its tangible fixed assets:

Asset class	Useful life
Building	30 years*
Office equipment	5 years
Computers (including server)	3 to 6 years
Furniture & fixtures	10 years

* The useful life of building has been calculated by management as per their technical estimate.

3.09 **Intangible assets**

The Project SPV Group exercised first time adoption under Ind AS 101 and has elected to continue with the carrying value of its “Toll Collection Rights” (Intangible Assets) including corresponding obligation, as recognised in the financial statements as at the date of transition April 1, 2016 measured as per the Previous GAAP and uses that as its deemed cost as at date of transition.

Toll collection rights are stated at cost, less accumulated amortisation , impairment losses and grant from government. Cost includes:

a) For acquired Toll Collection Rights - Upfront payments towards acquisition and incidental expenses related thereto.

b) Toll Collection Rights awarded by the grantor against construction service rendered by the Project SPV Group on BOT / DBFOT basis - Direct and indirect expenses on construction of roads, bridges, culverts, infrastructure and other assets at the toll plazas.

c) Toll Collection Rights in lieu of premium - Undiscounted premium obligation over the concession period.

Amortisation

Toll Collection Rights are amortised over the period of concession, using revenue based amortisation as prescribed in Ind As-36. Under this method, the carrying value of the rights is amortised in the proportion of actual toll revenue for the period to projected revenue for the balance toll period, to reflect the pattern in which the assets economic benefits will be consumed. At each balance sheet date, the projected revenue for the balance toll period is reviewed by the management. If there is any change in the projected revenue from previous estimates, the amortisation of toll collection rights is changed prospectively to reflect any changes in the estimates.

Intangible assets under development

Expenditure related to and incurred during implementation of project are included under “Intangible Assets under Development”. The same will be transferred to the respective intangible assets on completion of project.

3.10 **Borrowing costs**

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of the asset. All other borrowing costs are expensed in the period in which they occur. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds. Borrowing cost also includes exchange differences between the foreign currency borrowing and the functional currency borrowing to the extent regarded as an adjustment to the borrowing costs.

3.11 **Provisions**

Provisions are recognised when the Project SPV Group has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. When the Project SPV Group expects some or all of a provision to be reimbursed, for example, under an insurance contract, the reimbursement is recognised as a separate asset, but only when the reimbursement is virtually certain. The expense relating to a provision is presented in the statement of profit and loss net of any reimbursement.

If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, when appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost. Provisions are reviewed at each balance sheet date and adjusted to reflect the current best estimates.

3.12 **Resurfacing expenses**

As per the Concession Agreements, the Project SPV Group is obligated to carry out resurfacing of the roads under concession. Provision required for resurfacing expenses are measured at the present value of the expenditure required to settle the present obligation at the end of reporting period. The discount rate used to determine the present value is a pre-tax rate that reflects risks specific to the liability. The increase in the provision due to the passage of time is recognised as finance cost. Provision for the planned expenditure is made for the period upto end of the period for which periodic maintenance is required, out of the total entitiled period.The same is stated in the consolidated statement of profit and loss in accordance with Ind AS 37 "Provisions, Contingent Liabilities and Contingent Assets."

3.13 **Contingent liability and Contingent assets**

A contingent liability is a possible obligation that arises from past events whose existence will be confirmed by the occurrence or non-occurrence of one or more uncertain future events beyond the control of the Project SPV Group or a present obligation that is not recognised because it is not probable that an outflow of resources will be required to settle the obligation. A contingent liability also arises in extremely rare cases where there is a liability that cannot be recognised because it cannot be measured reliably. The Project SPV Group does not recognise a contingent liability but discloses its existence in the financial statements.

A contingent assets is not recognised unless it becomes virtually certain that an inflow of economic benefits will arise. When an inflow of economic benefits is probable, contingent assets are disclosed in the financial statements.

Contingent liabilities and contingent assets are reviewed at each balance sheet date.

3.14 **Financial instruments**

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

Financial assets

Initial recognition and measurement

All financial assets are recognised initially at fair value plus, in the case of financial assets not recorded at fair value through statement of profit and loss, transaction costs that are attributable to the acquisition of the financial asset.

On initial recognistion, a financial asset is classified as measured of
- amortised cost
- FVOCI - Debt instruments
- FVOCI - equity instruments
- FVTPL

Financial assets are not reclassified subsequent to their initial recognition, except if and in the year, the Project SPV Group changes its business model for managing financial assets.

Debt instruments at amortised cost

A 'debt instrument' is measured at the amortised cost if both the following conditions are met:
- The asset is held within a business model whose objective is to hold assets for collecting contractual cash flows, and
- Contractual terms of the asset give rise on specified dates to cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

After initial measurement, such financial assets are subsequently measured at amortised cost using the effective interest rate (EIR) method. Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included in finance income in the statement of profit and loss. The losses arising from impairment are recognised in the statement of profit and loss.

Debt instrument at FVTOCI

A 'debt instrument' is classified as at the FVTOCI if both of the following criteria are met:
- The objective of the business model is achieved both by collecting contractual cash flows and selling the financial assets, and
- The asset's contractual cash flows represent SPPI.

Debt instruments included within the FVTOCI category are measured initially as well as at each reporting date at fair value. Fair value movements are recognized in the other comprehensive income (OCI). However, the Project SPV Group recognizes interest income, impairment losses and reversals and foreign exchange gain or loss in the statement of profit and loss. On derecognition of the asset, cumulative gain or loss previously recognised in OCI is reclassified from the equity to Statement of profit and loss.Interest earned whilst holding FVTOCI debt instrument is reported as interest income using the EIR method.

Debt instrument at FVTPL

FVTPL is a residual category for debt instruments. Any debt instrument, which does not meet the criteria for categorization as at amortized cost or as at FVTOCI, is classified as at FVTPL.

In addition, the Project SPV Group may elect to designate a debt instrument, which otherwise meets amortized cost or FVTOCI criteria, as at FVTPL. However, such election is allowed only if doing so reduces or eliminates a measurement or recognition inconsistency (referred to as 'accounting mismatch'). The Project SPV Group has designated certain debt instrument as at FVTPL.

Debt instruments included within the FVTPL category are measured at fair value with all changes recognized in the Statement of profit and loss.

Equity investments

All equity investments in scope of Ind AS 109 are measured at fair value. Equity instruments which are held for trading are classified as at FVTPL. For all other equity instruments, the Project SPV Group may make an irrevocable election to present in other comprehensive income subsequent changes in the fair value. The Project SPV Group makes such election on an instrument-byinstrument basis. The classification is made on initial recognition and is irrevocable.

If the Project SPV Group decides to classify an equity instrument as at FVTOCI, then all fair value changes on the instrument, excluding dividends, are recognized in the OCI. There is no recycling of the amounts from OCI to P&L, even on sale of investment. However, the Project SPV Group may transfer the cumulative gain or loss within equity.

Equity instruments included within the FVTPL category are measured at fair value with all changes recognized in the Statement of profit and loss.

Derecognition

A financial asset (or, where applicable, a part of a financial asset or part of a Project SPV Group of similar financial assets) is primarily derecognised (i.e. removed from the Project SPV Group's consolidated balance sheet) when:

- The rights to receive cash flows from the asset has expired, or
-The Project SPV Group has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Project SPV Group has transferred substantially all the risks and rewards of the asset, or (b) the Project SPV Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Project SPV Group has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if and to what extent it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all of the risks and rewards of the asset, nor transferred control of the asset, the Project SPV Group continues to recognise the transferred asset to the extent of the Project SPV Group's continuing involvement. In that case, the Project SPV Group also recognises an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Project SPV Group has retained.

Continuing involvement that takes the form of a guarantee over the transferred asset is measured at the lower of the original carrying amount of the asset and the maximum amount of consideration that the Project SPV Group could be required to repay.

Impairment of financial assets

In accordance with Ind AS 109, the Project SPV Group applies expected credit loss (ECL) model for measurement and recognition of impairment loss on the following financial assets and credit risk exposure:

-Financial assets that are debt instruments, and are measured at amortised cost e.g., loans, debt securities, deposits, trade receivables and bank balance
-Financial assets that are debt instruments and are measured as at FVTOCI
-Lease receivables under Ind AS 17
-Trade receivables or any contractual right to receive cash or another financial asset that result from transactions that are within the scope of Ind AS 18 (referred to as contractual revenue receivables' in these financial statements)

-Loan commitments which are not measured as at FVTPL
-Financial guarantee contracts which are not measured as at FVTPL

The Project SPV Group follows 'simplified approach' for recognition of impairment loss allowance on:
-Trade receivables; and
-Other receivables

The application of simplified approach does not require the Project SPV Group to track changes in credit risk. Rather, it recognises impairment loss allowance based on lifetime ECLs at each reporting date, right from its initial recognition.

For recognition of impairment loss on other financial assets and risk exposure, the Project SPV Group determines that whether there has been a significant increase in the credit risk since initial recognition. If credit risk has not increased significantly, 12-month ECL is used to provide for impairment loss. However, if credit risk has increased significantly, lifetime ECL is used. If, in a subsequent period, credit quality of the instrument improves such that there is no longer a significant increase in credit risk since initial recognition, then the entity reverts to recognising impairment loss allowance based on 12-month ECL.

Lifetime ECL are the expected credit losses resulting from all possible default events over the expected life of a financial instrument. The 12-month ECL is a portion of the lifetime ECL which results from default events that are possible within 12 months after the reporting date.

ECL is the difference between all contractual cash flows that are due to the Project SPV Group in accordance with the contract and all the cash flows that the entity expects to receive (i.e., all cash shortfalls), discounted at the original EIR. When estimating the cash flows, an entity is required to consider:

-All contractual terms of the financial instrument (including prepayment, extension, call and similar options) over the expected life of the financial instrument. However, in rare cases when the expected life of the financial instrument cannot be estimated reliably, then the entity is required to use the remaining contractual term of the financial instrument. -

-Cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms
-Financial assets measured as at amortised cost, contractual revenue receivables and lease receivables: ECL is presented as an allowance, i.e., as an integral part of the measurement of those assets in the balance sheet. The allowance reduces the net carrying amount. Until the asset meets write-off criteria, the Project SPV Group does not reduce impairment allowance from the gross carrying amount.

Financial liabilities

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through Statement of profit and loss, loans and borrowings, or payables, as appropriate.

All financial liabilities are recognised initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.
The Project SPV Group's financial liabilities include trade and other payables, loans and borrowings including bank overdrafts and derivative financial instruments.

Subsequent measurement

The measurement of financial liabilities depends on their classification, as described below:

Financial liabilities at fair value through Statement of profit and loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through statement of profit and loss. Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Project SPV Group that are not designated as hedging instruments in hedge relationships as defined by Ind AS 109.

Gains or losses on liabilities held for trading are recognised in the consolidated statement of profit and loss.

Loans and borrowings

This is the category most relevant to the Project SPV Group. After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortised cost using the EIR method. Gains and losses are recognised in statement of profit and loss when the liabilities are derecognised as well as through the EIR amortisation process.

Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included as finance costs in the statement of profit and loss.

This category generally applies to borrowings. For more information refer note 16.

Derecognition

A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognised in the consolidated statement of profit and loss.

Offsetting of financial instruments

Financial assets and financial liabilities are offset and the net amount is reported in the standalone balance sheet if there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, to realise the assets and settle the liabilities simultaneously.

3.15 **Cash and cash equivalents**

Cash and cash equivalent in the balance sheet comprises of cash at banks and on hand and short-term deposits with an original maturity of three months or less, which are subject to an insignificant risk of changes in value.

For the purpose of the statement of cash flows, cash and cash equivalents consist of cash and short-term deposits, as defined above, as they are considered an integral part of the Project SPV Group's cash management.

3.16 **Cash dividend to equity holders of the Project SPV Group**

The Project SPV Group recognises a liability to make cash or non-cash distributions to equity holders of the parent when the distribution is authorised and the distribution is no longer at the discretion of the Project SPV Group. As per the corporate laws in India, a distribution is authorised when it is approved by the shareholders. A corresponding amount is recognised directly in equity.

3.17 **Impairment of non-financial assets**

The Project SPV Group assesses, at each reporting date, whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Project SPV Group estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs of disposal and its value in use. Recoverable amount is determined for an individual asset. unless the asset does not generate cash inflows that are largely independent of those from other assets or Project SPV Group's of assets. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs of disposal, recent market transactions are taken into account. If no such transactions can be identified, an appropriate valuation model is used. These calculations are corroborated by valuation multiples, quoted share prices for publicly traded companies or other available fair value indicators.

The Project SPV Group bases its impairment calculation on detailed budgets and forecast calculations, which are prepared separately for each of the Project SPV Group's CGUs to which the individual assets are allocated. These budgets and forecast calculations generally cover a period of five years. For longer periods, a long-term growth rate is calculated and applied to project future cash flows after the fifth year. To estimate cash flow projections beyond periods covered by the most recent budgets/forecasts, the Project SPV Group extrapolates cash flow projections in the budget using a steady or declining growth rate for subsequent years, unless an increasing rate can be justified. In any case, this growth rate does not exceed the long-term average growth rate for the products, industries, or country or countries in which the entity operates, or for the market in which the asset is used.

For assets excluding goodwill, an assessment is made at each reporting date to determine whether there is an indication that previously recognised impairment losses no longer exist or have decreased. If such indication exists, the Project SPV Group estimates the asset's or CGU's recoverable amount. A previously recognised impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognised. The reversal is limited so that the carrying amount of the asset does not exceed its recoverable amount, nor exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognised for the asset in prior years. Such reversal is recognised in the statement of profit and loss.

Goodwill is tested for impairment annually as at 31st March and when circumstances indicate that the carrying value may be impaired.

Impairment is determined for goodwill by assessing the recoverable amount of each CGU (or Project SPV Group of CGUs) to which the goodwill relates. When the recoverable amount of the CGU is less than its carrying amount, an impairment loss is recognised. Impairment losses relating to goodwill cannot be reversed in future periods.

Intangible assets with indefinite useful lives are tested for impairment annually as at 31st March at the CGU level, as appropriate, and when circumstances indicate that the carrying value may be impaired.

3.18 **Earnings per unit**

Basic earnings per unit are calculated by dividing the net profit or loss for the period attributable to unitholders by the weighted average number of units outstanding during the period. For the purpose of calculating diluted earnings per unit, the net profit or loss for the period attributable to unitholders and the weighted average number of units outstanding during the period are adjusted for the effects of all dilutive potential units.

3.19 **Recent pronouncements**

Ministry of Corporate Affairs ("MCA") notifies new standards or amendments to the existing standards under Companies (Indian Accounting Standards) Rules as issued from time to time. For the period ended September 30, 2024, MCA has not notified any new standards or amendments to the existing standards applicable to the Group.

IRB Infrastructure Trust
Notes to Unaudited Interim Consolidated Financial Information as at September 30, 2024
Note 4.1 : Property, Plant and Equipment (Rs. in million)

	Building	Office Equipments	Computer	Furniture and Fixture	Total
Cost					
As at March 31, 2023 (Audited)	**16.09**	**1.31**	**0.30**	**0.39**	**18.10**
Additions	-	-	-	-	-
Deletion/transfer	-	-	-	-	-
As at March 31, 2024 (Audited)	**16.09**	**1.31**	**0.30**	**0.39**	**18.10**
Additions	-	-	-	-	-
Deletion/transfer	-	-	-	-	-
As at September 30, 2024 (Unaudited)	**16.09**	**1.31**	**0.30**	**0.39**	**18.10**
Depreciation					
As at March 31, 2023 (Audited)	**8.60**	**1.23**	**0.29**	**0.39**	**10.51**
Additions	0.94	0.01	-	0.01	0.95
Deletion/transfer	-	-	-	-	-
As at March 31, 2024 (Audited)	**9.54**	**1.24**	**0.29**	**0.39**	**11.47**
Additions	0.38	0.00	-	0.00	0.38
Deletion/transfer	-	-	-	-	-
As at September 30, 2024 (Unaudited)	**9.92**	**1.24**	**0.29**	**0.39**	**11.84**
Net Book value					
As at March 31, 2024 (Audited)	**6.55**	**0.07**	**0.01**	**0.00**	**6.63**
As at September 30, 2024 (Unaudited)	**6.17**	**0.07**	**0.01**	**0.00**	**6.25**

Note 4.2 : Other Intangible Assets and Intangible Assets under development

Intangible Assets (Rs. in million)

	Toll Collection Rights	Total
Cost		
As at March 31, 2023 (Audited)	**2,37,527.40**	**2,37,527.40**
Additions	92,261.06	92,261.06
Deletion/transfer	-	-
As at March 31, 2024 (Audited)	**3,29,788.46**	**3,29,788.46**
Additions	69,485.50	69,485.50
Deletion/transfer	-	-
As at September 30, 2024 (Unaudited)	**3,99,273.96**	**3,99,273.96**
Amortisation		
As at March 31, 2023 (Audited)	**9,109.10**	**9,109.10**
Additions	3,648.04	3,648.04
Deletion/transfer	-	-
As at March 31, 2024 (Audited)	**12,757.14**	**12,757.14**
Additions	2,505.73	2,505.73
Deletion/transfer	-	-
As at September 30, 2024 (Unaudited)	**15,262.87**	**15,262.87**
Net Book value		
As at March 31, 2024 (Audited)	**3,17,031.32**	**3,17,031.32**
As at September 30, 2024 (Unaudited)	**3,84,011.09**	**3,84,011.09**

Intangible assets under development	(Rs. in million)
As at March 31, 2023 (Audited)	**2,421.67**
Additions	79,809.18
Deletion/transfer	(17,414.37)
As at March 31, 2024 (Audited)	**64,816.48**
Additions	8,686.36
Deletion/transfer	(69,485.50)
As at September 30, 2024 (Unaudited)	**4,017.34**

Note:
a. Property Plant & equipments and Intangible assets given as security
b. Property Plant and Equipments and Intangible assets are subject to first charge to secured long-term borrowings from the lenders of the Trust.

(Rs. in million)

	Face value	No. of Units	September 30, 2024 (Unaudited)	No. of Units	March 31, 2024 (Audited)
Financial Assets					
Note 5: Investments					
Investments in Mutual Funds					
Quoted (Fair Value Through Profit or Loss (FVTPL))					
Canara Robeco Liquid Fund - Direct Plan - Growth	1,000	1,06,128.11	318.29	31,932.12	92.40
Canara Robeco Overnight Fund - Direct Plan - Growth	1,000	89,820.04	114.82	-	-
LIC MF Liquid Fund - Direct Plan - Growth	1,000	22,897.26	104.07	8,064.54	10.01
LIC MF Overnight Fund - Direct Plan - Growth	1,000	23,404.11	30.00	-	-
ABSL Liquid Fund - Direct Plan - Growth	100	7,42,795.64	300.09	2,22,851.68	86.84
ABSL Liquid Fund - Regular Plan - Growth	100	87,799.41	35.08	-	-
ABSL Overnight Fund - Regular Plan - Growth	1,000	19,210.15	25.52	-	-
OGRD - Union Overnight Fund Growth - Direct	1,000	44,550.84	58.01	-	-
LGRD - Union Liquid Fund Growth - Direct	1,000	1,28,996.77	311.34	44,797.38	104.31
HSBC Liquid Fund Direct Growth	1,000	57,246.13	142.75	34,375.85	82.71
Bank of India Liquid Fund - Direct Growth	1,000	22,486.31	64.81	9,954.90	27.68
Bank of India Overnight Fund - Direct Growth	1,000	9,173.92	11.51	-	-
SBI Liquid Fund - Direct Growth	1,000	1,46,217.24	572.56	2,96,120.25	1119.12
SBI Overnight Fund - Direct Growth	1,000	11,262.16	45.31	-	-
Total			**2,134.16**		**1,523.07**
Aggregate book value of quoted investments			**2,139.50**		**1,512.65**
Market value of quoted investments			**2,134.16**		**1,523.07**

(Rs. in million)

	September 30, 2024 (Unaudited)	March 31, 2024 (Audited)
Note 6: Trade receivable		
(Unsecured, considered good, unless otherwise stated)		
Current		
- Related parties (Refer note 47)	0.51	0.51
- Others	122.72	67.64
Total	**123.23**	**68.15**

The group has not identified any credit impairment loss as at September 30, 2024 and March 31, 2024.

Note 7: Other financial assets		
(Unsecured, considered good, unless otherwise stated)		
Non-current		
Bank guarantee margin receivable		
- Related parties (Refer note 47)	**-**	**30.95**
Bank deposits with maturity more than 12 months	-	4,347.80
Security and other deposits	107.43	29.35
Total	**107.43**	**4,408.10**
Current		
Interest accrued on fixed deposits	77.07	63.74
Interest receivable from others	-	10.63
BG margin receivable		
- Related parties (Refer note 47)	30.95	-
Retention money receivable		
- from NHAI & others	664.62	638.59
Other receivables		
- Related parties (Refer note 47)	48.66	0.01
- Other parties	128.73	99.85
Security and other deposits	10.99	10.99
Receivable from Government Authorities (NHAI)	1,419.33	1,522.49
Total	**2,380.35**	**2,346.30**

(Rs. in million)

	September 30, 2024 (Unaudited)	March 31, 2024 (Audited)
Note 8: Deferred tax assets / Deferred tax liabilities		
Deferred tax liabilities		
Difference in Depreciation and other differences in block of Property, Plant and equipment and Intangible assets as per tax books & financial books	2,098.90	351.58
Fair valuation on current investments	0.62	-
Deferred tax assets:		
Business Losses	-	70.69
Depreciation	787.83	-
Tax losses	944.77	-
Resurfacing Expenses	72.37	-
Deferred tax liabilities	**294.55**	**280.89**
Deferred tax assets		
Deferred Tax assets on Fair valuation#	2,587.29	2,229.78
Deferred Tax Assets	**2,587.29**	**2,229.78**

Standalone Trust is taxable at maximum rate of 42.74%, However, domestic tax rate applicable to the SPVs which is in the range of 25.168% to 29.12% basis the section as per Income Tax Act, 1961.

Note 9: Other assets		
Non-current		
Duties and taxes receivable	-	12.00
Total	**-**	**12.00**
Current		
Mobilisation advances		
- Related parties (Refer note 47)	476.95	100.74
Advance given to suppliers		
- Related parties (Refer note 47)	146.38	140.22
- Others	76.80	48.70
Duties and taxes receivable	59.70	53.71
Prepaid expenses	193.17	126.39
Contract assets	31.14	68.17
Total	**984.14**	**537.93**
Note 10: Cash and cash equivalents		
Cash on hand	19.50	19.36
Balances with banks:	-	-
- On current accounts	165.59	349.09
- On trust, retention and other escrow accounts*	358.32	477.22
- In deposit with original maturity of less than 3 months	-	760.00
Total	**543.41**	**1,605.67**

* First charge on above to the extent of amount payable as per the waterfall mechanism as defined in the Concession Agreement / Common Loan Agreement.

IRB Infrastructure Trust
Notes to Unaudited Interim Consolidated Financial Information as at September 30, 2024

(Rs. in million)

	September 30, 2024 (Unaudited)	March 31, 2024 (Audited)
Note 11: Bank balance other than cash and cash equivalent		
Debt service reserve account with banks/ earmarked balance**		
-Maturity more than 3 months but less than 12 month	3,633.96	3,403.90
- Maturity more than 12 months	2,692.34	190.00
Major maintenance reserve account with banks/ earmarked		
- Maturity more than 3 but less than 12 months	2,452.90	1,985.50
Margin money deposits against bank guarantees		
- Maturity more than 3 but less than 12 months	214.00	91.00
Deposits with banks		
- Maturity more than 12 months	2.00	2.00
Cash reserves	1,000.00	1,000.00
Total	**9,995.20**	**6,672.40**

Debt service reserve account/ major maintenance reserve account and trust, retention and other escrow accounts
Bank deposits are marked lien / pledged against the non current secured loan as per term loan agreement with the lender, further the lenders have first charge on trust, retention and other escrow accounts.

** The deposits to the extent of Rs. 6,326.30 million (March 31, 2024 : Rs. 7,237.20 million) maintained by the Project SPV Group with bank includes time deposits, which are held against Debt Service Reserve (DSR), are considered as current portion under the head "Other bank balances" since the same are encashable by the lenders in the event of default by the Project SPV Group, if any.

Current deposits are made for varying periods of between one day and three months, depending on the immediate cash requirements of the group and earn interest at the respective current deposit rates. Other time deposits earn interest at the rate of 3.00% to 7.93% p.a. (March 31, 2024: 5.50% to 7.75% p.a).

Refer note 16 for details of security against term loans.

Note 12: Current tax assets (net)		
Advance income tax (net of provision: Rs.140.36 million, March 31, 2024: Rs.5.25 million)	193.74	174.41
Total	**193.74**	**174.41**

IRB Infrastructure Trust
Notes to Unaudited Interim Consolidated Financial Information as at September 30, 2024
Note 13: Unit capital

(Rs. in million)

	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)
Unit capital*		
Authorised unit capital	1,35,091.22	1,35,091.22
At the beginning and end of the year/period	**1,35,091.22**	**1,35,091.22**

Issued, subscribed and paid up unit capital

	September 30, 2024	March 31, 2024
At the beginning of the year/period	1,35,091.22	87,929.33
Issued during the year/period	-	51,146.49
Distribution during the year/period	(445.48)	(3,984.60)
At the end of the year/period	**1,34,645.74**	**1,35,091.22**

Terms / rights attached to units
The Trust has only one class of units. Each unit represents an undivided beneficial interest in the Trust. Each holder of unit is entitled to one vote per unit.
The Unitholder has no equiutable or proprietary interest in the projects of the Trust and is not entitled to any share in the transfer of the projects (or any part thereof) or any interest in the projects (or any part thereof) of the Trust. A unitholder's right is limited to the right to require due administration of the Trust in accordance with the provisions of the Trust Deed and the Investment Management Agreement.

* Under the provisions of the InvIT Regulations, Trust is required to distribute to Unitholders not less than 90% of the net distributable cash flows of the Trust for each financial year. Accordingly, a portion of the Unit Capital contains a contractual obligation of the Trust to pay to its Unitholders cash distributions. Hence, the Unit Capital is a compound financial instrument which contains equity and liability components in accordance with Ind AS 32 - Financial Instruments: Presentation. However, in accordance with Chapter 3 and Chapter 4 of the SEBI circular, the Unit capital have been presented as "Equity" in order to comply with the requirements of Section H of Chapter 3 to the SEBI circular, dealing with the minimum presentation and disclosure requirements for key financial statements. Consistent with Unit Capital being classified as equity, the distributions to Unitholders is also presented in Statement of Changes in Unitholders' Equity when the distributions are approved by the Board of Directors of the Investment Manager.

Units are classified as equity. Incremental costs attributable to the issue of units are directly recorded in equity, net of tax.

Reconciliation of units outstanding at the beginning and at the end of the reporting period.
Units issued, subscribed and fully paid

	September 30, 2024 (Unaudited)		March 31, 2024 (Audited)	
	No. of units	Amount (Rs. in million)	No. of units	Amount (Rs. in million)
At the beginning of the year/period	1,11,36,93,265	1,35,091.22	87,92,93,265	87,929.33
Issued during the year/period (refer a & b below)	-	-	23,44,00,000	51,146.49
Distribution during the year/period (Refer note 37)	-	(445.48)	-	(3,984.60)
At the end of the year/period	**1,11,36,93,265**	**1,34,645.74**	**1,11,36,93,265**	**1,35,091.22**

a) The Trust offered rights issue of up to 9,20,00,000 units of the Trust (the 'units'), for cash at a price of Rs. 244.86 per unit (the 'issue price'), aggregating to Rs. 22,527.00 million to the eligible unitholders (as defined in the Letter of Offer) on a rights basis to Sponsor and GIC affiliates in the ratio of 51:49 held by them on the record date, being on March 12, 2024 (the 'Issue') in accordance with the InvIT Regulations. The Board of Directors of MMK Toll Road Private Limited ('Investment Manager'), considered and approved allotment of 9,20,00,000 rights units to the eligible unitholders of IRB Infrastructure Trust on March 21, 2024.
b) The Trust offered rights issue of up to 14,24,00,000 units of the Trust (the 'units'), for cash at a price of Rs. 200.98 per unit (the 'issue price'), aggregating to Rs. 28,619.50 million to the eligible unitholders (as defined in the Letter of Offer) on a rights basis to Sponsor and GIC affiliates in the ratio of 51:49 held by them on the record date, being on July 28, 2023 (the 'Issue') in accordance with the InvIT Regulations. The Board of Directors of MMK Toll Road Private Limited ('Investment Manager'), considered and approved allotment of 14,24,00,000 rights units to the eligible unitholders of IRB Infrastructure Trust on August 10, 2023.

Details of unitholders holding more than 5% units

Name of unitholder	September 30, 2024 (Unaudited)		March 31, 2024 (Audited)	
	No. of units	% of total unit capital	No. of units	% of total unit capital
IRB Infrastructure Developers Limited	56,82,39,840	51%	56,82,39,840	51%
Cintra InvIT Investments B.V.	26,72,00,000	24%	-	-
Anahera Investment Pte. Ltd.	7,44,23,181	7%	27,86,23,181	25%
Bricklayers Investment Pte. Ltd.	6,65,57,561	6%	6,65,57,561	6%
Chiswick Investment Pte. Ltd.	6,65,57,561	6%	6,65,57,561	6%
Stretford Investment Pte. Ltd.	5,27,57,561	5%	6,67,57,561	6%
Dagenham Investment Pte. Ltd.	1,79,57,561	2%	6,69,57,561	6%
Total	**1,11,36,93,265**		**1,11,36,93,265**	

(Rs. in million)

Details of Sponsor units	September 30, 2024 (Unaudited)		March 31, 2024 (Audited)	
IRB Infrastructure Developers Limited	56,82,39,840	51%	56,82,39,840	51%

Note: 14 Subordinate Debt

(Rs. in million)

	September 30, 2024 (Unaudited)	March 31, 2024 (Audited)
At the beginning of the year/period	16,916.65	-
Increase / (decrease) during the year/period	-	16,916.65
At the end of the year/period	**16,916.65**	**16,916.65**

Note: 15 Other Equity
Attributable to the unit holders

(Rs. in million)

	September 30, 2024 (Unaudited)	March 31, 2024 (Audited)
Retained earnings		
At the beginning of the year/period	(17,640.04)	(10,395.80)
Profit for the year/period	(2,868.86)	(6,650.38)
Unit Issue expenses	-	(144.31)
Interest distribution (Refer note 37)	(545.71)	(449.55)
Total retained earnings	**(21,054.62)**	**(17,640.04)**

(Rs. in million)

	September 30, 2024 (Unaudited)	March 31, 2024 (Audited)
Financial liabilities		
Note 16: Borrowings		
Non-current Borrowings		
Secured		
Term Loans		
Indian rupee loan from banks	1,50,315.60	1,45,510.79
Less: Current maturities expected to be settled within 12 months from balance sheet date	(1,352.53)	(787.41)
Sub Total (a)	**1,48,963.07**	**1,44,723.38**
Indian rupee loan from financial institutions	48,154.63	45,697.98
Less: Current maturities expected to be settled within 12 months from balance sheet date	(455.00)	(303.06)
Sub Total (b)	**47,699.63**	**45,394.92**
Non-convertible debentures	28,003.81	28,035.89
Less: Current maturities expected to be settled within 12 months from balance sheet date	(119.58)	(64.17)
Sub Total (c)	**27,884.23**	**27,971.72**
Less: Unamortised transaction cost (d)	(4,113.00)	(3,953.68)
Total non current borrowings (e=a+b+c+d)	**2,20,433.93**	**2,14,136.34**
Current Borrowings		
Current maturities of long-term borrowings		
- Indian rupee loan from banks	1,352.53	787.41
- Indian rupee loan from financial institutions	455.00	303.06
- Non-convertible debentures	119.58	64.17
Unsecured loan		
- Interest free from related parties (Refer note 47)	-	0.02
Interest accrued but not due on borrowings	13.12	24.27
Total current borrowings (f)	**1,940.23**	**1,178.93**
Total borrowings (e+f)	**2,22,374.16**	**2,15,315.27**
Aggregate secured loans	2,22,361.04	2,15,290.98
Aggregate unsecured loans	-	0.02

Borrowing includes terms loans from banks, financials institutions and secured Non-convertible debentures.

September 30, 2024: Rs. 2,26,474.04 million; March 31, 2024: Rs. 2,19,244.66 million; pertains to term loans taken by SPV's (Special Purpose Vehicles) & Trust for Project financing.

Rate of interest

Rate of interest on the Indian Rupee loan from banks and financial institutions varies from 8.60% to 10.65% p.a. (March 31, 2024: 7.75% to 10.65% p.a.) and are secured by pledge of shares of its subsidiaries and subservient charge on the current assets of the trust.

Secured redeemable Non-convertible debentures carries interest rates which varies from 8.65% - 8.95% p.a.

Nature of security

i) Secured by first charge on the movable/immovable asset by way of mortgage/hypothecation; first charge on all intangible assets, assignment of all receivables; book debts, loans and advances extended by the Borrower to SPVs and all rights and interest in project, both present and future, excluding the Project Assets of respective companies;

ii) Secured by first charge over all the equity shares, Preference shares, Debentures representing 100% of such securities.

iii) Secured by first charge on the Escrow Account, Debt Service Reserve Account and any other reserves and other bank accounts of the respective Companies.

iv) Unconditional and irrecovable corporate guarantee by each of the RG SPV's, in a form and manner satisfactory to the Finance parties (the "Corporate Guarantee").

v) An irrevocable and unconditional corporate guarantee from IRB Infrastructure Developers Limited to meet shortfall (if any) between debt due and termination payments received from Concessioning Authority in case of termination of Concession Agreement for any reason in case of Project SPV's.

vi) Pledge of securities of obligators created pursuant to the terms of loan Agreement held as common security for the benefit of Rupee lenders.

Repayment terms

The Non Convertible Debentures of YATL are redeemable at par on in August 2027 for Rs.12,150 million and Rs.3,000 million are repayable in structured monthly installments commencing from October 2027.

The Non Convertible Debentures of SYTL are redeemable at par on in September 2027 for Rs.4,910 million and Rs.1,000 million are repayable in structured monthly installments commencing from November 2027.

The Indian rupee loans from Banks, Financial Institutions, Non Convertible Debentures(other than above) are repayable in structured monthly/quarterly installments such that the total tenor does not exceed 19 years and repayable as per the repayment schedule specified in common loan agreement with the Lenders.

Note 17: Trade Payables

(Rs. in million)

	September 30, 2024 (Unaudited)	March 31, 2024 (Audited)
Current		
Total outstanding dues of micro enterprises and small enterprises	1.83	2.41
Total outstanding dues of creditors other than micro and small enterprises		
- Related parties (Refer note 47)	5,324.47	4,151.31
- Others	1,456.95	1,460.40
Total	**6,783.25**	**5,614.12**

(Rs. in million)

	September 30, 2024 (Unaudited)	March 31, 2024 (Audited)
Note 18: Other financial liabilities		
Non-current		
Retention money payable		
- Others	3.84	4.07
Other payable		
- related parties (Refer Note 47)	42,013.09	40,760.96
Total	**42,016.93**	**40,765.03**
Current		
Obligation for construction	140.75	178.54
Director sitting fees payable	0.83	1.24
Retention money payable		
- related parties (Refer Note 47)	916.88	946.54
- others	279.05	287.75
Deposit	1.16	1.18
Revenue share payable to NHAI	505.48	455.58
Other payables		
- related parties (Refer Note 47)	6.05	9.84
- others	-	2.93
Total	**1,850.20**	**1,883.60**
Note 19: Other current liabilities		
Advance from customer		
- others	41.63	78.68
Duties and taxes payable	45.83	157.31
Total	**87.46**	**235.99**
Note 20: Provisions		
Non-current		
Major maintenance expenses	1,251.53	1,336.98
Total	**1,251.53**	**1,336.98**
Current		
Major maintenance expenses	2,520.74	2,235.58
Total	**2,520.74**	**2,235.58**
The movement in provision for resurfacing expenses is as follows:		
Opening balance	**3,572.57**	**2,965.03**
Obligation on new toll projects	1,339.25	2,029.54
Utilised / reversed during the period/year	(1,139.55)	(1,422.00)
Closing balance	**3,772.27**	**3,572.57**

The above provisions are based on current best estimation of expenses that may be required to fulfill the resurfacing obligation as per the service concession agreement with regulatory authorities. It is expected that significant portion of the costs will be incurred over the period. The actual expense incurred may vary from the above. No reimbursements are expected from any sources against the above obligation.

(Rs. in million)

	Six months ended September 30, 2024 (Unaudited)	Six months ended September 30, 2023 (Unaudited)
Note 21 : Revenue From Operations		
Contract Revenue (road construction)	9,107.82	6,828.77
Income arising out of toll collection (gross)	18,477.29	12,151.18
Less: Revenue share to NHAI	(3,897.62)	(3,773.03)
Income arising out of toll collection (net)	14,579.67	8,378.15
Less: Revenue share to NHAI/HMDA - Fastag	(80.67)	(75.25)
Total	**23,606.82**	**15,131.67**
Note 22 : Other income		
Interest income on		
Bank deposits	373.03	208.45
Others	3.15	0.07
Dividend income on		
- Other investments (non-trade, current)	-	0.03
Profit on sale of investments (net)	85.02	36.32
Fair value gain on investments	(5.34)	3.95
Other non operating income	20.80	12.64
Total	**476.66**	**261.46**
	-	-
Note 23 : Operating expenses		
Contract expenses	8,851.24	6,632.05
Operation and maintenance expenses	1,155.04	502.27
Site and other direct expenses	63.87	39.98
Technical consultancy & supervision charges	28.59	23.89
Total	**10,098.74**	**7,198.20**
Note 24 : Finance costs		
Interest expense		
- Banks and financial institutions	8,855.33	4,188.58
- Debentures	1,225.97	1,447.84
Subtotal	**10,081.30**	**5,636.42**
Other borrowing cost		
-Interest unwinding on loan/retention money	24.42	24.42
-Interest unwinding of Trade Payable-Associates	-	187.67
-Unwinding of discount on provision of MMR	184.80	155.05
-Amortisation of transaction cost	170.55	92.61
-Other finance costs	17.85	21.45
Subtotal	**397.62**	**481.21**
Total	**10,478.92**	**6,117.63**
Note 25 : Depreciation and amortisation expenses		
Depreciation on property, plant and equipment (refer note 4)	0.38	0.48
Amortisation on intangible assets (refer note 4)	2,505.73	1,658.92
Total	**2,506.11**	**1,659.40**
Note 26 : Other expenses		
Rent	0.04	0.04
Rates & taxes	2.30	1.76
Membership & subscription fees	0.05	0.05
Printing & stationery	0.12	-
Security expenses	0.98	-
Corporate social responsibilities expenditure	-	-
Director sitting fees	2.17	1.24
Travelling & conveyance	0.96	1.71
Miscellaneous expenses	8.22	3.08
Bank charges	3.99	1.23
Total	**18.83**	**9.12**
Note 27 : Auditor's Remuneration		
As auditors:		
- Statutory audit fees	4.42	0.82
- Limited review fees	4.19	1.43
In other capacity:	-	-
- Other services (certification fees)	0.57	0.10
Reimbursement of expenses	0.22	0.10
Total	**9.40**	**2.45**
Note : The above values are inclusive of Goods & Service Tax (GST)		
Note 28 : Tax expenses		
Current tax	140.36	4.85
Deferred tax (credit) / charge	(343.86)	(207.32)
Total	**(203.50)**	**(202.46)**

IRB Infrastructure Trust
Notes to Unaudited Interim Consolidated Financial Information as at September 30, 2024

Note 29 : Contingent liabilities and Commitments
a. Leases
Rental expense recorded for short-term leases/ low-value lease was Rs.0.04 million (September 30, 2023: Rs.0.04 million)

b. Capital commitments

(Rs. in million)

	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)
Estimated value of contracts in capital account remaining to be executed	19,204.63	28,594.95

SPV's have entered into agreement for toll operations and management services with Sponsor and Subsidiary of Sponsor.

c. Contingent liabilities

(Rs. in million)

	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)
Contigent liabilities	-	-
Total	**-**	**-**

a) UTL, CGTL and KGTL have filed Writ petition with Hon'ble Rajasthan High Court with prayer to commence payment of Premium to National Highways Authority of India (NHAI) six months post actual completion of the project construction work. The Hon'ble High Court prima facie agreed with the contention of these companies and had provided interim relief from payment of premium. Vide judgement order dated 25th August, 2021, the Hon'ble High Court found merit in the contention of the companies and has directed the parties to resolve the dispute under Arbitration. The said matter is currently pending under Arbitration. (Refer Note 38 (b))

Note 30 : Trade payable

Disclosure relating to suppliers registred under MSMED Act based on the information available with the respective companies in the Group:

(Rs. in million)

Particulars	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)
(a) Amount remaining unpaid to any supplier as at the year end:		
Principal amount	1.83	2.41
Interest due thereon	-	-
Total	**1.83**	**2.41**
(b) Amount of interest paid by the group in terms of section 16 of the MSMED, along with the amount of the payment made to the supplier beyond the appointed day during the accounting period.	-	-
(c) Amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed day during the period) but without adding the interest specified under the MSMED, 2006	-	-
(d) Amount of interest accrued and remaining unpaid at the end of the accounting period	-	-
(e) The amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues as above are actually paid to the small enterprise for the purpose of disallowance as a deductible expenditure under section 23 of the MSMED Act, 2006	-	-

a) MSME ageing schedule as at

(Rs. in million)

Particulars	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)
MSME Undisputed Dues	-	-
Less than 1 year	1.83	2.41
1-2 Years	-	-
2-3 Years	-	-
More than 3 years	-	-
Total dues to micro and small enterprises as per MSMED Act, 2006	**1.83**	**2.41**

There are no disputed dues to micro and small enterprises as per MSMED Act, 2006. The amounts payable to MSME are not due for payments.

b) Ageing of creditors other than micro enterprises and small enterprises as at

(Rs. in million)

Particulars	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)
Undisputed Dues		
Unbilled Dues	3,918.97	2,833.79
Less than 1 year	1,688.63	1,847.87
1-2 Years	250.87	146.78
2-3 Years	141.53	491.75
More than 3 years	781.42	291.52
Total dues to creditors other than micro enterprises and small enterprises as at	**6,781.42**	**5,611.71**

There are no disputed dues to creditors other than micro enterprises and small enterprises.

IRB Infrastructure Trust
Notes to Unaudited Interim Consolidated Financial Information as at September 30, 2024

Note 31 : Intangible Asset under development ageing schedule

a) Intangible asset under development (Rs. in million)

Particulars	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)
Less than 1 year	4,017.34	64,522.14
1-2 Years	-	212.64
2-3 Years	-	54.59
More than 3 years	-	27.11
Total	**4,017.34**	**64,816.48**

Note 32 : Fair values (Rs. in million)

	Carrying amount		Fair Value	
	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)
Financial assets				
Financial assets measured at amortised cost				
Other Financial assets	2,487.78	6,754.40	2,487.78	6,754.40
Trade receivable	123.23	68.15	123.23	68.15
Cash and cash equivalents	543.41	1,605.67	543.41	1,605.67
Other Bank balances	9,995.20	6,672.40	9,995.20	6,672.40
Financial assets measured at fair value through statement of Profit & Loss				
Investments (Quoted)	2,139.50	1,512.65	2,134.16	1,523.07
Financial liabilities				
Financial liabilities measured at amortised cost				
Trade payables	6,783.25	5,614.12	6,783.25	5,614.12
Borrowings (net of transaction cost)	2,22,374.16	2,15,315.27	2,22,374.16	2,15,315.27
Other financial liabilities	1,854.04	1,887.67	1,854.04	1,887.67
Financial liabilities measured at fair value through statement of Profit & Loss				
Other financial liabilities	42,013.09	40,760.96	42,013.09	40,760.96

The management assessed that the fair value of other financials assets, trade receivables, cash and cash equivalents, other bank balance, trade payables, borrowings and other financial liabilities approximate their carrying amounts largely due to the short-term maturities of these instruments.

The fair value of the financial assets and liabilities is included at the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.

The discount for lack of marketability represents the amounts that the Group has determined that market participants would take into account when pricing the investments.

Note 33 : Fair values hierarchy

All financial instruments for which fair value is recognised or disclosed are categorised within the fair value hierarchy described as follows, based on the lowest level input that is significant to the fair value measurement as a whole.

Level 1: Quoted (unadjusted) price in active market for identical assets or liabilities

Level 2: Valuation technique for which the lowest level input that has a significant effect on the fair value measurement are observed, either directly or indirectly.

Level 3: Valuation technique for which the lowest level input has a significant effect on the fair value measurement is not based on observable market data.

Quantitative disclosures fair value measurement hierarchy for financial instruments as at September 30, 2024:

(Rs. in million)

	As at September 30, 2024 (Unaudited)	Fair value measurement at end of the reporting period using		
		Level 1	Level 2	Level 3
Assets				
Investments (Quoted)	2,134.16	2,134.16	-	-
Liabilities				
Other financial liabilities	42,013.09	-	-	42,013.09

Quantitative disclosures fair value measurement hierarchy for financial instruments as at March 31, 2024:

(Rs. in million)

	As at March 31, 2024 (Audited)	Fair value measurement at end of the reporting period using		
		Level 1	Level 2	Level 3
Assets				
Investments (Quoted)	1,523.07	1,523.07	-	-
Liabilities				
Other financial liabilities	40,760.96	-	-	40,760.96

There has been no transfer between Level 1, Level 2 & Level 3 during the period.

Sensitivity: Higher probability by 5% and lower discount rate by 0.5% will decrease the fair value by Rs. 4,491.25 million (31st March 2024 - Rs. 4,397.66 million). Lower probability by 5% and higher discount rate by 0.5% will increase fair value by Rs. 4,274.96 million (31st March 2024 - Rs. 4,171.25 million).

Fair value movement for Payable to IRB Infrastructure Developers Limited is as under:

(Rs. in million)

	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)
Opening balance as at 1st April 2024 (Previous period: 1st April 2023)	40,760.97	35,778.03
Add: Recognised during the period/ year	1,227.70	4,935.38
Less: Payment of deferred consideration	-	-
Add: Adjustment on account of interest unwinding	24.42	47.56
Closing balance of payable as on September 30, 2024 (Previous period: March 31, 2024)	**42,013.09**	**40,760.97**

Note 34 : Financial risk management objectives and policies

The Group's risk management policies are established to identify and analyse the risks faced by the Group, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Group's activities.

The Board of Directors have overall responsibility for the establishment and oversight of the Group's risk management framework.

In performing its operating, investing and financing activities, the Group is exposed to the Credit risk, Liquidity risk and Currency risk.

Market risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: interest rate risk, currency risk and other price risk, such as equity price risk and commodity risk. Financial instruments affected by market risk include loans and borrowings, deposits, FVTOCI investments and derivative financial instruments.

Interest rate risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Group's exposure to the risk of changes in market interest rates relates primarily to the Group's long-term debt obligations with floating interest rates.

The Group manages its interest rate risk by having a balanced portfolio of fixed and variable rate borrowings.

Interest rate sensitivity

The following table demonstrates the sensitivity to a reasonably possible change in interest rates on that portion of loans and borrowings affected, after excluding the credit exposure on fixed rate borrowing. With all other variables held constant, the Group's profit before tax is affected through the impact on floating rate borrowings, as follows:

(Rs. in million)

	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)
If the interest rate is 50 basis point higher (lower), the impact on profit or loss would be		
- Decreased by	992.35	956.04
- Increased by	(992.35)	(956.04)

Credit risk on financial assets

Credit risk is the risk that counterparty will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The Company is exposed to credit risk from its operating activities (primarily trade receivables) and from its financing activities, including deposits with banks and financial institutions, foreign exchange transactions and other financial instruments.

Financial instruments

Credit risk from balances with banks, trade receivables, loans and advances and financial institutions is managed by the Group's management in accordance with the Group's policy. Investments of surplus funds are made only with approved counterparties and within credit limits assigned to each counterparty. Counterparty credit limits are reviewed by the top management on an annual basis, and may be updated throughout the year subject to approval of the Company's board of directors. The limits are set to minimise the concentration of risks and therefore mitigate financial loss through counterparty's potential failure to make payments.

Trade receivables and Loans and Advances

Customer credit risk and Loans and advances is managed by each business unit subject to the Group's established policy, procedures and control relating to customer credit risk management. An impairment analysis is performed at each reporting date on an individual basis for major trade receivables and loan and advances. The Group has not identifed any impairment loss as at September 30, 2024.

The following table provides information about the ageing of gross carrying amount of trade recievables as at :

(Rs. in million)

Gross Carrying Amount	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)
Undisputed Trade recievables -considered good		
Less than 6 months	-	-
6 months - 1 year	68.04	12.96
1-2 Years	33.02	33.02
2-3 Years	-	0.51
More than 3 years	22.17	21.66
Total	**123.23**	**68.15**

Other financial assets

Credit risk from balances with banks and financial institutions is managed by the Group in accordance with the Group's policy. Investments of surplus funds are made only in highly marketable debt instruments with appropriate maturities to optimise the cash return on instruments while ensuring sufficient liquidity to meet its liabilities.

Liquidity Risk

Liquidity risk is the risk that the group may not be able to meet its present and future cash and collateral obligations without incurring unacceptable losses. The group's objective is to, at all times maintain optimum levels of liquidity to meet its cash and collateral requirements. The group closely monitors its liquidity position and deploys a robust cash management system. It maintains adequate sources of financing including debt from banks at an optimised cost.

The table below summarises the maturity profile of the Trust's financial liabilities based on contractual undiscounted payments:

(Rs. in million)

As at September 30, 2024 (Unaudited)	Carrying amount	Total	On Demand	Less than 1 year	1 to 5 years	> 5 years
Borrowings (Gross of unamortised transaction cost)	2,26,487.16	2,26,487.16	-	1,940.23	44,557.83	1,79,989.10
Other financial liabilities	43867.13	43,867.13	-	1,850.20	42,016.93	-
Trade payables	6783.25	6,783.25	-	6,783.25	-	-
Total	**2,77,137.54**	**2,77,137.54**	**-**	**10,573.68**	**86,574.76**	**1,79,989.10**

(Rs. in million)

As at March 31, 2024 (Audited)	Carrying amount	Total	On Demand	Less than 1 year	1 to 5 years	> 5 years
Borrowings (Gross of unamortised transaction cost)	2,19,268.95	2,19,268.95	0.02	1,178.91	37,618.23	1,80,471.79
Other financial liabilities	42,648.63	42,648.63	-	1,883.60	40,765.03	-
Trade payables	5,614.12	5,614.12	-	5,614.12	-	-
Total	**2,67,531.70**	**2,67,531.70**	**0.02**	**8,676.63**	**78,383.26**	**1,80,471.79**

Note 35 : Transfer of Projects

On October 12, 2023, the Trust has executed arrangement with the Sponsor for implementation of Samakhiyali Tollway Private Limited ('SPV') by the Trust and accordingly, the project is being executed by the SPV and the Trust.

On July 29, 2023, the Trust has executed arrangement with the Sponsor for implementation of IRB Golconda Expressway Private Limited ('SPV') by the Trust and accordingly, the project is being executed by the SPV and the Trust.

Note 36 : Capital Management

Capital includes equity attributable to the unitholders to ensure that it maintains an efficient capital structure and healthy capital ratios in order to support its business and maximise unitholder value. The Group manages its capital structure and makes adjustments to it, in light of changes in economic conditions or its business requirements. To maintain or adjust the capital structure, the Project SPV Group may adjust the dividend payment to unitholders, return capital to unitholders or issue new units. No changes were made in the objectives, policies or processes during the period ended September 30, 2024.

The Group monitors capital using a gearing ratio, which is net debt divided by total equity. Net debt is calculated as loans and borrowings less cash and cash equivalents.

(Rs. in million)

	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)
Borrowings (Refer Note 16)	2,22,374.16	2,15,315.27
Less: cash and cash equivalents (Note 10)	(543.41)	(1,605.67)
Net debt	**2,21,830.75**	**2,13,709.60**
Equity (Note 13, 14 and 15)	1,30,507.77	1,34,367.83
Total equity	**1,30,507.77**	**1,34,367.83**
Capital and net debt	**3,52,338.52**	**3,48,077.43**
Gearing ratio (%)	169.98%	159.05%

In order to achieve this overall objective, the Group's capital management, amongst other things, aims to ensure that it meets financial covenants attached to the interest-bearing loans and borrowings that define capital structure requirements. Breaches in meeting the financial covenants would permit the lenders to immediately call loans and borrowings. There have been no breaches in the financial covenants of any interest-bearing borrowings in the current period.

Note 37 : Distribution made

(Rs. in million)

	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)
Distributed during the period as :		
Interest	545.71	449.55
Return of Capital	445.48	3,984.60
	991.19	**4,434.15**

Note: The Board of Directors of the Investment Manager have declared 3rd Distribution of Rs.0.24 per unit towards interest in their meeting held on May 03, 2024. The Board of Directors of the Investment Manager have declared 4th Distribution of Rs.0.65 per unit which comprises of Rs.0.40 per unit as return of capital and Rs.0.25 per unit as interest in their meeting held on August 05, 2024.

Note 38 : Revenue share / premium payment to NHAI

(a) During the period ended September 30, 2024, the Group has paid/accrued Rs.3,897.62 millions (September 30, 2023, Rs.3,773.03 millions) as Revenue Share (Additional Concession Fee) to National Highways Authority of India ("NHAI") out of its toll collection in accordance with the Concession Agreements entered with NHAI. Income from Operations in the financials for the above periods is net off the above Revenue Share to NHAI.

(b) During the year ended March 31, 2017, AE Tollway Limited (AETL) has entered into a Concession agreement (CA) with NHAI for a period of 24 years. As per the terms of the CA, AETL has agreed to pay a premium in the form of "Additional Concession Fee" equal to Rs. 810.00 millions for the first year and each subsequent year such premium shall be determined by increasing the amount of premium in the respective year by an additional 5% as compared to the immediately preceding year. Management based on the legal opinion obtained and their evaluations of the terms of the CA, believes that such premium payable is restricted to the toll collection during the year and is in the form of revenue sharing arrangement. Accordingly, the premium payable for the year is accounted for as revenue share. The said treatment has been followed in case of KGTL, UTL, CGTL and IRBHM where premium payment has commenced. Further, in case of IRB Hapur Moradabad Tollway Limited, at the time of refinancing, NHAI granted approval for refinancing subject to payment of premium not paid of earlier years. The SPV has paid the premium (INR 214 Million) to NHAI under protest and the same would be reconciled based on the outcome of Rajasthan projects which are of similar nature.

Note 39 : Details of Project management fees and Investment management fees

i) Project Management Fees

In accordance with the Project Implementation Agreements, the fees and remuneration payable by the Project SPVs to the Project Manager has been worked out and agreed upon for the duration of current financial year, between the Project Manager, Investment Manager and the respective Project SPV, on an arm's length basis, after taking into account the extent of work to be done in respect of maintenance and other services to be provided by the Project Manager to such Project SPV.

ii) Investment Management Fees

Pursuant to a resolution dated July 4, 2023 of the Board of Directors of the Investment Manager and a resolution dated July 27, 2023 of the Unitholders, the Management Fees have been revised to be equivalent to 110% of the cost incurred by the Investment Manager in connection with providing investment management services to the Trust including routine administrative and operational expenses (exclusive of any out of pocket expenses, reimbursements and taxes).

Note 40 : Income Tax

Reconciliation of tax expenses and the accounting of profit multiplied by Indian Domestic tax rate for six months ended September 30, 2024 and September 30, 2023 are:

(Rs. in million)

	Six month ended September 30, 2024 (Unaudited)	Six month ended September 30, 2023 (Unaudited)
Profit Before tax	(3,072.27)	(2,923.71)
Tax rate	42.74%	42.74%
Expected income tax at India's statutory rate	(1,313.09)	(1,249.59)
Effect of unused tax losses and tax offsets not recognised as deferred tax assets	1,033.55	934.65
Difference in tax rate as per new regime as compared to normal tax rates	66.00	94.27
Additional Prior Period Taxes booked in current year for current tax of prior years	-	-
Adjustments recognised in the current year in relation to the Deferred tax of prior years	-	-
Others	10.04	18.21
Income tax expense reported in statement of Profit and loss	**(203.50)**	**(202.46)**
Effective Tax Rate	**6.62%**	**6.92%**

Deferred tax reflects the impact of current year timing differences between taxable income and accounting income for the year and reversal of timing differences of earlier years in accordance with Ind AS 12. Deferred tax is measured based on the tax rates and the tax laws enacted or substantively enacted at the balance sheet date. The carry forward of unabsorbed depreciation & business loss and specific Ind AS related adjustments resulted into net deferred tax assets. The deferred tax asset is not recognized by the Group since there is no probable certainty that the same will be utilized in future against the taxable profit.

No deferred tax assets have been recognised on losses incurred in SPV's(except for PDTPL) due to uncertainty of future taxable business income.

Note 41 : Earnings Per Unit (EPU)

EPU amounts are calculated by dividing the profit for the period attributable to unit holders by the weighted average number of units outstanding during the period.

The following reflects the income and share data used in the EPU computations:

(Rs. in million)

	Six month ended September 30, 2024 (Unaudited)	Six month ended September 30, 2023 (Unaudited)
Profit attributable to unit holders for earnings (Rs in million)	(2,868.77)	(2,721.24)
Weighted average number of Units for EPU	1,11,36,93,265	91,97,56,653
Earnings per unit		
Basic (in Rs.)	(2.58)	(2.96)
Diluted (in Rs.)	(2.58)	(2.96)

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Note 42 : Segment reporting

The Group is engaged in setting up, operating, and managing of toll road assets in India. Based on the guiding principle given in Ind AS 108 "Operating Segments" all the activities of the Group fall within a single operating segment. Further, the entire operations of the Trust are only in India and hence, disclosure of secondary/ geographical segment information does not arise. Accordingly, giving disclosures under Ind AS 108 does not arise.

Note 43 : Subsequent Events

1. The Board of Directors of the Investment Manager declared Distribution of Rs.0.57 per unit which comprises of Rs.0.53 per unit as return of capital and Rs.0.04 per unit as interest in their meeting held on October 28, 2024.
2. The Board of Directors of Investment Manager to IRB Infrastructure Trust on November 14, 2024, has approved a preliminary and non-binding offer relates to the transfer of the five assets namely IRB Westcoast Tollway Limited, Kaithal Tollway Limited, AE Tollway Limited, Kishangarh Gulabpura Tollway Limited and IRB Hapur Moradabad Tollway Limited held by the Trust to be issued to the IRB InvIT Fund ("Public InvIT"), a publicly offered and listed Infrastructure Investment Trust.

Note 44 : Previous year comparatives

Previous year’s figures has been reclassified / regrouped wherever necessary to confirm to current year classification. The impact of the same is not material to the user of the Consolidated financial statements.

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Note 45 : Disclosure pursuant to Appendix - A to Ind AS 115 - " Service Concession Arrangements" ('SCA')

(A) Disclosures with regard to Toll Collection Rights (Intangible Assets)

Sr. No.	Name of Concessionaire	Type of Concession	Start of concession period under concession agreement (Appointed date)	End of concession period under concession agreement	Period of concession since the appointed date	Construction completion date or expected construction completion date, as applicable
1	IRB Westcoast Tollway Limited	BOT	March 3, 2014	March 2, 2042	28 years	June 30, 2022
2	Solapur Yedeshi Tollway Limited	BOT	January 21, 2015	January 20, 2044	29 years	October 15, 2019
3	Yedeshi Aurangabad Tollway Limited	BOT	July 1, 2015	June 30, 2041	26 years	September 24, 2020
4	Kaithal Tollway Limited	BOT	July 15, 2015	July 14, 2042	27 years	March 29, 2019
5	AE Tollway Limited	BOT	August 1, 2016	July 31, 2040	24 years	November 24, 2020
6	Udaipur Tollway Limited	BOT	September 3, 2017	September 2, 2038	21 years from Appointed Date	June 01, 2021
7	CG Tollway Limited	BOT	November 4, 2017	November 3, 2037	20 years from Appointed Date	August 14, 2021
8	Kishangarh Gulabpura Tollway Limited	BOT	February 21, 2018	February 20, 2038	20 years from Appointed Date	June 30, 2022
9	IRB Hapur Moradabad Tollway Limited	BOT	May 28, 2019	May 26, 2041	22 years from Appointed Date	June 30, 2022
10	Palsit Dankuni Tollway Private Limited	BOT	April 2, 2022	April 1, 2039	17 years from Appointed Date	Tolling & Construction
11	IRB Golconda Expressway Private Limited*	TOT	August 12, 2023	August 11, 2053	30 years from Appointed Date	NA
12	Samakhiyali Tollway Private Limited	BOT	December 28, 2023	December 27, 2043	20 years from Appointed Date	Tolling & Construction
13	IRB Lalitpur Tollway Private Limited#	TOT	April 01, 2024	March 31, 2044	20 years from Appointed Date	NA
14	IRB Kota Tollway Private Limited^	TOT	April 01, 2024	March 31, 2044	20 years from Appointed Date	NA
15	IRB Gwalior Tollway Private Limited $	TOT	April 01, 2024	March 31, 2044	20 years from Appointed Date	NA

* Upfront concession fee of Rs. 73,800 million
Upfront concession fee of Rs. 44,280 million
^ Upfront concession fee of Rs. 5,215.60 million
$ Upfront concession fee of Rs. 11,614.40 million

Note:
The above BOT/ DBFOT projects shall have following rights/ obligations in accordance with the Concession Agreement entered into with the Respective Government Authorities:-
a. Rights to use the Specified assets
b. Obligations to provide or rights to expect provision of services
c. Obligations to deliver or rights to receive at the end of the Concession.

Note 46 : Disclosure as per Ind AS 115
a) Disaggregation of revenue from contracts with customers
The Group believes that the information provided below for Revenue from Operations, is sufficient to meet the disclosure objectives with respect to disaggregation of revenue under Ind AS 115, Revenue from Contracts with Customers and also refer note (b).

(Rs. in million)

	Six months ended September 30, 2024	Six months ended September 30, 2023
Contract Revenue (refer note b below)	9,107.82	6,828.77
Income from toll collection (net) (refer note b below)	14,499.00	8,302.90
Total	**23,606.82**	**15,131.67**

b) Reconciliation of revenue as per Ind AS 115

(Rs. in million)

	Six months ended September 30, 2024	Six months ended September 30, 2023
Contract Revenue		
Construction revenue (Utility shifting & Construction work)	9,107.82	6,828.77
Total	**9,107.82**	**6,828.77**
Income from toll collection		
Revenue total collected	18,477.29	12,151.18
Less: NHAI Premium	(3,897.62)	(3,773.03)
Less : NHAI Revenue share - Double user fee	(80.67)	(75.25)
Total	**14,499.00**	**8,302.90**

Note 47 : Related Party disclosures

I. List of Related parties of the Trust [As per Regulation 2 (1) (zv)]

1	Parties to the InvIT	Sponsor Group and Project Manager (as per 'Table A' below)*
		MMK Toll Road Private Limited (Investment Manager)
		IDBI Trusteeship Services Limited (Trustee of the IRB Infrastructure Trust)
2	Promoters, Directors and Partners of the persons mentioned in clause 1	As per 'Table B' below#

*** Table A - Sponsor Group and Project Manager**

(i) The sponsor(s)	**(ii) Entities or person(s) which are controlled by such sponsor**	**(iii) Entities or person(s) who control such body corporate**	**(iv) Entities or person(s) which are controlled by entities or person(s) specified in clause (iii)**
IRB Infrastructure Developers Limited	Modern Road Makers Private Limited (MRMPL) IRB Ahmedabad Vadodara Super Express Tollway Private Limited (IRBAV) Mhaiskar Infrastructure Private Limited (MIPL) Thane Ghodbunder Toll Road Private Limited (TGTRPL) IRB Kolhapur Integrated Road Development Company Private Limited (IRBK) ATR Infrastructure Private Limited (ATRFL) Ideal Road Builders Private Limited (IRBPL) Aryan Toll Road Private Limited (ATRPL) GE1 Expressway Private Limited (Formerly known as IRB PP Project Private Limited) IRB PS Highway Private Limited (IRBPS) IRB Sindhudurg Airport Private Limited (IRBSA) IRB Infrastructure Private Limited (IRBFL) Aryan Infrastructure Investments Private Limited (AIIPL) Aryan Hospitality Private Limited (AHPL) IRB MP Expressway Private Limited IRB Goa Tollway Private Limited (IRB Goa) MRM Mining Private Limited (Subsidiary of MRMPL) VM7 Expressway Private Limited Pathankot Mandi Highway Private Limited Chittoor Thachur Highway Private Limited IRB Golconda Expressway Private Limited (Subsidiary upto 10.08.2023) Samakhiyali Tollway Private Limited (Subsidiary upto 27.12.2023) Meerut Budaun Expressway Limited - JV MMK Toll Road Private Limited (MMK) - JV IRB Infrastructure Trust - JV Project SPV's of IRB Infrastructure Trust as mentioned below: 1. IRB Westcoast Tollway Limited (IRBWTL) 2. Solapur Yedeshi Tollway Limited (SYTL) 3. Yedeshi Aurangabad Tollway Limited (YATL) 4. Kaithal Tollway Limited (KTL) 5. AE Tollway Limited (AETL) 6. Udaipur Tollway Limited (UTL) 7. CG Tollway Limited (CGTL) 8. Kishangarh Gulabpura Tollway Limited (KGTL) 9. IRB Hapur Muradabad Tollway Limited (IRBHMTL) 10. Palsit Dankuni Tollway Private Limited (PDTPL) 11. IRB Golconda Expressway Private Limited (IRBGEPL) w.e.f 11.08.2023 12. IRB Lalitpur Tollway Private Limited w.e.f 10.11.2023 13. Samakhiyali Tollway Private Limited w.e.f. 28.12.2023 14. IRB Kota Tollway Private Limited w.e.f. 01.01.2024 15. IRB Gwalior Private Limited w.e.f. 01.01.2024	Mr. Virendra D. Mhaiskar, Promoter of Sponsor IRB Holding Private Limited Ms. Deepali V. Mhaiskar, Promoter of Sponsor Virendra D. Mhaiskar HUF (Karta Mr. Virendra Mhaiskar), promoter of Sponsor	VDM Ventures Private Limited Duex Farming Films Private Limited

Table B - List of promoters, directors and partners of the persons mentioned in clause 1

Parties to the Trust	Promoters	Directors
(i) IRB Infrastructure Developers Limited (Sponsor and Project Manager)	1. Mr. Virendra D. Mhaiskar 2. Mrs. Deepali V. Mhaiskar 3. Mr. Virendra D. Mhaiskar (HUF)	1. Mr. Virendra D. Mhaiskar, Chairman and Managing Director 2. Mrs. Deepali V. Mhaiskar, Whole Time Director 3. Mr. Jose Tamariz Martel Goncer 4. Mr. Ravindra Dhariwal 5. Mr. Chandrashekhar S. Kaptan- Independent director (up to March 31, 2024) 6. Mr. Sunil H. Talati -Independent director (up to March 31, 2024) 7. Mr. Sandeep J. Shah - Independent director 8. Ms. Priti Savla - Independent director 9. Mr. Bajrang Lal Gupta-Independent Director (w.e.f April 1, 2024) 10. Mr. Vijay Nautamlal Bhatt- Independent Director (w.e.f April 1, 2024)
(ii) Entities or person(s) which are controlled by such sponsor	IRB Infrastructure Developers Limited (IRBIDL)	1. Mr. Virendra D. Mhaiskar 2. Mrs. Deepali V. Mhaiskar 3. Mr. Dhananjay K. Joshi 4. Mrs. Arati Taskar 5. Mr. Sudhir Rao Hoshing 6. Mr. Rajpaul Sharma 7. Mr. Amitabh Murarka 8. Mr. Aryan V. Mhaiskar 9. Mrs. Kshama Vengsarkar 10. Mr. Nikhil Maniar 11. Mr. Tushar Kawedia 12. Mr. Rajinder Pal Singh 13. Mr. Vinod Kumar Menon 12. Mr. Sunil Tandon -Independent Director 14. Mr. Nikesh Jain -Independent Director 15. Mr. Rushabh Gandhi 16. Mrs. Anusha Date-Independent Director 17. Mr. Kulumani Gopalratnam Krishnamurthy-Independent Director 18. Mrs. Ranjana Paranjape -Independent Director 19. Mr. Kunnasagaran Chinniah (Ceased to be director of MMK w.e.f. June 15, 2024) 20. Mr. Sandeep Shah -Independent Director 21. Ms. Shilpa Todankar 22. Mr. Abhay Phatak 23. Mr. Darshan Sangurdekar 24. Mr. Omprakash Singh 25. Mr. Chandrashekhar Kaptan 26. Mr. Boon Chin Hau 27. Mr. Nagendraa Parakh 28. Mr. Amyn Jassani (Ceased to be director of MMK w.e.f. May 31, 2024)
(iii) Entities or person(s) who control such body corporate	1. Mr. Virendra D. Mhaiskar 2. Mrs. Deepali V. Mhaiskar 3. Mr. Virendra D. Mhaiskar (HUF)	1. Mr. Virendra D. Mhaiskar 2. Mrs. Deepali V. Mhaiskar
(iv) Entities or person(s) which are controlled by entities or	1. Mr. Virendra D. Mhaiskar 2. Mrs. Deepali V. Mhaiskar 3. Mr. Aryan V. Mhaiskar	1. Mr. Virendra D. Mhaiskar 2. Mrs. Deepali V. Mhaiskar 3. Mr. Aryan V. Mhaiskar
MMK Toll Road Private Limited (Investment Manager)	IRB Infrastructure Developers Limited (IRBIDL)	Mr. Virendra D. Mhaiskar Mr. Kunnasagaran Chinniah (Ceased to be director of MMK w.e.f. June 15, 2024) Mr. Boon Chin Hau Mr. Aryan Mhaiskar Mr. K G Krishnamurthy -Independent director Mrs.Ranjana Paranjape - Independent director Mr. Nagendraa Parakh- Independent director Mr. Amyn Jassani - Independent director (Ceased to be director of MMK w.e.f. May 31, 2024)
IDBI Trusteeship Services Limited (Trustee of IRB Infrastructure Trust)	IDBI Bank Limited LIC Corporation Limited General Insurace Corporation	Mr. Jayakumar Subramonia Pillai Mr. Pradeep Kumar Jain Mrs. Jayashree Vijay Ranade (ceased to be director w.e.f April 18, 2024) Mr. Pradeep Kumar Malhotra Ms. Baljinder Kaur Mandal Mr. Arun Kumar Agarwal (Appointed w.e.f. July 19, 2024) Mr. Hare Krushna Dandapani Panda (Appointed w.e.f. July 19, 2024) Mr. Balkrishna Varier (Appointed w.e.f. June 24, 2024)

IRB Infrastructure Trust
Notes to Unaudited Interim Consolidated Financial Information as at September 30, 2024

II. Related Party Transactions

(Rs. in million)

Sr. No.	Particulars	Sponsor and Project Manager		Subsidiaries of Sponsor	
		Six months ended September 30, 2024	Six months ended September 30, 2023	Six months ended September 30, 2024	Six months ended September 30, 2023
1	**Contract expenses**	**8,303.46**	**5,533.33**	**265.08**	**631.69**
	IRB Infrastructure Developers Limited	8,303.46	5,533.33	-	-
	Modern Road Makers Private Limited	-	-	265.08	631.69
2	**Operation & Maintenance Expenses**	**3,909.12**	**2,424.27**	**-**	**-**
	IRB Infrastructure Developers Limited	3,909.12	2,424.27	-	-
3	**Finance Cost -Interest unwinding on Trade payable**	**-**	**-**	-	**120.17**
	Modern Road Makers Private Limited	**-**	-	-	120.17
4	**Finance Cost -Interest unwinding on Trade payable - TCR**	**-**	**-**	-	**172.03**
	Modern Road Makers Private Limited	-	-	-	172.03
5	**Sub-ordinate debts (Unsecured & interest free)**	**-**	**12,044.08**	**-**	**-**
	IRB Infrastructure Developers Limited	-	12,044.08	-	-
6	**Unsecured Loan Repaid**	**135.02**	**857.66**	**-**	**-**
	IRB Infrastructure Developers Limited	135.02	857.66	-	-
7	**Expenses incurred on our behalf**	**0.79**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	0.79	-	-	-
	Modern Road Makers Private Limited	-	-	-	-
8	**Mobilisation advances given**	**924.60**	**802.50**	**-**	**-**
	IRB Infrastructure Developers Limited	924.60	802.50	-	-
9	**Mobilisation advances recovered**	**548.39**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	548.39	-	-	-
10	**Construction cost**	**-**	**0.79**	**-**	**-**
	IRB Infrastructure Developers Limited	-	0.79	-	-
11	**Other payable**	**1,227.70**	**1,178.97**	**24.42**	**24.42**
	IRB Infrastructure Developers Limited	1,227.70	1,178.97	-	-
	Mhaiskar Infrastructure Private Limited		-	24.42	24.42
12	**Other receivable**	**-**	**-**	**34.21**	**-**
	Modern Road Makers Private Limited	-	-	34.21	-
13	**Unsecured Loan received**	**135.00**	**250.00**	**-**	**-**
	IRB Infrastructure Developers Limited	135.00	250.00	**-**	**-**
14	**Units Issued**	-	**14,631.32**	**-**	**-**
	IRB Infrastructure Developers Limited	-	14,631.32	**-**	**-**
15	**Interest Distribution**	**278.44**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	278.44	-	-	-
16	**Capital Reduction**	**227.30**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	227.30	-	-	-

IRB Infrastructure Trust
Notes to Unaudited Interim Consolidated Financial Information as at September 30, 2024

Related Party Transactions(continued)

Sr. No.	Particulars	Investment Manager		Key Management Personnel of Project SPV Group		Trustee of IRB Infrastructure Trust	
		Six months ended September 30, 2024	Six months ended September 30, 2023	Six months ended September 30, 2024	Six months ended September 30, 2023	Six months ended September 30, 2024	Six months ended September 30, 2023
17	**Expenses incurred on our behalf**	-	**0.45**	**-**	**-**	**-**	**-**
	MMK Toll Road Private Limited	-	0.45	**-**	**-**	**-**	**-**
18	**Investment Management Fees**	**52.65**	**87.56**	**-**	**-**	**-**	**-**
	MMK Toll Road Private Limited	52.65	87.56	**-**	**-**	**-**	**-**
19	**Trustee Fees**	-	-	-	-	**0.65**	**0.41**
	IDBI Trusteeship Services Limited	-	-	-	-	0.65	0.41
20	**Director sitting fees paid**	**-**	**-**	**2.17**	**1.39**	**-**	**-**
	Mrs. Arati Taskar	-	-	0.07	0.10	-	-
	Mr. Darshan Sangurdekar	-	-	0.21	0.12	-	-
	Mr.Omprakash Singh	-	-	0.21	0.14	-	-
	Mr. Sudhir Hoshing	-	-	0.05	0.02	-	-
	Mr. C S Kaptan	-	-	0.43	0.29	-	-
	Ms. Shilpa Todankar	-	-	0.53	0.32	-	-
	Mrs.Ranjana Paranjape	-	-	0.12	0.07	-	-
	Mr. Abhay Pathak	-	-	0.24	0.17	-	-
	Mr. Rajpaul Sharma	-	-	0.11	0.07	-	-
	Mr. Tushar Kawedia	-	-	0.03	-	-	-
	Mr. Amitabh Murarka	-	-	0.17	0.08	-	-

IRB Infrastructure Trust
Notes to Unaudited Interim Consolidated Financial Information as at September 30, 2024

III. Related party balances

(Rs. in million)

Sr. No.	Particulars	Sponsor and Project Manager		Subsidiaries of Sponsor	
		As on September 30, 2024	As on March 31, 2024	As on September 30, 2024	As on March 31, 2024
1	**Subordinated debt (unsecured and interest free)**	**16,916.65**	**16,916.65**	**-**	**-**
	IRB Infrastructure Developers Limited	16,916.65	16,916.65	-	-
2	**Trade payable**	**5,075.80**	**3,971.13**	**152.93**	**80.66**
	IRB Infrastructure Developers Limited	5,075.80	3,971.13	-	-
	Modern Road Makers Private Limited	-	-	152.93	80.66
3	**Mobilisation advances**	**476.95**	**100.74**	**-**	**-**
	IRB Infrastructure Developers Limited	476.95	100.74	-	-
4	**Advance given**	**146.38**	**140.22**	**-**	-
	IRB Infrastructure Developers Limited	146.38	140.22	-	-
	Modern Road Makers Private Limited	-	-	-	-
5	**BG Margin Money Receivable**	**30.95**	**30.95**	**-**	-
	IRB Infrastructure Developers Limited	30.95	30.95	-	-
6	**Retention payable**	**516.80**	**708.82**	**207.56**	**92.54**
	IRB Infrastructure Developers Limited	516.80	708.82	-	-
	Modern Road Makers Private Limited		-	207.56	92.54
7	**Deferred Consideratrion payable**	**38,258.65**	**37,031.44**	**3,753.94**	**3,729.52**
	IRB Infrastructure Developers Limited	38,258.65	37,031.44	-	-
	Modern Road Makers Private Limited	-	-	1,784.13	1,784.13
	IRB Goa Tollway Private Limited	-	-	1,544.86	1,544.86
	Mhaiskar Infrastructure Private Limited	-	-	424.95	400.53
8	**Amount Held Up**	**190.97**	**144.74**	**1.55**	**0.44**
	IRB Infrastructure Developers Limited	190.97	144.74	-	-
	Modern Road Makers Private Limited		-	1.55	0.44
9	**Other payable (Exp incurred on our behalf)**	**0.49**	**3.79**	**6.05**	**6.05**
	IRB Infrastructure Developers Limited	0.49	3.79		-
	Modern Road Makers Private Limited	-	-	6.05	6.05
10	**Unsecured Loan**	**-**	**0.02**	**-**	**-**
	IRB Infrastructure Developers Limited	-	0.02	-	-
11	**Trade Receivable**	**-**	**-**	**0.51**	**0.51**
	Modern Road Makers Private Limited	-	-	0.51	0.51
12	**Other receivable**	**14.44**	**-**	**34.22**	**0.01**
	IRB Infrastructure Developers Limited	14.44	-	-	-
	Modern Road Makers Private Limited	-	-	34.22	0.01

IRB Infrastructure Trust
Notes to Unaudited Interim Consolidated Financial Information as at September 30, 2024

Related party balances (continued)

(Rs. in million)

Sr. No.	Particulars	Investment Manager		Key Management Personnel of Project SPV Group		Trustee of IRB Infrastructure Trust	
		As on September 30, 2024	As on March 31, 2024	As on September 30, 2024	As on March 31, 2024	As on September 30, 2024	As on March 31, 2024
13	**Trade payable**	**95.73**	**95.19**	**-**	**-**	**-**	**-**
	MMK Toll Road Private Limited	95.73	95.19	-	-	-	-
14	**Director sitting fees Payable**	**-**	**-**	**0.79**	**1.24**	**-**	**-**
	Mrs. Aarti Taskar	-	-	0.03	0.04	-	-
	Mr. Darshan Sangurdekar	-	-	0.07	0.09	-	-
	Mr. Omprakash Singh	-	-	0.07	0.07	-	-
	Mr. Sudhir Hoshing	-	-	0.02	0.05	-	-
	Mr. C S Kaptan	-	-	0.15	0.18	-	-
	Ms. Shilpa Todankar	-	-	0.18	0.29	-	-
	Mr. Rajpaul Sharma	-	-	0.05	0.12	-	-
	Mr. Abhay Pathak	-	-	0.10	0.13	-	-
	Mr. Amitabh Murarka	-	-	0.07	0.16	-	-
	Mrs. Ranjana Paranjape	-	-	0.04	0.07	-	-
	Mr. Tushar Kawedia	-	-	0.01	0.03	-	-

IRB Infrastructure Trust
Notes to Unaudited Interim Consolidated Financial Information as at September 30, 2024

Note 48 : Other Statutory Information

i) The Group have not traded or invested in Crypto currency or Virtual Currency during the financial year.
ii) The Group does not hold benami property and no proceedings under Benami transaction (Prohibition) Act 1988 have been initiated against the Trust.
iii) The Group does not have any relationship with companies struck off.
iv) The Group does not have any such transaction which is not recorded in the books of accounts that has been surrendered or disclosed as income during the year in the tax assessments under the Income Tax Act, 1961 (such as, search or survey or any other relevant provisions of the Income Tax Act, 1961.
v) The Group did not have any long-term contracts including derivative contract for which there were any material foreseeable losses.
vi) The Group has not declared a wilfull defaulter by any bank / financial institution or any other lender during the year.
vii) The Group has complied with the number of layers prescribed under section 2(87) of the Companies Act, 2013 read with Companies (Restriction on Number of Layers) Rules, 2017.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

SD/-
Virendra D.Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

For M S K A & Associates
Chartered Accountants
ICAI registration number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No. 118894

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Place: Mumbai
Date: December 09, 2024

Place: Mumbai
Date: December 09, 2024

Gokhale & Sathe
Chartered Accountants
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Mumbai 400063, India
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INDEPENDENT AUDITOR'S REPORT

To the Unit Holders of IRB Infrastructure Trust

Report on the Audit of the Consolidated Financial Statements

Opinion

We have jointly audited the accompanying consolidated financial statements of IRB Infrastructure Trust (hereinafter referred to as the "Trust") and its subsidiaries (Trust and its subsidiaries together referred to as "the Group"), which comprise the Consolidated Balance Sheet as at March 31, 2024, the Consolidated Statement of Profit and Loss (including Other Comprehensive Income), the Consolidated Statement of Changes in Unit Holder's Equity, the Consolidated Statement of Cash Flows for the year then ended, Consolidated Statement of Net Assets at Fair value as at March 31, 2024, Consolidated Statement of Total Returns at Fair Value and Net Distributable cashflows of the Trust and each of its subsidiaries for the year then ended as an additional disclosure in accordance with the Securities and Exchange Board of India ("SEBI") Master Circular SEBI/HO/DDHS-PoD-2/P/CIR/2023/115 dated July 06, 2023, as amended, ("the SEBI Circular") for the year ended March 31, 2024 and notes to the Consolidated Financial Statements, including material accounting policy information and other explanatory information (hereinafter referred to as the "consolidated financial statements").

In our opinion and to the best of our information and according to the explanations given to us, and based on consideration of reports of other auditors on separate financial statements of subsidiaries, , the aforesaid consolidated financial statements give the information required by SEBI (Infrastructure Investment Trusts) Regulations, 2014, as amended from time to time read with SEBI Circular, together known as (the "InvIT Regulations") and give a true and fair view in conformity with the Indian Accounting Standards prescribed under rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended ("Ind AS") and other accounting principles generally accepted in India, to the extent not inconsistent with the InvIT Regulations, of their consolidated state of affairs of the Group as at March 31, 2024, of consolidated net loss (including other comprehensive loss), consolidated changes in unit holder's equity, its consolidated cash flows for the year then ended, its consolidated net asset assets at fair value as at March 31, 2024, its consolidated total returns at fair value and net distributable cashflows of the Trust and each of its subsidiaries for the year ended as on date and other financial information of the Trust for the year ended March 31, 2024.

Basis for Opinion

We conducted our joint audit of the consolidated financial statements in accordance with the Standards on Auditing (SAs) issued by the Institute of Chartered Accountants of India ("ICAI"). Our responsibilities under those SAs are further described in the Auditor's Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Group in accordance with the Code of Ethics issued by ICAI, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the Code of Ethics. We believe that the audit evidence we have obtained and on consideration of audit reports of other auditors referred to in paragraph (a) of the "Other Matters" section below, is sufficient and appropriate to provide a basis for our opinion on the consolidated financial statements.

Emphasis of Matter

We draw attention to Note 13 of the accompanying consolidated financial statements, which describes the presentation of 'Unit Capital' as 'Equity' to comply with InvIT Regulations. Our opinion is not modified in respect of this matter.

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Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements for the current year. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. We have determined the matters described below to be the key audit matters to be communicated in our report:

Sr. No	Key Audit Matter	How the Key Audit Matter was addressed in our audit
1	The Trust has payable of Rs. 40,760.96 million as on March 31, 2024 to IRB Infrastructure Developers Limited ("Sponsor") on account of transfer of 9 project companies by the Sponsor. (Refer note 17 of the consolidated financial statements). Pursuant to settlement of IRB Infrastructure Trust ('Trust') by Sponsor, as a Private InvIT, the Trust has entered into Debt Novation Agreements (DNA). As per the terms of DNA, in consideration of assets taken over in 9 project companies, Trust has issued units and agreed to transfer to the Sponsor, the claim amounts when and to the extent the same are eventually received by project companies, on account of Sponsor claims. Such Sponsor claims are lodged after obtaining Commercial Operation Date by respective project companies. The amount realisable against claims has been estimated by the valuers based on the weighted average of probabilities of realisation of such claims. Based on the fair value of liability as estimated by the valuers, a resultant impact in the value of liability has been recognised under the head 'Loss of fair value measurement of other payables'. There is significant judgement involved on assessing fair value of these payables which is based on key assumptions such as timing of collection, the discount rate, and the probability of success in respect of the claims.	Our audit procedures included: 1. Evaluated the design and implementation and testing operating effectiveness of key controls placed around the assessment process of the amount payable to Sponsor. 2. Obtained Trust's assessment of the fair valuation of the deferred consideration payable. These projections are based on underlying infrastructure project cash flows which are sensitive to some of the claims to be settled with NHAI/HDMA. 3. Assessed the work performed by management as well as management's external valuation expert, including the valuation methodology and the key assumptions used. Further, also assessed the competence, capabilities and objectivity of the expert used by the management in the process of evaluating impairment models. 4. Involved our internal valuation specialist, where appropriate, to evaluate the reasonability of the methodology, approach and discount rate used in the valuation carried out for determining the fair value of deferred consideration payable.

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2	**Impairment Testing for Intangible Assets - Toll Collection Rights (refer Note 4 to the consolidated financial statements)** As at March 31, 2024, the carrying amount of intangible assets and intangible assets under development is Rs. 3,17,031.31 million and Rs. 64,816.48 million respectively. The Trust's project subsidiaries have toll collection rights as intangible assets and intangible under developement pursuant to the concession agreements. The carrying value of these rights acquired under Build-Operate-Transfer (BOT) & Toll-Operate-Transfer (TOT) basis is being compared to the recoverable value (which is value in use in the instant case) thereof to ascertain for impairment. The process involves estimating the value in use of the asset which is determined by forecasting and discounting future cash flows. The same is sensitive to changes in discount rate, traffic growth rates, toll growth rates, concession period etc. The determination of the recoverable amount of the toll collection right involves significant judgment due to inherent uncertainty in the assumptions evaluated for recoverable amount of these rights. Accordingly, the evaluation of impairment of toll collection rights has been determined as a key audit matter	Our audit procedures included: 1. Evaluated the design and implementation and verified, on a test check basis the operating effectiveness of key controls around the estimation of future cash flows forecasts, the process by which they were produced, and the discount rates used. 2. Understanding Trust's assessment on impairment for intangible assets - toll collection rights and intangible under development. Assessed the model by testing the mathematical accuracy of the discounted cash flow model, evaluation of the assumption and methodologies on a test check basis that were used to arrive at the underlying recoverable value. 3. Engaged internal valuation specialists to evaluate the adequacy of specific inputs such as the discount rate, traffic growth rate, toll charges etc. 4. Focused on key assumptions such as discount rate, traffic growth rates, toll rates, concession period etc. which were most sensitive to the recoverable value of the intangible asset 5. Evaluated the objectivity, independence and competence of specialists involved.
3	**Disclosures relating to Statement of Net Assets at Fair Value and Statement of Total returns at Fair value as per InvIT Regulations.** The Trust is required to disclose Statement of Net Assets at Fair Value and Statement of Total Returns at Fair Value pursuant to SEBI Circulars issued under the InvIT Regulations which requires valuation of assets. Such fair valuation has been carried out by the independent valuer appointed by the Investment Manager of the Trust. For the above purpose, fair value is determined by the management using	Our audit procedures included: 1. Obtained an understanding of regulatory requirements by reading the requirements of SEBI Regulations along with the relevant SEBI circulars, pursuant to which the Statements are prepared by the Investment Manager. 2. Obtained an understanding of the Trust's policies and procedures adopted by the Investment Manager for computation and disclosure of the Statements.

	discounted cash flow ('DCF') valuation method which involves significant management judgement in respect of various estimates used as inputs such as determination of future cash flows, discount rates, revenue growth rates, inflation rates, tax rates, amongst others. The determination of fair value involves judgement due to inherent high estimation uncertainty in the underlying assumptions. Considering the judgement involved in determination of fair values due to inherent uncertainty and complexity of the assumptions used in determination of fair values, this is considered as a key audit matter for the current year audit.	3. Assessed the work performed by management as well as management's external valuation expert, including the valuation methodology and the key assumptions used. Also assessed the competence, capabilities and objectivity of the expert used by the management in the process. 4. Involved our internal valuation specialist, where appropriate, to evaluate the reasonability of the methodology, approach and assumptions used in the valuation carried out for determining the fair value. 5. Tested arithmetic accuracy of cash flows projections and sensitivity analysis. 6. Evaluated the appropriateness and adequacy of disclosures for compliance with the relevant requirements of SEBI regulations.

Information Other than the Consolidated Financial Statements and Auditor's Report Thereon

The Board of Directors of the Investment Manager (the "Board") are responsible for the other information. The other information comprises the Annual Report but does not include the consolidated financial statements and our auditor's report thereon. The Annual report is expected to be made available to us after the date of auditor's report.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact.

When we read the Annual report, if we conclude that there is a material misstatement therein, we are required to communicate the matter to those charged with governance.

Responsibilities of the Investment Manager and Those Charged with Governance for the Consolidated Financial Statements

The Board are responsible for the preparation and presentation of these consolidated financial statements in term of the requirements of the Act that give a true and fair view of the consolidated financial position, consolidated financial performance, consolidated changes in unit holder's equity, consolidated cash flows of the Group, consolidated net assets at fair value as at March 31, 2024, consolidated total returns at fair value and net distributable cashflows of the Trust and it's subsidiaries for the year ended as on date and other financial information in accordance with the

requirement of InvIT Regulations; the Indian Accounting Standards prescribed under Rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015 , as amended, and other accounting principles generally accepted in India, to the extent not inconsistent with the InvIT Regulations. The respective Board of Directors of the companies included in the Group are responsible for maintenance of adequate accounting records in accordance with the provisions of the Act for safeguarding the assets of the Group for preventing and detecting frauds and other irregularities; the selection and application of appropriate accounting policies; making judgments and estimates that are reasonable and prudent; and the design, implementation and maintenance of adequate internal financial controls, that were operating effectively for ensuring accuracy and completeness of the accounting records, relevant to the preparation and presentation of the consolidated financial statements that give a true and fair view and are free from material misstatement, whether due to fraud or error, which have been used for the purpose of preparation of the consolidated financial statements by the Board of Directors of the Investment Manager, as aforesaid.

In preparing the consolidated financial statements, the Board of the Trust and the respective Board of Directors of the companies included in the Group are responsible for assessing the ability of the Group to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

The Board of the Trust and the respective Board of Directors of the companies included in the Group are responsible for overseeing the financial reporting process of the Group.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Standards on Auditing ("SAs") will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

We give in "Annexure A" a detailed description of Auditor's responsibilities for Audit of the Consolidated Financial Statements.

Other Matters

a. We did not audit the financial statements of six subsidiaries, whose financial statements reflect total assets of Rs. 1,22,334.50 million (before consolidation adjustments) as at March 31, 2024, total revenues of Rs. 20,960.13 million (before consolidation adjustments) and net cash outflows amounting to Rs. 157.30 million for the year ended on that date, as considered in the consolidated financial statements. These financial statements have been audited by other auditor whose reports have been furnished to us by the Management and our opinion on the consolidated financial statements, in so far as it relates to the amounts and disclosures included in respect of these subsidiaries , is based solely on the reports of the other auditor.

Gokhale & Sathe
Chartered Accountants
304/308/309, Udyog Mandir No.1,
7-C, Bhagoji Keer Marg,
Mahim, Mumbai 400 016.
Telephone + 91 (22) 43484242
Fax + 91 (22) 43484241

M S K A & Associates
Chartered Accountants
602, Floor 6, Raheja Titanium
Western Express Highway,
Geetanjali Railway Colony,
Ram Nagar, Goregaon (E),
Mumbai 400063, India
Tel: +91 22 6238 0519

b. The consolidated financial statements of the Trust for the year ended March 31, 2023, were audited by Gokhale & Sathe, Chartered Accountants, one of the joint auditors of the Trust whose report dated May 12, 2023 expressed an unmodified opinion on those statements.

Our opinion on the consolidated financial statements is not modified in respect of the above matters.

Report on Other Legal and Regulatory Requirements

Based on our audit and as required by InvIT Regulations, we report that:

a. We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit of the aforesaid consolidated financial statements.

b. The Consolidated Balance Sheet, the Consolidated Statement of Profit and Loss (including other comprehensive income), the Consolidated Statement of Changes in Unit Holders' Equity, the Consolidated Statement of Cash Flow, Consolidated net assets at fair value as at March 31, 2024, Consolidated total returns at fair value and net distributable cashflows of the Trust and each of its subsidiaries for the year ended dealt with by this Report are in agreement with the relevant books of account maintained for the purpose of preparation of the consolidated financial statements.

c. In our opinion, the aforesaid consolidated financial statements comply with the Indian Accounting Standards ('Ind AS') as defined in Rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015, as amended, and other accounting principles generally accepted in India, to the extent not inconsistent with the InvIT Regulations.

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration No.103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No.: 121011
UDIN: 24121011BKAAOO4370

Place: Mumbai
Date: May 03, 2024

For M S K A & Associates
Chartered Accountants
ICAI Firm Registration No.105047W

SD/-
Nitin Tiwari
Partner
Membership No.: 118894
UDIN: 24118894BKGQHE9759

Place: Mumbai
Date: May 03, 2024

Gokhale & Sathe
Chartered Accountants
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ANNEXURE A TO THE INDEPENDENT AUDITOR'S REPORT ON EVEN DATE ON THE CONSOLIDATED FINANCIAL STATEMENTS OF IRB INFRASTRUCTURE TRUST

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

As part of an audit in accordance with SAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances but not for the purpose of expressing an opinion on whether the Trust has in place an adequate internal financial controls with reference to consolidated financial statements in place and the operating effectiveness of such controls.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board.

- Conclude on the appropriateness of the Board's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the ability of the Group's to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the audit of the financial statements of such entities included in the consolidated financial statements of which we are the independent auditors. For the other entities included in the consolidated financial statements, which have been audited by other auditors, such other auditors remain responsible for the direction, supervision and performance of the audits carried out by them. We remain solely responsible for our audit opinion.

We communicate with those charged with governance of the Trust and such other entities included in the consolidated financial statements of which we are the independent auditors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our joint audit.

Gokhale & Sathe
Chartered Accountants
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Mumbai 400063, India
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We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements for the year ended March 31, 2024 and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

We also performed procedures in accordance with Regulation 13(2)(e) of the InvIT Regulations, as amended to the extent applicable.

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration No.103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No.: 121011
UDIN: 24121011BKAAOO4370

Place: Mumbai
Date: May 03, 2024

For M S K A & Associates
Chartered Accountants
ICAI Firm Registration No.105047W

SD/-
Nitin Tiwari
Partner
Membership No.: 118894
UDIN: 24118894BKGQHE9759

Place: Mumbai
Date: May 03, 2024

IRB Infrastructure Trust
Consolidated Balance sheet as at March 31, 2024

(Rs. in million)

	Notes	As at March 31, 2024	As at March 31, 2023
ASSETS			
Non-current assets			
Property, Plant and Equipment	4.1	6.63	7.59
Goodwill		604.54	604.54
Other Intangible assets	4.2	3,17,031.32	2,28,418.29
Intangible assets under development	4.2	64,816.48	2,421.67
Financial assets			
i) Others	7	4,408.10	0.33
Other non-current assets	8	12.00	174.07
Deferred tax assets	9	2,229.78	792.60
		3,89,108.85	**2,32,419.09**
Current assets			
Financial assets			
i) Investments	5	1,523.07	1,283.09
ii) Trade receivables	6	68.15	84.67
iii) Cash and cash equivalents	10	1,605.67	731.31
iv) Bank balance other than Cash and cash equivalents	11	6,672.40	4,866.69
v) Others	7	2,346.30	1,448.56
Current tax assets (net)	12	174.41	24.81
Other current assets	8	537.93	2,657.07
		12,927.93	**11,096.20**
Total assets		**4,02,036.78**	**2,43,515.29**
EQUITY AND LIABILITIES			
Equity			
Unit Capital	13	1,35,091.22	87,929.33
Subordinate debt	14	16,916.65	-
Other equity			
Other reserves	15	(17,640.04)	(10,395.80)
Total Equity		**1,34,367.83**	**77,533.53**
Non-controlling interests		1.49	0.81
Total unit holder's equity		**1,34,369.32**	**77,534.34**
Non-current liabilities			
Financial liabilities			
i) Borrowings	16	2,14,136.34	98,943.95
ii) Other financial liabilities	17	40,765.03	35,780.80
iii) Trade payables	18	-	4,165.72
Provisions	19	1,336.98	2,965.03
Deferred tax liabilities	9	280.89	36.80
		2,56,519.24	**1,41,892.30**
Current liabilities			
Financial liabilities			
i) Borrowings	16	1,178.93	6,135.65
ii) Trade payables	18		
a) total outstanding dues of micro enterprises and small enterprises		2.41	1.61
b) total outstanding dues of creditors other than micro enterprises and small enterprises		5,611.71	15,303.87
iii) Other financial liabilities	17	1,883.60	2,549.37
Other current liabilities	20	235.99	98.15
Provisions	19	2,235.58	-
		11,148.22	**24,088.65**
Total liabilities		**2,67,667.46**	**1,65,980.95**
Total equity and liabilities		**4,02,036.78**	**2,43,515.29**

Summary of material accounting policies 3
The accompanying notes are an integral part of Consolidated Financial Statements.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

For M S K A & Associates
Chartered Accountants
ICAI registration number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No. 118894

Place: Mumbai
Date: May 03, 2024

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Place: Mumbai
Date: May 03, 2024

IRB Infrastructure Trust
Consolidated Statement of Profit and Loss for the year ended March 31, 2024

(Rs. in million)

Particulars	Notes	For the year ended March 31, 2024	For the year ended March 31, 2023
Income			
Revenue from operations	21	38,930.75	26,912.59
Other income	22	839.83	263.08
Total income		**39,770.58**	**27,175.67**
Expenses			
Operating Expenses	23	19,876.05	12,865.52
Project Management Fees		3,573.20	2,647.70
Valuation Expenses		5.41	2.67
Insurance and Security Expenses		94.71	14.72
Trustee Fees		14.97	5.95
Depreciation on Property, Plant and Equipment	24	0.95	1.25
Amortisation of Intangible Assets	24	3,648.04	2,809.17
Finance costs (Interest)	25	13,449.23	9,005.28
Finance costs (Others)	25	1,007.87	1,249.41
Audit fees	27	12.48	5.04
Legal & Professional Fees		726.17	163.58
Investment Manager Fees		146.32	56.52
Custodian fees		1.21	0.09
Loss on sale of assets		-	0.01
Fair value loss on measurement of other payable		4,935.37	560.53
Other expenses	26	116.58	92.71
Total expenses		**47,608.56**	**29,480.14**
Profit/(loss) before tax		**(7,837.98)**	**(2,304.47)**
Tax expenses			
Current tax	40	5.25	435.25
Deferred tax	40	(1,193.08)	(468.13)
Total tax expenses		**(1,187.83)**	**(32.88)**
Profit/(loss) after tax		**(6,650.15)**	**(2,271.59)**
Other comprehensive income			
Item that will not be reclassified to profit or loss:			
(a) Re-measurement (loss)/gain on defined benefit plans (net of taxes)		-	-
Other comprehensive income/ (loss) for the year, net of tax		**-**	**-**
Total comprehensive income/(loss) for the year		**(6,650.15)**	**(2,271.59)**
Profit/(loss) after tax		**(6,650.15)**	**(2,271.59)**
Attributable to:			
Unit holders		(6,650.38)	(2,272.18)
Non-controlling interests		0.23	0.59
Total comprehensive income for the year			
Attributable to:			
Unit holders		(6,650.38)	(2,272.18)
Non-controlling interests		0.23	0.59
Earnings per unit			
Basic (in Rs.)	41	(6.83)	(2.59)
Diluted (in Rs.)		(6.83)	(2.59)
Summary of material accounting policies	3		

The accompanying notes are an integral part of Consolidated Financial Statements.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

For M S K A & Associates
Chartered Accountants
ICAI registration number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No. 118894

Place: Mumbai
Date: May 03, 2024

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Place: Mumbai
Date: May 03, 2024

IRB Infrastructure Trust
Consolidated Statement of Cash Flows for the period April 01, 2023 to March 31, 2024

Particulars	For the year ended March 31, 2024	For the year ended March 31, 2023
Cash flow from operating activities		
Profit/(loss) before tax	(7,837.98)	(2,304.47)
Adjustment to reconcile loss before tax to net cash flows:		
Depreciation and amortisation	3,648.99	2,810.42
Resurfacing expenses	607.54	1,614.45
Fair value gain on mutual funds	(10.42)	(11.35)
Net (gain) on sale of current Investment	(190.86)	(62.95)
Finance costs	14,147.00	10,111.65
Interest income	(566.97)	(186.05)
Gain/(loss) on fair value measurement of other payable	4,935.37	560.53
Dividend income on current investments	(0.03)	-
Operating profit before working capital changes	**14,732.63**	**12,532.23**
Movement in working capital:		
Increase/ (Decrease) in trade payables	(14,206.31)	1178.92
Increase/ (Decrease) in other financial liabilities	(1,202.70)	435.72
Increase/ (Decrease) in other liabilities & provision	85.39	(45.01)
(Increase) / Decrease in trade receivables	16.52	(33.12)
Decrease / (Increase) in other financial assets	(904.80)	134.16
Decrease / (Increase) in other assets	4,027.16	(343.36)
Cash generated from operations	**2,547.88**	**13,859.54**
Taxes paid (net of refunds)	(154.86)	(345.84)
Net cash flows (used in)/generated from operating activities (A)	**2,393.02**	**13,513.70**
Cash flows from investing activities		
Purchase of property, plant and equipment including CWIP, intangible assets including intangible assets under development	(1,54,655.86)	(11,055.81)
Proceeds from sale/ (purchase) of current investments (net)	(38.67)	(549.25)
Investments in bank deposits (having maturity of more than three months) (net)	(6,153.51)	(2396.72)
Interest received	514.80	200.12
Net cash flows (used in) investing activities (B)	**(1,60,333.24)**	**(13,801.66)**
Cash flows from financing activities		
Proceeds from non-current borrowings	1,65,552.04	32,302.27
Repayment of non convertible debentures	(5,396.93)	(124.36)
Repayment of non-current borrowings	(43,167.48)	(25799.39)
Proceed of current borrowings	97.68	1,532.48
Repayment of current borrowings	(5,448.38)	(447.97)
Issue of Unit capital	51,146.50	2,425.00
Distribution made to unit holders	(3,984.60)	-
Issue of Subordinate Debt	16,916.65	-
Unit issue expenses	(144.30)	(15.33)
Finance cost paid	(13,880.03)	(9,140.79)
Transaction cost paid	(2,428.99)	-
Interest distribution to unitholders	(449.55)	-
Net cash flows generated from financing activities (C)	**1,58,812.61**	**731.91**
Net increase / (decrease) in cash and cash equivalents (A+B+C)	**872.39**	**443.95**
Cash and cash equivalents at the beginning of the year	731.31	287.23
Add: Cash acquired on transfer of SPV's	1.98	0.13
Cash and cash equivalents at the end of the period	**1,605.67**	**731.31**
Components of cash and cash equivalents		
Balances with scheduled banks:		
- Trust, retention and other escrow accounts	477.22	394.06
- Others	349.09	279.37
- In deposit accounts with original maturity less than 3 months	760.00	49.50
Cash on hand	19.36	8.38
Total cash and cash equivalents	**1,605.67**	**731.31**

IRB Infrastructure Trust
Consolidated Statement of Cash Flows for the period April 01, 2023 to March 31, 2024

Particulars	For the year ended March 31, 2024	For the year ended March 31, 2023
Debt reconciliation statement in accordance with Ind AS 7		
Opening balances		
Long term borrowing	1,01,369.82	94,124.22
Short term borrowing	5,350.72	4,085.74
Movements		
Cash Flows		
Long term borrowing	1,17,874.84	7,245.60
Short term borrowing	(5,350.70)	1264.98
Non-cash changes		
Long term borrowing	-	-
Short term borrowing	-	-
Closing balances		
Long term borrowing	2,19,244.66	1,01,369.82
Short term borrowing	0.02	5,350.72

Notes :
1. All figures in bracket are outflow.
2. Taxes paid are treated as arising from operating activities and are not bifurcated between investing and financing activities.
3. The Consolidated Cash Flow Statement has been prepared under Indirect Method as per Ind AS 7 "Statement of Cash Flows".

4. The Borrowings reflected in above Debt Reconciliation Statement are gross of Unamortised Transaction Cost.

Summary of material accounting policies 3
The accompanying notes are an integral part of Consolidated Financial Statements.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

For M S K A & Associates
Chartered Accountants
ICAI registration number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No. 118894

Place: Mumbai
Date: May 03, 2024

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Place: Mumbai
Date: May 03, 2024

IRB Infrastructure Trust
Consolidated Statement of changes in unitholder's equity for the period April 01, 2023 to March 31, 2024

Statement of changes in Unitholders equity
A. Unit capital:

(Rs. in millions)

	As at March 31, 2024		As at March 31, 2023	
i) Units issued, subscribed and fully paid	**No.**	**Rs.**	**No.**	**Rs.**
Balance at the beginning of the year	87,92,93,265	87,929.33	85,50,43,265	85,504.33
Issue of Unit capital	23,44,00,000	51,146.50	2,42,50,000	2,425.00
Return of Unit capital (refer note 37)	-	(3,984.60)	-	-
Balance at the end of the period / year	**1,11,36,93,265**	**1,35,091.22**	**87,92,93,265**	**87,929.33**

B. Other equity

(Rs. in million)

	As at March 31, 2024	As at March 31, 2023
Retained earnings		
Balance at the beginning of the year	(10,395.80)	(8,108.29)
Loss for the period / year	(6,650.38)	(2,272.18)
Interest Distribution (refer note 37)	(449.55)	-
Unit Issue expenses	(144.30)	(15.33)
Balance at the end of the period / year	**(17,640.03)**	**(10,395.80)**

C. Movement of NCI

(Rs. in million)

	As at March 31, 2024	As at March 31, 2023
Balance at the beginning of the year	0.81	
Add: NCI on acquisition	0.45	0.22
Add: Profit Attributable for the period / year	0.23	0.59
Balance at the end of the period / year	**1.49**	**0.81**

The accompanying notes are an integral part of Consolidated Financial Statements.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

For M S K A & Associates
Chartered Accountants
ICAI registration number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No. 118894

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Place: Mumbai
Date: May 03, 2024

Place: Mumbai
Date: May 03, 2024

IRB Infrastructure Trust
DISCLOSURES PURSUANT TO SEBI CIRCULARS
(SEBI Circular No. SEBI/HO/DDHS-PoD-2/P/CIR/2023/115 dated July 06, 2023)

A. Consolidated Statement of Net Assets at Fair Value

(Rs. in Million)

	March 31, 2024		**March 31, 2023**	
Particulars	**Book value**	**Fair value**	**Book value**	**Fair value**
A. Assets	4,02,036.78	5,67,707.56	2,43,515.29	3,48,724.47
B. Liabilities (at book value)	2,67,667.46	2,67,667.46	1,65,980.95	1,65,980.95
C. Net Assets (A-B)	1,34,369.32	3,00,040.10	77,534.34	1,82,743.52
D. Number of units (in millions)	1,113.69	1,113.69	879.29	879.29
E. NAV (C/D) (Amount in Rs.)	**120.65**	**269.41**	**88.18**	**207.83**

Project wise break up of fair value of total assets: **(Rs. in Million)**

Name of the project	**March 31, 2024**	**March 31, 2023**
IRB Westcoast Tollway Limited (IRBWTL)	34,349.80	35,698.00
Solapur Yedeshi Tollway Limited (SYTL)	26,098.85	23,853.00
Yedeshi Aurangabad Tollway Limited (YATL)	43,959.36	41,431.00
Kaithal Tollway Limited (KTL)	23,729.03	24,837.00
AE Tollway Limited (AETL)	35,515.99	31,500.00
Udaipur Tollway Limited (UTL)	26,471.47	26,618.00
CG Tollway Limited (CGTL)	28,272.18	28,338.00
Kishangarh Gulabpura Tollway Limited (KGTL)	20,525.91	21,918.00
IRB Hapur Moradabad Tollway Limited (IRBHMTL)	43,182.42	41,868.00
Palsit Dankuni Tollway Private Limited (PDTPL)	17,954.33	11,277.00
IRB Golconda Expressway Private Limited (IGEPL)	1,44,280.42	-
Samakhiyali Tollway Private Limited (STPL)	4,966.03	-
IRB Lalitpur Tollway Private Limited(ILTPL)	49,878.83	-
IRB Kota Tollway Private Limited(IKTPL)	7,190.66	-
IRB Gwalior Tollway Private Limited(IGTPL)	13,416.72	-
Subtotal	**5,19,792.00**	**2,87,338.00**
Add: Net Assets adjusted for Deferred consideration (Refer Note 1)	40,760.96	35,778.03
Add: As per Valuation Report	3,380.52	2,065.50
Add: Other Adjustments at Trust level	3,774.08	23,542.94
Total assets	**5,67,707.56**	**3,48,724.47**

B. Consolidated Statement of total returns at Fair Value :

(Rs. in Million)

Particulars	**For the year ended March 31, 2024**	**For the year ended March 31, 2023**
Total Comprehensive Income (As per the Statement of Profit and Loss)	(6,650.15)	(2,271.59)
Add/Less: other changes in fair value (e.g., in investment property, property, plant & equipment (if cost model is followed)) not recognized in total comprehensive income	1,65,670.78	1,05,209.18
Total Return	**1,59,020.63**	**1,02,937.59**

Note 1: Liability as per books includes deferred consideration of INR 40,761 Million (PY: 35,778 Million) (Refer Note No. 17). Corresponding adjustements carried out in the Fair value of Assets, which is not considered in the valuation reports issued by independent valuers appointed under the InvIT Regulations. Adjustement will not have a impact on Net Assets determined by independent valuer.

Note 2: Fair value of assets as at March 31, 2024 and March 31, 2023 and other changes in fair value for the year then ended as disclosed in the above tables are derived based on the fair valuation reports issued by the independent valuer appointed under the InvIT Regulations.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

SD/-
Nitin Tiwari
Partner
Membership No. 118894

Place: Mumbai
Date: May 03, 2024

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D.Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

Place: Mumbai
Date: May 03, 2024

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Additional Disclosures as required by Paragraph 6 to SEBI Circulars No.SEBI/HO/DDHS-PoD-2/P/CIR/2023/115

a. Net Distributable Cash Flow for the year ended March 31, 2024

(i) IRB Infrastructure Trust

(Rs. in Million)

Sr. No.	Particulars	Year ended March 31, 2024	Year ended March 31, 2023[3]
1	Cash flows received from Project SPVs in the form of Interest[1]	3,748.20	2,097.00
2	Cash flows received from Project SPVs in the form of Dividend	-	-
3	Any other income accruing at the Trust level and not captured above, including but not limited to interest/return on surplus cash invested by the Trust	199.49	0.92
4	Cash flows received from the project SPVs towards the repayment (Net) of the debt issued to the Project SPVs by the Trust[2]	8,897.76	(1,928.34)
5	**Total cash inflow at the Trust level (A)**	**12,845.45**	**169.58**
	Less:		
6	Any payment of fees, interest and expense incurred at the Trust level, including but not limited to the fees of the Investment Manager	(2,634.54)	(113.33)
7	Income tax (if applicable) at the Standalone Trust Level	-	-
8	Repayment of external debt	(646.69)	-
9	Promoter contribution in under construction Project SPVs	(4,855.00)	-
10	**Total cash outflows / retention at the Trust level (B)**	**(8,136.23)**	**(113.33)**
11	**Net Distributable Cash Flows (C) = (A+B)**	**4,709.22**	**56.25**

Note :

1. Excludes interest due but not received of Rs.7,703.64 millions, Rs.5,009.88 millions,Rs. 922.36 millions,Rs. 12,713.52 millions and Rs. 2,124.77 Millions for the six months ended March 31, 2024, six months ended September 30, 2023, six months ended March 31, 2023, year ended March 31, 2024 and year ended March 31, 2023.
2. Netted - off with disbursement of short-term unsecured loan to related parties. (Refer RPT disclosures of standalone financial results).
3. The same is earmarked towards capex for ongoing projects.

(ii) IRB Westcoast Tollway Limited (IRBWC)

(Rs. in Million)

Sr. No.	Description	Year ended March 31, 2024*	Year ended March 31, 2023
1	Profit after tax as per profit and loss account (A)	(3,308.86)	(1,135.93)
2	Add: Depreciation and amortisation as per Statement of profit and loss	214.60	164.74
3	Add/Less: Decrease/(Increase) in Working capital	(238.79)	-
4	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	42.29	137.31
5	Add: Interest paid/payable to the Trust	3,158.60	530.18
6	Add :- Provision for resurfacing expenses (Net)	-	-
7	Less: Principal repayment of external debt	(121.51)	(70.97)
8	Less: Tax paid	-	-
9	Less: Creation of MMRA	322.00	-
10	Less: Capital expenditure towards the project	(24.56)	-
11	Total adjustments (B)	**3,352.64**	**761.26**
12	**Net Distributable Cash Flows (C) = (A+B)**	**43.78**	**(374.67)**

Notes:

[#] Working capital adjustment has been carried out from the current period.

[*]The above NDCF is excluding amounts borrowed to repay debt availed from external lenders and Trust.

(iii) Yedeshi Aurangabad Tollway Limited (YATL)

(Rs. in Million)

Sr. No.	Description	Year ended March 31, 2024	Year ended March 31, 2023
1	Profit after tax as per profit and loss account (A)	(1,302.40)	(264.71)
2	Add: Depreciation and amortisation as per Statement of profit and loss	573.49	559.99
3	Add/Less: Decrease/(Increase) in Working capital	(537.41)	-
4	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	74.36	41.68
5	Add: Interest paid/payable to the Trust	1,522.05	581.77
6	Add :- Provision for resurfacing expenses (Net)	123.21	109.06
7	Less: Principal repayment of external debt	-	(60.29)
8	Less: Tax paid	-	-
9	Less: Creation of MMRA/ release of DSRA	460.00	(220.00)
10	Less: Capital expenditure towards the project	-	-
11	Total Adjustments (B)	**2,215.70**	**1,012.21**
12	**Net Distributable Cash Flows (C) = (A+B)**	**913.30**	**747.50**

Notes:

[#] Working capital adjustment has been carried out from the current period.

(iv) Solpaur Yedeshi Tollway Limited (SYTL)

(Rs. in Million)

Sr. No.	Description	Year ended March 31, 2024	Year ended March 31, 2023
1	Profit after tax as per profit and loss account (A)	(844.59)	(225.45)
2	Add: Depreciation and amortisation as per Statement of profit and loss	156.93	168.97
3	Add/Less: Decrease/(Increase) in Working capital	(109.90)	-
4	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	36.44	20.80
5	Add: Interest paid/payable to the Trust	1,192.25	560.00
6	Add :- Provision for resurfacing expenses (Net)	71.40	60.75
7	Less: Principal repayment of external debt	-	(5.86)
8	Less: Tax paid	-	-
9	Less: Creation of MMRA/release of DSRA	260.00	(80.00)
10	Less: Capital expenditure towards the project	-	-
11	Total Adjustments (B)	**1,607.12**	**724.66**
12	**Net Distributable Cash Flows (C) = (A+B)**	**762.53**	**499.21**

Notes:

[#] Working capital adjustment has been carried out from the current period.

(v) Kaithal Tollway Limited (KTL)

(Rs. in Million)

Sr. No.	Description	Year ended March 31, 2024*	Year ended March 31, 2023
1	Profit after tax as per profit and loss account (A)	(1,895.65)	(848.69)
2	Add: Depreciation and amortisation as per Statement of profit and loss	217.01	212.13
3	Add/Less: Decrease/(Increase) in Working capital	633.48	-
4	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	184.01	96.97
5	Add: Interest paid/payable to the Trust	2,227.67	1,186.02
6	Add :- Provision for resurfacing expenses (Net)	(227.64)	176.65
7	Less: Principal repayment of external debt	(50.13)	(121.25)
8	Less: Tax paid	-	-
9	Less: Creation of MMRA	145.00	-
10	Less: Capital expenditure towards the project	-	-
11	Total Adjustments (B)	**3,129.40**	**1,550.52**
12	**Net Distributable Cash Flows (C) = (A+B)**	**1,233.75**	**701.83**

Notes:

[#] Working capital adjustment has been carried out from the current period.

[*]The above NDCF is excluding amounts borrowed to repay debt availed from external lenders and Trust.

(vi) Agra Etawah Tollway Limited (AETL)

(Rs. in Million)

Sr. No.	Description	Year ended March 31, 2024*	Year ended March 31, 2023
1	Profit after tax as per profit and loss account (A)	(3,507.79)	(1,749.13)
2	Add: Depreciation and amortisation as per Statement of profit and loss	326.30	309.71
3	Add/Less: Decrease/(Increase) in Working capital	413.41	-
4	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	120.73	32.54
5	Add: Interest paid/payable to the Trust	3,266.16	1,333.98
6	Add :- Provision for resurfacing expenses (Net)	(133.53)	185.82
7	Less: Principal repayment of external debt	(23.23)	(68.51)
8	Less: Tax paid	-	-
9	Less: Creation of MMRA/ release of DSRA	424.30	-
10	Less: Capital expenditure towards the project	-	-
11	Total Adjustments (B)	**4,394.14**	**1,793.54**
12	**Net Distributable Cash Flows (C) = (A+B)**	**886.35**	**44.41**

Notes:

[#] Working capital adjustment has been carried out from the current period.

[*]The above NDCF is excluding amounts borrowed to repay debt availed from external lenders and Trust.

(vii) Udaipur Tollway Limited (UTL)

(Rs. in Million)

Sr. No.	Description	Year ended March 31, 2024	Year ended March 31, 2023
1	Profit after tax as per profit and loss account (A)	(1,460.53)	(1,903.87)
2	Add: Depreciation and amortisation as per Statement of profit and loss	429.26	364.50
3	Add/Less: Decrease/(Increase) in Working capital	908.52	-
4	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	109.09	120.39
5	Add: Interest paid/payable to the Trust	-	-
6	Add :- Provision for resurfacing expenses (Net)	(87.05)	432.11
7	Less: Principal repayment of external debt	(35.41)	(28.84)
8	Less: Tax paid	-	-
9	Less: Creation of MMRA	-	-
10	Less: Capital expenditure towards the project	-	-
11	Total Adjustments (B)	**1,324.41**	**888.16**
12	**Net Distributable Cash Flows (C) = (A+B)**	**(136.12)**	**(1,015.71)**

Notes:

[#] Working capital adjustment has been carried out from the current period.

(viii) Chittorgarh Gulabpura Tollway Limited (CGTL)

(Rs. in Million)

Sr. No.	Description	Year ended March 31, 2024	Year ended March 31, 2023
1	Profit after tax as per profit and loss account (A)	(1,131.42)	(936.67)
2	Add: Depreciation and amortisation as per Statement of profit and loss	398.41	371.14
3	Add/Less: Decrease/(Increase) in Working capital	(21.16)	-
4	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	36.69	(110.79)
5	Add: Interest paid/payable to the Trust	-	-
6	Add :- Provision for Resurfacing Expenses (Net)	138.16	126.16
7	Less: Repayment of external debt (principal)	(100.37)	(79.44)
8	Less: Tax paid	-	-
9	Less: Creation of MMRA	-	-
10	Less: Capital expenditure towards the project	-	-
11	Total Adjustments (B)	**451.73**	**307.08**
12	**Net Distributable Cash Flows (C) = (A+B)**	**(679.69)**	**(629.59)**

Notes:

[#] Working capital adjustment has been carried out from the current period.

(ix) Kishangarh Gulabpura Tollway Limited (KGTL)

(Rs. in Million)

Sr. No.	Description	Year ended March 31, 2024*	Year ended March 31, 2023
1	Profit after tax as per profit and loss account (A)	(2,038.30)	(247.35)
2	Add: Depreciation and amortisation as per Statement of profit and loss	259.92	212.76
3	Add/Less: Decrease/(Increase) in Working capital	(0.73)	-
4	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	249.70	249.35
5	Add: Interest paid/payable to the Trust	942.45	-
6	Add :- Provision for Resurfacing Expenses (Net)	173.73	110.67
7	Less: Repayment of external debt (principal)	(7.96)	(36.32)
8	Less: Tax paid	-	-
9	Less: Creation of MMRA/release of DSRA	360.00	-
10	Less: Capital expenditure towards the project	-	-
11	Total Adjustments (B)	**1,977.11**	**536.46**
12	**Net Distributable Cash Flows (C) = (A+B)**	**(61.19)**	**289.11**

Notes:

[#] Working capital adjustment has been carried out from the current period.

[*]The above NDCF is excluding amounts borrowed to repay debt availed from external lenders and Trust.

(x) IRB Hapur Moradabad Tollway Limited (IRBHM)

(Rs. in Million)

Sr. No.	Description	Year ended March 31, 2024*	Year ended March 31, 2023^
1	Profit after tax as per profit and loss account (A)	(1,844.84)	(75.48)
2	Add: Depreciation and amortisation as per Statement of profit and loss	481.39	351.78
3	Add/Less: Decrease/(Increase) in Working capital	(992.13)	
4	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	334.11	120.02
5	Add: Interest paid/payable to the Trust	2,257.27	-
6	Add :- Provision for Resurfacing Expenses (Net)	372.37	270.19
7	Less: Repayment of external debt (principal)	(96.43)	(134.90)
8	Less: Tax paid	-	-
9	Less: Creation of MMRA/ release of DSRA	600.00	-
10	Less: Capital expenditure towards the project	(344.10)	(62.03)
11	Total Adjustments (B)	**2,612.48**	**545.06**
12	**Net Distributable Cash Flows (C) = (A+B)#**	**767.64**	**469.58**

Notes:

Working capital adjustment has been carried out from the current period.

*The above NDCF is excluding amounts borrowed to repay debt availed from external lenders and Trust.

^ The said funds are earmarked towards balance Capex.

(xi) Palsit Dankuni Tollway Private Limited (PDTPL)

(Rs. in Million)

Sr. No.	Description	Year ended March 31, 2024	Year ended March 31, 2023^
1	Profit after tax as per profit and loss account (A)	393.86	1,430.69
2	Add: Depreciation and amortisation as per Statement of profit and loss	276.13	94.71
3	Add/Less: Decrease/(Increase) in Working capital	(144.47)	-
4	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	(78.95)	193.17
5	Add: Interest paid/payable to the Trust		-
6	Add :- Provision for Resurfacing Expenses (Net)	-	-
7	Less: Repayment of external debt (principal)	-	-
8	Less: Tax paid	(5.28)	(363.10)
9	Less: Creation of MMRA		
10	Less: Capital expenditure towards the project	(457.00)	(1,332.99)
11	Total Adjustments (B)	**(409.57)**	**(1,408.21)**
12	**Net Distributable Cash Flows (C) = (A+B)**	**(15.71)**	**22.48**

Notes:

[#] Working capital adjustment has been carried out from the current period.

^ The said funds are earmarked towards balance Capex.

(xii) IRB Golconda Expressway Private Limited (IGEPL)

(Rs. in Million)

Sr. No.	Description	Six Months ended March 31, 2024^	August 11, 2023 to March 31, 2024^
1	Profit after tax as per profit and loss account (A)	(740.32)	(1,008.24)
2	Add: Depreciation and amortisation as per Statement of profit and loss	244.87	312.12
3	Add/Less: Decrease/(Increase) in Working capital	(8.83)	(8.83)
4	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	64.19	(120.23)
5	Add: Interest paid/payable to the Trust	1,867.05	1,882.86
6	Add :- Provision for Resurfacing Expenses (Net)	(388.74)	-
7	Less: Repayment of external debt (principal)	-	-
8	Less: Tax paid	-	-
9	Less: Creation of MMRA	-	-
10	Less: Capital expenditure towards the project	-	-
11	Total Adjustments (B)	**1,778.54**	**2,065.92**
12	**Net Distributable Cash Flows (C) = (A+B)**	**1,038.22**	**1,057.68**

Note:

^The said funds would be released post meeting Restricted Payment conditions as stated in Facility Agreement.
The Company has been transferred to Trust from August 11, 2023.

(xiii) Samakhiyali Tollway Private Limited (STPL)

(Rs. in Million)

Sr. No.	Description	December 28, 2023 to March 31, 2024^
1	Profit after tax as per profit and loss account (A)	327.17
2	Add: Depreciation and amortisation as per Statement of profit and loss	3.43
3	Add/Less: Decrease/(Increase) in Working capital	9.15
4	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	6.92
5	Add: Interest paid/payable to the Trust	-
6	Add :- Provision for Resurfacing Expenses (Net)	-
7	Less: Repayment of external debt (principal)	-
8	Less: Tax paid	(83.40)
9	Less: Creation of MMRA	-
10	Less: Capital expenditure towards the project	(254.13)
11	Total Adjustments (B)	**(318.04)**
12	**Net Distributable Cash Flows (C) = (A+B)**	**9.13**

Note: ^ The said funds are earmarked towards balance Capex.
The Company has been transferred to Trust from December 28, 2023.

(xiv) IRB Lalitpur Tollway Private Limited (ILTPL)

(Rs. in Million)

Sr. No.	Description	November 10, 2023 to March 31, 2024
1	Profit after tax as per profit and loss account (A)	10.16
2	Add: Depreciation and amortisation as per Statement of profit and loss	-
3	Add/Less: Decrease/(Increase) in Working capital	98.93
4	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	(8.24)
5	Add: Interest paid/payable to the Trust	-
6	Add :- Provision for Resurfacing Expenses (Net)	-
7	Less: Repayment of external debt (principal)	-
8	Less: Tax paid	-
9	Less: Creation of MMRA	-
10	Less: Capital expenditure towards the project	-
11	Total Adjustments (B)	**90.69**
12	**Net Distributable Cash Flows (C) = (A+B)**	**100.85**

Note: The Company has been incorporated on November 10, 2023.

(xv) IRB Kota Tollway Private Limited (IKTPL)

(Rs. in Million)

Sr. No.	Description	January 01, 2024 to March 31, 2024
1	Profit after tax as per profit and loss account (A)	(0.87)
2	Add: Depreciation and amortisation as per Statement of profit and loss	-
3	Add/Less: Decrease/(Increase) in Working capital	5.28
4	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	(1.11)
5	Add: Interest paid/payable to the Trust	-
6	Add :- Provision for Resurfacing Expenses (Net)	-
7	Less: Repayment of external debt (principal)	-
8	Less: Tax paid	-
9	Less: Creation of MMRA	-
10	Less: Capital expenditure towards the project	-
11	Total Adjustments (B)	**4.16**
12	**Net Distributable Cash Flows (C) = (A+B)**	**3.29**

Note: The Company has been incorporated on January 01, 2024.

(xvi) IRB Gwalior Tollway Private Limited (IGTPL)

(Rs. in Million)

Sr. No.	Description	January 01, 2024 to March 31, 2024
1	Profit after tax as per profit and loss account (A)	0.60
2	Add: Depreciation and amortisation as per Statement of profit and loss	-
3	Add/Less: Decrease/(Increase) in Working capital	10.70
4	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	(2.62)
5	Add: Interest paid/payable to the Trust	-
6	Add :- Provision for Resurfacing Expenses (Net)	-
7	Less: Repayment of external debt (principal)	-
8	Less: Tax paid	-
9	Less: Creation of MMRA	-
10	Less: Capital expenditure towards the project	-
11	Total Adjustments (B)	**8.08**
12	**Net Distributable Cash Flows (C) = (A+B)**	**8.68**

Note: The Company has been incorporated on January 01, 2024.

1 **Corporate Information**

The IRB Infrastructure Trust (the "Trust") is a trust settled pursuant to the indenture of trust dated August 27, 2019 which is registered under the Registration Act, 1908 and under the Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time. The Trust is settled by the Sponsor, IRB Infrastructure Developers Limited ("IRB" or the "Sponsor"), an infrastructure development company in India. The Trustee to the Trust is IDBI Trusteeship Services Limited (the "Trustee"). Investment manager for the Trust is MMK Toll Road Private Limited (the "Investment Manager"). The Trust has received registraion certificate from SEBI on November 25, 2019.

The Trust has been formed to invest in infrastructure assets primarily being in the road sector in India. The Trust's road projects are eligible infrastructure projects under the InvIT Regulations and held through special purpose vehicles ("Project SPVs" together as "Project SPV Group"). The Trust's portfolio comprises of fifteen road projects as listed below:-

Project SPV Name**	Residual Concession life*	Shareholding	Nature of Investment	Status	Principal Activities	Country of incorporation
IRB Westcoast Tollway Limited (IRBWTL)	17 years 11 Months 1 days	100%	Subsidiary	Tolling and Construction	Construction and operation of road including toll collection.	India
Solapur Yedeshi Tollway Limited (SYTL)	19 years 9 Months 21 days	100%	Subsidiary	Operating		India
Yedeshi Aurangabad Tollway Limited (YATL)	17 years 3 Months	100%	Subsidiary	Operating		India
Kaithal Tollway Limited (KTL)	18 years 3 Months 14 days	100%	Subsidiary	Operating		India
AE Tollway Limited (AETL)	16 years 4 Months 1 days	100%	Subsidiary	Operating		India
Udaipur Tollway Limited (UTL)	14 years 5 Months 3 days	100%	Subsidiary	Operating		India
CG Tollway Limited (CGTL)	13 years 7 Months 4 days	100%	Subsidiary	Operating		India
Kishangarh Gulabpura Tollway Limited (KGTL)	13 years 10 Months 21 days	100%	Subsidiary	Operating		India
IRB Hapur Moradabad Tollway Limited (IRBHMTL)	17 years 1 Months 24 days	100%	Subsidiary	Operating		India
Palsit Dankuni Tollway Private Limited (PDTPL) w.e.f 02.04.2022	15 years	100%	Subsidiary	Tolling and Construction		India
IRB Golconda Expressway Private Limited(IGEPL) w.e.f 11.08.2023	29 years 4 Months 12 days	100%	Subsidiary	Operating		India
Samakhiyali Tollway Private Limited(STPL) w.e.f 28.12.2023	19 years 8 Months 27 days	100%	Subsidiary	Tolling and Construction		India
IRB Lalitpur Tollway Private Limited(ILTPL) w.e.f 10.11.2023	20 years	100%	Subsidiary	Appointed date received on April 1, 2024		India
IRB Kota Tollway Private Limited(IKTPL) w.e.f 01.01.2024	20 years	100%	Subsidiary	Appointed date received on April 1, 2024		India
IRB Gwalior Tollway Private Limited(IGTPL) w.e.f 01.01.2024	20 years	100%	Subsidiary	Appointed date received on April 1, 2024		India

* Represents residual concession life as at March 31, 2024 as per original concession period (without considering extension of concession period, if any).

** Of the above Project SPVs, IRBWTL, SYTL, YATL, AETL, CGTL, UTL and IRBHMTL have been converted to public companies on November 13, 2019 and KTLand KGTL on November 14, 2019 .

The registered office of the Investment Manager is Off No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai Mumbai 400076.
The Trust has been listed on NSE w.e.f. 03.04.2023.

2 **Basis of preparation of Consolidated Financial Statements**

A. Basis of preparation of Consolidated Financial Statements

The Consolidated Financial Statements comprise the Financial Statements of the Project SPV Group.
Consolidated Financial Statements are prepared using uniform accounting policies for like transactions and other events in similar circumstances.
The Financial Statements of all Project SPVs used for the purpose of consolidation are drawn up to the same reporting date i.e. year ended on March 31.
Consolidation procedure:
(a) Consolidate like items of assets, liabilities, equity, income, expenses and cash flows of Project SPVs.
(b) Eliminate in full intra Project SPVs assets and liabilities, income, expenses and cash flows relating to transactions between Project SPVs of the Project SPV Group (profits or losses resulting from intra Project SPV Group transactions that are recognised in assets, such as inventory and property, plant and equipment, are eliminated in full). Profit or loss and each component of other comprehensive income (OCI) are attributed to the equity holders of the Project SPV Group and to the non-controlling interests, even if this results in the non-controlling interests having a deficit balance.

B. Statement of compliance

The Consolidated Financial Statements of Project SPV Group comprises of Consolidated Balance Sheet as at March 31, 2024 and March 31, 2023, the Consolidated Statement of Profit and Loss (including Other Comprehensive Income) of the Project SPV group, the Consolidated Statement of Cash Flow, the Consolidated Statement of Changes in Unitholders equity for the year ended March 31, 2024 and March 31, 2023, the consolidated statement of Net Assets at Fair Value as at March 31, 2024 and March 31, 2023 and the Consolidated Statement of Total Returns at Fair Value for the year ended March 31, 2024 and March 31, 2023, a summary of material accounting policies, notes and other explanatory Information.

The Consolidated Financial Statements which comprises the Consolidated Balance Sheet as at March 31, 2024, the Consolidated Statement of Profit and Loss (including Other Comprehensive Income), the Consolidated Statement of Changes in Unit Holder's Equity, the Consolidated Statement of Cash Flows for the year then ended, Statement of Net Assets at Fair value as at March 31, 2024, Statement of Total Returns at Fair Value and Net Distributable cashflows for the year then ended as an additional disclosure in accordance with the Securities and Exchange Board of India ("SEBI") Master Circular SEBI/HO/DDHS-PoD-2/P/CIR/2023/115 dated July 06, 2023, as amended, ("the SEBI Circular") for the year ended March 31, 2024 and notes to the Consolidated Financial Statements, including material accounting policy information and other explanatory information has been prepared in accordance with the requirements of SEBI (Infrastructure Investment Trusts) Regulations, 2014, as amended from time to time read with SEBI Circular, together known as ("InvIT Regulations"); the Indian Accounting Standards prescribed under Rule 2(1) (a) of Companies (Indian Accounting Standards) Rules, 2015, as amended, and other accounting principles generally accepted in India to the extent not inconsistent with the InvIT Regulations (refer note 13 below on presentation of "Unit Capital" as "Equity" instead of compound instruments under Ind AS 32 - Financial Instruments: Presentation).

The Consolidated Financial Statements are presented in Rs. in millions, except when otherwise indicated.Wherever the amount represented '0' (zero) construes value less than Rupees five thousand.

C. The accounting policies adopted, and methods of computation followed are consistent with those of the previous financial year, except for items disclosed below:

The Ministry of Corporate Affairs has notified Companies (Indian Accounting Standard) Amendment Rules 2023 dated 31 March 2023 to amend the following Ind AS which are effective from 1 April 2023

Ind AS 1, Presentation of Financial Statements
An entity shall disclose material accounting policy information. Accounting policy information is material if, when considered together with other information included in an entity's financial statements, it can reasonably be expected to influence decisions that the primary users of general purpose financial statements make on the basis of those financial statements.

Ind AS 8, Accounting policies, Change in Accounting Estimates and Errors
Definition of 'Change in Accounting Estimates' in account has been replaced by revised definition of 'Accounting Estimate'. As per revised definition, accounting estimates are monetary amounts in the financial statements that are subject to measurement uncertainty. An entity develops an accounting estimate to achieve the objective set out by the accounting policy. Developing accounting estimates involves the use of judgements or assumptions based on the latest available, reliable information.
An entity may need to change an accounting estimate if changes occur in the circumstances on which the accounting estimate was based or as a result of new information, new developments or more experience. By its nature, a change in an accounting estimate does not relate to prior periods and is not the correction of an error.

3 **Summary of material accounting policies**

3.01 **Current versus non-current classification**
The Project SPV Group has identified twelve months as its operating cycle. The operating cycle is the time between the acquisition of assets for processing and their realisation in cash and cash equivalents.
The Project SPV Group presents assets and liabilities in the balance sheet based on current/ non-current classification. An asset is treated as current when it is:
- Expected to be realised or intended to be sold or consumed in normal operating cycle
- Held primarily for the purpose of trading
- Expected to be realised within twelve months after the reporting period, or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

All other assets are classified as non-current.

A liability is current when:
- It is expected to be settled in normal operating cycle
- It is held primarily for the purpose of trading
- It is due to be settled within twelve months after the reporting period, or
- There is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period

The Project SPV Group classifies all other liabilities as non-current.
Deferred tax assets and liabilities are classified as non-current assets and liabilities respectively.

3.02 **Use of estimates and judgements**
The preparation of the Project SPV Group's financial statements requires management to make judgements, estimates and assumptions that affect the reported amounts of expenses, assets and liabilities, and the accompanying disclosures, and the disclosure of contingent liabilities. Uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of assets or liabilities affected in future years.

Estimates and assumptions
Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the year in which the estimates are revised and future periods are affected.

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are described below. The Project SPV Group based its assumptions and estimates on parameters available when the financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising that are beyond the control of the Group. Such changes are reflected in the assumptions when they occur.

Fair value measurement of financial instruments (refer note 31)
Provision for major maintenance (refer note 19)
Impairment of non financial assets (refer note 3.17)

3.03 **Business Combinations**
Business combinations are accounted for using the acquisition method. The cost of an acquisition is measured as the aggregate of the consideration transferred measured at fair value on acquisition date and the amount of any non-controlling interests in the acquiree. For each business combination, the Group elects whether to measure the non-controlling interests in the acquiree at fair value or at the proportionate share of the acquiree's identifiable net assets.

At the acquisition date, the identifiable assets acquired and the liabilities assumed are recognised at their acquisition date fair values. For this purpose, the liabilities assumed include contingent liabilities representing present obligation and they are measured at their acquisition fair values irrespective of the fact that outflow of resources embodying economic benefits is not probable.

Goodwill is initially measured at cost, being the excess of the aggregate of the consideration transferred and the amount recognised for non-controlling interests, and any previous interest held, over the net identifiable assets acquired and liabilities assumed. If the fair value of the net assets acquired is in excess of the aggregate consideration transferred, the Group re-assesses whether it has correctly identified all of the assets acquired and all of the liabilities assumed and reviews the procedures used to measure the amounts to be recognised at the acquisition date. If the reassessment still results in an excess of the fair value of net assets acquired over the aggregate consideration transferred, then the gain is recognised in OCI and accumulated in equity as capital reserve. However, if there is no clear evidence of bargain purchase, the entity recognises the gain directly in equity as capital reserve, without routing the same through OCI.

After initial recognition, goodwill is measured at cost less any accumulated impairment losses. For the purpose of impairment testing, goodwill acquired in a business combination is, from the acquisition date, allocated to each of the Group's cash-generating units that are expected to benefit from the combination, irrespective of whether other assets or liabilities of the acquiree are assigned to those units.

A cash generating unit to which goodwill has been allocated is tested for impairment annually, or more frequently when there is an indication that the unit may be impaired. If the recoverable amount of the cash generating unit is less than its carrying amount, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then to the other assets of the unit pro rata based on the carrying amount of each asset in the unit.

Any impairment loss for goodwill is recognised in profit or loss. An impairment loss recognised for goodwill is not reversed in subsequent periods. Where goodwill has been allocated to a cashgenerating unit and part of the operation within that unit is disposed of, the goodwill associated with the disposed operation is included in the carrying amount of the operation when determining the gain or loss on disposal. Goodwill disposed in these circumstances is measured based on the relative values of the disposed operation and the portion of the cash-generating unit retained.

3.04 **Asset acquisition**
The acquisition of an asset or a group of assets that does not constitute a business. In such cases the acquirer shall identify and recognise the individual identifiable asset acquired including those assets that meet the definition of, and recognition criteria for, intangible asset in IND AS 38, Intangible Assets and Liabilities assumed. The cost of the group is allocated to the individual identifiable assets and liabilities on the basis of their relative fair values at the date of purchase. Such a transaction or event does not give rise to goodwill.

3.05 **Fair value measurement**

The Project SPV Group measures financial instruments, (refer note 31) at fair value at each balance sheet date.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:

- In the principal market for the asset or liability, or
- In the absence of a principal market, in the most advantageous market for the asset or liability

The principal or the most advantageous market must be accessible by the Project SPV Group.

The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The Project SPV Group uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

Level 1 - Quoted (unadjusted) market prices in active markets for identical assets or liabilities

Level 2- Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable

Level 3 -Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable

For assets and liabilities that are recognised in the financial statements on a recurring basis, the Project SPV Group determines whether transfers have occurred between levels in the hierarchy by re-assessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

The Project SPV Group's Management determines the policies and procedures for both recurring fair value measurement, such as derivative instruments and unquoted financial assets measured at fair value, and for non-recurring measurement, such as assets held for distribution in discontinued operations.

At each reporting date, the Management analyses the movements in the values of assets and liabilities which are required to be remeasured or re-assessed as per the Project SPV Group's accounting policies. For this analysis, the Management verifies the major inputs applied in the latest valuation by agreeing the information in the valuation computation to contracts and other relevant documents.

The management also compares the change in the fair value of each asset and liability with relevant external sources to determine whether the change is reasonable.

On an annual basis, the Management presents the valuation results to the Investment Manager and the Project SPV Group's independent auditors. This includes a discussion of the major assumptions used in the valuations.

For the purpose of fair value disclosures, the Project SPV Group has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy as explained above.

This note summarises accounting policy for fair value. Other fair value related disclosures are given in the relevant notes.

Disclosures for valuation methods, significant estimates and assumptions (note 3.02)

Financial instruments (including those carried at amortised cost) (note 5,6,7,8,17,31)

Quantative disclosure of fair value measurement hierarchy (note 32)

3.06 **Revenue recognition**

The Project SPV Group has applied the following accounting policy for revenue recognition:

Revenue from contracts with customers:

The Project SPV Group recognises revenue from contracts with customers based on a five step model as set out in Ind AS 115:

Step 1. Identify the contract(s) with a customer: A contract is defined as an agreement between two or more parties that creates enforceable rights and obligations and sets out the criteria for every contract that must be met.

Step 2. Identify the performance obligations in the contract: A performance obligation is a promise in a contract with a customer to transfer a good or service to the customer.

Step 3. Determine the transaction price: The transaction price is the amount of consideration to which the Company expects to be entitled in exchange for transferring promised goods or services to a customer, excluding amounts collected on behalf of third parties.

Step 4. Allocate the transaction price to the performance obligations in the contract: For a contract that has more than one performance obligation, the Company will allocate the transaction price to each performance obligation in an amount that depicts the amount of consideration to which the Company expects to be entitled in exchange for satisfying each performance obligation.

Step 5. Recognise revenue when (or as) the entity satisfies a performance obligation.

The Project SPV Group satisfies a performance obligation and recognises revenue over time, if one of the following criteria is met:

1. The customer simultaneously receives and consumes the benefits provided by the Project SPV Group's performance as the Project SPV Group performs; or
2. The Project SPV Group's performance creates or enhances an asset that the customer controls as the asset is created or enhanced; or
3. The Project SPV Group's performance does not create an asset with an alternative use to the Project SPV Group and the entity has an enforceable right to payment for performance completed to date.

Contract revenue

Contract revenue associated with the utility shifting incidental to construction of road are recognized as revenue by reference to the stage of completion of the projects at the balance sheet date. The stage of completion of project is determined by the proportion that contract cost incurred for work performed up to the balance sheet date bears to the estimated total contract costs.

Project SPVs operations involve levying of GST on the construction work. Goods and Service tax is not received by the project SPVs on its own account, rather, it is tax collected on value added to the commodity by the seller on behalf of the government. Accordingly, it is excluded from revenue.

Income from the concession arrangements earned under the intangible asset model consists of the (i) fair value of contract revenue, which is deemed to be fair value of consideration transferred to acquire the asset; and (ii) payments actually received from the users. The intangible asset is amortised over its expected useful life in a way that reflects the pattern in which the asset's economic benefits are consumed by the Project SPV Group, starting from the date when the right to operate starts to be used. Based on these principles, the intangible asset is amortised in line with the actual usage of the specific public utility facility, with a maximum of the duration of the concession.

Claim Revenue

Claims are recognised as revenue as per relevant terms of concession agreement with the authority when it is probable that such claims will be accepted by the customer that can be measured reliably.

Income from toll contracts

The income from Toll Contracts on BOT basis are recognised on actual collection of toll revenue (net of Premium and revenue share payable to NHAI) as per Concession Agreement. Revenue from electronic toll collection is recognised on accrual basis.

Interest income

For all financial assets measured either at amortised cost or at fair value through other comprehensive income, interest income is recorded using the effective interest rate (EIR). EIR is the rate that exactly discounts the estimated future cash payments or receipts over the expected life of the financial instrument or a shorter period, where appropriate, to the gross carrying amount of the financial asset or to the amortised cost of a financial liability. When calculating the effective interest rate, the Project SPV Group estimates the expected cash flows by considering all the contractual terms of the financial instrument (for example, prepayment, extension, call and similar options) but does not consider the expected credit losses. Interest income is included in finance income in the statement of profit and loss.

Dividends

Revenue is recognised when the Project SPV Group's right to receive the payment is established, which is generally when shareholders approve the dividend.

Trade receivables

A receivable represents the Project SPV Group's right to an amount of consideration that is unconditional i.e. only the passage of time is required before payment of consideration is due.

3.07 **Taxes**

Current income tax

Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities in accordance the Income Tax Act, 1961. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted at the reporting date in the country where the Company operates and generates taxable income.

Current income tax relating to items recognised outside profit or loss (either in other comprehensive income or in equity). Current tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity. Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

Deferred tax

Deferred tax is provided using the liability method on temporary differences between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date.

Deferred tax liabilities are recognised for all taxable temporary differences, except:

- When the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and at the time of the transaction, affects neither the accounting profit nor taxable profit or loss.

- In respect of taxable temporary differences associated with investments in subsidiaries, when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future

Deferred tax assets are recognised for all deductible temporary differences, the carry forward of unused tax credits and any unused tax losses. Deferred tax assets are recognised to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilised, except:

- When the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction affects neither the accounting profit nor taxable profit or loss.

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised. Unrecognised deferred tax assets are re-assessed at each reporting date and are recognised to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax relating to items recognised outside statement of profit and loss is recognised outside statement of profit and loss (either in other comprehensive income or in equity). Deferred tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity .

Deferred tax assets and deferred tax liabilities are offset if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

Tax benefits acquired as part of a business combination, but not satisfying the criteria for separate recognition at that date, are recognised subsequently if new information about facts and circumstances change. Acquired deferred tax benefits recognised within the measurement period reduce goodwill related to that acquisition if they result from new information obtained about facts and circumstances existing at the acquisition date. If the carrying amount of goodwill is zero, any remaining deferred tax benefits are recognised in OCI/ capital reserve depending on the principle explained for bargain purchase gains. All other acquired tax benefits realised are recognised in the consolidated statement of profit and loss. Deferred tax is recognised in consolidated statement of profit and loss on the consolidated adjustments.

Minimum Alternate Tax (MAT)

Minimum Alternate Tax (MAT) paid as per Indian Income Tax Act, 1961 is in the nature of unused tax credit which can be carried forward and utilised when the Project SPV Group will pay normal income tax during the specified period. Being DTA tax credit is recognised to the extent that it is probable that the unused tax credit can be utilised in the specified future period. The net amount of tax recoverable from, or payable to, the taxation authority is included as part of receivables or payables in the balance sheet.

Goods and service tax paid on acquisition of assets or on incurring expenses

Expenses and assets are recognised net of the amount of goods and service tax paid, except:
When the tax incurred on a purchase of assets or services is not recoverable from the tax authority, in which case, the tax paid is recognised as part of the cost of acquisition of the asset or as part of the expense item, as applicable.

When receivables and payables are stated with the amount of tax included. The net amount of tax recoverable from, or payable to, the tax authority is included as part of receivables or payables in the balance sheet.

3.08 **Property, plant and equipment**

Property, plant and equipment are stated at cost, less accumulated depreciation and impairment losses if any. Cost comprises the purchase price and any attributable cost of bringing the asset to its working condition for its intended use.Any trade discount or rebates are deducted in arriving at the purchase price.

Depreciation is calculated on written down value method (WDV) using the useful lives as prescribed under the Schedule II to the Companies Act, 2013 or re-assessed by the Project SPV Group based on technical evaluation. The Project SPV Group has estimated the following useful lives for its tangible fixed assets:

Asset class	Useful life
Building	30 years*
Office equipment	5 years
Computers (including server)	3 to 6 years
Furniture & fixtures	10 years

* The useful life of building has been calculated by management as per their technical estimate.

3.09 **Intangible assets**

The Project SPV Group exercised first time adoption under Ind AS 101 and has elected to continue with the carrying value of its "Toll Collection Rights" (Intangible Assets) including corresponding obligation, as recognised in the financial statements as at the date of transition April 1, 2016 measured as per the Previous GAAP and uses that as its deemed cost as at date of transition.

Toll collection rights are stated at cost, less accumulated amortisation , impairment losses and grant from government. Cost includes:
a) For acquired Toll Collection Rights - Upfront payments towards acquisition and incidental expenses related thereto.
b) Toll Collection Rights awarded by the grantor against construction service rendered by the Project SPV Group on BOT / DBFOT basis - Direct and indirect expenses on construction of roads, bridges, culverts, infrastructure and other assets at the toll plazas.

c) Toll Collection Rights in lieu of premium - Undiscounted premium obligation over the concession period.

Amortisation

Toll Collection Rights are amortised over the period of concession, using revenue based amortisation as prescribed in Ind As-36. Under this method, the carrying value of the rights is amortised in the proportion of actual toll revenue for the period to projected revenue for the balance toll period, to reflect the pattern in which the assets economic benefits will be consumed. At each balance sheet date, the projected revenue for the balance toll period is reviewed by the management. If there is any change in the projected revenue from previous estimates, the amortisation of toll collection rights is changed prospectively to reflect any changes in the estimates.

Intangible assets under development

Expenditure related to and incurred during implementation of project are included under "Intangible Assets under Development". The same will be transferred to the respective intangible assets on completion of project.

3.10 **Borrowing costs**

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of the asset. All other borrowing costs are expensed in the period in which they occur. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds. Borrowing cost also includes exchange differences between the foreign currency borrowing and the functional currency borrowing to the extent regarded as an adjustment to the borrowing costs.

3.11 **Provisions**

Provisions are recognised when the Project SPV Group has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. When the Project SPV Group expects some or all of a provision to be reimbursed, for example, under an insurance contract, the reimbursement is recognised as a separate asset, but only when the reimbursement is virtually certain. The expense relating to a provision is presented in the statement of profit and loss net of any reimbursement.

If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, when appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost. Provisions are reviewed at each balance sheet date and adjusted to reflect the current best estimates.

3.12 **Resurfacing expenses**

As per the Concession Agreements, the Project SPV Group is obligated to carry out resurfacing of the roads under concession. Provision required for resurfacing expenses are measured at the present value of the expenditure required to settle the present obligation at the end of reporting period. The discount rate used to determine the present value is a pre-tax rate that reflects risks specific to the liability. The increase in the provision due to the passage of time is recognised as finance cost. Provision for the planned expenditure is made for the period upto end of the period for which periodic maintenance is required, out of the total entitiled period.The same is stated in the consolidated statement of profit and loss in accordance with Ind AS 37 "Provisions, Contingent Liabilities and Contingent Assets."

3.13 **Contingent liability and Contingent assets**

A contingent liability is a possible obligation that arises from past events whose existence will be confirmed by the occurrence or non-occurrence of one or more uncertain future events beyond the control of the Project SPV Group or a present obligation that is not recognised because it is not probable that an outflow of resources will be required to settle the obligation. A contingent liability also arises in extremely rare cases where there is a liability that cannot be recognised because it cannot be measured reliably. The Project SPV Group does not recognise a contingent liability but discloses its existence in the financial statements.

A contingent assets is not recognised unless it becomes virtually certain that an inflow of economic benefits will arise. When an inflow of economic benefits is probable, contingent assets are disclosed in the financial statements.

Contingent liabilities and contingent assets are reviewed at each balance sheet date.

3.14 **Financial instruments**

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

Financial assets

Initial recognition and measurement

All financial assets are recognised initially at fair value plus, in the case of financial assets not recorded at fair value through statement of profit and loss, transaction costs that are attributable to the acquisition of the financial asset.

On initial recognistion, a financial asset is classified as measured of
- amortised cost
- FVOCI - Debt instruments
- FVOCI - equity instruments
- FVTPL

Financial assets are not reclassified subsequent to their initial recognition, except if and in the year, the Project SPV Group changes its business model for managing financial assets.

Debt instruments at amortised cost

A 'debt instrument' is measured at the amortised cost if both the following conditions are met:
- The asset is held within a business model whose objective is to hold assets for collecting contractual cash flows, and
- Contractual terms of the asset give rise on specified dates to cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

After initial measurement, such financial assets are subsequently measured at amortised cost using the effective interest rate (EIR) method. Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included in finance income in the statement of profit and loss. The losses arising from impairment are recognised in the statement of profit and loss.

Debt instrument at FVTOCI

A 'debt instrument' is classified as at the FVTOCI if both of the following criteria are met:
- The objective of the business model is achieved both by collecting contractual cash flows and selling the financial assets, and
- The asset's contractual cash flows represent SPPI.

Debt instruments included within the FVTOCI category are measured initially as well as at each reporting date at fair value. Fair value movements are recognized in the other comprehensive income (OCI). However, the Project SPV Group recognizes interest income, impairment losses and reversals and foreign exchange gain or loss in the statement of profit and loss. On derecognition of the asset, cumulative gain or loss previously recognised in OCI is reclassified from the equity to Statement of profit and loss.Interest earned whilst holding FVTOCI debt instrument is reported as interest income using the EIR method.

Debt instrument at FVTPL

FVTPL is a residual category for debt instruments. Any debt instrument, which does not meet the criteria for categorization as at amortized cost or as at FVTOCI, is classified as at FVTPL.

In addition, the Project SPV Group may elect to designate a debt instrument, which otherwise meets amortized cost or FVTOCI criteria, as at FVTPL. However, such election is allowed only if doing so reduces or eliminates a measurement or recognition inconsistency (referred to as 'accounting mismatch'). The Project SPV Group has designated certain debt instrument as at FVTPL.

Debt instruments included within the FVTPL category are measured at fair value with all changes recognized in the Statement of profit and loss.

Equity investments

All equity investments in scope of Ind AS 109 are measured at fair value. Equity instruments which are held for trading are classified as at FVTPL. For all other equity instruments, the Project SPV Group may make an irrevocable election to present in other comprehensive income subsequent changes in the fair value. The Project SPV Group makes such election on an instrument-byinstrument basis. The classification is made on initial recognition and is irrevocable.

If the Project SPV Group decides to classify an equity instrument as at FVTOCI, then all fair value changes on the instrument, excluding dividends, are recognized in the OCI. There is no recycling of the amounts from OCI to P&L, even on sale of investment. However, the Project SPV Group may transfer the cumulative gain or loss within equity.

Equity instruments included within the FVTPL category are measured at fair value with all changes recognized in the Statement of profit and loss.

Derecognition
A financial asset (or, where applicable, a part of a financial asset or part of a Project SPV Group of similar financial assets) is primarily derecognised (i.e. removed from the Project SPV Group's consolidated balance sheet) when:

- The rights to receive cash flows from the asset has expired, or
-The Project SPV Group has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Project SPV Group has transferred substantially all the risks and rewards of the asset, or (b) the Project SPV Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Project SPV Group has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if and to what extent it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all of the risks and rewards of the asset, nor transferred control of the asset, the Project SPV Group continues to recognise the transferred asset to the extent of the Project SPV Group's continuing involvement. In that case, the Project SPV Group also recognises an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Project SPV Group has retained.

Continuing involvement that takes the form of a guarantee over the transferred asset is measured at the lower of the original carrying amount of the asset and the maximum amount of consideration that the Project SPV Group could be required to repay.

Impairment of financial assets
In accordance with Ind AS 109, the Project SPV Group applies expected credit loss (ECL) model for measurement and recognition of impairment loss on the following financial assets and credit risk exposure:

-Financial assets that are debt instruments, and are measured at amortised cost e.g., loans, debt securities, deposits, trade receivables and bank balance
-Financial assets that are debt instruments and are measured as at FVTOCI
-Lease receivables under Ind AS 17
-Trade receivables or any contractual right to receive cash or another financial asset that result from transactions that are within the scope of Ind AS 18 (referred to as contractual revenue receivables' in these financial statements)

-Loan commitments which are not measured as at FVTPL
-Financial guarantee contracts which are not measured as at FVTPL
The Project SPV Group follows 'simplified approach' for recognition of impairment loss allowance on:
-Trade receivables; and
-Other receivables
The application of simplified approach does not require the Project SPV Group to track changes in credit risk. Rather, it recognises impairment loss allowance based on lifetime ECLs at each reporting date, right from its initial recognition.

For recognition of impairment loss on other financial assets and risk exposure, the Project SPV Group determines that whether there has been a significant increase in the credit risk since initial recognition. If credit risk has not increased significantly, 12-month ECL is used to provide for impairment loss. However, if credit risk has increased significantly, lifetime ECL is used. If, in a subsequent period, credit quality of the instrument improves such that there is no longer a significant increase in credit risk since initial recognition, then the entity reverts to recognising impairment loss allowance based on 12-month ECL.

Lifetime ECL are the expected credit losses resulting from all possible default events over the expected life of a financial instrument. The 12-month ECL is a portion of the lifetime ECL which results from default events that are possible within 12 months after the reporting date.

ECL is the difference between all contractual cash flows that are due to the Project SPV Group in accordance with the contract and all the cash flows that the entity expects to receive (i.e., all cash shortfalls), discounted at the original EIR. When estimating the cash flows, an entity is required to consider:

-All contractual terms of the financial instrument (including prepayment, extension, call and similar options) over the expected life of the financial instrument. However, in rare cases when the expected life of the financial instrument cannot be estimated reliably, then the entity is required to use the remaining contractual term of the financial instrument. -

-Cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms
-Financial assets measured as at amortised cost, contractual revenue receivables and lease receivables: ECL is presented as an allowance, i.e., as an integral part of the measurement of those assets in the balance sheet. The allowance reduces the net carrying amount. Until the asset meets write-off criteria, the Project SPV Group does not reduce impairment allowance from the gross carrying amount.

Financial liabilities
Initial recognition and measurement
Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through Statement of profit and loss, loans and borrowings, or payables, as appropriate.

All financial liabilities are recognised initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.
The Project SPV Group's financial liabilities include trade and other payables, loans and borrowings including bank overdrafts and derivative financial instruments.

Subsequent measurement
The measurement of financial liabilities depends on their classification, as described below:

Financial liabilities at fair value through Statement of profit and loss
Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through statement of profit and loss. Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Project SPV Group that are not designated as hedging instruments in hedge relationships as defined by Ind AS 109.

Gains or losses on liabilities held for trading are recognised in the consolidated statement of profit and loss.

Loans and borrowings
This is the category most relevant to the Project SPV Group. After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortised cost using the EIR method. Gains and losses are recognised in statement of profit and loss when the liabilities are derecognised as well as through the EIR amortisation process.

Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included as finance costs in the statement of profit and loss.

This category generally applies to borrowings. For more information refer note 16.

Derecognition
A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognised in the consolidated statement of profit and loss.

Offsetting of financial instruments
Financial assets and financial liabilities are offset and the net amount is reported in the standalone balance sheet if there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, to realise the assets and settle the liabilities simultaneously.

3.15 **Cash and cash equivalents**
Cash and cash equivalent in the balance sheet comprises of cash at banks and on hand and short-term deposits with an original maturity of three months or less, which are subject to an insignificant risk of changes in value.

For the purpose of the statement of cash flows, cash and cash equivalents consist of cash and short-term deposits, as defined above, as they are considered an integral part of the Project SPV Group's cash management.

3.16 **Cash dividend to equity holders of the Project SPV Group**
The Project SPV Group recognises a liability to make cash or non-cash distributions to equity holders of the parent when the distribution is authorised and the distribution is no longer at the discretion of the Project SPV Group. As per the corporate laws in India, a distribution is authorised when it is approved by the shareholders. A corresponding amount is recognised directly in equity.

3.17 **Impairment of non-financial assets**

The Project SPV Group assesses, at each reporting date, whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Project SPV Group estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs of disposal and its value in use. Recoverable amount is determined for an individual asset. unless the asset does not generate cash inflows that are largely independent of those from other assets or Project SPV Group's of assets. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs of disposal, recent market transactions are taken into account. If no such transactions can be identified, an appropriate valuation model is used. These calculations are corroborated by valuation multiples, quoted share prices for publicly traded companies or other available fair value indicators.

The Project SPV Group bases its impairment calculation on detailed budgets and forecast calculations, which are prepared separately for each of the Project SPV Group's CGUs to which the individual assets are allocated. These budgets and forecast calculations generally cover a period of five years. For longer periods, a long-term growth rate is calculated and applied to project future cash flows after the fifth year. To estimate cash flow projections beyond periods covered by the most recent budgets/forecasts, the Project SPV Group extrapolates cash flow projections in the budget using a steady or declining growth rate for subsequent years, unless an increasing rate can be justified. In any case, this growth rate does not exceed the long-term average growth rate for the products, industries, or country or countries in which the entity operates, or for the market in which the asset is used.

For assets excluding goodwill, an assessment is made at each reporting date to determine whether there is an indication that previously recognised impairment losses no longer exist or have decreased. If such indication exists, the Project SPV Group estimates the asset's or CGU's recoverable amount. A previously recognised impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognised. The reversal is limited so that the carrying amount of the asset does not exceed its recoverable amount, nor exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognised for the asset in prior years. Such reversal is recognised in the statement of profit and loss.

Goodwill is tested for impairment annually as at 31st March and when circumstances indicate that the carrying value may be impaired.

Impairment is determined for goodwill by assessing the recoverable amount of each CGU (or Project SPV Group of CGUs) to which the goodwill relates. When the recoverable amount of the CGU is less than its carrying amount, an impairment loss is recognised. Impairment losses relating to goodwill cannot be reversed in future periods.

Intangible assets with indefinite useful lives are tested for impairment annually as at 31st March at the CGU level, as appropriate, and when circumstances indicate that the carrying value may be impaired.

3.18 **Earnings per unit**

Basic earnings per unit are calculated by dividing the net profit or loss for the period attributable to unitholders by the weighted average number of units outstanding during the period. For the purpose of calculating diluted earnings per unit, the net profit or loss for the period attributable to unitholders and the weighted average number of units outstanding during the period are adjusted for the effects of all dilutive potential units.

3.19 **Recent pronouncements**

Ministry of Corporate Affairs ("MCA") notifies new standards or amendments to the existing standards under Companies (Indian Accounting Standards) Rules as issued from time to time. For the year ended March 31, 2024, MCA has not notified any new standards or amendments to the existing standards applicable to the Group.

Note 4.1 Property, Plant and Equipment (Rs. in million)

	Building	Computer	Office Equipments	Furniture and Fixture	Total
Cost					
Balance as at 31 March 2022	**16.09**	**0.30**	**1.40**	**0.39**	**18.18**
Additions	-	-	-	-	-
Disposals/ Adjustments	-	-	0.09	-	0.09
Balance as at 31 March 2023	**16.09**	**0.30**	**1.31**	**0.39**	**18.10**
Additions	-	-	-	-	**-**
Disposals/ Adjustments	-	-	-	-	**-**
Balance as at 31 March 2024	**16.09**	**0.30**	**1.31**	**0.39**	**18.10**
Depreciation					
Balance as at 31 March 2022	**7.40**	**0.29**	**1.28**	**0.38**	**9.34**
Additions	1.20	0.00	0.03	0.01	1.25
Disposals/ Adjustments	-	-	0.08	-	0.08
Balance as at 31 March 2023	**8.60**	**0.29**	**1.23**	**0.39**	**10.51**
Additions	0.94	-	0.01	0.01	0.95
Disposals/ Adjustments	-	-	-	-	-
Balance as at 31 March 2024	**9.54**	**0.29**	**1.24**	**0.39**	**11.47**
Net Book value					
Balance as at 31 March 2024	**6.55**	**0.01**	**0.07**	**0.00**	**6.63**
Balance as at 31 March 2023	**7.49**	**0.01**	**0.08**	**0.00**	**7.59**

Note 4.2 Other Intangible Assets and Intangible Assets under development

Intangible Assets (Rs. in million)

Particulars	Toll Collection Rights	Total
Cost		
Balance as at 31 March 2022	**2,28,159.42**	**2,28,159.42**
Additions	9,663.30	9,663.30
Deletions / Adjustments	295.32	295.32
Balance as at 31 March 2023	**2,37,527.40**	**2,37,527.40**
Additions	92,261.06	92,261.06
Deletions / Adjustments	-	-
Balance as at 31 March 2024	**3,29,788.46**	**3,29,788.46**
Amortisation		
Balance as at 31 March 2022	**6,299.93**	**6,299.93**
Additions	2,809.17	2,809.17
Deletions / Adjustments	-	-
Balance as at 31 March 2023	**9,109.10**	**9,109.10**
Additions	3,648.04	3,648.04
Deletions / Adjustments	-	-
Balance as at 31 March 2024	**12,757.14**	**12,757.14**
Net Book value		
Balance as at 31 March 2024	3,17,031.32	3,17,031.32
Balance as at 31 March 2023	2,28,418.29	2,28,418.29

Intangible assets under development (Rs. in million)

Particulars	March 31, 2024	March 31, 2023
Toll Collection Rights		
At the beginning of the year	2,421.67	1,290.89
Add : Development during the year	79,809.18	11,128.99
Sub total	**82,230.85**	**12,419.88**
Less : Transfer to Intangible Asset (Toll Collection Rights)	17,414.37	9,998.21
Closing balance	**64,816.48**	**2,421.67**

Note:

a. Property Plant & equipments and Intangible assets given as security

b. Property Plant and Equipments and Intangible assets are subject to first charge to secured long-term borrowings from the lenders of the Trust.

Financial Assets
Note 5 : Investment

(Rs. in million)

Particulars	March 31, 2024			March 31, 2023		
	Face Value (Rs.)	No of Units	Amount	Face Value (Rs.)	No of Units	Amount
i) Investments in Mutual Funds						
Quoted (Fair Value Through Profit or Loss (FVTPL))						
Canara Robeco Liquid Fund - Direct Plan - Growth	1,000	31,932.12	92.40	1,000	18,486.04	49.85
Canara Robeco Overnight Fund - Direct Plan - Growth	-	-	-	1,000	5,174.20	6.00
IDBI Liquid Fund - Direct Plan - Growth	-	-	-	1,000	64,718.69	156.76
LIC MF Liquid Fund - Direct Plan - Growth	1,000	8,064.54	10.01	-	-	-
ABSL Liquid Fund - Direct Plan - Growth	100	2,22,851.68	86.84	-	-	-
LGRD - Union Liquid Fund Growth - Direct	1,000	44,797.38	104.31	-	-	-
HSBC Liquid Fund Direct Growth	1,000	34,375.85	82.71	-	-	-
SBI Liquid Fund - Direct Growth	1,000	2,96,120.25	1,119.12	1,000	2,91,778.24	1,028.03
Bank of India Liquid Fund - Direct Growth	1,000	9,954.90	27.68	-	-	-
SBI Overnight Fund - Direct Growth	1,000	-	-	1,000	11,632.96	42.44
Total			**1,523.07**			**1,283.09**
Aggregate book value of quoted investments			**1,512.65**			**1,271.74**
Market value of quoted investments			**1,523.07**			**1,283.09**

Note 6 : Trade receivable

(Rs. in million)

	March 31, 2024	March 31, 2023
(Unsecured, considered good, unless otherwise stated)		
Related parties (Refer Note 47)	0.51	0.61
Others	67.64	84.05
Total	**68.15**	**84.67**

The group has not identified any credit impairment loss as at March 31, 2024 and March 31, 2023

Note 7 : Other financial assets

(Rs. in million)

	March 31, 2024		March 31, 2023	
	Current	**Non-current**	**Current**	**Non-current**
(Unsecured, considered good, unless otherwise stated)				
Interest accrued on fixed deposits	63.74	-	11.57	-
Interest receivable from others	10.63	-	3.73	-
Retention money receivable	638.59	-	530.54	-
Receivable from Related parties (BG Margin receivable) (Refer Note 47)	-	30.95	-	-
Receivable from Government Authorities (NHAI)	1,522.49	-	816.07	-
Other receivable				
- related parties (refer note 47)	0.01	-	-	-
- other parties	99.85	-	75.65	-
Security and other deposits	10.99	29.35	10.99	0.33
Bank deposits with more than 12 months maturity	-	4,347.80	-	-
Total	**2,346.30**	**4,408.10**	**1,448.56**	**0.33**

Note 8 : Other assets

(Rs. in million)

	March 31, 2024		March 31, 2023	
	Current	**Non-current**	**Current**	**Non-current**
Advance with suppliers				
- Related parties (refer note 47)	140.22	-	1,347.33	-
- Others	48.70	-	45.29	-
Mobilisation advances (refer note 47)	100.74	-	33.68	-
Prepaid expenses	126.39	-	45.88	-
Bank Guarantee margin receivable -related party	-	-	-	-
Duties and taxes receivable	53.71	-	1,184.89	-
Contract assets	68.17	-	-	-
Duties and taxes receivable	-	12.00		174.07
Total	**537.93**	**12.00**	**2,657.07**	**174.07**

Note 9 : Deferred tax assets / Deferred tax liabilities (Rs. in million)

	March 31, 2024	March 31, 2023
Deferred tax liabilities:		
Deferred tax liabilities:		
Difference in Depreciation and other differences in block of Property, Plant and equipment and Intangible assets as per tax books & financial books	351.58	36.80
Deferred tax assets:		
Business Losses	70.69	-
Deferred tax liabilities	**280.89**	**36.80**
Deferred tax assets:		
Deferred Tax assets on Fair valuation#	2,229.78	792.60
Deferred Tax Assets	**2,229.78**	**792.60**

Standalone Trust is taxable at maximum marginal rate of 42.74%, However, domestic tax rate applicable to the SPVs which is in the range of 25.168% to 29.12% basis the section as per Income Tax Act, 1961.

Note 10 : Cash and cash equivalents (Rs. in million)

	March 31, 2024	March 31, 2023
Balances with banks:		
-on current accounts	349.09	279.37
-on trust, retention and other escrow accounts*	477.22	394.06
-In deposits with original maturity of less than three months	760.00	49.50
Cash on hand	19.36	8.38
Total	**1,605.67**	**731.31**

* First charge on above to the extent of amount payable as per the waterfall mechanism as defined in the Concession Agreement / Common Loan Agreement.

Note 11 : Bank balance other than cash and cash equivalent

(Rs. in million)

	March 31, 2024	March 31, 2023
Maturity more than 3 months less than 12 months		
Cash Reserve	1,000.00	-
Other deposits	-	15.09
Debt service reserve account with banks /earmarked balance**	3,403.90	3,459.60
Major Maintenance Reserve Account	1,985.50	1,390.00
Margin money deposits against bank guarantees	91.00	-
Maturity more than 12 months		
Debt service reserve account with banks /earmarked balance**	190.00	-
Other deposits	2.00	2.00
Total	**6,672.40**	**4,866.69**

Debt service reserve account/ major maintenance reserve account and trust, retention and other escrow accounts

Bank deposits are marked lien / pledged against the non current secured loan as per term loan agreement with the lender, further the lenders have first charge on trust, retention and other escrow accounts.

** The deposits to the extent of Rs. 7,237.20 million (March 31, 2023 : Rs. 3,459.60 million) maintained by the Project SPV Group with bank includes time deposits, which are held against Debt Service Reserve (DSR), are considered as current portion under the head "Other bank balances" since the same are encashable by the lenders in the event of default by the Project SPV Group, if any.

Current deposits are made for varying periods of between one day and three months, depending on the immediate cash requirements of the group and earn interest at the respective current deposit rates. Other time deposits earn interest at the rate of 5.50% to 7.75% p.a. (March 31, 2023: 4.70% to 7.95% p.a).

Refer note 16 for details of security against term loans.

Note 12 : Current tax assets (net)

(Rs. in million)

	March 31, 2024	March 31, 2023
Advance income-tax (net of provision : Rs. 5.25 Millions, March 31, 2023 : Rs.435.25 Million))	174.41	24.81
Total	**174.41**	**24.81**

Note : 13 : Unit capital (Rs. in million)

	March 31, 2024		March 31, 2023	
	No. of units	Amount (Rs. in million)	No. of units	Amount (Rs. in million)
Unit capital*				
Authorised unit capital	1,11,36,93,265	1,35,091.22	87,92,93,265	87,929.33
	1,11,36,93,265	**1,35,091.22**	**87,92,93,265**	**87,929.33**
Issued, Subscribed and fully paid up unit capital	1,11,36,93,265	1,35,091.22	87,92,93,265	87,929.33
Total	**1,11,36,93,265**	**1,35,091.22**	**87,92,93,265**	**87,929.33**

Terms / rights attached to units

The Trust has only one class of units. Each unit represents an undivided beneficial interest in the Trust. Each holder of unit is entitled to one vote per unit.

The Unitholder has no equiutable or proprietary interest in the projects of the Trust and is not entitled to any share in the transfer of the projects (or any part thereof) or any interest in the projects (or any part thereof) of the Trust. A unitholder's right is limited to the right to require due administration of the Trust in accordance with the provisions of the Trust Deed and the Investment Management Agreement.

* Under the provisions of the InvIT Regulations, Trust is required to distribute to Unitholders not less than 90% of the net distributable cash flows of the Trust for each financial year. Accordingly, a portion of the Unit Capital contains a contractual obligation of the Trust to pay to its Unitholders cash distributions. Hence, the Unit Capital is a compound financial instrument which contains equity and liability components in accordance with Ind AS 32 - Financial Instruments: Presentation. However, in accordance with Chapter 3 and Chapter 4 of the SEBI circular, the Unit capital have been presented as "Equity" in order to comply with the requirements of Section H of Chapter 3 to the SEBI circular, dealing with the minimum presentation and disclosure requirements for key financial statements. Consistent with Unit Capital being classified as equity, the distributions to Unitholders is also presented in Statement of Changes in Unitholders' Equity when the distributions are approved by the Board of Directors of the Investment Manager.

Units are classified as equity. Incremental costs attributable to the issue of units are directly recorded in equity, net of tax.

Reconciliation of the units outstanding at the beginning and at the end of the year:

	March 31, 2024		March 31, 2023	
Units issued, subscribed and fully paid	No. of units	Amount (Rs. in million)	No. of units	Amount (Rs. in million)
Balance at the beginning of the year	87,92,93,265	87,929.33	85,50,43,265	85,504.33
lssued during the year (refer a, b & c below)	23,44,00,000	51,146.49	2,42,50,000	2,425.00
Distributions (refer note 37)	-	(3,984.60)	-	-
Balance at the end of the year	**1,11,36,93,265**	**1,35,091.22**	**87,92,93,265**	**87,929.33**

a) The Trust offered rights issue of up to 9,20,00,000 units of the Trust (the 'units'), for cash at a price of Rs. 244.86 per unit (the 'issue price'), aggregating to Rs. 22,527.00 million to the eligible unitholders (as defined in the Letter of Offer) on a rights basis to Sponsor and GIC affiliates in the ratio of 51:49 held by them on the record date, being on March 12, 2024 (the 'Issue') in accordance with the InvIT Regulations. The Board of Directors of MMK Toll Road Private Limited ('Investment Manager'), considered and approved allotment of 9,20,00,000 rights units to the eligible unitholders of IRB Infrastructure Trust on March 21, 2024.

b) The Trust offered rights issue of up to 14,24,00,000 units of the Trust (the 'units'), for cash at a price of Rs. 200.98 per unit (the 'issue price'), aggregating to Rs. 28,619.50 million to the eligible unitholders (as defined in the Letter of Offer) on a rights basis to Sponsor and GIC affiliates in the ratio of 51:49 held by them on the record date, being on July 28, 2023 (the 'Issue') in accordance with the InvIT Regulations. The Board of Directors of MMK Toll Road Private Limited ('Investment Manager'), considered and approved allotment of 14,24,00,000 rights units to the eligible unitholders of IRB Infrastructure Trust on August 10, 2023.

c) The Trust offered rights issue of up to 2,44,29,805 units of the Trust (the 'units'), for cash at a price of Rs. 100 per unit (the 'issue price'), aggregating to Rs. 2,442.98 million to the eligible unitholders (as defined in the Letter of Offer) on a rights basis to Sponsor and GIC affiliates in the ratio of 51:49 held by them on the record date, being on April 8, 2022 (the 'Issue') in accordance with the InvIT Regulations. The Board of Directors of MMK Toll Road Private Limited ('Investment Manager'), considered and approved allotment of 2,44,29,805 rights units to the eligible unitholders of IRB Infrastructure Trust on April 13, 2022.

Details of unit holders holding more than 5% units:

	March 31, 2024		March 31, 2023	
	No. of units	**% of total unit capital**	**No. of units**	**% of total unit capital**
IRB Infrastructure Developers Limited	56,82,39,840	51%	44,84,39,840	51%
Anahera Investments Pte Ltd	27,86,23,181	25%	21,98,23,181	25%
Bricklayers Investments Pte Ltd	6,65,57,561	6%	5,27,57,561	6%
Chiswick Investments Pte Ltd	6,65,57,561	6%	5,27,57,561	6%
Stretford End Investments Pte Ltd	6,67,57,561	6%	5,27,57,561	6%
Dangenham Investments Pte Ltd	6,69,57,561	6%	5,27,57,561	6%

Details of Sponsor units	**March 31, 2024**		**March 31, 2023**	
IRB Infrastructure Developers Limited	56,82,39,840	51%	44,84,39,840	51%

Note : 14 : Subordinate Debt

(Rs. in million)

	March 31, 2024	**March 31, 2023**
At the beginning of the year	-	-
Increase / (decrease) during the year	16,916.65	
At the end of the year	**16,916.65**	**-**

Note : 15 : Other equity

Attributable to the unit holders

(Rs. in million)

	March 31, 2024	**March 31, 2023**
Retained earnings		
At the beginning of the year	(10,395.80)	(8,108.29)
Profit for the year	(6,650.38)	(2,272.18)
Interest Distribution (refer note 37)	(449.55)	-
Unit Issue expenses	(144.31)	(15.33)
At the end of the period	**(17,640.04)**	**(10,395.80)**

Note : 16 : Borrowings (Rs. in million)

	As at March 31, 2024	As at March 31, 2023
Non-current Borrowings		
Term loans		
Indian rupee loan from banks (secured)		
Project loans for SPVs	1,45,510.79	61,005.36
Less : current maturities expected to be settled within 12 month from balance sheet date	(787.41)	(639.16)
Total (a)	**1,44,723.38**	**60,366.20**
Indian rupee loan from financial institutions (secured)		
Project loans for SPVs	45,697.98	6,931.65
Less : current maturities expected to be settled within 12 month from balance sheet date	(303.06)	(9.75)
Total (b)	**45,394.92**	**6,921.90**
Non-convertible debentures (secured)	28,035.89	33,432.82
Less : current maturities expected to be settled within 12 month from balance sheet date	(64.17)	(130.59)
Total (c)	**27,971.72**	**33,302.22**
Less: Unamortised transaction cost **(d)**	(3,953.68)	(1,646.37)
Total non current borrowings (e = a + b + c + d)	**2,14,136.34**	**98,943.95**
Current Borrowings		
Short-term borrowings		
Current maturity of long term loans		
Indian rupee loan from banks (secured)	787.41	639.16
Indian rupee loan from financial institutions (secured)	303.06	9.75
Non convertible debentures (secured)	64.17	130.59
Interest accrued but not due on borrowings	24.27	5.43
(Unsecured, repayable on demand and interest free)		
Loan from related parties (refer note 47)	0.02	5,350.72
Total current borrowings (f)	**1,178.93**	**6,135.65**
Total borrowings (e+f)	**2,15,315.27**	**1,05,079.60**
Aggregate secured loans	2,15,290.98	99,723.46
Aggregate unsecured loans	0.02	5,350.72

Borrowing includes terms loans from banks, financials institutions and secured Non-convertible debentures.
March 31, 2024: Rs. 2,19,244.66 million; March 31, 2023: Rs.1,01,369.83 million; pertains to term loans taken by SPV's (Special Purpose Vehicles) & Trust for Project financing.

Rate of interest
Rate of interest on the Indian Rupee loan from banks and financial institutions varies from 7.75% to 10.65% p.a. (March 31, 2023: 7.75% to 10.75% p.a.) and are secured by pledge of shares of its subsidiaries and subservient charge on the current assets of the trust.
Secured redeemable Non-convertible debentures carries interest rates which varies from 8.65% - 8.95% p.a.

Nature of security
i) Secured by first charge on the movable/immovable asset by way of mortgage/hypothecation; first charge on all intangible assets, assignment of all receivables; book debts, loans and advances extended by the Borrower to SPVs and all rights and interest in project, both present and future, excluding the Project Assets of respective companies;
ii) Secured by first charge over all the equity shares, Preference shares, Debentures representing 100% of such securities.
iii) Secured by first charge on the Escrow Account, Debt Service Reserve Account and any other reserves and other bank accounts of the respective Companies.
iv) Unconditional and irrecovable corporate guarantee by each of the RG SPV's, in a form and manner satisfactory to the Finance parties (the "Corporate Guarantee").
v) An irrevocable and unconditional corporate guarantee from IRB Infrastructure Developers Limited to meet shortfall (if any) between debt due and termination payments received from Concessioning Authority in case of termination of Concession Agreement for any reason in case of Project SPV's.
vi) Pledge of securities of obligators created pursuant to the terms of loan Agreement held as common security for the benefit of Rupee lenders.

Repayment terms
The Non Convertible Debentures of YATL are redeemable at par on in August 2027 for Rs.12,150 million and Rs.3,000 million are repayable in structured monthly installments commencing from October 2027.
The Non Convertible Debentures of SYTL are redeemable at par on in September 2027 for Rs.4,910 million and Rs.1,000 million are repayable in structured monthly installments commencing from November 2027.
The Indian rupee loans from Banks, Financial Institutions, Non Convertible Debentures(other than above) are repayable in structured monthly/quarterly installments such that the total tenor does not exceed 19 years and repayable as per the repayment schedule specified in common loan agreement with the Lenders.

Note 17 : Other financial liabilities (Rs. in million)

	March 31, 2024		March 31, 2023	
	Current	**Non-current**	**Current**	**Non-current**
Obligation for construction	178.54	-	1,102.31	-
Directors sitting fees payable	1.24	-	0.44	-
Deposit	1.18	-	1.18	-
Retention money payable				
- Related parties (refer note 47)	946.54	-	636.46	-
- Others	287.75	4.07	295.83	2.77
Revenue share payable	455.58	-	345.46	-
Other payable				
- Related parties (refer note 47)	9.84	40,760.96	167.70	35,778.03
- Others	2.93	-	-	-
Total	**1,883.60**	**40,765.03**	**2,549.37**	**35,780.80**

Note 18 : Trade payables (Rs. in million)

	March 31, 2024		March 31, 2023	
	Current	**Non-current**	**Current**	**Non-current**
Total outstanding dues of micro enterprises and small enterprises	2.41	-	1.61	-
Total outstanding dues of creditors other than micro and small enterprises		-		-
- Related parties (refer note 47)	4,151.31	-	13,812.18	4,165.72
'- Others	1,460.40	-	1,491.69	-
Total	**5,614.12**	**-**	**15,305.48**	**4,165.72**

Note 19 : Provisions

	March 31, 2024		March 31, 2023	
	Current	**Non-current**	**Current**	**Non-current**
Major maintenance expenses	2,235.58	1,336.98	-	2,965.03
Total	**2,235.58**	**1,336.98**	**-**	**2,965.03**

The movement in provision for resurfacing expenses is as follows:

	March 31, 2024	**March 31, 2023**
Opening balance	2,965.03	1,350.57
Obligation on new toll projects	2,029.54	1,614.45
Utilised / reversed during the year	(1,422.00)	-
Closing balance	**3,572.57**	**2,965.03**

The above provisions are based on current best estimation of expenses that may be required to fulfill the resurfacing obligation as per the service concession agreement with regulatory authorities. It is expected that significant portion of the costs will be incurred over the period. The actual expense incurred may vary from the above. No reimbursements are expected from any sources against the above obligation.

Note 20 : Other current liabilities (Rs. in million)

	March 31, 2024	**March 31, 2023**
Duties and taxes payable	157.31	64.12
Advance from customer- Others	78.68	34.03
Total	**235.99**	**98.15**

Note 21 : Revenue from operations

(Rs. in million)

	For the year ended March 31, 2024	For the year ended March 31, 2023
Contract revenue (road construction)	19,154.21	11,672.04
Income from toll collection (gross)	27,470.26	21,097.46
Less - Revenue Share to NHAI	(7,546.06)	(5,671.70)
Income arising out of toll collection (net)	19,924.20	15,425.76
Revenue share to NHAI- Fastag	(147.66)	(185.44)
Other operating revenue	-	0.23
Total	**38,930.75**	**26,912.59**

Note 22 : Other income

	For the year ended March 31, 2024	For the year ended March 31, 2023
Interest income on		
- Bank deposits	563.24	178.88
- Others	3.73	7.17
Dividend income on :		
- Other investments (non-trade, current)	0.03	-
Profit on sale of investments	190.86	62.95
Fair value gain on mutual funds	10.42	11.35
Other non operating income	71.55	2.73
Total	**839.83**	**263.08**

Note 23 : Operating expenses

	For the year ended March 31, 2024	For the year ended March 31, 2023
Contract expenses	18,037.07	11,330.91
Operation and maintenance expenses	1,719.43	1,471.41
Site and other direct expenses	85.90	0.00
Sub-contracting / Security expenses	-	0.35
Technical consultancy and supervision charges	33.65	62.84
Total	**19,876.05**	**12,865.52**

Note 24 : Depreciation and amortisation expenses

	For the year ended March 31, 2024	For the year ended March 31, 2023
Depreciation on property, plant and equipment (refer note 4)	0.95	1.25
Amortisation on intangible assets (refer note 4)	3,648.04	2,809.17
Total	**3,648.99**	**2,810.42**

Note 25 : Finance cost

	For the year ended March 31, 2024	For the year ended March 31, 2023
Interest expense		
- Banks and financial institutions	10,773.55	7,387.76
- Debentures	2,675.68	1,617.52
Subtotal	**13,449.23**	**9,005.28**
Other borrowing costs	-	
- Amortisation of Transaction cost	226.41	128.80
- Unwinding of discount on provision of MMR	310.10	143.04
- Interest unwinding on loan/retention money	48.84	48.71
- Interest unwinding of Trade Payable- Associates	187.67	765.06
- Others	234.85	163.82
Subtotal	**1,007.87**	**1,249.41**
Total	**14,457.10**	**10,254.69**

Note 26 : Other expenses

(Amount in Millions.)

	For the year ended March 31, 2024	For the year ended March 31, 2023
Rent	0.07	0.03
Rates and taxes	44.16	81.75
Travelling and conveyance	5.53	0.01
Membership & Subscription	0.05	-
Director sitting fees	3.31	1.83
Corporate social responsibilities expenditure	16.10	-
Donations	-	2.50
Security expenses	0.89	-
Bank charges	9.16	2.83
Miscellaneous expenses	37.31	3.76
Total	**116.58**	**92.71**

Note 27 : Auditor's Remuneration

	For the year ended March 31, 2024	For the year ended March 31, 2023
As auditors:		
- Statutory audit fees	7.30	1.42
- Limited review fees	4.15	2.05
In other capacity		
- Other services (certification fees)*	0.80	1.37
Reimbursement of expenses	0.23	0.20
Total	**12.48**	**5.04**

* Excluding Rs 2.95 millions paid to joint statutory auditors in connection with services rendered for rights issue considered as part of capital cost of the respective SPV's

Note 1: The above values are inclusive of Goods & Services Tax (GST)

Note 28 : Contigent liabilities and Commitments

a. Leases

Rental expense recorded for short-term leases/ low-value lease was Rs.0.07 million (March 31, 2023: Rs.0.03 million)

b. Capital commitments

(Rs. in million)

	As at March 31, 2024	As at March 31, 2023
Estimated value of contracts in capital account remaining to be executed	28,594.95	14,295.07

SPV's have entered into agreement for toll operations and management services with Sponsor and Subsidiary of Sponsor.

c. Contingent liabilities

(Rs. in million)

	As at March 31, 2024	As at March 31, 2023
Contigent liabilities	-	-
Total	-	-

a) UTL, CGTL and KGTL have filed Writ petition with Hon'ble Rajasthan High Court with prayer to commence payment of Premium to National Highways Authority of India (NHAI) six months post actual completion of the project construction work. The Hon'ble High Court prima facie agreed with the contention of these companies and had provided interim relief from payment of premium. Vide judgement order dated 25th August, 2021, the Hon'ble High Court found merit in the contention of the companies and has directed the parties to resolve the dispute under Arbitration. The said matter is currently pending under Arbitration. (Refer Note 38 (b))

Note 29 : Trade payable

Disclosure relating to suppliers registred under MSMED Act based on the information available with the respective companies in the Group:

(Rs. in million)

Particulars	As at March 31, 2024	As at March 31, 2023
(a) Amount remaining unpaid to any supplier as at the year end:		
Principal amount	2.41	1.61
Interest due thereon	-	-
Total	**2.41**	**1.61**
(b) Amount of interest paid by the group in terms of section 16 of the MSMED, along with the amount of the payment made to the supplier beyond the appointed day during the accounting period.	-	-
(c) Amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed day during the period) but without adding the interest specified under the MSMED, 2006	-	-
(d) Amount of interest accrued and remaining unpaid at the end of the accounting period	-	-
(e) The amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues as above are actually paid to the small enterprise for the purpose of disallowance as a deductible expenditure under section 23 of the MSMED Act, 2006	-	-

a) MSME ageing schedule as at

Particulars	As at March 31, 2024	As at March 31, 2023
MSME Undisputed Dues	-	-
Less than 1 year	2.41	1.61
1-2 Years	-	-
2-3 Years	-	-
More than 3 years	-	-
Total dues to micro and small enterprises as per MSMED Act, 2006	**2.41**	**1.61**

There are no disputed dues to micro and small enterprises as per MSMED Act, 2006. The amounts payable to MSME are not due for payments.

b) Ageing of creditors other than micro enterprises and small enterprises as at

Particulars	As at March 31, 2024	As at March 31, 2023
Undisputed Dues		
Unbilled Dues	2,833.79	2,660.17
Less than 1 year	1,847.87	4,778.20
1-2 Years	146.78	9,433.59
2-3 Years	491.75	2,559.45
More than 3 years	291.52	38.18
Total dues to creditors other than micro enterprises and small enterprises as at	**5,611.71**	**19,469.59**

There are no disputed dues to creditors other than micro enterprises and small enterprises.

Note 30 : Intangble Asset under development ageing schedule

a) Intangible asset under development (Rs. in million)

Particulars	As at March 31, 2024	As at March 31, 2023
Less than 1 year	64,522.14	2,339.97
1-2 Years	212.64	54.59
2-3 Years	54.59	27.11
More than 3 years	27.11	
Total	**64,816.48**	**2,421.67**

Note 31 : Fair values (Rs. in million)

	Carrying amount		Fair Value	
	As at March 31, 2024	As at March 31, 2023	As at March 31, 2024	As at March 31, 2023
Financial assets				
Financial assets measured at amortised cost				
Other Financial assets	6,754.40	1,448.89	6,754.40	1,448.89
Trade receivable	68.15	84.67	68.15	84.67
Cash and cash equivalents	1,605.67	731.31	1,605.67	731.31
Other Bank balances	6,672.40	4,866.69	6,672.40	4,866.69
Financial assets measured at fair value through statement of Profit & Loss				
Investments (Quoted)	1,512.65	1,283.09	1,523.07	1,283.09
Financial liabilities				
Financial liabilities measured at amortised cost				
Trade payables	5,614.12	19,471.20	5,614.12	19,471.20
Borrowings (net of transaction cost)	2,15,315.27	1,05,079.60	2,15,315.27	1,05,079.60
Other financial liabilities	1,887.67	2,552.14	1,887.67	2,552.14
Financial liabilities measured at fair value through statement of Profit & Loss				
Other financial liabilities	40,760.96	35,778.03	40,760.96	35,778.03

The management assessed that the fair value of other financials assets, trade receivables, cash and cash equivalents, other bank balance, trade payables, borrowings and other financial liabilities approximate their carrying amounts largely due to the short-term maturities of these instruments.

The fair value of the financial assets and liabilities is included at the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.

The discount for lack of marketability represents the amounts that the Group has determined that market participants would take into account when pricing the investments.

Note 32 : Fair value hierarchy

All financial instruments for which fair value is recognised or disclosed are categorised within the fair value hierarchy described as follows, based on the lowest level input that is significant to the fair value measurement as a whole.

Level 1: Quoted (unadjusted) price in active market for identical assets or liabilities

Level 2: Valuation technique for which the lowest level input that has a significant effect on the fair value measurement are observed, either directly or indirectly.

Level 3: Valuation technique for which the lowest level input has a significant effect on the fair value measurement is not based on observable market data.

Quantitative disclosures fair value measurement hierarchy for financial instruments as at March 31, 2024:

(Rs in million)

	As on March 31, 2024	Fair value measurement at end of the reporting period using Level 1	Level 2	Level 3
Assets				
Investments (Quoted)	1,523.07	1,523.07	-	-
Liabilities				
Other financial liabilities	40,760.96	-	-	40,760.96

Quantitative disclosures fair value measurement hierarchy for financial instruments as at March 31, 2023:

(Rs in million)

	As on March 31, 2023	Fair value measurement at end of the reporting period using Level 1	Level 2	Level 3
Assets				
Investments (Quoted)	1,283.09	1,283.09	-	-
Liabilities				
Other financial liabilities	35,778.03	-	-	35,778.03

There has been no transfer between Level 1, Level 2 & Level 3 during the period.

Sensitivity: Higher probability by 5% and lower discount rate by 0.5% will decrease the fair value by Rs. 4,397.66 million (31st march 2023 - Rs. 4,166.87 million). Lower probability by 5% and higher discount rate by 0.5% will increase fair value by Rs.4,171.25 million (31st March 2023 - Rs. 3,946.06 million).

Fair value movement for Payable to IRB Infrastructure Developers Limited is as under:

(Rs in million)

	As at March 31, 2024	As at March 31, 2023
Opening balance as at 1st April 2023 (Previous period: 1st April 2022)	35,778.03	35,168.79
Add: Recognised during the period/ year	4,935.38	560.53
Less: Payment of deferred consideration	-	-
Add: Adjustment on account of interest unwinding	47.56	48.71
Closing balance of payable as on March 31, 2024 (Previous period: March 31, 2023)	**40,760.97**	**35,778.03**

Note 33 : Financial risk management objectives and policies

The Group's risk management policies are established to identify and analyse the risks faced by the Group, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Group's activities.
The Board of Directors have overall responsibility for the establishment and oversight of the Group's risk management framework.
In performing its operating, investing and financing activities, the Group is exposed to the Credit risk, Liquidity risk and Currency risk.

Market risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: interest rate risk, currency risk and other price risk, such as equity price risk and commodity risk. Financial instruments affected by market risk include loans and borrowings, deposits, FVTOCI investments and derivative financial instruments.

Interest rate risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Group's exposure to the risk of changes in market interest rates relates primarily to the Group's long-term debt obligations with floating interest rates.

The Group manages its interest rate risk by having a balanced portfolio of fixed and variable rate borrowings.

Interest rate sensitivity

The following table demonstrates the sensitivity to a reasonably possible change in interest rates on that portion of loans and borrowings affected, after excluding the credit

exposure on fixed rate borrowing. With all other variables held constant, the Group's profit before tax is affected through the impact on floating rate borrowings, as follows:

(Rs in million)

Particulars	As at March 31, 2024	As at March 31, 2023
If the interest rate is 50 basis point higher		
- Decreased by	956.04	339.69
- Increased by	-956.04	-339.69

Credit risk on financial assets

Credit risk is the risk that counterparty will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The Company is exposed to credit risk from its operating activities (primarily trade receivables) and from its financing activities, including deposits with banks and financial institutions, foreign exchange transactions and other financial instruments.

Financial instruments

Credit risk from balances with banks, trade receivables, loans and advances and financial institutions is managed by the Group's management in accordance with the Group's policy. Investments of surplus funds are made only with approved counterparties and within credit limits assigned to each counterparty. Counterparty credit limits are reviewed by the top management on an annual basis, and may be updated throughout the year subject to approval of the Company's board of directors. The limits are set to minimise the concentration of risks and therefore mitigate financial loss through counterparty's potential failure to make payments.

Trade receivables and Loans and Advances

Customer credit risk and Loans and advances is managed by each business unit subject to the Group's established policy, procedures and control relating to customer credit risk management. An impairment analysis is performed at each reporting date on an individual basis for major trade receivables and loan and advances. The Group has not identifed any impairment loss as at March 31, 2024.

The following table provides information about the ageing of gross carrying amount of trade recievables as at :

(Rs in million)

Gross Carrying Amount	**As at March 31, 2024**	**As at March 31, 2023**
Undisputed Trade recievables -considered		
Less than 6 months	-	33.02
6 months - 1 year	12.96	0.10
1-2 Years	33.02	29.37
2-3 Years	0.51	0.51
More than 3 years	21.66	21.66
Total	**68.15**	**84.67**

Other financial assets

Credit risk from balances with banks and financial institutions is managed by the Group in accordance with the Group's policy. Investments of surplus funds are made only in highly marketable debt instruments with appropriate maturities to optimise the cash return on instruments while ensuring sufficient liquidity to meet its liabilities.

Liquidity Risk

Liquidity risk is the risk that the group may not be able to meet its present and future cash and collateral obligations without incurring unacceptable losses. The group's objective is to, at all times maintain optimum levels of liquidity to meet its cash and collateral requirements. The group closely monitors its liquidity position and deploys a robust cash management system. It maintains adequate sources of financing including debt from banks at an optimised cost.

The table below summarises the maturity profile of the Trust's financial liabilities based on contractual undiscounted payments:

(Rs. in million)

As at March 31, 2024	**Carrying amount**	**Total**	**On Demand**	**Less than 1 year**	**1 to 5 years**	**> 5 years**
Borrowings (Gross of unamortised transaction cost)	2,19,268.95	2,19,268.95	0.02	1,178.91	37,618.23	1,80,471.79
Other financial liabilities	42,648.63	42,648.63	-	1,883.60	40,765.03	-
Trade payables	5,614.12	5,614.12	-	5,614.12	-	-
Total	**2,67,531.70**	**2,67,531.70**	**0.02**	**8,676.63**	**78,383.26**	**1,80,471.79**

(Rs. in million)

As at March 31, 2023	**Carrying amount**	**Total**	**On Demand**	**Less than 1 year**	**1 to 5 years**	**> 5 years**
Borrowings (Gross of unamortised transaction cost)	1,06,725.97	1,06,725.97	5,350.72	784.93	17,853.83	82,736.49
Other financial liabilities	38,330.17	38,330.17	-	2,549.37	35,780.80	-
Trade payables	19,471.20	19,471.20	-	15,305.48	4,165.72	-
Total	**1,64,527.34**	**1,64,527.34**	**5,350.72**	**18,639.78**	**57,800.35**	**82,736.49**

Note 34 : Transfer of Projects

On April 7, 2022, the Trust has executed arrangement with the Sponsor for implementation of Palsit Dankuni Tollway Private Limited ('SPV') by the Trust and accordingly, the project is being executed by the SPV and the Trust.

On October 12, 2023, the Trust has executed arrangement with the Sponsor for implementation of Samakhiyali Tollway Private Limited ('SPV') by the Trust and accordingly, the project is being executed by the SPV and the Trust.

On July 29, 2023, the Trust has executed arrangement with the Sponsor for implementation of IRB Golconda Expressway Private Limited ('SPV') by the Trust and accordingly, the project is being executed by the SPV and the Trust.

Note 35 : Corporate Social Responsibility

(Rs. in million)

For the year ended March 31, 2024			
(a) Gross amount required to be spent by the Group during the period			15.97
(b) Amount spent during the period on:			
Particulars	**In Cash**	**Yet to be paid in**	**Total**
(i) Construction/acquisition of any asset	-	-	-
(ii) On purposes other than (i) above	16.10	-	16.10

For the year ended March 31, 2023			
(a) Gross amount required to be spent by the Group during the period			-
(b) Amount spent during the period on:			
Particulars	**In Cash**	**Yet to be paid in**	**Total**
(i) Construction/acquisition of any asset	-	-	-
(ii) On purposes other than (i) above	-	-	-

Note 36 : Capital Management

Capital includes equity attributable to the unitholders to ensure that it maintains an efficient capital structure and healthy capital ratios in order to support its business and maximise unitholder value. The Group manages its capital structure and makes adjustments to it, in light of changes in economic conditions or its business requirements. To maintain or adjust the capital structure, the Project SPV Group may adjust the dividend payment to unitholders, return capital to unitholders or issue new units. No changes were made in the objectives, policies or processes during the year ended March 31, 2024.

The Group monitors capital using a gearing ratio, which is net debt divided by total equity. Net debt is calculated as loans and borrowings less cash and cash equivalents.

	As at March 31, 2024	**As at March 31, 2023**
Borrowings (Refer Note 16)	2,15,315.27	1,05,079.60
Less: cash and cash equivalents (Note 10)	(1,605.67)	(731.31)
Net debt	**2,13,709.60**	**1,04,348.29**
Equity (Note 13, 14 and 15)	1,34,367.83	77,533.53
Total equity	**1,34,367.83**	**77,533.53**
Capital and net debt	**3,48,077.43**	**1,81,881.82**
Gearing ratio (%)	159.05%	134.58%

In order to achieve this overall objective, the Group's capital management, amongst other things, aims to ensure that it meets financial covenants attached to the interest-bearing loans and borrowings that define capital structure requirements. Breaches in meeting the financial covenants would permit the lenders to immediately call loans and borrowings. There have been no breaches in the financial covenants of any interest-bearing borrowings in the current period.

Note 37 : Distribution made

(Rs in million)

	As at March 31, 2024	**As at March 31, 2023**
Distributed during the period as :		
Interest	449.55	-
Return of Capital	3,984.60	-
	4,434.15	-

Note: The Board of Directors of the Investment Manager have declared 1st Distribution of Rs.1.52 per unit which comprises of Rs.0.44 per unit as interest and Rs. 1.08 per unit as return of capital in their meeting held on October 25, 2023. Also, the Investment Manager have declared 2nd Distribution of Rs.2.82 per unit towards return of capital in their meeting held on January 25, 2024.

Note 38 : Revenue share / premium payment to NHAI

(a) During the period ended March 31, 2024, the Group has paid/accrued Rs. 7,546.06 millions (March 31, 2023, Rs. 5,671.70 millions) as Revenue Share (Additional Concession Fee) to National Highways Authority of India ("NHAI") out of its toll collection in accordance with the Concession Agreements entered with NHAI. Income from Operations in the financials for the above periods is net off the above Revenue Share to NHAI.

(b) During the year ended March 31, 2017, AE Tollway Limited (AETL) has entered into a Concession agreement (CA) with NHAI for a period of 24 years. As per the terms of the CA, AETL has agreed to pay a premium in the form of "Additional Concession Fee" equal to Rs. 810.00 millions for the first year and each subsequent year such premium shall be determined by increasing the amount of premium in the respective year by an additional 5% as compared to the immediately preceding year. Management based on the legal opinion obtained and their evaluations of the terms of the CA, believes that such premium payable is restricted to the toll collection during the year and is in the form of revenue sharing arrangement. Accordingly, the premium payable for the year is accounted for as revenue share. The said treatment has been followed in case of KGTL, UTL, CGTL and IRBHM where premium payment has commenced. Further, in case of IRB Hapur Moradabad Tollway Limited, at the time of refinancing, NHAI granted approval for refinancing subject to payment of premium not paid of earlier years. The SPV has paid the premium (INR 214 Million) to NHAI under protest and the same would be reconciled based on the outcome of Rajasthan projects which are of similar nature.

Note 39 : Details of Project management fees and Investment management fees

i) Project Management Fees

In accordance with the Project Implementation Agreements, the fees and remuneration payable by the Project SPVs to the Project Manager has been worked out and agreed upon for the duration of current financial year, between the Project Manager, Investment Manager and the respective Project SPV, on an arm's length basis, after taking into account the extent of work to be done in respect of maintenance and other services to be provided by the Project Manager to such Project SPV.

ii) Investment Management Fees

Pursuant to a resolution dated July 4, 2023 of the Board of Directors of the Investment Manager and a resolution dated July 27, 2023 of the Unitholders, the Management Fees have been revised to be equivalent to 110% of the cost incurred by the Investment Manager in connection with providing investment management services to the Trust including routine administrative and operational expenses (exclusive of any out of pocket expenses, reimbursements and taxes).

Note 40 : Income Tax

Reconciliation of tax expenses and the accounting of profit multiplied by Indian Domestic tax rate for the year ended March 31, 2024 and March 31, 2023 are:

(Rs in million)

	Year ended March 31, 2024	Year ended March 31, 2023
Profit Before tax	(7,837.98)	(2,304.47)
Tax rate	42.74%	42.74%
Expected income tax at India's statutory rate	(3,349.95)	(984.93)
Effect of unused tax losses and tax offsets not recognised as deferred tax assets	1,647.45	1,549.80
Difference in tax rate as per new regime as compared to normal tax rates	502.76	(259.63)
Additional Prior Period Taxes booked in current year for current tax of prior years	6.64	(9.25)
Adjustments recognised in the current year in relation to the Deferred tax of prior years	-	(339.00)
Others	5.27	10.13
Income tax expense reported in statement of Profit and loss	**(1187.83)**	**(32.88)**
Effective Tax Rate	**15.15%**	**1.43%**

Deferred tax reflects the impact of current year timing differences between taxable income and accounting income for the year and reversal of timing differences of earlier years in accordance with Ind AS 12. Deferred tax is measured based on the tax rates and the tax laws enacted or substantively enacted at the balance sheet date. The carry forward of unabsorbed depreciation & business loss and specific Ind AS related adjustments resulted into net deferred tax assets. The deferred tax asset is not recognized by the Group since there is no probable certainty that the same will be utilized in future against the taxable profit. The Group has an unabsorbed tax depreciation amounting to ` 1,62,545.71 lakhs as at March 31, 2023 (March 31, 2022: ` Nil) that are available for offsetting against future taxable profits for indefinite years.

No deferred tax assets have been recognised on losses incurred in SPV's(except for PDTPL) due to uncertainty of future taxable business income.

Note 41: Earnings Per Unit (EPU)

EPU amounts are calculated by dividing the profit for the year attributable to unit holders by the weighted average number of units outstanding during the year.

The following reflects the income and share data used in the EPU computations:

	Year ended March 31, 2024	Year ended March 31, 2023
Profit attributable to unit holders for earnings (Rs in million)	(6,650.15)	(2,271.59)
Weighted average number of Units for EPU	97,34,89,986	87,79,64,498
Earnings per unit		
Basic (in Rs.)	(6.83)	(2.59)
Diluted (in Rs.)	(6.83)	(2.59)

Note 42 : Segment reporting

The Group is engaged in setting up, operating, and managing of toll road assets in India. Based on the guiding principle given in Ind AS 108 "Operating Segments" all the activities of the Group fall within a single operating segment. Further, the entire operations of the Trust are only in India and hence, disclosure of secondary/ geographical segment information does not arise. Accordingly, giving disclosures under Ind AS 108 does not arise.

Note 43 : Subsequent Events

The Board of Directors of the Investment Manager have declared 3rd Distribution of Rs.0.24 per unit towards interest distribution in their meeting held on May 03, 2024.

Note 44 : Previous year comparatives

Previous year's figures has been reclassified / regrouped wherever necessary to confirm to current year classification. The impact of the same is not material to the user of the Consolidated financial statements.

Note 45 : Disclosure pursuant to Appendix - A to Ind AS 115 - " Service Concession Arrangements" ('SCA')

(A) Disclosures with regard to Toll Collection Rights (Intangible Assets)

Sr. No.	Name of Concessionaire	Type of Concession	Start of concession period under concession agreement (Appointed date)	End of concession period under concession agreement	Period of concession since the appointed date	Construction completion date or expected construction completion date, as applicable
1	IRB Westcoast Tollway Limited	BOT	March 3, 2014	March 2, 2042	28 years	June 30, 2022
2	Solapur Yedeshi Tollway Limited	BOT	January 21, 2015	January 20, 2044	29 years	October 15, 2019
3	Yedeshi Aurangabad Tollway Limited	BOT	July 1, 2015	June 30, 2041	26 years	September 24, 2020
4	Kaithal Tollway Limited	BOT	July 15, 2015	July 14, 2042	27 years	March 29, 2019
5	AE Tollway Limited	BOT	August 1, 2016	July 31, 2040	24 years	November 24, 2020
6	Udaipur Tollway Limited	BOT	September 3, 2017	September 2, 2038	21 years from Appointed Date	June 01, 2021
7	CG Tollway Limited	BOT	November 4, 2017	November 3, 2037	20 years from Appointed Date	August 14, 2021
8	Kishangarh Gulabpura Tollway Limited	BOT	February 21, 2018	February 20, 2038	20 years from Appointed Date	June 30, 2022
9	IRB Hapur Moradabad Tollway Limited	BOT	May 28, 2019	May 26, 2041	22 years from Appointed Date	June 30, 2022
10	Palsit Dankuni Tollway Private Limited	BOT	April 2, 2022	April 1, 2039	17 years from Appointed Date	Tolling & Construction
11	IRB Golconda Expressway Private Limited*	TOT	August 12, 2023	August 11, 2053	30 years from Appointed Date	NA
12	Samakhiyali Tollway Private Limited	BOT	December 28, 2023	December 27, 2043	20 years from Appointed Date	Tolling & Construction
13	IRB Lalitpur Tollway Private Limited#	TOT	Appointed date received on April 01, 2024	March 31, 2044	20 years from Appointed Date	NA
14	IRB Kota Tollway Private Limited^	TOT	Appointed date received on April 01, 2024	March 31, 2044	20 years from Appointed Date	NA
15	IRB Gwalior Tollway Private Limited $	TOT	Appointed date received on April 01, 2024	March 31, 2044	20 years from Appointed Date	NA

* Upfront concession fee of Rs. 73,800 million
Upfront concession fee of Rs. 44,280 million
^ Upfront concession fee of Rs. 52.156 million
$ Upfront concession fee of Rs. 11,614.40 million

Note:

The above BOT/ DBFOT projects shall have following rights/ obligations in accordance with the Concession Agreement entered into with the Respective Government Authorities:-

a. Rights to use the Specified assets
b. Obligations to provide or rights to expect provision of services
c. Obligations to deliver or rights to receive at the end of the Concession.

Note 46 :Disclosure as per Ind AS 115

a) Disaggregation of revenue from contracts with customers

The Group believes that the information provided below for Revenue from Operations, is sufficient to meet the disclosure objectives with respect to disaggregation of revenue under Ind AS 115, Revenue from Contracts with Customers and also refer note (b).

(Rs. in million)

	For the year ended March 31, 2024	For the year ended March 31, 2023
Contract Revenue (refer note b below)	19,154.21	11,672.04
Income from toll collection (net) (refer note b below)	19,776.53	15,240.56
Total	**38,930.74**	**26,912.59**

b) Reconciliation of revenue as per Ind AS 115

(Rs. in million)

	For the year ended March 31, 2024	For the year ended March 31, 2023
Contract Revenue		
Construction revenue (Utility shifting & Construction work)	19,154.21	11,672.04
Total	**19,154.21**	**11,672.04**
Income from toll collection		
Revenue total collected	27,470.26	21,097.69
Less: NHAI Premium	(7,546.06)	(5,671.70)
Less : NHAI Revenue share - Double user fee	(147.66)	(185.44)
Total	**19,776.53**	**15,240.56**

Note 47 : Related Party disclosures

I. List of Related parties of the Trust [As per Regulation 2 (1) (zv)]

1	Parties to the InvIT	Sponsor Group and Project Manager (as per 'Table A' below)*
		MMK Toll Road Private Limited (Investment Manager)
		IDBI Trusteeship Services Limited (Trustee of the IRB Infrastructure Trust)
2	Associates, Promoters, Directors and Partners of the persons mentioned in clause 1	As per 'Table B' below#

*** Table A - Sponsor Group and Project Manager**

(i) The sponsor(s)	**(ii) Entities or person(s) which are controlled by such sponsor**	**(iii) Entities or person(s) who control such body corporate**	**(iv) Entities or person(s) which are controlled by entities or person(s) specified in clause (iii)**
IRB Infrastructure Developers Limited	Modern Road Makers Private Limited (MRMPL) IRB Ahmedabad Vadodara Super Express Tollway Private Limited (IRBAV) Mhaiskar Infrastructure Private Limited (MIPL) Thane Ghodbunder Toll Road Private Limited (TGTRPL) IRB Kolhapur Integrated Road Development Company Private Limited (IRBK) ATR Infrastructure Private Limited (ATRFL) Ideal Road Builders Private Limited (IRBPL) Aryan Toll Road Private Limited (ATRPL) GE1 Expressway Private Limited (Formerly known as IRB PP Project Private Limited) IRB PS Highway Private Limited (IRBPS) IRB Sindhudurg Airport Private Limited (IRBSA) IRB Infrastructure Private Limited (IRBFL) Aryan Infrastructure Investments Private Limited (AIIPL) Aryan Hospitality Private Limited (AHPL) IRB MP Expressway Private Limited IRB Goa Tollway Private Limited (IRB Goa) MRM Mining Private Limited (Subsidiary of MRMPL) VM7 Expressway Private Limited Pathankot Mandi Highway Private Limited Chittoor Thachur Highway Private Limited Samakhiyali Tollway Private Limited (Subsidiary upto 27.12.2023) Meerut Budaun Expressway Limited - JV MMK Toll Road Private Limited (MMK) - JV IRB Infrastructure Trust - JV Project SPV's of IRB Infrastructure Trust as mentioned below: 1. IRB Westcoast Tollway Limited (IRBWTL) 2. Solapur Yedeshi Tollway Limited (SYTL) 3. Yedeshi Aurangabad Tollway Limited (YATL) 4. Kaithal Tollway Limited (KTL) 5. AE Tollway Limited (AETL) 6. Udaipur Tollway Limited (UTL) 7. CG Tollway Limited (CGTL) 8. Kishangarh Gulabpura Tollway Limited (KGTL) 9. IRB Hapur Muradabad Tollway Limited (IRBHMTL) 10. Palsit Dankuni Tollway Private Limited (PDTPL) 11. IRB Golconda Expressway Private Limited (IRBGEPL) 12. IRB Lalitpur Tollway Private Limited w.e.f 10.11.2023 13. Samakhiyali Tollway Private Limited w.e.f. 28.12.2023 14. IRB Kota Tollway Private Limited w.e.f. 01.01.2024 15. IRB Gwalior Private Limited w.e.f. 01.01.2024	Mr. Virendra D. Mhaiskar, Promoter of Sponsor IRB Holding Private Limited Ms. Deepali V. Mhaiskar, Promoter of Sponsor Virendra D. Mhaiskar HUF (Karta Mr. Virendra Mhaiskar), promoter of Sponsor	VDM Ventures Private Limited Duex Farming Films Private Limited

Table B - List of promoters, directors and partners of the persons mentioned in clause 1

Parties to the Trust	Promoters	Directors
(i) IRB Infrastructure Developers Limited (Sponsor and Project Manager)	1. Mr. Virendra D. Mhaiskar 2. Mrs. Deepali V. Mhaiskar 3. Mr. Virendra D. Mhaiskar (HUF)	1. Mr. Virendra D. Mhaiskar, Chairman and Managing Director 2. Mrs. Deepali V. Mhaiskar, Whole Time Director 3. Mr. Jose Tamariz Martel Goncer 4. Mr. Ravindra Dhariwal 5. Mr. Chandrashekhar S. Kaptan- Independent director 6. Mr. Sunil H. Talati -Independent director 7. Mr. Sandeep J. Shah - Independent director 8. Ms. Priti Savla - Independent director
(ii) Entities or person(s) which are controlled by such sponsor	IRB Infrastructure Developers Limited (IRBIDL)	1. Mr. Virendra D. Mhaiskar 2. Mrs. Deepali V. Mhaiskar 3. Mr. Dhananjay K. Joshi 4. Mrs. Arati Taskar 5. Mr. Sudhir Rao Hoshing 6. Mr. Rajpaul Sharma 7. Mr. Amitabh Murarka 8. Mr. Aryan V. Mhaiskar 9. Mrs. Kshama Vengsarkar 10. Mr. Nikhil Maniar 11. Mr. Tushar Kawedia 12. Mr. Rajinder Pal Singh 13. Mr. Vinod Kumar Menon 12. Mr. Sunil Tandon -Independent Director 14. Mr. Nikesh Jain -Independent Director 15. Mr. Rushabh Gandhi 16. Mrs. Anusha Date-Independent Director 17. Mr. Kulumani Gopalratnam Krishnamurthy-Independent Director 18. Mrs. Ranjana Paranjape -Independent Director 19. Mr. Kunnasagaran Chinniah 20. Mr. Sandeep Shah -Independent Director 21. Ms. Shilpa Todankar 22. Mr. Abhay Phatak 23. Mr. Darshan Sangurdekar 24. Mr. Omprakash Singh 25. Mr. Chandrashekhar Kaptan 26. Mr. Boon Chin Hau 27. Mr. Nagendraa Parakh 28. Mr. Amyn Jassani
(iii) Entities or person(s) who control such body corporate	1. Mr. Virendra D. Mhaiskar 2. Mrs. Deepali V. Mhaiskar 3. Mr. Virendra D. Mhaiskar (HUF)	1. Mr. Virendra D. Mhaiskar 2. Mrs. Deepali V. Mhaiskar
(iv) Entities or person(s) which are controlled by entities or	1. Mr. Virendra D. Mhaiskar 2. Mrs. Deepali V. Mhaiskar 3. Mr. Aryan V. Mhaiskar	1. Mr. Virendra D. Mhaiskar 2. Mrs. Deepali V. Mhaiskar 3. Mr. Aryan V. Mhaiskar
MMK Toll Road Private Limited (Investment Manager)	IRB Infrastructure Developers Limited (IRBIDL)	Mr. Virendra D. Mhaiskar Mr. Kunnasagaran Chinniah Mr. Boon Chin Hau Mr. Aryan Mhaiskar Mr. K G Krishnamurthy -Independent director Mrs.Ranjana Paranjape - Independent director Mr. Nagendraa Parakh- Independent director Mr. Amyn Jassani - Independent director
IDBI Trusteeship Services Limited (Trustee of IRB Infrastructure Trust)	IDBI Bank Limited LIC Corporation Limited General Insurace Corporation	Mr. Jayakumar Subramonia Pillai Mr. Pradeep Kumar Jain Mrs. Jayashree Vijay Ranade Mr. Pradeep Kumar Malhotra Ms. Baljinder Kaur Mandal

II. Related Party Transactions

(Rs. in Millions)

Sr. No.	Particulars	Sponsor and Project Manager		Investment Manager		Fellow subsidiaries of Sponsor and Project Manager		Key Managerial personnel		Trustee of IRB Infrastructure Trust	
		31/03/2024 (Audited)	31/03/2023 (Audited)	31/03/2024 (Audited)	31/03/2023 (Audited)	31/03/2024 (Audited)	31/03/2023 (Audited)	31/03/2024 (Audited)	31/03/2023 (Audited)	31/03/2024 (Audited)	31/03/2023 (Audited)
1	**Contract expenses**	**16,327.35**	**-**	**-**	**-**	**928.21**	**858.69**	**-**	**-**	-	-
	IRB Infrastructure Developers Limited	16,327.35	-	-	-	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	928.21	858.69	-	-	-	-
2	**Interest Distribution**	**229.35**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	-	-
	IRB Infrastructure Developers Limited	229.35	-	-	-	-	-	-	-	-	-
3	**Capital Reduction**	**2,032.84**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	-	-
	IRB Infrastructure Developers Limited	2,032.84	-	-	-	-	-	-	-	-	-
4	**Operation & Main. Expenses**	**5,229.00**	**2,719.41**	**-**	**-**	**-**	**-**	**-**	**-**	-	-
	IRB Infrastructure Developers Limited	5,229.00	2,719.41	-	-	-	-	-	-	-	-
5	**Finance Cost -Interest unwinding on Trade payable**	**-**	**-**	**-**	**-**	**187.67**	**765.06**	**-**	**-**	**-**	**-**
	Modern Road Makers Private Limited	-	-	-	-	187.67	765.06	-	-	-	-
6	**Finance Cost -Interest unwinding on Trade payable - TCR**	-	-	-	-	**172.03**	**33.74**	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	172.03	33.74	-	-	-	-
7	**Sub-ordinate debts**	**16,916.65**	-	-	-	-	-	-	-	-	-
	IRB Infrastructure Developers Limited	16,916.65	-	-	-	-	-	-	-	-	-
	IRB Goa Tollway Private Limited	-	-	-	-	-	-	-	-	-	-
8	**Unsecured loan received**	**726.22**	**1,532.48**	-	-	-	-	-	-	-	-
	IRB Infrastructure Developers Limited	726.22	1,532.48	-	-	-	-	-	-	-	-
9	**Unsecured loan repaid**	**6,174.59**	**267.50**	**-**	**-**	**-**	**-**	**-**	**-**	-	-
	IRB Infrastructure Developers Limited	6,174.59	267.50	-	-	-	-	-	-	-	-
10	**Expenses incurred on behalf of others**	**36.96**	**-**	**0.45**	**-**	**0.01**	**-**	**-**	**-**	-	-
	IRB Infrastructure Developers Limited	36.96	-	-	-	-	-	-	-	-	-
	MMK Toll Road Private Limited	-	-	0.45	-	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	0.01	-	-	-	-	-
11	**Mobilisation advances given**	**802.50**	-	-	-	-	-	-	-	-	-
	IRB Infrastructure Developers Limited	802.50	-	-	-	-	-	-	-	-	-
12	**Mobilisation advances recovered**	**33.68**	**509.07**	**-**	**-**	**-**	**-**	**-**	**-**	-	-
	IRB Infrastructure Developers Limited	33.68	509.07	-	-	-	-	-	-	-	-
13	**Material aggregate purchase**	**-**	**-**	**-**	**-**	**-**	**588.05**	**-**	**-**	**-**	**-**
	Modern Road Makers Private Limited	-	-	-	-	-	588.05	-	-	-	-
14	**General advance - given**	**7,190.62**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	7,190.62	-	-	-	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	-	-	-	-	-	-
15	**General advance repayment**	**0.03**	-	-	-	-	-	-	-	-	-
	IRB Infrastructure Developers Limited	0.03	-	-	-	-	-	-	-	-	-
	Modern Road Makers Private Limited		-	-	-	-	-	-	-	-	-
16	**Trustee Fees**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**0.56**	**5.30**
	IDBI Trusteeship Services Limited	-	-	-	-	-	-	-	-	0.56	5.30
17	**Construction cost**	**907.75**	**11,171.92**	**-**	**-**	**-**	**-**	**-**	**-**	-	-
	IRB Infrastructure Developers Limited	907.75	11,171.92	-	-	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	-	-	-	-	-	-
18	**Other payable**	**4,935.38**	**560.52**	**-**	**-**	**48.84**	**48.73**	**-**	**-**	-	-
	IRB Infrastructure Developers Limited	4,935.38	560.52	-	-	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	-	0.02	-	-	-	-
	IRB Goa Tollway Private Limited	-	-	-	-	-	-	-	-	-	-
	Mhaiskar Infrastructure Private Limited	-	-	-	-	48.84	48.71	-	-	-	-
19	**Professional Fees**	**419.96**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	419.96	-	-	-	-	-	-	-	-	-
20	**Units Issued**	**26,139.68**	**1,236.75**	**-**	**-**	**-**	**-**	**-**	**-**	-	-
	IRB Infrastructure Developers Limited	26,139.68	1,236.75	**-**	**-**	**-**	**-**	**-**	**-**	-	-
21	**Additional Intangible Asset**	**-**	**8,745.66**	**-**	**-**	**-**	**33.73**	**-**	**-**	-	-
	IRB Infrastructure Developers Limited	-	8,745.66	**-**	**-**	-	-	-	-	-	-
	Modern Road Makers Limited	-	-	-	-	-	33.73	-	-	-	-
22	**Deletion Intangible Asset**	**-**	**-**	**-**	**-**	**-**	**23.46**	**-**	**-**	**-**	**-**
	Modern Road Makers Limited	**-**	**-**	**-**	**-**	**-**	23.46	**-**	**-**	**-**	**-**
23	**Investment Management Fees**	**-**	**-**	**146.32**	**56.52**	**-**	**-**	**-**	**-**	**-**	**-**
	MMK Toll Road Pvt Limited	**-**	**-**	146.32	56.52	-	-	**-**	**-**	**-**	**-**

II. Related Party Transactions

(Rs. in Millions)

Sr. No.	Particulars	Sponsor and Project Manager		Investment Manager		Fellow subsidiaries of Sponsor and Project Manager		Key Managerial personnel		Trustee of IRB Infrastructure Trust	
		31/03/2024 (Audited)	31/03/2023 (Audited)	31/03/2024 (Audited)	31/03/2023 (Audited)	31/03/2024 (Audited)	31/03/2023 (Audited)	31/03/2024 (Audited)	31/03/2023 (Audited)	31/03/2024 (Audited)	31/03/2023 (Audited)
24	**Director sitting fees paid**	**-**	**-**	**-**	**-**	**-**	**-**	**3.39**	**1.83**	**-**	**-**
	Mrs. Arati Taskar	-	-	-	-	-	-	0.19	0.06	-	-
	Mr. Darshan Sangurdekar	-	-	-	-	-	-	0.24	0.22	-	-
	Mr.Omprakash Singh	-	-	-	-	-	-	0.24	0.19	-	-
	Mr. Sudhir Hoshing	-	-	-	-	-	-	0.16	0.06	-	-
	Mr. C S Kaptan	-	-	-	-	-	-	0.54	0.33	-	-
	Ms. Shilpa Todankar	-	-	-	-	-	-	0.71	0.51	-	-
	Mr. Tushar Kawedia	-	-	-	-	-	-	0.09	-	-	-
	Mr. Rajpaul S. Sharma	-	-	-	-	-	-	0.28	-	-	-
	Mrs.Ranjana Paranjape	-	-	-	-	-	-	0.17	0.13	-	-
	Mr. Abhay Pathak	-	-	-	-	-	-	0.35	0.25	-	-
	Mr. Amitabh Murarka	-	-	-	-	-	-	0.41	0.06	-	-

IRB Infrastructure Trust
Notes to Consolidated Financial Statements as at March 31, 2024

III. Related party balances

(Rs. in millions)

Sr. No.	Particulars	Sponsor and Project Manager		Investment Manager		Fellow subsidiaries of Sponsor and Project Manager		Key Managerial personnel		Trustee of IRB Infrastructure Trust	
		31/03/2024 (Audited)	31/03/2023 (Audited)	31/03/2024 (Audited)	31/03/2023 (Audited)	31/03/2024 (Audited)	31/03/2023 (Audited)	31/03/2024 (Audited)	31/03/2023 (Audited)	31/03/2024 (Audited)	31/03/2023 (Audited)
1	**Subordinated debt (unsecured and interest free)**	**16,916.65**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	16,916.65	-	-	-	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-			-	-	-	-		
	IRB Goa Tollway Private Limited	-	-			-	-	-	-		
2	**Short-term borrowings**	**-**	**477.81**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited		477.81	-	-	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-			-	-	-	-		
3	**Trade payable**	**3,971.13**	**4,931.60**	**95.19**	**78.54**	**80.66**	**12,475.69**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	3,971.13	4,931.60	-	-	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	80.66	12,475.69	-	-	-	-
	MMK Toll Road Private Limited	-	-	95.19	78.54	-	-	-	-	-	-
4	**Mobilisation advances**	**100.74**	**33.68**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	100.74	33.68	-	-	-	-	-	-	-	-
5	**Advance given**	**140.22**	**451.18**	**-**	**-**	**-**	**0.03**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	140.22	451.18	-	-	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-		0.03	-	-	-	-
6	**BG Margin Money Receivable**	**30.95**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	30.95	-	-	-	-	-	-	-	-	-
7	**Retention payable**	**708.82**	**-**	**-**	**-**	**92.54**	**281.35**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	708.82	-			-	-				
	Modern Road Makers Private Limited	-	-	-	-	92.54	281.35	-	-	-	-
8	**Other Payable including BG margin payable**	**37,031.44**	**32,246.65**	**-**	**-**	**3,729.52**	**3,697.39**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	37,031.44	32,246.65	-	-	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	1,784.13	1,800.84	-	-	-	-
	IRB Goa Tollway Private Limited	-	-	-	-	1,544.86	1,544.86	-	-	-	-
	Mhaiskar Infrastructure Private Limited	-	-	-	-	400.53	351.69	-	-	-	-
9	**Amount Held Up**	**144.74**				**0.44**					
	IRB Infrastructure Developers Limited	144.74									
	Modern Road Makers Private Limited					0.44					
10	**Short-term loans & advances**	**-**	**-**			**-**	**-**	**-**	**-**	**-**	**-**
	Modern Road Makers Private Limited	-	-			-	-	-	-	-	-
11	**Other payable (Exp incurred on behalf of others)**	**3.79**	**1.77**	**-**	**-**	**6.05**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	3.79	1.77	-	-	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	6.05	-	-	-	-	-
12	**Unsecured Loan**	**0.02**	**4,872.91**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	0.02	4,872.91	-	-	-	-	-	-	-	-
13	**Trade Receivable**	**-**	**-**	**-**	**-**	**0.51**	**0.61**	**-**	**-**	**-**	**-**
	Modern Road Makers Private Limited	-	-	-	-	0.51	0.61	-	-	-	-
14	**Expense payable**	**-**	**491.53**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**0.51**
	IRB Infrastructure Developers Limited		491.53	-	-	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	-	-	-	-	-	-
	IDBI Trusteeship Services Limited	-	-	-	-	-	-	-	-		0.51
15	**Other receivable**	**-**	**-**	**-**	**0.08**	**0.01**	**-**	**-**	**-**	**-**	**-**
	MMK Toll Road Private Limited	-	-		0.08	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	0.01	-	-	-	-	-
16	**Director sitting fees Payable**	**-**	**-**	**-**	**-**	**-**	**-**	**1.24**	**0.44**	**-**	**-**
	Mrs. Aarti Taskar	-	-	-	-	-	-	0.04	0.01	-	-
	Mr. Darshan Sangurdekar	-	-	-	-	-	-	0.09	0.05	-	-
	Mr. Omprakash Singh	-	-	-	-	-	-	0.07	0.04	-	-
	Mr. Sudhir Hoshing	-	-	-	-	-	-	0.05	0.01	-	-
	Mr. Jitendra Sharma	-	-	-	-	-	-	-	0.02	-	-
	Mr. Rajpaul S. Sharma	-	-	-	-	-	-	0.12	-	-	-
	Mr. C S Kaptan	-	-	-	-	-	-	0.18	0.08	-	-
	Miss Shilpa Todankar	-	-	-	-	-	-	0.29	0.13	-	-
	Mr. Abhay Pathak	-	-	-	-	-	-	0.13	0.07	-	-
	Mr. Amitabh Murarka	-	-	-	-	-	-	0.16	0.01	-	-
	Mr. Tushar Kawedia	-	-	-	-	-	-	0.03	-	-	-
	Mrs. Ranjana Paranjape	-	-	-	-	-	-	0.07	0.03	-	-

IRB Infrastructure Trust
Notes to Consolidated Financial Statements as at March 31, 2024
Note 48 : Other Statutory Information

i) The Group have not traded or invested in Crypto currency or Virtual Currency during the financial year.
ii) The Group does not hold benami property and no proceedings under Benami transaction (Prohibition) Act 1988 have been initiated against the Trust.
iii) The Group does not have any relationship with companies struck off.
iv) The Group does not have any such transaction which is not recorded in the books of accounts that has been surrendered or disclosed as income during the year in the tax assessments under the Income Tax Act, 1961 (such as, search or survey or any other relevant provisions of the Income Tax Act, 1961.
v) The Group did not have any long-term contracts including derivative contract for which there were any material foreseeable losses.
vi) The Group has not declared a wilfull defaulter by any bank / financial institution or any other lender during the year.
vii) The Group has complied with the number of layers prescribed under section 2(87) of the Companies Act, 2013 read with Companies (Restriction on Number of Layers) Rules, 2017.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

For M S K A & Associates
Chartered Accountants
ICAI registration number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No. 118894

Place: Mumbai
Date: May 03, 2024

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Place : Mumbai
Date: May 03, 2024

gokhale & sathe (regd.)
chartered accountants
308/309, Udyog Mandir No. 1,
7-C, Bhagoji Keer Marg,
Mahim, Mumbai 400 016

INDEPENDENT AUDITOR'S REPORT

To the Unit Holders of IRB Infrastructure Trust

REPORT ON THE AUDIT OF THE CONSOLIDATED IND AS FINANCIAL STATEMENTS

OPINION

We have audited the accompanying Consolidated Ind AS Financial Statements of IRB Infrastructure Trust ("the InvIT" or "the Trust") and its subsidiaries (the Trust and its subsidiaries together referred to as "the Group"), which comprise the Consolidated Balance Sheet as at March 31, 2023, the Consolidated Statement of Profit and Loss (including Other Comprehensive Income), the Consolidated Statement of Cash Flows, the Consolidated Statement of Changes in Unit Holder's Equity for the year then ended and the Consolidated Statement of Net Assets at Fair value as at March 31, 2023, the Consolidated Statement of Total Returns at Fair Value and the consolidated statement of Net Distributable Cash Flows ('NDCFs') of the trust and each of the subsidiaries for the year then ended, and notes to the Consolidated Financial Statements including a Summary of Significant Accounting Policies and Other Explanatory Information (hereinafter referred to as "the Consolidated Financial Statements").

In our opinion and to the best of our information and according to the explanations given to us and based on the consideration of reports of other auditors on separate financial statements and on the other financial information of the subsidiaries, the aforesaid consolidated financial statements give the information required by the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time including any guidelines and circulars issued thereunder (together referred to as the "SEBI lnvlT Regulations") in the manner so required and give a true and fair view in conformity with the Indian Accounting Standards prescribed under Rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015 ("Ind AS"), as amended and other accounting principles generally accepted in India, of the consolidated State of Affairs of the Group as at March 31, 2023, its Consolidated Loss and Total Comprehensive Loss, consolidated movement of the unit holders' funds and its consolidated cash flows for the year ended March 31, 2023, its consolidated Net Assets at fair value as at March 31, 2023, its consolidated total Returns at fair value and the Net Distributable Cash Flows ('NDCFs') of the trust and each of the subsidiaries for the year ended March 31, 2023.

BASIS FOR OPINION

We conducted our audit of the Consolidated Financial Statements in accordance with the Standards on Auditing ("SAs") issued by the Institute of Chartered Accountants of India. Our responsibilities under those Standards are further described in the Auditor's Responsibilities for the Audit of the consolidated IND AS financial statements section of

our report. We are independent of the Group in accordance with the Code of Ethics issued by the Institute of Chartered Accountants of India together with the ethical requirements that are relevant to our audit of the Consolidated Financial Statements under the provisions of the SEBI InvIT Regulations and we have fulfilled our other ethical responsibilities in accordance with these requirements and the Code of Ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on the Consolidated Financial Statements.

KEY AUDIT MATTERS

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the Consolidated Financial Statements of the current period. These matters were addressed in the context of our audit of the Consolidated Financial Statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. We have determined the matters described below to be the key audit matters to be communicated in our report.

PARTICULARS	HOW THEY WERE ADDRESSED IN OUR AUDIT
1. <u>Loss on fair value measurement of other payable / deferred consideration payable to IRB Group.</u> Pursuant to settlement of IRB Infrastructure Trust by IRB Infrastructure Developers Limited (Sponsor), as a Private INVIT, the Trust has entered into Debt Novation Agreements (DNA). As per the terms of DNA, in consideration of assets taken over in 9 SPVs, Trust has issued units and agreed to transfer to the Sponsor, the claim amounts when and to the extent the same are eventually received by Project SPVs, on account of Sponsor Claims. Such Sponsor Claims shall be lodged after obtaining COD by respective SPVs. The amount realizable against claims has been estimated by the valuers appointed by the Management based on the weighted average of probabilities of realization of such claims. Based on the fair value of liability as estimated by the valuers, a resultant impact in the value of liability has been recognized under the head 'Loss on fair value measurement of other payable'.	• We reviewed the Placement Memorandum filed with SEBI and the consequential legal documentation entered into by the Trust, including inter alia the Debt Novation Agreements and their reflection in the underlying SPVs. • We have reviewed the methodology adopted by the valuer in deriving the value including the assumptions made. • We assessed the estimates of Fair Value provided in the Valuation Report and realizability of claims as indicated therein. • We also reviewed the reasonableness of the variables applied in the said computation. • Based on the above, the fair value of liability to the Sponsor, as estimated by the valuer, taking into consideration the weighted average of probabilities of realization has been validated.
2. <u>Impairment Testing</u> The Group has toll collection rights as intangible assets pursuant to the concession agreement. The carrying value of these rights acquired under BOT basis is being compared to the recoverable value (which is value in use in the instant case) thereof to ascertain if there is any impairment.	• We evaluated management's assessment on impairment for intangible assets under development and intangible assets – toll collection rights by testing the assumptions and methodologies used by the Management.

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PARTICULARS	HOW THEY WERE ADDRESSED IN OUR AUDIT
The process involves estimating the value in use of the asset which is determined by forecasting and discounting future cash flows. The same is sensitive to changes in discount rate, traffic growth rates, toll growth rates etc. The determination of the recoverable amount of the toll collection right involves significant judgment due to inherent uncertainty in the assumptions supporting the recoverable amount of these rights. Accordingly, the evaluation of impairment of toll collection rights has been determined as a Key Audit Matter.	• Referred to valuation reports and Traffic Growth Study Reports and determined reasonableness of future toll revenue. • Evaluated the potential changes in major components as compared to previous year vis-à-vis actual performance in order to evaluate whether the inputs and assumptions used in the cash flow forecasts were suitable. • Assessed the appropriateness of the weighted average cost of capital used in determining recoverable amount. • Performed sensitivity analysis of key assumptions used in valuation. • Tested the arithmetical accuracy of the model.

INFORMATION OTHER THAN THE CONSOLIDATED FINANCIAL STATEMENTS AND AUDITOR'S REPORT THEREON

The Board of Directors of the Investment Manager is responsible for the preparation of the other information. The other information comprises the information included in the Management Discussion and Analysis, Report of Investment Manager including annexures to Investment Manager's Report and other information as required to be given by SEBI InvIT Regulations but, does not include the Consolidated Financial Statements and our auditor's report thereon.

Our opinion on the Consolidated Financial Statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the Consolidated Financial Statements or our knowledge obtained during the course of our audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

RESPONSIBILITIES OF THE BOARD OF DIRECTORS OF INVESTMENT MANAGER FOR THE CONSOLIDATED FINANCIAL STATEMENTS

The Board of Directors of Investment Manager ('the Management') is responsible for the preparation of these Consolidated Financial Statements that give a true and fair view of the consolidated financial position as at 31 March 2023, consolidated financial performance including other comprehensive income, consolidated movement of the unit holder's funds and consolidated cash flows for the year ended March 31, 2023, the consolidated net assets at fair value as at 31 March 2023, its consolidated total returns at fair value and the net distributable cash flow of the trust and each of its subsidiaries in

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accordance with the accounting principles generally accepted in India, including the Indian Accounting Standards specified and/or any addendum thereto as defined in Rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended read with the Securities and Exchange Board of India (Infrastructure Investment Trusts)Regulation 2014 as amended from time to time including any guidelines and circulars issued thereunder (together referred to as the "InvIT Regulations").

The Board of Directors of Investment Manager and the respective Board of Directors of the companies included in the Group are responsible for maintenance of adequate accounting records in accordance with the provisions of the relevant laws for safeguarding of the assets of the Group and for preventing and detecting frauds and other irregularities; selection and application of appropriate accounting policies; making judgements and estimates that are reasonable and prudent; and design, implementation and maintenance of adequate internal financial controls for ensuring the accuracy and completeness of accounting records, relevant to the preparation and presentation of the consolidated financial statements that give a true and fair view and are free from material misstatement, whether due to fraud and error, which have been used for the purpose of preparation of the consolidated financial statements by the management of the trust, as aforesaid.

In preparing the Consolidated Financial Statements, the Board of Directors of Investment Manager and respective Board of Directors of the subsidiary companies included in the Group are responsible for assessing the ability of the Group to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors of Investment Manager and respective Board of Directors of the subsidiary companies included in the Group either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

The Board of Directors of the Investment Manager and the respective Board of Directors of the subsidiary companies included in the Group are also responsible for overseeing the financial reporting process.

AUDITOR'S RESPONSIBILITY FOR THE AUDIT OF THE CONSOLIDATED IND AS FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance whether the Consolidated Financial Statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate,

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they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with SAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also,

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of such controls.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board of Directors of the Investment Manager.
- Conclude on the appropriateness of use of the going concern basis of accounting by the Board of Directors of Investment Manager and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group of which we are the independent auditors, to express an opinion on the Consolidated Financial Statements. We are responsible for the direction, supervision and performance of the audit of the Financial Statements of such entities included in the Consolidated Financial Statements of which we are the independent auditors. For companies included in the consolidated financial statement, which have been audited by other auditors, such other auditors remain responsible for the direction, supervision and performance of the audits carried out by them. We remain solely responsible for our audit opinion.

Materiality is the magnitude of misstatements in the Consolidated Financial Statements that, individually or in aggregate, makes it probable that the economic decisions of a

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reasonably knowledgeable user of the financial statements may be influenced. We consider quantitative materiality and qualitative factors in (i) planning the scope of our audit work and in evaluating the results of our work; and (ii) to evaluate the effect of any identified misstatements in the Financial Statements.

We communicate with those charged with governance of the trust included in the consolidated financial statements of which we are the independent auditors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the Consolidated Financial Statements of the current period and are therefore the Key Audit Matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

OTHER MATTERS

We did not audit the Financial Statements and other financial information of 5 subsidiaries, whose Financial Statements reflect Total Assets of INR 1,13,238.70 Million, Net Assets of INR 35,029.67 Million as at 31 March 2023, Total Revenues of IINR 19,132.81 Million, Losses after taxes of INR 1,657.28 Million and Net Cash Inflow amounting to INR 201.07 Million for the year ended on 31 March 2023, as considered in the Consolidated Financial Statements before giving effect to elimination of intra-group transactions. These Financial Statements and other financial information have been audited by other auditor whose reports have been furnished to us by the Management and our opinion on the Consolidated Financial Statements, in so far as it relates to the amounts and disclosures included in respect of these subsidiaries and our report in terms of InvIT regulations, in so far as it relates to the aforesaid subsidiaries is based solely on the reports of the other auditor.

Our opinion above, on the Consolidated Financial Statements, and our report on other legal and regulatory requirements below, is not modified in respect of the above matters with respect to our reliance on the work done by and the reports of the other auditor.

REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

Based on our audit and as required by SEBI InvIT Regulations, we report that**:**

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a. We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit of the aforesaid Consolidated Financial Statements.

b. The consolidated Balance Sheet, and the consolidated Statement of Profit and Loss including other comprehensive income dealt with by this report are in agreement with the books of account maintained for the purpose of preparation of the consolidated financial statements; and

c. In our opinion, the aforesaid consolidated financial statements comply with the Indian Accounting Standards (Ind AS) and / or any addendum thereto as defined in Rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended.

For Gokhale & Sathe,
Chartered Accountants
Firm Registration No.: 103264W

SD/-
CA Kaustubh Deshpande,
Partner
Membership No. 121011
UDIN: 23121011BGXXWC5823
Date: 12th May 2023
Place: Mumbai

tel.: (22) 43 48 42 42 | fax: (22) 43 48 42 41 | office@gokhalesathe.in

IRB Infrastructure Trust
Consolidated Balance sheet as at March 31, 2023

(Rs. in Millions)

	Notes	As at March 31, 2023	As at March 31, 2022
ASSETS			
Non-current assets			
Property, Plant and Equipment	4	7.59	8.85
Goodwill		604.54	604.54
Other Intangible assets	4	2,28,418.29	2,21,859.48
Intangible assets under development	4	2,421.67	1,290.89
Financial assets			
i) Others	7	0.33	2.74
Other non-current assets	9	174.07	656.55
Deferred tax assets (net)	8	755.80	287.67
		2,32,382.29	**2,24,710.72**
Current assets			
Financial assets			
i) Investments	5	1,283.09	659.54
ii) Trade receivables	6	84.67	51.55
iii) Cash and cash equivalents	10	731.31	287.23
iv) Bank balance other than (iii) above	11	4,866.69	2,469.97
v) Others	7	1,448.56	1,604.18
Current tax assets (net)	12	24.81	114.22
Other current assets	13	2,657.07	1,677.46
		11,096.20	**6,864.15**
Total assets		**2,43,478.49**	**2,31,574.87**
EQUITY AND LIABILITIES			
Equity			
Equity share capital	14	87,929.33	85,504.33
Other equity	15		
Other reserves		(10,395.80)	(8,108.29)
Total Equity		**77,533.53**	**77,396.04**
Non-controlling interests		**0.81**	**-**
		77,534.34	**77,396.04**
Non-current liabilities			
Financial liabilities			
i) Borrowings	16	98,943.95	92,559.82
ii) Other financial liabilities	18	35,780.80	35,168.79
iii) Trade payables	19	4,165.72	5,998.85
Provisions	20	2,965.03	1,350.57
		1,41,855.50	**1,35,078.03**
Current liabilities			
Financial liabilities			
i) Borrowings	16	6,135.65	4,719.18
ii) Trade payables	17		
a) total outstanding dues of micro enterprises and small		1.61	3.69
b) total outstanding dues of creditors other than micro enterprises and small enterprises		15,303.87	11,214.65
iii) Other financial liabilities	18	2,549.37	3,023.13
Other current liabilities	21	98.15	140.15
		24,088.65	**19,100.80**
Total liabilities		**1,65,944.15**	**1,54,178.83**
Total equity and liabilities		**2,43,478.49**	**2,31,574.87**

Summary of significant accounting policies 3

The accompanying summary of significant accounting policies and other explanatory information (notes) are an integral part of Consolidated Financial Statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

Place: Mumbai
Date: 12.05.2023

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Place: Mumbai
Date: 12.05.2023

IRB Infrastructure Trust
Consolidated Statement of Profit and Loss for the year ended March 31, 2023

(Rs. in Millions)

Particulars	Notes	For the year ended March 31, 2023	For the year ended March 31, 2022
Income			
Revenue from operations	22	26,912.59	12,404.84
Other income	23	263.08	100.13
Total income		**27,175.67**	**12,504.97**
Expenses			
Valuation Expenses		2.67	1.46
Audit fees	27A	5.04	3.13
Operating Expenses	24	12,865.52	2,029.53
Project Management Fees		2,647.70	1,960.27
Insurance and Security Expenses		14.72	1.12
Trustee Fees		5.95	4.16
Depreciation on Property, plant and Equipment	25	1.25	1.74
Amortisation of Intangible Assets	25	2,809.17	1,673.16
Finance costs (Interest)	26	9,005.28	8,670.13
Finance costs (Others)	26	1,249.41	868.58
Investment Manager Fees		56.52	42.48
Custodian fees		0.09	0.18
Loss on sale of assets		0.01	-
Fair value loss on measurement of other payable		560.53	2,161.31
Other expenses	27	256.29	235.06
Total expenses		**29,480.14**	**17,652.31**
Profit/(loss) before tax		**(2,304.47)**	**(5,147.34)**
Tax expenses			
Current tax		435.25	8.87
Deferred tax		(468.13)	(720.23)
MAT Credit utilisation / (Entitlement)		-	-
Total tax expenses		**(32.88)**	**(711.36)**
Profit/(loss) after tax		**(2,271.59)**	**(4,435.98)**
Other comprehensive income			
Item that will not be reclassified to profit or loss:			
(a) Re-measurement (loss)/gain on defined benefit plans (net of taxes)		-	-
Other comprehensive income/ (loss) for the year, net of tax		-	-
Total comprehensive income /(loss) for the year		**(2,271.59)**	**(4,435.98)**
Profit/(loss) after tax		**(2,271.59)**	**(4,435.98)**
Attributable to:			
Owners of the Project SPV Group		(2,272.18)	(4,435.98)
Non-controlling interests		0.59	-
Total comprehensive income for the year			
Attributable to:			
Equity holders of the Project SPV Group		(2,272.18)	(4,435.98)
Non-controlling interests		0.59	-
Earnings per unit (of Rs 100 each)	43		
Basic		(2.59)	(5.26)
Diluted		(2.59)	(5.26)
Summary of significant accounting policies	3		

The accompanying summary of significant accounting policies and other explanatory information (notes) are an integral part of Consolidated Financial Statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

Place: Mumbai
Date: 12.05.2023

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Place: Mumbai
Date: 12.05.2023

IRB Infrastructure Trust
DISCLOSURES PURSUANT TO SEBI CIRCULARS
(SEBI Circular No. CIR/IMD/DF/114/2016 dated 20-Oct-2016 and No. CIR/IMD/DF/127/2016 dated 29-Nov-2016

A. Consolidated statement of net assets at fair value

(Rs. in Millions)

	As at March 31, 2023		As at March 31, 2022	
Particulars	**Book value**	**Fair value**	**Book value**	**Fair value**
A. Assets	2,43,478.49	2,99,372.54	2,31,574.87	2,52,287.18
B. Liabilities (at book value)	1,65,944.15	1,16,629.02	1,54,178.83	1,05,330.89
C. Net Assets (A-B)	77,534.34	1,82,743.52	77,396.04	1,46,956.29
D. Number of units (in millions)	879.29	879.29	855.04	855.04
E. NAV (C/D) (Amount in Rs.)	**88.18**	**207.83**	**90.52**	**171.87**

Project wise break up of fair value of total assets:

Name of the project	**As at March 31, 2023**
IRB Westcoast Tollway Limited (IRBWTL)	36,482.81
Solapur Yedeshi Tollway Limited (SYTL)	24,790.88
Yedeshi Aurangabad Tollway Limited (YATL)	43,312.69
Kaithal Tollway Limited (KTL)	25,383.75
AE Tollway Limited (AETL)	32,259.22
Udaipur Tollway Limited (UTL)	27,580.66
CG Tollway Limited (CGTL)	29,523.00
Kishangarh Gulabpura Tollway Limited (KGTL)	23,223.41
IRB Hapur Moradabad Tollway Limited (IRBHMTL)	43,631.92
Palsit Dankuni Tollway Private Limited (PDTPL)	12,478.53
Subtotal	**2,98,666.88**
Add : IRB Infrastructure Trust Assets	**705.66**
Total assets	**2,99,372.54**

B. Consolidated statement of total returns at fair value :

(Rs. in Millions)

Particulars	**For the year ended March 31, 2023**	**For the year ended March 31, 2022**
Total Comprehensive Income (As per the Statement of Profit and Loss)	(2,271.59)	(4,435.98)
Add/Less: other changes in fair value (e.g., in investment property, property, plant & equipment (if cost model is followed)) not recognized in total comprehensive income	1,05,209.18	69,560.25
Total Return	**1,02,937.59**	**65,124.27**

Notes :
Fair value of assets as at March 31, 2023 and March 31, 2022 and other changes in fair value for the year then ended as disclosed in the above tables are derived based on the fair valuation reports issued by the independent valuer appointed under the InvIT Regulations.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

Place: Mumbai
Date: 12.05.2023

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D.Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Place: Mumbai
Date: 12.05.2023

IRB Infrastructure Trust
Consolidated Statement of Cash Flows for the year ended March 31, 2023

(Rs. in Millions)

Particulars	For the year ended March 31, 2023	For the year ended March 31, 2022
Cash flow from operating activities		
Profit/(loss) before tax	(2,304.47)	(5,147.34)
Adjustment to reconcile profit before tax to net cash flows:		
Depreciation and amortisation	2,810.42	1,674.90
Resurfacing expenses	1,614.45	992.73
Fair value gain on mutual funds	(11.35)	(0.78)
Net (gain) on sale of current Investment	(62.95)	(13.93)
Finance costs	10,111.65	9,538.70
Interest income	(186.05)	(81.69)
Gain/(loss) on fair value measurement of other payable	560.53	2,161.31
Operating profit before working capital changes	**12,532.23**	**9,123.91**
Movement in working capital:		
Increase/ (decrease) in trade payables	1,178.92	11,498.13
Increase/ (decrease) in provisions	-	-
Increase/ (decrease) in other financial liabilities	435.72	306.46
(Decrease)/ increase in other liabilities	(45.01)	30.37
Decrease / (increase) in trade receivables	(33.12)	48.69
(Increase) / decrease in other financial assets	134.16	(989.59)
(Increase) / decrease in other assets	(343.36)	(167.46)
Cash generated from operations	**13,859.54**	**19,850.51**
Taxes paid (net)	(345.84)	32.09
Net cash flows generated from operating activities (A)	**13,513.70**	**19,882.59**
Cash flows from investing activities		
Purchase of property, plant and equipment including CWIP, intangible assets including intangible assets under development and capital advances	(11,055.81)	(17,617.12)
Proceeds from sale/ (purchase) of current investments (net)	(549.25)	(72.33)
Investments in bank deposits (having original maturity of more than three months) (net)	(2396.72)	(725.62)
Interest received	200.12	103.63
Net cash flows (used in) investing activities (B)	**(13,801.66)**	**(18,311.44)**
Cash flows from financing activities		
Proceeds from non-current borrowings	32,302.27	3,988.29
Repayment of non-current borrowings	(25923.75)	(775.43)
Proceed of current borrowings	1,532.48	4759.00
Repayment of current borrowings	(447.97)	(4828.83)
Issue of equity share capital	2,425.00	3,816.33
Unit issue expenses	(15.33)	(3.26)
Finance cost paid	(9,140.79)	(8,653.52)
Net cash flows (used in)/generated from financing activities (C)	**731.91**	**(1,697.41)**
Net increase / (decrease) in cash and cash equivalents (A+B+C)	**443.95**	**(126.26)**
Cash and cash equivalents at the beginning of the year	287.23	413.49
Add: Cash acquired during business combination	0.13	
Cash and cash equivalents at the end of the year (refer note 10)	**731.31**	**287.23**
Components of cash and cash equivalents		
Balances with scheduled banks:		
- Trust, retention and other escrow accounts	394.06	161.56
- Others	279.37	118.03
- In deposit accounts with original maturity less than 3 months	49.50	-
Cash on hand	8.38	7.64
Total cash and cash equivalents	**731.31**	**287.23**

IRB Infrastructure Trust
Consolidated Statement of Cash Flows for the year ended March 31, 2023

(Rs. in Millions)

Particulars	For the year ended March 31, 2023	For the year ended March 31, 2022
Debt reconciliation statement in accordance with Ind AS 7		
Opening balances		
Long term borrowing	94,124.22	90,833.34
Short term borrowing	4,085.74	4,155.57
Movements		
Cash Flows		
Long term borrowing	7,245.60	3,290.88
Short term borrowing	1264.98	(69.83)
Non-cash changes		
Long term borrowing	-	-
Short term borrowing	-	-
Closing balances		
Long term borrowing	1,01,369.82	94,124.22
Short term borrowing	5,350.72	4,085.74

Notes :
1. All figures in bracket are outflow.
2. Taxes paid are treated as arising from operating activities and are not bifurcated between investing and financing activities.

3. The Consolidated cash flow statement has been prepared under Indirect Method as per Ind AS 7 "Statement of Cash Flows".

Summary of significant accounting policies 3
The accompanying summary of significant accounting policies and other explanatory information (notes)are an integral part of Consolidated Financial Statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

Place: Mumbai
Date: 12.05.2023

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Place: Mumbai
Date: 12.05.2023

Statement of changes in Unitholders equity
A. Unit capital:

(Rs. in Millions)

	March 31, 2023		March 31, 2022	
i) Units issued, subscribed and fully paid	**No.**	**Rs.**	**No.**	**Rs.**
Units having face value of Rs. 100/-				
Balance at the beginning of the year	85,50,43,265	85,504.33	81,68,80,000	81,688.00
Issue of Unit capital (Note 14)	2,42,50,000	2,425.00	3,81,63,265	3,816.33
Balance at the end of the year	**87,92,93,265**	**87,929.33**	**85,50,43,265**	**85,504.33**

B. Other equity

(Rs. in Millions)

	March 31, 2023	March 31, 2022
Retained earnings		
Balance at the beginning of the year	(8,108.29)	(3,669.05)
Profit/(loss) for the year	(2,272.18)	(4,435.98)
Pre-incorporation profit		
Unit Issue expenses	(15.33)	(3.26)
Balance at the end of the year	**(10,395.80)**	**(8,108.29)**

Summary of significant accounting policies 3

The accompanying summary of significant accounting policies and other explanatory information (notes)are an integral part of Consolidated Financial Statements.

As per our report of even date attached

For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Place: Mumbai
Date: 12.05.2023

Place: Mumbai
Date: 12.05.2023

Additional Disclosures as required by Paragraph 6 to SEBI Circulars No. CIR/MD/DF/127/2016

a. Net Distributable Cash Flow for the half year ended March 31, 2023

(i) IRB Infrastructure Trust

(Rs. in Millions)

Sr. No.	Particulars	Year ended March 31, 2023#	Year ended March 31, 2022
1	Cash flows received from Project SPVs in the form of Interest	2,097.00	825.00
2	Cash flows received from Project SPVs in the form of Dividend	-	-
3	Any other income accruing at the Trust level and not captured above, including but not limited to interest/return on surplus cash invested by the Trust	0.92	0.40
4	Cash flows received from the project SPVs towards the repayment (Net) of the debt issued to the Project SPVs by the Trust	(1,928.34)	(1,682.67)
5	**Total cash inflow at the Trust level (A)**	**169.58**	**(857.27)**
	Less:		
6	Any payment of fees, interest and expense incurred at the Trust level, including but not limited to the fees of the Investment Manager	(113.33)	(63.38)
7	Income tax (if applicable) at the Standalone Trust Level	-	-
8	Repayment of external debt	-	-
9	**Total cash outflows / retention at the Trust level (B)**	**(113.33)**	**(63.38)**
10	**Net Distributable Cash Flows (C) = (A+B)**	**56.25**	**(920.65)**

The same is earmarked towards capex for ongoing projects.

Note :

1 Excludes interest due but not received of Rs.922.36, Rs.1,202.41 millions,Rs. 1,729.24 millions,Rs. 2,124.77 millions and Rs. 3,375 Millions for the six months ended March 31, 2023, six months ended September 30, 2022, six months ended March 31, 2022, year ended March 31, 2023 and year ended March 31, 2022.

2 Netted - off with disbursement of short-term unsecured loan to project SPVs. (Refer RPT disclosures of standalone financial results).

(ii) IRB Westcoast Tollway Limited (IRBWC)

(Rs. in Millions)

Sr. No.	Description	Year ended March 31, 2023	Year ended March 31, 2022
1	Profit after tax as per profit and loss account (A)	(1,135.93)	(815.33)
2	Add: Depreciation and amortisation as per Statement of profit and loss	164.74	113.19
3	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	137.31	64.76
4	Add: Interest paid/payable to the Trust	530.18	491.37
5	Add :- Provision for resurfacing expenses (Net)		
6	Less: Principal repayment of external debt	(70.97)	(86.97)
7	Less: Tax paid		
8	Less: Creation of MMRA		
9	Less: Capital expenditure towards the project		
10	Total adjustments (B)	**761.26**	**582.35**
11	**Net Distributable Cash Flows (C) = (A+B)**	**(374.67)**	**(232.98)**

(ii) Yedeshi Aurangabad Tollway Limited (YATL)

(Rs. in Millions)

Sr. No.	Description	Year ended March 31, 2023	Year ended March 31, 2022
1	Profit after tax as per profit and loss account (A)	(264.71)	(834.88)
2	Add: Depreciation and amortisation as per Statement of profit and loss	559.99	305.02
3	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	41.68	3.08
4	Add: Interest paid/payable to the Trust	581.77	560.00
5	Add :- Provision for resurfacing expenses (Net)	109.06	102.67
6	Less: Principal repayment of external debt	(60.29)	(361.08)
7	Less: Tax paid		
8	Less: Creation of MMRA	(220.00)	
9	Less: Capital expenditure towards the project		
10	Total Adjustments (B)	**1,012.21**	**609.69**
11	**Net Distributable Cash Flows (C) = (A+B)**	**747.50**	**(225.19)**

(iii) Solpaur Yedeshi Tollway Limited (SYTL)

(Rs. in Millions)

Sr. No.	Description	Year ended March 31, 2023	Year ended March 31, 2022
1	Profit after tax as per profit and loss account (A)	(225.45)	(543.70)
2	Add: Depreciation and amortisation as per Statement of profit and loss	168.97	116.74
3	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	20.80	7.61
4	Add: Interest paid/payable to the Trust	560.00	560.00
5	Add :- Provision for resurfacing expenses (Net)	60.75	59.68
6	Less: Principal repayment of external debt	(5.86)	(111.88)
7	Less: Tax paid		
8	Less: Creation of MMRA	(80.00)	
9	Less: Capital expenditure towards the project		
10	Total Adjustments (B)	**724.66**	**632.15**
11	**Net Distributable Cash Flows (C) = (A+B)**	**499.21**	**88.45**

(iii) Kaithal Tollway Limited (KTL)

(Rs. in Millions)

Sr. No.	Description	Year ended March 31, 2023	Year ended March 31, 2022*
1	Profit after tax as per profit and loss account (A)	(848.69)	(896.42)
2	Add: Depreciation and amortisation as per Statement of profit and loss	212.13	52.97
3	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	96.97	77.30
4	Add: Interest paid/payable to the Trust	1,186.02	1,186.02
5	Add :- Provision for resurfacing expenses (Net)	176.65	171.38
6	Less: Principal repayment of external debt	(121.25)	(66.45)
7	Less: Tax paid		
8	Less: Creation of MMRA		
9	Less: Capital expenditure towards the project		
10	Total Adjustments (B)	**1,550.52**	**1,421.22**
11	**Net Distributable Cash Flows (C) = (A+B)**	**701.83**	**524.80**

* Profit after tax is inclusive of compensation income towards toll suspension due to farmers agitation amounting to Rs.900.90 millions.

(v) Agra Etawah Tollway Limited (AETL)

(Rs. in Millions)

Sr. No.	Description	Year ended March 31, 2023	Year ended March 31, 2022*
1	Profit after tax as per profit and loss account (A)	(1,749.13)	(1,669.85)
2	Add: Depreciation and amortisation as per Statement of profit and loss	309.71	262.06
3	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	32.54	12.68
4	Add: Interest paid/payable to the Trust	1,333.98	1,333.98
5	Add :- Provision for resurfacing expenses (Net)	185.82	178.57
6	Less: Principal repayment of external debt	(68.51)	(37.63)
7	Less: Tax paid		
8	Less: Creation of MMRA		
9	Less: Capital expenditure towards the project		
10	Total Adjustments (B)	**1,793.54**	**1,749.66**
11	**Net Distributable Cash Flows (C) = (A+B)**	**44.41**	**79.81**

* Profit after tax is inclusive of compensation income towards toll suspension due to farmers agitation amounting to Rs.64.26 millions.

(vi) Udaipur Tollway Limited (UTL)

(Rs. in Millions)

Sr. No.	Description	Year ended March 31, 2023	Year ended March 31, 2022
1	Profit after tax as per profit and loss account (A)	(1,903.87)	(1,291.68)
2	Add: Depreciation and amortisation as per Statement of profit and loss	364.50	267.28
3	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	120.39	164.27
4	Add: Interest paid/payable to the Trust	-	-
5	Add :- Provision for resurfacing expenses (Net)	432.11	349.85
6	Less: Principal repayment of external debt	(28.84)	(32.90)
7	Less: Tax paid		
8	Less: Creation of MMRA		
9	Less: Capital expenditure towards the project		
10	Total Adjustments (B)	**888.16**	**748.50**
11	**Net Distributable Cash Flows (C) = (A+B)**	**(1,015.71)**	**(543.18)**

(vii) Chittorgarh Gulabpura Tollway Limited (CGTL)

(Rs. in Millions)

Sr. No.	Description	Year ended March 31, 2023	Year ended March 31, 2022
1	Profit after tax as per profit and loss account (A)	(936.67)	(213.49)
2	Add: Depreciation and amortisation as per Statement of profit and loss	371.14	243.63
3	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	(110.79)	145.29
4	Add: Interest paid/payable to the Trust	-	-
5	Add :- Provision for Resurfacing Expenses (Net)	126.16	76.99
6	Less: Repayment of external debt (principal)	(79.44)	(51.48)
7	Less: Tax paid		
8	Less: Creation of MMRA		
9	Less: Capital expenditure towards the project		
10	Total Adjustments (B)	**307.08**	**414.43**
11	**Net Distributable Cash Flows (C) = (A+B)**	**(629.59)**	**200.94**

(viii) Kishangarh Gulabpura Tollway Limited (KGTL)

(Rs. in Millions)

Sr. No.	Description	Year ended March 31, 2023#	Year ended March 31, 2022
1	Profit after tax as per profit and loss account (A)	(247.35)	(405.09)
2	Add: Depreciation and amortisation as per Statement of profit and loss	212.76	103.80
3	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	249.35	174.35
4	Add: Interest paid/payable to the Trust	-	-
5	Add :- Provision for Resurfacing Expenses (Net)	110.67	
6	Less: Repayment of external debt (principal)	(36.32)	(15.94)
7	Less: Tax paid		
8	Less: Creation of MMRA		
9	Less: Capital expenditure towards the project		
10	Total Adjustments (B)	**536.46**	**262.21**
11	**Net Distributable Cash Flows (C) = (A+B)**	**289.11**	**(142.88)**

The said funds are earmarked towards NHAI premium payment.

(ix) IRB Hapur Muradabad Tollway Limited (IRBHM)

(Rs. in Millions)

Sr. No.	Description	Year ended March 31, 2023#	Year ended March 31, 2022
1	Profit after tax as per profit and loss account (A)	(75.48)	(285.44)
2	Add: Depreciation and amortisation as per Statement of profit and loss	351.78	210.21
3	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	120.02	87.52
4	Add: Interest paid/payable to the Trust	-	-
5	Add :- Provision for Resurfacing Expenses (Net)	270.19	
6	Less: Repayment of external debt (principal)	(134.90)	(11.10)
7	Less: Tax paid		
8	Less: Creation of MMRA		
9	Less: Capital expenditure towards the project	(62.03)	(10.20)
10	Total Adjustments (B)	**545.06**	**276.43**
11	**Net Distributable Cash Flows (C) = (A+B)#**	**469.58**	**(9.01)**

The said funds are earmarked towards balance Capex.

(x) Palsit Dankuni Tollway Private Limited (PDTPL)

(Rs. in Millions)

Sr. No.	Description	Year ended March 31, 2023#
1	Profit after tax as per profit and loss account (A)	1,430.69
2	Add: Depreciation and amortisation as per Statement of profit and loss	94.71
3	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	193.17
4	Add: Interest paid/payable to the Trust	
5	Add :- Provision for Resurfacing Expenses (Net)	
6	Less: Repayment of external debt (principal)	
7	Less: Tax paid	(363.10)
8	Less: Creation of MMRA	
9	Less: Capital expenditure towards the project	(1,332.99)
10	Total Adjustments (B)	**(1,408.21)**
11	**Net Distributable Cash Flows (C) = (A+B)**	**22.48**

The said funds are earmarked towards balance Capex.

IRB Infrastructure Trust
Notes to Consolidated Financial Statements for the year ended March 31, 2023

1 **Corporate Information**

The IRB Infrastructure Trust (the "Trust") is a trust settled pursuant to the indenture of trust dated August 27, 2019 which is registered under the Registration Act, 1908 and under the Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time. The Trust is settled by the Sponsor, IRB Infrastructure Developers Limited ("IRB" or the "Sponsor"), an infrastructure development company in India. The Trustee to the Fund is IDBI Trusteeship Services Limited (the "Trustee"). Investment manager for the Trust is MMK Toll Road Private Limited (the "Investment Manager"). The Trust has received registraion certificate from SEBI on November 25, 2019.

The Trust has been formed to invest in infrastructure assets primarily being in the road sector in India. The Trust's road projects are eligible infrastructure projects under the InvIT Regulations and held through special purpose vehicles ("Project SPVs" together as "Project SPV Group"). The Trust's portfolio comprises of ten road projects as listed below:-

Project SPV Name**	Residual Concession life*	Proposed shareholding	Nature of Investment	Status	Principal Activities	Country of incorporation
IRB Westcoast Tollway Limited (IRBWTL)	18 years 11 Months 2 days	100%	Subsidiary	Tolling and Construction	Construction and operation of road including toll collection.	India
Solapur Yedeshi Tollway Limited (SYTL)	20 years 9 Months 21 days	100%	Subsidiary	Operating		India
Yedeshi Aurangabad Tollway Limited (YATL)	18 years 3 Months 1 days	100%	Subsidiary	Operating		India
Kaithal Tollway Limited (KTL)	19 years 3 Months 15 days	100%	Subsidiary	Operating		India
AE Tollway Limited (AETL)	17 years 4 Months 2 days	100%	Subsidiary	Operating		India
Udaipur Tollway Limited (UTL)	15 years 5 Months 4 days	100%	Subsidiary	Operating		India
CG Tollway Limited (CGTL)	14 years 7 Months 5 days	100%	Subsidiary	Operating		India
Kishangarh Gulabpura Tollway Limited (KGTL)	14 years 10 Months 22 days	100%	Subsidiary	Operating		India
IRB Hapur Moradabad Tollway Limited (IRBHMTL)	18 years 1 Months 25 days	100%	Subsidiary	Operating		India
Palsit Dankuni Tollway Private Limited (PDTPL) w.e.f 02.04.2022	16 years 0 Months 1 days	100%	Subsidiary	Tolling and Construction		India

* Represents residual concession life as at March 31, 2023 as per original concession period (without considering extension of concession period, if any).

** Of the above Project SPVs, IRBWTL, SYTL, YATL, AETL, CGTL, UTL and IRBHMTL have been converted to public companies on November 13, 2019 and KTLand KGTL on November 14, 2019 .

The registered office of the Investment Manager is Off No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai Mumbai 400076.
The financial statements were authorised for issue in accordance with resolution passed by the board of directors of the Investment manager on May 12, 2023.
The Trust has been listed on NSE w.e.f. 03.04.2023.

2 **Basis of preparation**

A. Statement of compliance

The Consolidated Financial Statements of Project SPV Group comprises of Consolidated Balance Sheet as at March 31, 2023 and March 31, 2022, the Consolidated Statement of Profit and Loss (including Other Comprehensive Income) of the Project SPV group, the Consolidated Statement of Cash Flow Statement, the Consolidated Statement of Changes in Equity of the movement of the unit holders for the year ended March 31, 2023 and March 31, 2022, the consolidated statement of Net Assets at Fair Value as at March 31, 2023 and March 31, 2022 and the Consolidated Statement of Total Returns at Fair Value for the year ended March 31, 2023 and March 31, 2022, a summary of significant accounting policies, notes and other explanatory Information.

The Consolidated Financial Statements of the Project SPV Group have been prepared in accordance with Indian Accounting Standards (Ind AS) as per the Companies (Indian Accounting Standards) Rules, 2015 notified under Section 133 of the Act, read with SEBI (Infrastructure Investment Trusts) Regulations, 2014, as amended and the circulars issued thereunder ("InvIT Regulations") and other accounting principles generally accepted in India.The Consolidated Financial Statements have been prepared on a accrued and historical cost basis, except for certain assets and liabilities which have been measured at fair value.

The Consolidated Financial Statements are presented in Rs. in millions, except when otherwise indicated.Wherever the amount represented '0' (zero) construes value less than Rupees five thousand.

B Basis of preparation of Consolidated Financial Statements

The Consolidated Financial Statements comprise the Financial Statements of the Project SPV Group.

Consolidated Financial Statements are prepared using uniform accounting policies for like transactions and other events in similar circumstances.

The Financial Statements of all Project SPVs used for the purpose of consolidation are drawn up to the same reporting date i.e. year ended on March 31.
Consolidation procedure:

(a) Consolidate like items of assets, liabilities, equity, income, expenses and cash flows of Project SPVs.

(b) Eliminate in full intra Project SPVs assets and liabilities, income, expenses and cash flows relating to transactions between Project SPVs of the Project SPV Group (profits or losses resulting from intra Project SPV Group transactions that are recognised in assets, such as inventory and property, plant and equipment, are eliminated in full). Profit or loss and each component of other comprehensive income (OCI) are attributed to the equity holders of the Project SPV Group and to the non-controlling interests, even if this results in the non-controlling interests having a deficit balance.

3 **Summary of significant accounting policies**

3.01 **Current versus non-current classification**

The Project SPV Group has identified twelve months as its operating cycle. The operating cycle is the time between the acquisition of assets for processing and their realisation in cash and cash equivalents.

The Project SPV Group presents assets and liabilities in the balance sheet based on current/ non-current classification. An asset is treated as current when it is:

- Expected to be realised or intended to be sold or consumed in normal operating cycle
- Held primarily for the purpose of trading
- Expected to be realised within twelve months after the reporting period, or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

All other assets are classified as non-current.

A liability is current when:
- It is expected to be settled in normal operating cycle
- It is held primarily for the purpose of trading
- It is due to be settled within twelve months after the reporting period, or
- There is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period

The Project SPV Group classifies all other liabilities as non-current.
Deferred tax assets and liabilities are classified as non-current assets and liabilities respectively.

3.02 **Use of estimates and judgements**

The preparation of the Project SPV Group's financial statements requires management to make judgements, estimates and assumptions that affect the reported amounts of revenue, expenses, assets and liabilities, and the accompanying disclosures, and the disclosure of contingent liabilities. Uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of assets or liabilities affected in future years.

Estimates and assumptions

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the year in which the estimates are revised and future periods are affected.

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are described below. The Project SPV Group based its assumptions and estimates on parameters available when the financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising that are beyond the control of the Group. Such changes are reflected in the assumptions when they occur.

Fair value measurement of financial instruments (refer note 31)

Provision for major maintenance (refer note 20)
Impairment of non financial assets (refer note 3.19)

3.03 **Business Combinations**

Business combinations are accounted for using the acquisition method. The cost of an acquisition is measured as the aggregate of the consideration transferred measured at fair value on acquisition date and the amount of any non-controlling interests in the acquiree. For each business combination, the Group elects whether to measure the non-controlling interests in the acquiree at fair value or at the proportionate share of the acquiree's identifiable net assets.

At the acquisition date, the identifiable assets acquired and the liabilities assumed are recognised at their acquisition date fair values. For this purpose, the liabilities assumed include contingent liabilities representing present obligation and they are measured at their acquisition fair values irrespective of the fact that outflow of resources embodying economic benefits is not probable.

Goodwill is initially measured at cost, being the excess of the aggregate of the consideration transferred and the amount recognised for non-controlling interests, and any previous interest held, over the net identifiable assets acquired and liabilities assumed. If the fair value of the net assets acquired is in excess of the aggregate consideration transferred, the Group re-assesses whether it has correctly identified all of the assets acquired and all of the liabilities assumed and reviews the procedures used to measure the amounts to be recognised at the acquisition date. If the reassessment still results in an excess of the fair value of net assets acquired over the aggregate consideration transferred, then the gain is recognised in OCI and accumulated in equity as capital reserve. However, if there is no clear evidence of bargain purchase, the entity recognises the gain directly in equity as capital reserve, without routing the same through OCI.

After initial recognition, goodwill is measured at cost less any accumulated impairment losses. For the purpose of impairment testing, goodwill acquired in a business combination is, from the acquisition date, allocated to each of the Group's cash-generating units that are expected to benefit from the combination, irrespective of whether other assets or liabilities of the acquiree are assigned to those units.

A cash generating unit to which goodwill has been allocated is tested for impairment annually, or more frequently when there is an indication that the unit may be impaired. If the recoverable amount of the cash generating unit is less than its carrying amount, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then to the other assets of the unit pro rata based on the carrying amount of each asset in the unit.

Any impairment loss for goodwill is recognised in profit or loss. An impairment loss recognised for goodwill is not reversed in subsequent periods. Where goodwill has been allocated to a cashgenerating unit and part of the operation within that unit is disposed of, the goodwill associated with the disposed operation is included in the carrying amount of the operation when determining the gain or loss on disposal. Goodwill disposed in these circumstances is measured based on the relative values of the disposed operation and the portion of the cash-generating unit retained.

3.04 **Asset acquisition**

The acquisition of an asset or a group of assets that does not constitute a business. In such cases the acquirer shall identify and recognise the individual identifiable asset acquired including those assets that meet the definition of, and recognition criteria for, intangible asset in IND AS 38, Intangible Assets and Liabilities assumed. The cost of the group is allocated to the individual identifiable assets and liabilities on the basis of their relative fail values at the date of purchase. Such a transaction or event does not give rise to goodwill.

3.05 **Fair value measurement**

The Project SPV Group measures financial instruments, (refer note 31) at fair value at each balance sheet date.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:

- In the principal market for the asset or liability, or
- In the absence of a principal market, in the most advantageous market for the asset or liability

The principal or the most advantageous market must be accessible by the Project SPV Group.
The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The Project SPV Group uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

Level 1 - Quoted (unadjusted) market prices in active markets for identical assets or liabilities
Level 2- Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable
Level 3 -Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable

For assets and liabilities that are recognised in the financial statements on a recurring basis, the Project SPV Group determines whether transfers have occurred between levels in the hierarchy by re-assessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

The Project SPV Group's Management determines the policies and procedures for both recurring fair value measurement, such as derivative instruments and unquoted financial assets measured at fair value, and for non-recurring measurement, such as assets held for distribution in discontinued operations.

At each reporting date, the Management analyses the movements in the values of assets and liabilities which are required to be remeasured or re-assessed as per the Project SPV Group's accounting policies. For this analysis, the Management verifies the major inputs applied in the latest valuation by agreeing the information in the valuation computation to contracts and other relevant documents.

The management also compares the change in the fair value of each asset and liability with relevant external sources to determine whether the change is reasonable.

On an annual basis, the Management presents the valuation results to the Investment Manager and the Project SPV Group's independent auditors. This includes a discussion of the major assumptions used in the valuations.

For the purpose of fair value disclosures, the Project SPV Group has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy as explained above.

This note summarises accounting policy for fair value. Other fair value related disclosures are given in the relevant notes.
Disclosures for valuation methods, significant estimates and assumptions (note 3.02)
Financial instruments (including those carried at amortised cost) (note 5,6,7,11,17,18,19,31)
Quantative disclosure of fair value measurement hierarchy (note 32)

3.06 **Revenue recognition**

The Project SPV Group has applied the following accounting policy for revenue recognition:

Revenue from contracts with customers:
The Project SPV Group recognises revenue from contracts with customers based on a five step model as set out in Ind AS 115:
Step 1. Identify the contract(s) with a customer: A contract is defined as an agreement between two or more parties that creates enforceable rights and obligations and sets out the criteria for every contract that must be met.

Step 2. Identify the performance obligations in the contract: A performance obligation is a promise in a contract with a customer to transfer a good or service to the customer.

Step 3. Determine the transaction price: The transaction price is the amount of consideration to which the Company expects to be entitled in exchange for transferring promised goods or services to a customer, excluding amounts collected on behalf of third parties.

Step 4. Allocate the transaction price to the performance obligations in the contract: For a contract that has more than one performance obligation, the Company will allocate the transaction price to each performance obligation in an amount that depicts the amount of consideration to which the Company expects to be entitled in exchange for satisfying each performance obligation.

Step 5. Recognise revenue when (or as) the entity satisfies a performance obligation.

The Project SPV Group satisfies a performance obligation and recognises revenue over time, if one of the following criteria is met:
1. The customer simultaneously receives and consumes the benefits provided by the Project SPV Group's performance as the Project SPV Group performs; or
2. The Project SPV Group's performance creates or enhances an asset that the customer controls as the asset is created or enhanced; or
3. The Project SPV Group's performance does not create an asset with an alternative use to the Project SPV Group and the entity has an enforceable right to payment for performance completed to date.

Contract revenue
Contract revenue associated with the utility shifting incidental to construction of road are recognized as revenue by reference to the stage of completion of the projects at the balance sheet date. The stage of completion of project is determined by the proportion that contract cost incurred for work performed up to the balance sheet date bears to the estimated total contract costs. Project SPVs operations involve levying of GST on the construction work. Goods and Service tax is not received by the project SPVs on its own account, rather, it is tax collected on value added to the commodity by the seller on behalf of the government. Accordingly, it is excluded from revenue.

Income from the concession arrangements earned under the intangible asset model consists of the (i) fair value of contract revenue, which is deemed to be fair value of consideration transferred to acquire the asset; and (ii) payments actually received from the users. The intangible asset is amortised over its expected useful life in a way that reflects the pattern in which the asset’s economic benefits are consumed by the Project SPV Group, starting from the date when the right to operate starts to be used. Based on these principles, the intangible asset is amortised in line with the actual usage of the specific public utility facility, with a maximum of the duration of the concession.

Income from toll contracts
The income from Toll Contracts on BOT basis are recognised on actual collection of toll revenue (net of Premium and revenue share payable to NHAI) as per Concession Agreement. Revenue from electronic toll collection is recognised on accrual basis.

Interest income
For all financial assets measured either at amortised cost or at fair value through other comprehensive income, interest income is recorded using the effective interest rate (EIR). EIR is the rate that exactly discounts the estimated future cash payments or receipts over the expected life of the financial instrument or a shorter period, where appropriate, to the gross carrying amount of the financial asset or to the amortised cost of a financial liability. When calculating the effective interest rate, the Project SPV Group estimates the expected cash flows by considering all the contractual terms of the financial instrument (for example, prepayment, extension, call and similar options) but does not consider the expected credit losses. Interest income is included in finance income in the statement of profit and loss.

Dividends
Revenue is recognised when the Project SPV Group's right to receive the payment is established, which is generally when shareholders approve the dividend.

Trade receivables
A receivable represents the Project SPV Group’s right to an amount of consideration that is unconditional i.e. only the passage of time is required before payment of consideration is due.

3.07 **Government Grants**
Grants and subsidies from the government are recognised if the following conditions are satisfied.

There is reasonable assurance that the Project SPV Group will comply with the conditions attached to it.
Such benefits are earned and reasonable certainty exists of the collection.
Government grants are recognised in accordance with the terms of the respective grant on accrual basis considering the status of compliance of prescribed conditions and ascertainment that the grant will be received.
Grant received are considered as a part of the total outlay of the construction project and accordingly, the same is reduced from the gross value of assets.

3.08 **Taxes**

Current income tax

Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities in accordance the Income Tax Act, 1961. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted at the reporting date in the country where the Company operates and generates taxable income.

Current income tax relating to items recognised outside profit or loss (either in other comprehensive income or in equity). Current tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity. Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

Deferred tax

Deferred tax is provided using the liability method on temporary differences between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date.

Deferred tax liabilities are recognised for all taxable temporary differences, except:

- When the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and at the time of the transaction, affects neither the accounting profit nor taxable profit or loss.
- In respect of taxable temporary differences associated with investments in subsidiaries, when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future

Deferred tax assets are recognised for all deductible temporary differences, the carry forward of unused tax credits and any unused tax losses. Deferred tax assets are recognised to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilised, except:

- When the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction. affects neither the accounting profit nor taxable profit or loss.

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised. Unrecognised deferred tax assets are re-assessed at each reporting date and are recognised to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax relating to items recognised outside statement of profit and loss is recognised outside statement of profit and loss (either in other comprehensive income or in equity). Deferred tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity .

Deferred tax assets and deferred tax liabilities are offset if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

Tax benefits acquired as part of a business combination, but not satisfying the criteria for separate recognition at that date, are recognised subsequently if new information about facts and circumstances change. Acquired deferred tax benefits recognised within the measurement period reduce goodwill related to that acquisition if they result from new information obtained about facts and circumstances existing at the acquisition date. If the carrying amount of goodwill is zero, any remaining deferred tax benefits are recognised in OCI/ capital reserve depending on the principle explained for bargain purchase gains. All other acquired tax benefits realised are recognised in the consolidated statement of profit and loss. Deferred tax is recognised in consolidated statement of profit and loss on the consolidated adjustments.

Minimum Alternate Tax (MAT)

Minimum Alternate Tax (MAT) paid as per Indian Income Tax Act, 1961 is in the nature of unused tax credit which can be carried forward and utilised when the Project SPV Group will pay normal income tax during the specified period. Being DTA tax credit is recognised to the extent that it is probable that the unused tax credit can be utilised in the specified future period. The net amount of tax recoverable from, or payable to, the taxation authority is included as part of receivables or payables in the balance sheet.

Goods and service tax paid on acquisition of assets or on incurring expenses

Expenses and assets are recognised net of the amount of goods and service tax paid, except:
When the tax incurred on a purchase of assets or services is not recoverable from the tax authority, in which case, the tax paid is recognised as part of the cost of acquisition of the asset or as part of the expense item, as applicable.

When receivables and payables are stated with the amount of tax included. The net amount of tax recoverable from, or payable to, the tax authority is included as part of receivables or payables in the balance sheet.

3.09 **Property, plant and equipment**

Property, plant and equipment are stated at cost, less accumulated depreciation and impairment losses if any. Cost comprises the purchase price and any attributable cost of bringing the asset to its working condition for its intended use.Any trade discount or rebates are deducted in arriving at the purchase price.

Depreciation is calculated on written down value method (WDV) using the useful lives as prescribed under the Schedule II to the Companies Act, 2013 or re-assessed by the Project SPV Group based on technical evaluation. The Project SPV Group has estimated the following useful lives for its tangible fixed assets:

Asset class	Useful life
Building	30 years*
Office equipment	5 years
Computers	3 years
Furniture & fixtures	10 years

* The useful life of building has been calculated by management as per their technical estimate.

3.10 **Intangible assets**

The Project SPV Group exercised first time adoption under Ind AS 101 and has elected to continue with the carrying value of its “Toll Collection Rights” (Intangible Assets) including corresponding obligation, as recognised in the financial statements as at the date of transition April 1, 2016 measured as per the Previous GAAP and uses that as its deemed cost as at date of transition.

Toll collection rights are stated at cost, less accumulated amortisation , impairment losses and grant from government. Cost includes:
a) For acquired Toll Collection Rights - Upfront payments towards acquisition and incidental expenses related thereto.
b) Toll Collection Rights awarded by the grantor against construction service rendered by the Project SPV Group on BOT / DBFOT basis - Direct and indirect expenses on construction of roads, bridges, culverts, infrastructure and other assets at the toll plazas.

c) Toll Collection Rights in lieu of premium - Undiscounted premium obligation over the concession period.

Amortisation

Toll Collection Rights are amortised over the period of concession, using revenue based amortisation as prescribed in Ind As-36. Under this method, the carrying value of the rights is amortised in the proportion of actual toll revenue for the year to projected revenue for the balance toll period, to reflect the pattern in which the assets economic benefits will be consumed. At each balance sheet date, the projected revenue for the balance toll period is reviewed by the management. If there is any change in the projected revenue from previous estimates, the amortisation of toll collection rights is changed prospectively to reflect any changes in the estimates.

Intangible assets under development

Expenditure related to and incurred during implementation of project are included under "Intangible Assets under Development". The same will be transferred to the respective intangible assets on completion of project.

3.11 **Borrowing costs**

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of the asset. All other borrowing costs are expensed in the period in which they occur. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds. Borrowing cost also includes exchange differences between the foreign currency borrowing and the functional currency borrowing to the extent regarded as an adjustment to the borrowing costs.

3.12 **Leases**

The determination of whether an arrangement is (or contains) a lease is based on the substance of the arrangement at the inception of the lease. The arrangement is, or contains, a lease if fulfilment of the arrangement is dependent on the use of a specific asset or assets and the arrangement conveys a right to use the asset or assets, even if that right is not explicitly specified in an arrangement.

Project SPV Group as a lessee

A leased asset is depreciated over the useful life of the asset. However, if there is no reasonable certainty that the Project SPV Group will obtain ownership by the end of the lease term, the asset is depreciated over the shorter of the estimated useful life of the asset and the lease term.

A lease is classified at the inception date as a finance lease or an operating lease. A lease that transfers substantially all the risks and rewards incidental to ownership to the Project SPV Group is classified as a finance lease.

Operating lease payments are recognised as an expense in the consolidated statement of profit and loss on a straight-line basis over the lease term.

Ind AS 116 - Leases

Ind AS 116, Leases, it sets out principles for the recognition, measurement, presentation and disclosure of leases and requires lessees to account for all leases, except short-term leases and leases for low-value items, under a single on-balance sheet lease accounting model. A lessee recognises a right-of-use asset representing its right to use the underlying asset and a lease liability representing its obligation to make lease payments. Lessor accounting largely unchanged from the existing standard – i.e. lessors continue to classify leases as finance or operating leases.

Based on the preliminary assessment, the Company does not expect any significant impacts on transition to Ind AS 116. This assessment is based on currently available information and may be subject to changes arising from further reasonable and supportable information when the standard will be adopted.

Project SPV Group as a lessor

Leases in which the Project SPV Group does not transfer substantially all the risks and rewards of ownership of an asset are classified as operating leases. Rental income from operating lease is recognised on a straight-line basis over the term of the relevant lease. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognised over the lease term on the same basis as rental income.Contingent rents are recognised as revenue in the period in which they are earned.

Leases are classified as finance leases when substantially all of the risks and rewards of ownership transfer from the Project SPV Group to the lessee. Amounts due from lessees under finance leases are recorded as receivables at the Project SPV Group's net investment in the leases. Finance lease income is allocated to accounting periods so as to reflect a constant periodic rate of return on the net investment outstanding in respect of the lease.

3.13 **Provisions**

Provisions are recognised when the Project SPV Group has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. When the Project SPV Group expects some or all of a provision to be reimbursed, for example, under an insurance contract, the reimbursement is recognised as a separate asset, but only when the reimbursement is virtually certain. The expense relating to a provision is presented in the statement of profit and loss net of any reimbursement.

If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, when appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost. Provisions are reviewed at each balance sheet date and adjusted to reflect the current best estimates.

3.14 **Resurfacing expenses**

As per the Concession Agreements, the Project SPV Group is obligated to carry out resurfacing of the roads under concession. Provision required for resurfacing expenses are measured at the present value of the expenditure required to settle the present obligation at the end of reporting period. The discount rate used to determine the present value is a pre-tax rate that reflects risks specific to the liability. The increase in the provision due to the passage of time is recognised as finance cost. Provision for the planned expenditure is made for the period upto end of the period for which periodic maintenance is required, out of the total entitiled period.The same is stated in the consolidated statement of profit and loss in accordance with Ind AS 37 "Provisions, Contingent Liabilities and Contingent Assets."

3.15 **Contingent liability and Contingent assets**

A contingent liability is a possible obligation that arises from past events whose existence will be confirmed by the occurrence or non-occurrence of one or more uncertain future events beyond the control of the Project SPV Group or a present obligation that is not recognised because it is not probable that an outflow of resources will be required to settle the obligation. A contingent liability also arises in extremely rare cases where there is a liability that cannot be recognised because it cannot be measured reliably. The Project SPV Group does not recognise a contingent liability but discloses its existence in the financial statements.

A contingent assets is not recognised unless it becomes virtually certain that an inflow of economic benefits will arise. When an inflow of economic benefits is probable, contingent assets are disclosed in the financial statements.

Contingent liabilities and contingent assets are reviewed at each balance sheet date.

3.16 **Financial instruments**

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

Financial assets

Initial recognition and measurement

All financial assets are recognised initially at fair value plus, in the case of financial assets not recorded at fair value through statement of profit and loss, transaction costs that are attributable to the acquisition of the financial asset.

On initial recognistion, a financial asset is classified as measured of
- amortised cost
- FVOCI - Debt instruments
- FVOCI - equity instruments
- FVTPL

Financial assets are not reclassified subsequent to their initial recognition, except if and in the year, the Project SPV Group changes its business model for managing financial assets.

Debt instruments at amortised cost

A 'debt instrument' is measured at the amortised cost if both the following conditions are met:
- The asset is held within a business model whose objective is to hold assets for collecting contractual cash flows, and
- Contractual terms of the asset give rise on specified dates to cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

After initial measurement, such financial assets are subsequently measured at amortised cost using the effective interest rate (EIR) method. Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included in finance income in the statement of profit and loss. The losses arising from impairment are recognised in the statement of profit and loss.

Debt instrument at FVTOCI

A 'debt instrument' is classified as at the FVTOCI if both of the following criteria are met:
- The objective of the business model is achieved both by collecting contractual cash flows and selling the financial assets, and
- The asset's contractual cash flows represent SPPI.

Debt instruments included within the FVTOCI category are measured initially as well as at each reporting date at fair value. Fair value movements are recognized in the other comprehensive income (OCI). However, the Project SPV Group recognizes interest income, impairment losses and reversals and foreign exchange gain or loss in the statement of profit and loss. On derecognition of the asset, cumulative gain or loss previously recognised in OCI is reclassified from the equity to Statement of profit and loss.Interest earned whilst holding FVTOCI debt instrument is reported as interest income using the EIR method.

Debt instrument at FVTPL

FVTPL is a residual category for debt instruments. Any debt instrument, which does not meet the criteria for categorization as at amortized cost or as at FVTOCI, is classified as at FVTPL.

In addition, the Project SPV Group may elect to designate a debt instrument, which otherwise meets amortized cost or FVTOCI criteria, as at FVTPL. However, such election is allowed only if doing so reduces or eliminates a measurement or recognition inconsistency (referred to as 'accounting mismatch'). The Project SPV Group has designated certain debt instrument as at FVTPL.

Debt instruments included within the FVTPL category are measured at fair value with all changes recognized in the Statement of profit and loss.

Equity investments

All equity investments in scope of Ind AS 109 are measured at fair value. Equity instruments which are held for trading are classified as at FVTPL. For all other equity instruments, the Project SPV Group may make an irrevocable election to present in other comprehensive income subsequent changes in the fair value. The Project SPV Group makes such election on an instrument-byinstrument basis. The classification is made on initial recognition and is irrevocable.

If the Project SPV Group decides to classify an equity instrument as at FVTOCI, then all fair value changes on the instrument, excluding dividends, are recognized in the OCI. There is no recycling of the amounts from OCI to P&L, even on sale of investment. However, the Project SPV Group may transfer the cumulative gain or loss within equity.

Equity instruments included within the FVTPL category are measured at fair value with all changes recognized in the Statement of profit and loss.

Derecognition

A financial asset (or, where applicable, a part of a financial asset or part of a Project SPV Group of similar financial assets) is primarily derecognised (i.e. removed from the Project SPV Group's consolidated balance sheet) when:

- The rights to receive cash flows from the asset has expired, or
-The Project SPV Group has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Project SPV Group has transferred substantially all the risks and rewards of the asset, or (b) the Project SPV Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Project SPV Group has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if and to what extent it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all of the risks and rewards of the asset, nor transferred control of the asset, the Project SPV Group continues to recognise the transferred asset to the extent of the Project SPV Group's continuing involvement. In that case, the Project SPV Group also recognises an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Project SPV Group has retained.

Continuing involvement that takes the form of a guarantee over the transferred asset is measured at the lower of the original carrying amount of the asset and the maximum amount of consideration that the Project SPV Group could be required to repay.

Impairment of financial assets

In accordance with Ind AS 109, the Project SPV Group applies expected credit loss (ECL) model for measurement and recognition of impairment loss on the following financial assets and credit risk exposure:

-Financial assets that are debt instruments, and are measured at amortised cost e.g., loans, debt securities, deposits, trade receivables and bank balance
-Financial assets that are debt instruments and are measured as at FVTOCI
-Lease receivables under Ind AS 17
-Trade receivables or any contractual right to receive cash or another financial asset that result from transactions that are within the scope of Ind AS 18 (referred to as contractual revenue receivables' in these financial statements)

-Loan commitments which are not measured as at FVTPL
-Financial guarantee contracts which are not measured as at FVTPL

The Project SPV Group follows 'simplified approach' for recognition of impairment loss allowance on:
-Trade receivables; and
-Other receivables

The application of simplified approach does not require the Project SPV Group to track changes in credit risk. Rather, it recognises impairment loss allowance based on lifetime ECLs at each reporting date, right from its initial recognition.

For recognition of impairment loss on other financial assets and risk exposure, the Project SPV Group determines that whether there has been a significant increase in the credit risk since initial recognition. If credit risk has not increased significantly, 12-month ECL is used to provide for impairment loss. However, if credit risk has increased significantly, lifetime ECL is used. If, in a subsequent period, credit quality of the instrument improves such that there is no longer a significant increase in credit risk since initial recognition, then the entity reverts to recognising impairment loss allowance based on 12-month ECL.

Lifetime ECL are the expected credit losses resulting from all possible default events over the expected life of a financial instrument. The 12-month ECL is a portion of the lifetime ECL which results from default events that are possible within 12 months after the reporting date.

ECL is the difference between all contractual cash flows that are due to the Project SPV Group in accordance with the contract and all the cash flows that the entity expects to receive (i.e., all cash shortfalls), discounted at the original EIR. When estimating the cash flows, an entity is required to consider:

-All contractual terms of the financial instrument (including prepayment, extension, call and similar options) over the expected life of the financial instrument. However, in rare cases when the expected life of the financial instrument cannot be estimated reliably, then the entity is required to use the remaining contractual term of the financial instrument. -

-Cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms
-Financial assets measured as at amortised cost, contractual revenue receivables and lease receivables: ECL is presented as an allowance, i.e., as an integral part of the measurement of those assets in the balance sheet. The allowance reduces the net carrying amount. Until the asset meets write-off criteria, the Project SPV Group does not reduce impairment allowance from the gross carrying amount.

Financial liabilities

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through Statement of profit and loss, loans and borrowings, or payables, as appropriate.

All financial liabilities are recognised initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.
The Project SPV Group's financial liabilities include trade and other payables, loans and borrowings including bank overdrafts and derivative financial instruments.

Subsequent measurement

The measurement of financial liabilities depends on their classification, as described below:

Financial liabilities at fair value through Statement of profit and loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through statement of profit and loss. Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Project SPV Group that are not designated as hedging instruments in hedge relationships as defined by Ind AS 109.

Gains or losses on liabilities held for trading are recognised in the consolidated statement of profit and loss.

Loans and borrowings

This is the category most relevant to the Project SPV Group. After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortised cost using the EIR method. Gains and losses are recognised in statement of profit and loss when the liabilities are derecognised as well as through the EIR amortisation process.

Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included as finance costs in the statement of profit and loss.

This category generally applies to borrowings. For more information refer note 16.

Derecognition

A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognised in the consolidated statement of profit and loss.

Offsetting of financial instruments

Financial assets and financial liabilities are offset and the net amount is reported in the standalone balance sheet if there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, to realise the assets and settle the liabilities simultaneously.

3.17 **Cash and cash equivalents**

Cash and cash equivalent in the balance sheet comprises of cash at banks and on hand and short-term deposits with an original maturity of three months or less, which are subject to an insignificant risk of changes in value.

For the purpose of the statement of cash flows, cash and cash equivalents consist of cash and short-term deposits, as defined above, as they are considered an integral part of the Project SPV Group's cash management.

3.18 **Cash dividend to equity holders of the Project SPV Group**

The Project SPV Group recognises a liability to make cash or non-cash distributions to equity holders of the parent when the distribution is authorised and the distribution is no longer at the discretion of the Project SPV Group. As per the corporate laws in India, a distribution is authorised when it is approved by the shareholders. A corresponding amount is recognised directly in equity.

3.19 **Impairment of non-financial assets**

The Project SPV Group assesses, at each reporting date, whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Project SPV Group estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs of disposal and its value in use. Recoverable amount is determined for an individual asset. unless the asset does not generate cash inflows that are largely independent of those from other assets or Project SPV Group's of assets. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs of disposal, recent market transactions are taken into account. If no such transactions can be identified, an appropriate valuation model is used. These calculations are corroborated by valuation multiples, quoted share prices for publicly traded companies or other available fair value indicators.

The Project SPV Group bases its impairment calculation on detailed budgets and forecast calculations, which are prepared separately for each of the Project SPV Group's CGUs to which the individual assets are allocated. These budgets and forecast calculations generally cover a period of five years. For longer periods, a long-term growth rate is calculated and applied to project future cash flows after the fifth year. To estimate cash flow projections beyond periods covered by the most recent budgets/forecasts, the Project SPV Group extrapolates cash flow projections in the budget using a steady or declining growth rate for subsequent years, unless an increasing rate can be justified. In any case, this growth rate does not exceed the long-term average growth rate for the products, industries, or country or countries in which the entity operates, or for the market in which the asset is used.

For assets excluding goodwill, an assessment is made at each reporting date to determine whether there is an indication that previously recognised impairment losses no longer exist or have decreased. If such indication exists, the Project SPV Group estimates the asset's or CGU's recoverable amount. A previously recognised impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognised. The reversal is limited so that the carrying amount of the asset does not exceed its recoverable amount, nor exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognised for the asset in prior years. Such reversal is recognised in the statement of profit and loss.

Goodwill is tested for impairment annually as at 31 March and when circumstances indicate that the carrying value may be impaired.

Impairment is determined for goodwill by assessing the recoverable amount of each CGU (or Project SPV Group of CGUs) to which the goodwill relates. When the recoverable amount of the CGU is less than its carrying amount, an impairment loss is recognised. Impairment losses relating to goodwill cannot be reversed in future periods.

Intangible assets with indefinite useful lives are tested for impairment annually as at 31 March at the CGU level, as appropriate, and when circumstances indicate that the carrying value may be impaired.

3.20 **Segment information**

Based on "Management Approach" as defined in Ind AS 108 - Operating Segments, the Management ("the Board of Directors") evaluates the Project SPV Group's performance and allocates the resources based on an analysis of various performance indicators by business segments. Inter segment sales and transfers are reflected at market prices.

Unallocable items includes general corporate income and expense items which are not allocated to any business segment.

Segment policies:

Based on "Management Approach" as defined in Ind AS 108 -Operating Segments, the Management evaluates the Project SPV Group's performance and allocates the resources based on an analysis of various performance indicators by business segments. Inter segment sales and transfers are reflected at market prices.

Unallocable items includes general corporate income and expense items which are not allocated to any business segment.

The Project SPV Group prepares its segment information in conformity with the accounting policies adopted for preparing and presenting the financial statements of the Project SPV Group as a whole. Common allocable costs are allocated to each segment on an appropriate basis.

3.21 **Earnings per unit**

Basic earnings per unit are calculated by dividing the net profit or loss for the period attributable to unitholders by the weighted average number of units outstanding during the period. For the purpose of calculating diluted earnings per unit, the net profit or loss for the period attributable to unitholders and the weighted average number of units outstanding during the period are adjusted for the effects of all dilutive potential units.

3.22 **Foreign currencies**

The Trust's financial statements are presented in INR, which is also the Trust's functional currency. The Trust does not have any foreign operation and has assessed the functional currency to be INR.

Transactions and balances

Transactions in foreign currencies are initially recorded by the Trust at their respective functional currency spot rates at the date the transaction first qualifies for recognition. Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency spot rates of exchange at the reporting date.
Differences arising on settlement or translation of monetary items are recognised in the statement of profit or loss.
Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates at the dates of the initial transactions.

3.23 **Recent pronouncements**

Ministry of Corporate Affairs ("MCA") notifies new standards or amendments to the existing standards under Companies (Indian Accounting Standards) Rules as issued from time to time. On March 31, 2023, MCA amended the Companies (Indian Accounting Standards) Amendment Rules, 2023, as below:

Ind AS 1: Disclosure of Material Accounting policy information and similar consequential amendment to Ind AS 34.
Ind AS 1: Disclosure of the judgements, apart from those involving estimations, that management has made in the process of applying the entity's accounting policies and that have the most significant effect on the amounts recognised in the financial statements.
Ind AS 8: Definition of Accounting Estimate as "Accounting estimates are monetary amounts in financial statements that are subject to measurement uncertainty". Further amendments to paragraphs delineating Changes to Accounting Estimates.
Ind AS 12: Amendments to taxable temporary difference, initial recognition of asset or liability and Deductible taxable differences.
Ind AS 12: Deferred tax related to assets and liabilities arising from Single Transaction.
Ind AS 107: Information about measurement basis (or bases) for financial instruments to be disclosed as material accounting policy.
Ind AS 109: Amendment to paragraph on reassessment of embedded derivative.
Ind AS 115: Amendments to Appendix 1 which gives there in the major differences, if any, between Indian Accounting Standard (Ind AS) 115 and the corresponding International Financial Reporting Standard (IFRS) 15, Revenue from Contracts with Customers, IFRIC 12, Service Concession Arrangements and SIC 29 Service Concession Arrangements: Disclosures, issued by the International Accounting Standards Board

Based on the preliminary assessment, the company does not expect these amendment to have any significant impact on its consolidated financial statements.

Note 4 : Property, Plant and Equipment

(Rs. in Millions)

	Premises	Computer	Office Equipments	Furniture and Fixture	Total
At 31 March 2021	**16.09**	**0.30**	**1.40**	**0.39**	**18.18**
Additions	-	-	-	-	-
Disposals/ Adjustments	-	-	-	-	-
At 31 March 2022	**16.09**	**0.30**	**1.40**	**0.39**	**18.18**
Additions	-	-	-	-	-
Disposals/ Adjustments	-	-	0.09	-	0.09
At 31 March 2023	**16.09**	**0.30**	**1.31**	**0.39**	**18.10**
Depreciation					
At 31 March 2021	**5.79**	**0.28**	**1.18**	**0.34**	**7.59**
Additions	1.61	0.00	0.09	0.04	1.74
Disposals/ Adjustments	-	-	-	-	-
At 31 March 2022	**7.40**	**0.29**	**1.28**	**0.38**	**9.34**
Additions	1.20	0.00	0.03	0.01	1.25
Disposals/ Adjustments	-	-	0.08	-	0.08
At 31 March 2023	**8.60**	**0.29**	**1.23**	**0.39**	**10.51**
Net Book value					
At 31 March 2023	**7.49**	**0.01**	**0.08**	**0.00**	**7.59**
At 31 March 2022	**8.69**	**0.02**	**0.12**	**0.02**	**8.85**

Net Book value	**March 31, 2023**	**March 31, 2022**
Property, Plant and Equipment	7.59	8.85

Note 4 : Intangible Assets and Intangible Assets under development

Intangible Assets (Rs. in Millions)

Particulars	Toll Collection Rights	Total
At 31 March 2021	**2,16,344.42**	**2,16,344.42**
Additions	11,814.99	11,814.99
Deletions	-	-
Adjustments	-	-
At 31 March 2022	**2,28,159.42**	**2,28,159.42**
Additions	9,663.30	9,663.30
Deletions	295.32	295.32
Adjustments	-	-
At 31 March 2023	**2,37,527.40**	**2,37,527.40**
Amortisation		
At 31 March 2021	**4,626.78**	**4,626.78**
Additions	1,673.16	1,673.16
Deletions	-	-
Adjustments	-	-
At 31 March 2022	**6,299.93**	**6,299.93**
Additions	2,809.17	2,809.17
Deletions	-	-
Adjustments	-	-
At 31 March 2023	**9,109.10**	**9,109.10**
Net Book value		
At 31 March 2023	2,28,418.29	
At 31 March 2022	2,21,859.48	

Particulars	March 31, 2023	March 31, 2022
Toll Collection Rights	2,28,418.29	2,21,859.48
Total	**2,28,418.29**	**2,21,859.48**

Intangible assets under development

(Rs. in Millions)

Particulars	March 31, 2023	March 31, 2022
Toll Collection Rights		
At the beginning of the year	1,290.89	4,684.26
Add : development during the year	11,128.99	835.34
	12,419.88	5,519.60
Less : Transfer to Intangible Asset (Toll Collection Rights)	9,998.21	4,228.70
Closing balance	**2,421.67**	**1,290.89**
Total	**2,421.67**	**1,290.89**

Tangible and Intangible assets given as security

Tangible and Intangible assets are subject to first charge to secured long-term borrowings from the lenders.

(Rs. in Millions)

Particulars	March 31, 2023				March 31, 2022			
	Face Value Rs.	No of Units	Current	Non-current	Face Value Rs.	No of Units	Current	Non-current
Financial Assets								
Note 5 : Investment								
i) Investments in Mutual Funds (quoted)								
Fair Value Through Profit or Loss (FVTPL)								
Canara Robeco Liquid Fund - Direct Plan - Growth	1,000	18,486.04	49.85	-	1,000	-	-	-
Canara Robeco Overnight Fund - Direct Plan - Growth	1,000	5,174.20	6.00	-	1,000	-	-	-
IDBI Liquid Fund - Direct Plan - Growth	1,000	64,718.69	156.76		1,000	48,116.73	110.24	-
ABSL Liquid Fund - Direct Plan - Growth	100		-	-	100	53,926.78	18.50	-
SBI Liquid Fund - Direct Growth	1,000	2,91,778.24	1,028.03	-	1,000	1,53,238.96	510.75	-
SBI Overnight Fund - Direct Growth	1,000	11,632.96	42.44	-	1,000	5,790.54	20.04	-
			1,283.09	**-**			**659.54**	**-**
Total			**1,283.09**	**-**			**659.54**	**-**
Aggregate book value of quoted investments			**1,271.74**				**658.76**	
Market value of quoted investments			**1,283.09**				**659.54**	
Aggregate amount of unquoted investments			-				-	
Aggregate amount of impairment in value of investments			-				-	
Refer note 31 for determination of fair value of investments			-				-	

(Rs. in Millions)

	March 31, 2023		March 31, 2022	
	Current	**Non-current**	**Current**	**Non-current**
Note 6 : Trade receivable				
(Unsecured, considered good)				
Related parties	0.61	-	0.51	-
Others	84.05	-	51.03	-
Total	**84.67**	**-**	**51.55**	**-**
Less: Allowances for expected credit loss/ bad and doubtful debt	-	-	-	-
Total	**84.67**	**-**	**51.55**	**-**

The Group has not identifed any credit impairment loss as at March 31, 2023 and March 31, 2022.

Note 7 : Other financial assets				
(Unsecured, considered good)				
Interest accrued on fixed deposits	11.57	-	25.64	-
Interest receivable from others	3.73	-	23.99	-
Retention money receivable	530.54	-	526.28	-
Receivable from Government Authorities (NHAI)	816.07	-	965.24	-
Other receivable	75.65	-	56.15	-
Security and other deposits	10.99	0.33	6.89	2.74
Total	**1,448.56**	**0.33**	**1,604.18**	**2.74**

(Rs. in Millions)

	March 31, 2023	March 31, 2022
Note 8 : Deferred tax assets		
Deferred tax liabilities (net):		
Deferred tax liabilities:		
Difference in Depreciation and other differences in block of Property, Plant and equipment and Intangible assets as per tax books & financial books	36.80	1,350.50
Deferred tax assets:		
Effect of expenditure debited to profit and loss account in the current year but allowed for tax purposes in following years	-	-
Deferred tax liabilities (net)	**36.80**	**1,350.50**
Deferred tax assets:		
Deferred tax assets:		
Depreciation	-	428.55
MAT credit entitlement	-	582.83
Deferred Tax assets on Fair valuation	792.60	626.79
Deferred Tax Assets	**792.60**	**1,638.17**
Deferred Tax liabilities:		
Difference in Depreciation/ amortisation and other differences		
Tax losses	-	-
Deferred tax (assets) / liabilities	**(755.80)**	**(287.67)**
Note 9 : Other non - current assets		
Duties and taxes receivable	174.07	656.55
Total	**174.07**	**656.55**

(Rs. in Millions)

	March 31, 2023	March 31, 2022
Note 10 : Cash and cash equivalents		
Cash and Bank balances		
Balances with banks:		
-on current accounts	279.37	118.03
-on trust, retention and other escrow accounts*	394.06	161.56
Deposits with banks		
-Original maturity less than 3 months	49.50	-
Cash on hand	8.38	7.64
Total	**731.31**	**287.23**
Note 11 : Bank balance other than cash and cash equivalent		
Maturity more than 3 months less than 12 months		
Other deposits	15.09	102.53
Debt service reserve account with banks /earmarked balance**	3,459.60	2,365.43
Major Maintenance Reserve Account	1,390.00	-
Maturity more than 12 months		
Debt service reserve account with banks /earmarked balance**	-	-
Other deposits	2.00	2.00
Total	**4,866.69**	**2,469.97**

Debt service reserve account/ major maintenance reserve account and trust, retention and other escrow accounts

Bank deposits are marked lien / pledged against the non current secured loan as per term loan agreement with the lender, further the lenders have first charge on trust, retention and other escrow accounts.

* First charge on above to the extent of amount payable as per the waterfall mechanism as defined in the Concession Agreement / Common Loan Agreement.

** The deposits to the extent of Rs. 3,459.60 millions (March 31, 2022 : Rs. 2,365.43 millions) maintained by the Project SPV Group with bank includes time deposits, which are held against Debt Service Reserve (DSR), are considered as current portion under the head "Other bank balances" since the same are encashable by the lenders in the event of default by the Project SPV Group, if any.

Current deposits are made for varying periods of between one day and three months, depending on the immediate cash requirements of the group and earn interest at the respective current deposit rates. Other time deposits earn interest at the rate of 4.70% to 7.95% p.a.

Refer note 16 for details of security against term loans.

For the purpose of statement of cash flows, cash and cash equivalents comprise the following:

(Rs. in Millions)

	March 31, 2023	March 31, 2022
Balance with banks:		
-on current accounts	279.37	118.03
-on trust, retention and other escrow accounts	394.06	161.56
Fixed deposits less than 3 months	49.50	-
Cash on hand	8.38	7.64
Less: Bank overdraft	-	-
Total	**731.31**	**287.23**
Note 12 : Current tax assets (net)		
Advance income-tax (net of provision for tax)	24.81	114.22
Total	**24.81**	**114.22**
Note 13 : Other current assets		
(Unsecured, considered good unless otherwise stated)		
Advance with suppliers		
- Related parties (refer note 34)	1,347.33	502.89
- Others	45.29	32.22
Mobilisation advances (refer note 34)	33.68	435.80
Prepaid expenses	45.88	0.51
Duties and taxes receivable	1,184.89	706.04
Total	**2,657.07**	**1,677.46**

Note : 14 : Unit capital

(Amount in Millions.)

	March 31, 2023		March 31, 2022	
Unit capital				
Authorised Unit capital				
Units having face value of Rs.100 each	87,92,93,265	87,929.33	85,50,43,265	85,504.33
	87,92,93,265	**87,929.33**	**85,50,43,265**	**85,504.33**
Issued Unit capital				
Units having face value of Rs.100 each	87,92,93,265	87,929.33	85,50,43,265	85,504.33
Total	**87,92,93,265**	**87,929.33**	**85,50,43,265**	**85,504.33**

Terms / rights attached to equity shares

The Project SPVs have only one class of equity shares having par value of Rs. 100/- per share Each holder of equity shares is entitled to one vote per share. The Project SPVs declares and pays dividend in Indian rupees.

In the event of liquidation of the Project SPV, the holders of equity shares will be entitled to receive remaining assets of the Project SPV, after distribution of all preferential amounts. The distribution will be in proportion to the number of equity shares held by the shareholders.

Reconciliation of the number of unit outstanding and the amount of Unit capital:

	March 31, 2023		March 31, 2022	
Units issued, subscribed and fully paid	**No. of units**	**Rs.**	**No. of units**	**Rs.**
Units having face value of Rs. 100/-				
At the beginning of the year	85,50,43,265	85,504.33	81,68,80,000	81,688.00
lssued during the year	2,42,50,000	2,425.00	3,81,63,265	3,816.33
At the end of the year	**87,92,93,265**	**87,929.33**	**85,50,43,265**	**85,504.33**

Details of unit holders holding more than 5% units:

	March 31, 2023		March 31, 2022	
	No. of units	**% of total unit capital**	**No. of units**	**% of total unit capital**
IRB Infrastructure Developers Limited	44,84,39,840	51%	43,60,72,332	51%
Anahera Investments Pte Ltd	21,98,23,181	25%	21,37,60,685	25%
Bricklayers Investments Pte Ltd	5,27,57,561	6%	5,13,02,562	6%
Chiswick Investments Pte Ltd	5,27,57,561	6%	5,13,02,562	6%
Stretford End Investments Pte Ltd	5,27,57,561	6%	5,13,02,562	6%
Dangenham Investments Pte Ltd	5,27,57,561	6%	5,13,02,562	6%

Details of Sponsor units	**March 31, 2023**		**March 31, 2022**	
IRB Infrastructure Developers Limited	44,84,39,840	51%	43,60,72,332	51%

Note : 15 : Other equity

Attributable to the equity holders

Other reserves	**March 31, 2023**	**March 31, 2022**
Retained earnings		
At the beginning of the year	(8,108.29)	(3,669.05)
Profit for the year	(2,272.18)	(4,435.98)
Less: Appropriations		
Pre-incoporation Profits		
Unit Issue expenses	(15.33)	(3.26)
At the end of the year	**(10,395.80)**	**(8,108.29)**
Total	**(10,395.80)**	**(8,108.29)**

(Amount in Millions.)

	March 31, 2023	March 31, 2022
Financial liabilities		
Note : 16 : Borrowings		
Non-current Borrowings		
Term loans		
Indian rupee loan from banks (secured)		
Project loans for SPVs	61,005.36	78,298.59
Less : current maturities expected to be settled within 12 month from balance sheet date	(639.16)	(429.15)
Total (a)	**60,366.20**	**77,869.44**
Indian rupee loan from financial institutions (secured)		
Project loans for SPVs	6,931.65	10,328.45
Less : current maturities expected to be settled within 12 month from balance sheet date	(9.75)	(59.79)
Total (b)	**6,921.90**	**10,268.66**
Non-convertible debentures (secured)	33,432.82	5,497.18
Less : current maturities expected to be settled within 12 month from balance sheet date	(130.59)	(110.76)
Total (c)	**33,302.22**	**5,386.42**
Less: Unamortised transaction cost **(d)**	(1,646.37)	(964.70)
Total non current borrowings (e = a + b + c + d)	**98,943.95**	**92,559.82**
Current Borrowings		
Short-term borrowings (secured)		
Current maturity of long term loans		
Indian rupee loan from banks (secured)	639.16	429.15
Indian rupee loan from financial institutions (secured)	9.75	59.79
Non convertible debentures (secured)	130.59	110.76
Interest accrued but not due on borrowings	5.43	33.73
(Unsecured, repayable on demand and interest free)		
Loan from related parties (refer note 34)	5,350.72	4,085.74
Total current borrowings (f)	**6,135.65**	**4,719.18**
Total borrowings (e+f)	**1,05,079.60**	**97,279.00**
Aggregate secured loans	99,723.46	93,159.52
Aggregate unsecured loans	5,350.72	4,085.74

(i) Project loans for SPVs

March 31, 2023: Rs.1,01,369.83 millions; March 31, 2022: Rs. 94,124.22 millions; pertains to term loans taken by SPV's (Special Purpose Vehicles) for Project financing.

Rate of interest

Rate of interest on the Indian Rupee loan from banks and financial institutions varies from 7.75% to 10.75% p.a. (March 31, 2022: 8.25% to 10.40% p.a.) and are secured by pledge of shares of its subsidiaries and subservient charge on the current assets of the company to the extent of 125% of the outstanding loan.

Nature of security

i) Secured by first charge on the movable/immovable asset by way of mortgage/hypothecation; first charge on all intangible assets, present and future; assignment of all receivables; book debts and all rights and interest in project, both present and future, excluding the Project Assets of respective companies;

ii) Secured by first charge on the Escrow Account, Debt Service Reserve Account and any other reserves and other bank accounts of the respective Companies.

iii) An irrevocable and unconditional corporate guarantee from IRB Infrastructure Developers Limited to meet shortfall (if any) between debt due and termination payments received from Concessioning Authority in case of termination of Concession Agreement for any reason in case of Project SPV's.

Repayment terms

The Indian rupee loans are repayable in structured monthly installments commencing after commercial operation date such that the total tenor does not exceed 17 years and repayable as per the repayment schedule specified in common loan agreement with the Lenders.

Note : 17 : Trade payables		
Total outstanding dues of micro enterprises and small enterprises (refer note 29)	1.61	3.69
Total outstanding dues of creditors other than micro and small enterprises		
- Related parties (refer note 34)	13,812.18	10,022.93
- Others	1,491.69	1,191.71
Total	**15,305.48**	**11,218.34**

(Rs. in Millions)

	March 31, 2023		March 31, 2022	
	Current	**Non-current**	**Current**	**Non-current**
Note 18 : Other financial liabilities				
Obligation for construction	1,102.31	-	2,009.01	-
Directors sitting fees payable	0.44	-	0.36	-
Deposit	1.18	-	1.13	-
Retention money payable				
- Related parties (refer note 34)	636.46	-	256.48	-
- Others	295.83	2.77	336.92	-
Revenue share payable	345.46	-	225.81	-
Other payable				
- Related parties (refer note 34)	167.70	35,778.03	193.42	35,168.79
Total	**2,549.37**	**35,780.80**	**3,023.13**	**35,168.79**

	March 31, 2023	**March 31, 2022**
Note : 19 : Trade payables		
a) Total outstanding dues of micro enterprises and small enterprises		
micro and small enterprises		
'- Related parties	4,165.72	5,998.85
	4,165.72	**5,998.85**

Note 20 : Provisions

	March 31, 2023		March 31, 2022	
	Current	**Non-current**	**Current**	**Non-current**
Others				
Major maintenance expenses		2,965.03	-	1,350.57
Total	**-**	**2,965.03**	**-**	**1,350.57**

The movement in provision for resurfacing expenses is as follows:

	March 31, 2023	**March 31, 2022**
Opening balance	1,350.57	357.84
Obligation on new toll projects	1,614.45	992.73
Utilised / reversed during the year	**-**	**-**
Closing balance	**2,965.03**	**1,350.57**

The above provisions are based on current best estimation of expenses that may be required to fulfill the resurfacing obligation as per the service concession agreement with regulatory authorities. It is expected that significant portion of the costs will be incurred over the period. The actual expense incurred may vary from the above. No reimbursements are expected from any sources against the above obligation.

	March 31, 2023	**March 31, 2022**
Note 21 : Other current liabilities		
Duties and taxes payable	64.12	129.65
Advance from customer- Others	34.03	10.50
Total	**98.15**	**140.15**

(Amount in Millions.)

	March 31, 2023	March 31, 2022
Note 22 : Revenue from operations		
Contract revenue (road construction)	11,672.04	1,054.48
Income from toll collection (gross)	21,097.46	12,377.44
Less - Revenue Share to NHAI	(5,671.70)	(1,779.36)
Income arising out of toll collection (net)	15,425.76	10,598.07
Revenue share to NHAI- Fastag	(185.44)	(212.87)
Other operating revenue	0.23	965.16
Total	**26,912.59**	**12,404.84**
Note 23 : Other income		
Interest income on		
- Bank deposits	178.88	73.64
- Others	7.17	8.05
Profit on sale of investments	62.95	13.93
Fair value gain on mutual funds	11.35	0.78
Other non operating income	2.73	3.73
Total	**263.08**	**100.13**
Note 24 : Road work and site expenses		
Contract expenses	11,330.91	1,036.47
Operation and maintenance expenses	1,471.41	939.15
Site and other direct expenses	0.00	-
Sub-contracting / Security expenses	0.35	0.72
Technical consultancy and supervision charges	62.84	53.20
Total	**12,865.52**	**2,029.53**
Note 25 : Depreciation and amortisation expenses		
Depreciation on property, plant and equipment (refer note 4)	1.25	1.74
Amortisation on intangible assets (refer note 4)	2,809.17	1,673.16
Total	**2,810.42**	**1,674.90**
Note 26 : Finance cost		
Interest expense		
- Banks and financial institutions	7,387.76	8,670.13
- Debentures	1,617.52	-
- Unwinding of retention money	-	48.71
Other borrowing costs		
- Amortisation of Transaction cost	128.80	78.02
- Unwinding of discount on provision of MMR	143.04	39.64
- Interest unwinding on loan/retention money	48.71	-
- Interest unwinding of Trade Payable- Associates	765.06	655.78
- Others	163.82	46.44
Total	**10,254.69**	**9,538.70**

(Amount in Millions.)

	March 31, 2023	March 31, 2022
Note 27 : Other expenses		
Rent	0.03	0.24
Rates and taxes	81.75	31.64
Water charges	-	-
Travelling and conveyance	0.01	-
Director sitting fees	1.83	1.61
Legal and professional expenses	163.58	186.84
Corporate social responsibilities expenditure	-	8.00
Donations	2.50	-
Bank charges	2.83	5.54
Miscellaneous expenses	3.76	1.19
Fair value loss on measurement of other payable	-	-
Total	**256.29**	**235.06**
Note 27A : Payment to auditor (including GST)		
As auditors:		
- Statutory audit fees	1.42	1.23
- Limited review fees	2.05	1.70
In other capacity	-	-
- Other services (certification fees)	1.37	0.17
Reimbursement of expenses	0.20	0.04
Total	**5.04**	**3.13**

Note 28 : Commitment and Contingencies

a. Leases
Rent / lease payments under operating lease are recognised as an expense in the Consolidated Statement of profit and loss on a straight line basis over the lease term.

Operating lease

(Rs in millions)

	March 31, 2023	March 31, 2022
a) Future lease rental payments under non-cancellable operating lease are as follows:-		
i) Not later than one year	-	-
ii) Later than one year and not more than five year	-	-
iii) Later than five year	-	-
b) Lease payment recognised in the consolidated statement of profit and loss	0.03	0.24
c) General description of the leasing agreement		
i) Leased assets – accommodation for employees	-	-
ii) Future lease rentals are determined on agreed terms	-	-

b. Capital commitments

	March 31, 2023	March 31, 2022
Estimated value of contracts in capital account remaining to be executed	14,295.07	625.98

c. Contingent liabilities
Contingent liabilities not provided for

	March 31, 2023	March 31, 2022
Guarantees given by the Group to suppliers, government bodies and performance guarantee		
For Service Tax, ESIC, Custom Duty, Other Finance expenses and Stamp duty matters	-	-
Total	-	-

UTL, CGTL and KGTL have filed Writ petition with Hon'ble Rajasthan High Court with prayer to commence payment of Premium to National Highways Authority of India (NHAI) six months post actual completion of the project construction work. The Hon'ble High Court prima facie agreed with the contention of these companies and had provided interim relief from payment of premium. Vide judgement order dated 25th August, 2021, the Hon'ble High Court found merit in the contention of the companies and has directed the parties to resolve the dispute under Arbitration. The said matter is currently pending under Arbitration.
During the year premium payment to NHAI has been commenced in IRBHM and KGTL.

Note 29 : Trade payable

Under the Micro, Small and Medium Enterprises Development Act, 2006 ('MSMED') which came into force from 2 October 2006, certain disclosures are required to be made relating to Micro, Small and Medium enterprises. On the basis or the informntion and records available with the management, there are no overdue amount to the Micro and Small enterprises as defined in the Micro, Small Medium Enterprises Development Act, 2006 as set out in the following disclosures:

The disclosure in respect of the amount payable to enterprises which have provided goods and services to the Group and which qualify under the definition of micro and small enterprises, as defined under Micro, Small and Medium Enterprises Development Act, 2006 has been made in the consolidated financial statement as at March 31, 2023 based on the information received and available with the Group.

Particulars	March 31, 2023	March 31, 2022
Principal amount remaining unpaid to any supplier as at the period end	1.61	3.69
Interest due thereon	-	-
Amount of interest paid by the Company in terms of section 16 of the MSMED, along with the amount of the payment made to the supplier beyond the appointed day during the accounting period.	-	-
Amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed day during the period) but without adding the interest specified under the MSMED, 2006	-	-
Amount of interest accrued and remaining unpaid at the end of the accounting period	-	-
The amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues as above are actually paid to the small enterprise for the purpose of disallowance as a deductible expenditure under the MSMED Act, 2006	-	-

a) MSME ageing schedule as at

Particulars	March 31, 2023	March 31, 2022
MSME Undisputed Dues	-	-
Less than 1 year	1.61	3.69
1-2 Years	-	-
2-3 Years	-	-
More than 3 years	-	-
Total dues to micro and small enterprises as per MSMED Act, 2006	**1.61**	**3.69**

There are no disputed dues to micro and small enterprises as per MSMED Act, 2006. The amounts payable to MSME are not due for payments.

b) Ageing of creditors other than micro enterprises and small enterprises as at

Particulars	March 31, 2023	March 31, 2022
Undisputed Dues		
Less than 1 year	7,438.37	13,369.16
1-2 Years	9,433.59	3,808.21
2-3 Years	2,559.45	12.82
More than 3 years	38.18	23.32
Total dues to creditors other than micro enterprises and small enterprises as at	**19,469.59**	**17,213.50**

There are no disputed dues to creditors other than micro enterprises and small enterprises.

c) out of the above unbilled amount	2,660.17	3,191.66

Note 30 : Intangble Asset under development ageing schedule

a) Intangible asset under development (Rs in millions)

Particulars	March 31, 2023	March 31, 2022
Less than 1 year	2,339.97	1,055.74
1-2 Years	54.59	59.90
2-3 Years	27.11	175.24
More than 3 years		-
Total	**2,421.67**	**1,290.89**

b) Intangible asset under development

Particulars	March 31, 2023	March 31, 2022
To be completed in		
Less than 1 year	2,421.67	1,290.89
1-2 Years	-	-
2-3 Years	-	-
More than 3 years	-	-
Total	**2,421.67**	**1,290.89**

Note 31 : Fair values

The carrying values of financials instruments of the Group are reasonable and approximations of fair values.

	Carrying amount		Fair Value	
	March 31, 2023	**March 31, 2022**	**March 31, 2023**	**March 31, 2022**
Financial assets				
Financial assets measured at amortised cost				
Loans	-	-	-	-
Other Financial assets	1,448.89	1,606.92	1,448.89	1,606.92
Financial assets measured at fair value through statement of Profit & Loss				
Investments (Quoted)	1,283.09	659.54	1,283.09	659.54
Financial assets measured at amortised cost				
Investments (Unquoted)	-	-	-	-
Trade receivable	84.67	51.55	84.67	51.55
Cash and cash equivalents	731.31	287.23	731.31	287.23
Other Bank balances	4,866.69	2,469.97	4,866.69	2,469.97
Financial liabilities				
Financial liabilities measured at amortised cost				
Trade payables	19,471.20	17,217.19	19,471.20	17,217.19
Borrowings	1,05,079.60	97,279.00	1,05,079.60	97,279.00
Other financial liabilities	38,330.17	38,191.92	38,330.17	38,191.92

The management assessed that the fair value of cash and cash equivalents, trade receivables, trade payables, bank overdrafts and other current liabilities approximate their carrying amounts largely due to the short-term maturities of these instruments.

The fair value of the financial assets and liabilities is included at the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.

The discount for lack of marketability represents the amounts that the Group has determined that market participants would take into account when pricing the investments.

Note 32 : Fair value hierarchy

All financial instruments for which fair value is recognised or disclosed are categorised within the fair value hierarchy described as follows, based on the lowest level input that is significant to the fair value measurement as a whole.

Level 1: Quoted (unadjusted) price in active market for identical assets or liabilities

Level 2: Valuation technique for which the lowest level input that has a significant effect on the fair value measurement are observed, either directly or indirectly

Level 3: Valuation technique for which the lowest level input has a significant effect on the fair value measurement is not based on observable market data.

Quantitative disclosures fair value measurement hierarchy for financial instruments as at March 31, 2023:

(Rs in millions)

	As on Mar 31, 2023	Fair value measurement at end of the reporting year using		
		Level 1	Level 2	Level 3
Assets				
Investments (Quoted)	**1,283.09**	1,283.09	-	-
Trade Receivable	**84.67**	-	-	84.67
Cash and cash equivalents	**731.31**	-	-	731.31
Bank balance other than above	**4,866.69**	-	-	4,866.69
Loans	**-**	-	-	-
Other Financial assets	**1,448.89**	-	-	1,448.89
Liabilities				
Borrowings	**1,05,079.60**	-	-	1,05,079.60
Trade Payable	**19,471.20**	-	-	19,471.20
Other financial liabilities	**38,330.17**	-	-	38,330.17

Quantitative disclosures fair value measurement hierarchy for financial instruments as at March 31, 2022:

(Rs in millions)

	As on Mar 31, 2022	Fair value measurement at end of the reporting year using		
		Level 1	Level 2	Level 3
Assets				
Investments (Quoted)	**659.54**	659.54	-	-
Trade Receivable	**51.55**	-	-	51.55
Cash and cash equivalents	**287.23**	-	-	287.23
Bank balance other than above	**2,469.97**	-	-	2,469.97
Loans	**-**	-	-	-
Other Financial assets	**1,606.92**	-	-	1,606.92
Liabilities				
Borrowings	**97,279.00**	-	-	97,279.00
Trade Payable	**17,217.19**	-	-	17,217.19
Other financial liabilities	**38,191.92**	-	-	38,191.92

There has been no transfer between Level 1, Level 2 & Level 3 during the year.

Note 33 : Financial risk management objectives and policies

The Group's risk management policies are established to identify and analyse the risks faced by the Group, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Group's activities.

The Board of Directors have overall responsibility for the establishment and oversight of the Group's risk management framework.

In performing its operating, investing and financing activities, the Group is exposed to the Credit risk, Liquidity risk and Currency risk.

Market risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: interest rate risk, currency risk and other price risk, such as equity price risk and commodity risk. Financial instruments affected by market risk include loans and borrowings, deposits, FVTOCI investments and derivative financial instruments.

Credit risk on financial assets
Credit risk is the risk that counterparty will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The Company is exposed to credit risk from its operating activities (primarily trade receivables) and from its financing activities, including deposits with banks and financial institutions, foreign exchange transactions and other financial instruments.

Financial instruments
Credit risk from balances with banks, trade receivables, loans and advances and financial institutions is managed by the Group's management in accordance with the Group's policy. Investments of surplus funds are made only with approved counterparties and within credit limits assigned to each counterparty. Counterparty credit limits are reviewed by the top management on an annual basis, and may be updated throughout the year subject to approval of the Company's board of directors. The limits are set to minimise the concentration of risks and therefore mitigate financial loss through counterparty's potential failure to make payments.

Trade receivables and Loans and Advances
Customer credit risk and Loans and advances is managed by each business unit subject to the Group's established policy, procedures and control relating to customer credit risk management. An impairment analysis is performed at each reporting date on an individual basis for major trade receivables and loan and advances. The Group has not identifed any impairment loss as at March 31, 2023.

The following table provides information about the ageing of gross carrying amount of trade recievables as at :

(Rs in millions)

Gross Carrying Amount	**March 31, 2023**	**March 31, 2022**
Undisputed Trade recievables -		-
Less than 6 months	33.02	-
6 months - 1 year	0.10	29.37
1-2 Years	29.37	0.51
2-3 Years	0.51	21.66
More than 3 years	21.66	
Total	**84.67**	**51.55**

Other financial assets
Credit risk from balances with banks and financial institutions is managed by the Group in accordance with the Group's policy. Investments of surplus funds are made only in highly marketable debt instruments with appropriate maturities to optimise the cash return on instruments while ensuring sufficient liquidity to meet its liabilities.

Interest rate risk
Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The

Group's exposure to the risk of changes in market interest rates relates primarily to the Group's long-term debt obligations with floating interest rates.

The Group manages its interest rate risk by having a balanced portfolio of fixed and variable rate borrowings.

Interest rate sensitivity
The following table demonstrates the sensitivity to a reasonably possible change in interest rates on that portion of loans and borrowings affected, after excluding the credit exposure on fixed rate borrowing. With all other variables held constant, the Group's profit before tax is affected through the impact on floating rate borrowings, as follows:

(Rs in millions)

	Borrowings	Fixed Deposits	Borrowings	Fixed Deposits
Balance of Fixed Deposit and Borrowings	March 31, 2023		March 31, 2022	
- INR Millions	1,01,369.82	4,866.69	94,124.22	2,469.97
Increase in basis points - INR	50 bps	50 bps	50 bps	50 bps
Effect on profit before tax - INR Millions	(506.85)	24.33	(470.62)	12.35
Decrease in basis points - INR	50 bps	50 bps	50 bps	50 bps
Effect on profit before tax - INR Millions	506.85	(24.33)	470.62	(12.35)

Liquidity risk

Liquidity risk is the risk that the Group may not be able to meet its present and future cash and collateral obligations without incurring unacceptable losses. The Group's objective is to, at all times maintain optimum levels of liquidity to meet its cash and collateral requirements. The Group closely monitors its liquidity position and deploys a robust cash management system. It maintains adequate sources of financing including debt from banks at an optimised cost.

The table below summarises the maturity profile of the Group's financial liabilities based on contractual undiscounted payments:

As at March 31, 2023	Carrying amt	Total	On Demand	Less than 1 year	1 to 5 years	> 5 years
Long term Borrowings (Gross of unamortised transaction cost)	1,06,725.97	1,06,725.97	5,350.72	784.93	17,853.83	82,736.49
Other financial liabilities	38,330.17	38,330.17	-	2,549.37	35,780.80	-
Trade payables	19,471.20	19,471.20	-	15,305.48	4,165.72	
Total	**1,64,527.34**	**1,64,527.34**	**5,350.72**	**18,639.78**	**57,800.35**	**82,736.49**

As at March 31, 2022	Carrying amt	Total	On Demand	Less than 1 year	1 to 5 years	> 5 years
Long term Borrowings (Gross of unamortised transaction cost)	98,243.70	98,243.70	4,085.74	633.43	14,152.24	79,372.29
Other financial liabilities	38,191.92	38,191.92	-	3,023.13	35,168.79	-
Trade payables	17,217.19	17,217.19	-	11,218.34	5,998.85	-
Total	**1,53,652.81**	**1,53,652.81**	**4,085.74**	**14,874.90**	**55,319.88**	**79,372.29**

IRB Infrastructure Trust
Notes to Condensed Interim Special Purpose Consolidated / Combined Financial Statements

Note 34 : Related party disclosures

List of Related parties of the Fund

(i)	Parties to the InvIT	IRB Infrastructure Developers Limited (Sponsor and Project Manager)
		MMK Toll Road Private Limited (Investment Manager)
		IDBI Trusteeship Services Limited (Trustee of the IRB Infrastructure Trust)
(ii)	Associates, Promoters, Directors and Partners of the persons mentioned in clause (i) and (ii)	As per table below

List of associates, promoters, directors and partners of the persons mentioned in clause (i) and (ii)

Particulars	**IRB Infrastructure Developers Limited (Sponsor and Project Manager)**	**MMK Toll Road Private Limited (Investment Manager)**	**IDBI Trusteeship Services Limited (Trustee of IRB Infrastructure Trust)**
Promoters	Mr. Virendra D. Mhaiskar Mrs. Deepali V. Mhaiskar Mr. Virendra D. Mhaiskar (HUF)	IRB Infrastructure Developers Limited (IRBIDL)	IDBI Bank Limited LIC Corporation Limited General Insurace Corporation
Directors	Mr. Virendra D. Mhaiskar Mrs. Deepali V. Mhaiskar Mr. Jose Tamariz Martel Goncer Mr. Ravindra Dhariwal **Independent Directors** Mr. Chandrashekhar S. Kaptan Mr. Sunil H. Talati Mr. Sandeep J. Shah Mrs. Priti Savla	Mr. Virendra D. Mhaiskar Mr. Kunnasagaran Chinniah **Independent Directors** Mr. K G Krishnamurthy Mrs. Ranjana Paranjape	Mr. Samuel Joseph Jebaraj Mr. Pradeep Kumar Jain Mrs. Jayashree Vijay Ranade Mr. Pradeep Kumar Malhotra Ms. Baljinder Kaur Mandal
Associates	**A) Holding Company of Sponsor / Project Manager** IRB Holding Private Limited (Formerly Mhaiskar Ventures Private Limited) **B) Subsidiary Companies of Sponsor / Project Manager** **Project SPVs** 1. IRB Westcoast Tollway Limited (IRBWTL) 2. Solapur Yedeshi Tollway Limited (SYTL) 3. Yedeshi Aurangabad Tollway Limited (YATL) 4. Kaithal Tollway Limited (KTL) 5. AE Tollway Limited (AETL) 6. Udaipur Tollway Limited (UTL) 7. CG Tollway Limited (CGTL) 8. Kishangarh Gulabpura Tollway Limited (KGTL) 9. IRB Hapur Muradabad Tollway Limited (IRBHMTL) 10. Palsit Dankuni Tollway Private Limited (PDTPL) **Others** 1. Ideal Road Builders Private Limited (IRBPL) 2. Mhaiskar Infrastructure Private Limited (MIPL) 3. Modern Road Makers Private Limited (MRMPL) 4. Aryan Toll Road Private Limited (ATRPL) 5. ATR Infrastructure Private Limited (ATRFL) 6. IRB Infrastructure Private Limited (IRBFL) 7. Thane Ghodbunder Toll Road Private Limited (TGTRPL) 8. Aryan Infrastructure Investments Private Limited (AIIPL) 9. IRB MP Expressway Private Limited (formerly known as NKT Road and Toll Private Limited) 10. MMK Toll Road Private Limited (MMK) 11. IRB Kolhapur Integrated Road Development Company Private Limited (IRBK) 12. Aryan Hospitality Private Limited (AHPL) 13. IRB Sindhudurg Airport Private Limited (IRBSA) 14. IRB Goa Tollway Private Limited (IRB Goa) 15. IRB PS Highway Private Limited (formerly known as MRM Highways Private Limited) (IRBPS) 16. IRB Ahmedabad Vadodara Super Express Tollway Private Limited (IRBAV) 17. MRM Mining Private Limited (Formerly "J J Patel Infrastructural and Engineering Private Limited") (Subsidiary of MRMPL) 18. GE1 Expressway Private Limited (formerly known as IRB PP Project Private Limited) 19. VK1 Expressway Private Limited (VK1) 20. Modern Estate (Partnership Firm) 21. Pathankot Mandi Highway Private Limited 22. Chittoor Thachur Highway Private Limited 23. Meerut Budaun Expressway Limited - Subsidiary upto October 14, 2022 and Entity with Joint Control w.e.f. October 15,2022 24. VM7 Expressway Private Limmited 25. Samakhiyali Tollway Private Limited w.e.f 14.03.2023		

C) Other Associate Companies of Sponsor / Project Manager

1. Virendra D. Mhaiskar (HUF)
2. VCR Toll Services Private Limited
3. VDM Ventures Private Limited
4. DEUX Farming Films Private Limited
5. IRB Charitable Foundation

Key Managerial personnel of Project SPV Group (Only with whom Project SPV Group had transactions during the year/ there was balance outstanding at the year end)

1. Ms. Shilpa Todankar
2. Mr. Abhay Phatak (w.e.f. March 09, 2022)
3. Mr. Darshan Sangurdekar
4. Mr. Omprakash Singh
5. Mr. Chandrashekhar Kaptan
6. Mrs. Ranjana Paranjape (w.e.f October 06, 2021)
7. Mrs. Arati Taskar
8. Mr. Sudhir Rao Hoshing
9. Mr. Amitabh Murarka
10. Mr. Jitendra Sharma (upto February 28, 2022)
11. Mrs. Heena Raja (upto October 01, 2021)

IRB Infrastructure Trust
Notes to Consolidated Financial Statements for the year ended March 31, 2023

I. Related Party Transactions

Sr. No.	Particulars	Sponsor and Project Manager		Investment Manager		Fellow subsidiaries of Project SPV Group		Key Management Personnel of Project SPV Group		Trustee of IRB Infrastructure Trust	
		March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022
1	**Contract expenses**	-	-	-	-	**858.69**	**629.52**	-	-	-	-
	IRB Infrastructure Developers Limited	-	-	-	-	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	858.69	629.52	-	-	-	-
2	**Operation & Main. Expenses**	**2,719.41**	**1,906.45**	-	-	-	-	-	-	-	-
	IRB Infrastructure Developers Limited	2,719.41	1,906.45	-	-	-	-	-	-	-	-
3	**Finance Cost -Interest unwinding on Trade payable**	-	-	-	-	**765.06**	**655.79**	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	765.06	655.79	-	-	-	-
4	**Mobilisation advances recovered**	**509.07**	**743.02**	-	-	-	-	-	-	-	-
	IRB Infrastructure Developers Limited	509.07	743.02	-	-	-	-	-	-	-	-
5	**Material Aggregate Purchase**	-	-	-	-	**588.05**	**1,555.19**	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	588.05	1,555.19	-	-	-	-
6	**Advance given including BG margin given**	**896.12**	**451.03**	-	-	-	**62.57**	-	-	-	-
	IRB Infrastructure Developers Limited	896.12	451.03	-	-	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-			-	62.57	-	-	-	-
7	**General advance recovered - EPC**	**-**	**394.25**	-	-	-	**62.48**	-	-	-	-
	IRB Infrastructure Developers Limited	-	394.25	-	-	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-			-	62.48	-	-	-	-
8	**Construction cost**	**11,171.92**	**8,484.71**	-	-	-	-	-	-	-	-
	IRB Infrastructure Developers Limited	11,171.92	8,484.71	-	-	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-			-	-	-	-	-	-
9	**Amount held up**	**77.81**	**-**	-	-	**74.86**	**2.76**	-	-	-	-
	IRB Infrastructure Developers Limited	77.81	-	-	-						
	Modern Road Makers Private Limited	-	-			74.86	2.76	-	-	-	-
10	**Retention / Held up release during Year**	**-**	**-**	-	-	**45.63**	**-**	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	45.63	-	-	-	-	-
11	**Other payable**	**560.52**	**2,161.31**	-	-	**48.73**	**48.71**	-	-	-	-
	IRB Infrastructure Developers Limited	560.52	2,161.31	-	-	-	-	-	-	-	-
	Mhaiskar Infrastructure Private Limited	-	-	-	-	48.71	48.71	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	0.02	-	-	-	-	-
12	**Expenses incurred on our behalf**	**-**	**1.77**	-	-	-	-	-	-	-	-
	IRB Infrastructure Developers Limited	-	1.77	-	-	-	-	-	-	-	-
13	**Unsecured Loan received**	**1,532.48**	**4,759.00**	-	-	-	-	-	-	-	-
	IRB Infrastructure Developers Limited	1,532.48	4,759.00	-	-	-	-	-	-	-	-
14	**Unsecured Loan repaid**	**267.50**	**4,828.83**	-	-	-	-	-	-	-	-
	IRB Infrastructure Developers Limited	267.50	4,828.83	-	-	-	-	-	-	-	-
15	**Units Issued**	**1,236.75**	**1,946.33**	-	-	-	-	-	-	-	-
	IRB Infrastructure Developers Limited	1,236.75	1,946.33	-	-	-	-	-	-	-	-
16	**Trade payable**	**212.45**	**-**	-	**12.88**	**12.80**		-	-	-	-
	IRB Infrastructure Developers Limited	212.45	-	-	-	-		-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	12.80		-	-	-	-
	MMK Toll Road Private Limited	-	-	-	12.88	-		-	-	-	-
17	**Additional Intangible Asset**	-	-	-	-	-	**7,148.39**	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	-	7,148.39	-	-	-	-
18	**Deletion Intangible Asset**	-	-	-	-	**23.46**	-	-	-	-	-
	Modern Road Makers Limited	-	-	-	-	23.46	-	-	-	-	-
19	**Interest unwinding of Intangible Asset**	-	-	-	-	**33.74**	-	-	-	-	-
	Modern Road Makers Limited	-	-	-	-	33.74	-	-	-	-	-

I. Related Party Transactions

Sr. No.	Particulars	Sponsor and Project Manager		Investment Manager		Fellow subsidiaries of Project SPV Group		Key Management Personnel of Project SPV Group		Trustee of IRB Infrastructure Trust	
		March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022
20	**Investment Management Fees**	**-**	**-**	**56.52**	**42.48**	-	-	-	-	**-**	**-**
	MMK Toll Road Pvt Limited	-	-	56.52	42.48	-	-	-	-	-	-
21	**Trustee Fees**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**5.30**	**3.33**
	IDBI Trusteeship Services Limited	-	-	-	-	-	-	-	-	5.30	3.33
22	**Director sitting fees paid**	-	-	-	-	-	-	**1.83**	**1.65**	**1.83**	**1.65**
	Mrs. Arati Taskar	-	-	-	-	-	-	0.06	-	0.06	-
	Mr. Darshan Sangurdekar	-	-	-	-	-	-	0.22	0.23	0.22	0.23
	Mr.Omprakash Singh	-	-	-	-	-	-	0.19	0.23	0.19	0.23
	Mr. Sudhir Hoshing	-	-	-	-	-	-	0.06	-	0.06	-
	Mr. Jitendra Sharma	-	-	-	-	-	-	-	0.41	-	0.41
	Mrs. Heena Raja	-	-	-	-	-	-	-	0.06	-	0.06
	Mr. C S Kaptan	-	-	-	-	-	-	0.33	0.39	0.33	0.39
	Ms. Shilpa Todankar	-	-	-	-	-	-	0.51	0.26	0.51	0.26
	Mrs.Ranjana Paranjape	-	-	-	-	-	-	0.13	0.05	0.13	0.05
	Mr. Abhay Pathak	-	-	-	-	-	-	0.25	0.02	0.25	0.02
	Mr. Amitabh Murarka	-	-	-	-	-	-	0.06	-	0.06	-

II. Related party balances

(Rs. in millions)

Sr. No.	Particulars	Sponsor and Project Manager		Investment Manager		Fellow subsidaries of Project SPV Group		Key Management Personnel of Project SPV Group	
		March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022
1	**Short-term borrowings**	**477.81**	**477.81**	**-**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	477.81	477.81	-	-	-	-	-	-
2	**Trade payable**	**4,931.60**	**1,189.05**	**78.54**	**80.31**	**12,475.69**	**11,888.28**	**-**	**-**
	IRB Infrastructure Developers Limited	4,931.60	1,189.05	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	12,475.69	11,888.28	-	-
	MMK Toll Road Private Limited	-	-	78.54	80.31	-	-	-	-
3	**Mobilisation advances**	**33.68**	**435.80**	**-**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	33.68	435.80	-	-	-	-	-	-
4	**Advance given**	**451.18**	**502.86**	**-**	**-**	**0.03**	**0.03**	**-**	**-**
	IRB Infrastructure Developers Limited	451.18	502.86	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	0.03	0.03	-	-
5	**Retention payable**	**-**	**-**	**-**	**-**	**281.35**	**256.49**	**-**	**-**
	Modern Road Makers Private Limited	-	-	-	-	281.35	256.49	-	-
6	**Other payable including BG margin payable**	**32,246.65**	**31,711.77**	**-**	**-**	**3,697.39**	**3,648.68**	**-**	**-**
	IRB Infrastructure Developers Limited	32,246.65	31,711.77	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	1,800.84	1,800.83	-	-
	IRB Goa Tollway Private Limited	-	-	-	-	1,544.86	1,544.86	-	-
	Mhaiskar Infrastructure Private Limited	-	-	-	-	351.69	302.98	-	-
7	**Other payable (Exp incurred on our behalf)**	**1.77**	**1.77**	**-**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	1.77	1.77	-	-	-	-	-	-
8	**Unsecured Loan / other payable**	**4,872.91**	**3,607.93**	**-**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	4,872.91	3,607.93	-	-	-	-	-	-
9	**Trade Receivable**	**-**	**-**	**-**	**-**	**0.61**	**0.51**	**-**	**-**
	Modern Road Makers Private Limited	-	-	-	-	0.61	0.51	-	-
10	**Expense payable**	**491.53**	**938.23**	**-**	**-**	**-**	**-**	**0.51**	**-**
	IRB Infrastructure Developers Limited	491.53	938.23	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-			-	-	-	-
	IDBI Trusteeship Services Limited							0.51	-
11	**Other receivable**	**-**	**-**	**0.08**	**-**	**-**	**-**	**-**	**-**
	MMK Toll Road Private Limited	-	-	0.08	-	-	-	-	-
12	**Director sitting fees Payable**	**-**	**-**	**-**	**-**	**-**	**-**	**0.44**	**0.43**
	Mr. Mukeshlal Gupta	-	-	-	-	-	-	-	-
	Mr. Dhananjay K. Joshi	-	-	-	-	-	-	-	-
	Mr. Ajay P. Deshmukh	-	-	-	-	-	-	-	-
	Mr. Rajendra kumar Agarwal	-	-	-	-	-	-	-	0.01
	Mrs. Aarti Taskar	-	-	-	-	-	-	0.01	-
	Mr. Darshan Sangurdekar	-	-	-	-	-	-	0.05	0.05
	Mr. Omprakash Singh	-	-	-	-	-	-	0.04	0.05
	Mr. Sudhir Hoshing	-	-	-	-	-	-	0.01	-
	Mr. Jitendra Sharma	-	-	-	-	-	-	0.02	0.09
	Mr. Rajpaul S. Sharma	-	-	-	-	-	-	-	-
	Mrs. Heena Raja	-	-	-	-	-	-	-	-
	Mr. C S Kaptan	-	-	-	-	-	-	0.08	0.11
	Mrs. Kshama Vengsarkar	-	-	-	-	-	-	-	-
	Miss Shilpa Todankar	-	-	-	-	-	-	0.13	0.09
	Mr. Abhay Pathak	-	-	-	-	-	-	0.07	-
	Mr. Amitabh Murarka	-	-	-	-	-	-	0.01	-
	Mrs. Ranjana Paranjape	-	-	-	-	-	-	0.03	0.03

Note 35 : Capital management

Capital includes equity attributable to the unitholders to ensure that it maintains an efficient capital structure and healthy capital ratios in order to support its business and maximise unitholder value. The Group manages its capital structure and makes adjustments to it, in light of changes in economic conditions or its business requirements. To maintain or adjust the capital structure, the Project SPV Group may adjust the dividend payment to unitholders, return capital to shareholders or issue new shares. No changes were made in the objectives, policies or processes during the year ended March 31, 2023.

The Group monitors capital using a gearing ratio, which is net debt divided by total capital plus net debt. Net debt is calculated as loans and borrowings less cash and cash equivalents.

	March 31, 2023	March 31, 2022
Borrowings	1,05,079.60	97,279.00
Less: cash and cash equivalents (Note 10)	(731.31)	(287.23)
Net debt	1,04,348.29	96,991.77
Equity (Note 14 and 15)	77,533.53	77,396.04
Total equity	77,533.53	77,396.04
Capital and net debt	1,81,881.82	1,74,387.81
Gearing ratio (%)	57.37%	55.62%

In order to achieve this overall objective, the Group's capital management, amongst other things, aims to ensure that it meets financial covenants attached to the interest-bearing loans and borrowings that define capital structure requirements. Breaches in meeting the financial covenants would permit the bank to immediately call loans and borrowings. There have been no breaches in the financial covenants of any interest-bearing borrowings in the current period.

Note 36: Details of Project management fees and Investment management fees

Details of fees paid to project manager and investment manager as required pursuant to SEBI Circular No, CIRIMD/DFIl27i2016, dated November 29,2016 are as under:

i) Project Management Fees

In accordance with the Project Implementation Agreements, the fees and remuneration payable by the Project SPVs to the Project Manager has been worked out and agreed upon for the duration of current financial year, between the Project Manager, Investment Manager and the respective Project SPV, on an arm's length basis, after taking into account the extent of work to be done in respect of maintenance and other services to be provided by the Project Manager to such Project SPV.

ii) Investment Management Fees

Pursuant to the terms of the Investment Management Agreement, the fees will be paid to the Investment Manager for the services provided by it (“Management Fees”). The Management Fees have been revised for the Financial Year with the approval of the Unitholders, where the votes cast by Unitholders so entitled and voting in favor of a resolution are not less than one-and-a-half times the votes cast against such resolution. Pursuant to a resolution of the Unitholders, the Management Fees for the Financial Year 2023 has been revised to Rs.47.70 millions

Note 37: Revenue share / premium payment to NHAI

(a) During the year ended March 31, 2023, the Group has paid/accrued Rs. 5,671.70 millions (March 31, 2022, Rs. 1,779.36 millions) as Revenue Share to National Highways Authority of India ("NHAI") out of its toll collection in accordance with the Concession Agreements entered with NHAI. Income from Operations in the financials for the above periods is net off the above Revenue Share to NHAI.

(b) During the year ended March 31, 2017, AE Tollway Limited (AETL) has entered into a Concession agreement (CA) with NHAI for a period of 24 years. As per the terms of the CA, AETL has agreed to pay a premium in the form of "Additional Concession Fee" equal to Rs. 810.00 millions for the first year and each subsequent year such premium shall be determined by increasing the amount of premium in the respective year by an additional 5% as compared to the immediately preceding year. Management based on the legal opinion obtained and their evaluations of the terms of the CA, believes that such premium payable is restricted to the toll collection during the year and is in the form of revenue sharing arrangement. Accordingly, the premium payable for the year is accounted for as revenue share. The said treatment has been followed in case of KGTL and IRBHM where premium payment has commenced during the current year.

Note 38: Grant from Government Authorities

As per Article 25 of the respective Concession Agreement with the National Highways Authority of India ('NHAI' or 'the Grantor'), the Concessionaires are entitled to receive Grant for meeting the part of the project cost subject to the conditions laid down in the concession agreement. The details are as under:

(Rs in millions)

Name of the Company	Eligible for Grant	Grant received in FY 2016-17	Grant received in FY 2017-18	Grant received in FY 2018-19	Grant yet to be received
SYTL	1,890.00	1,391.70	403.80	**94.50**	-
KTL	2,340.00	1,533.79	806.21	**-**	-
YATL	5,580.00	-	4,230.24	**1,349.76**	-
IRBWTL	5,362.20	4,512.30	-	**849.90**	-
Total	**15,172.20**	**7,437.79**	**5,440.25**	**2,294.16**	**-**

Note 39 : Events after reporting period

The Trust has been listed on NSE from April 3, 2023.

Note 40: Information on segment reporting pursuant to Ind AS 108 - Operating Segments

The Project SPV Group has identified business segment in accordance with Indian Accounting Standard 108 "Operating Segment" notified under section 133 of the Companies Act 2013, read together with relevant rules issued thereunder. The Group has identified Built, Operate and Transfer ('BOT') as its single reportable segment. Moreover the Group's activities are restricted within India and hence no separate geographical segment disclosure is considered necessary.

IRB Infrastructure Trust
Notes to Condensed Interim Special Purpose Consolidated / Combined Financial Statements

Note 41 : Debt payment history

(Amount in Millions.)

Particulars	Opening Balance as on April 1, 2022	Loan availed during the period	Loan repaid during the period	Closing Balance as at March 31, 2023
Secured loan from Bank and Financial Institution	88,627.04	5,109.36	25,799.39	67,937.01
Debenture	5,497.18	28,060.00	124.36	33,432.82
Loan from related party	4,085.74	1532.48	267.5	5,350.72
Total	**98,209.96**	**34,701.84**	**26,191.25**	**1,06,720.55**

Particulars	Opening Balance as on April 1, 2021	Loan availed during the period	Loan repaid during the period	Closing Balance as at March 31, 2022
Secured loan from Bank and Financial Institution	85,269.71	4,066.31	708.98	88,627.04
Debenture	5,563.63		66.45	5,497.18
Loan from related party	4,155.57	3746.5	3816.326547	4,085.74
Total	**94,988.91**	**7,812.81**	**4,591.75**	**98,209.96**

Note 42: Capitalisation Statement

Particulars	**As at Mar 31, 2023**
Shareholders' Funds:	
Unit Capital	87,929.33
Subordinate Debt	
Other Equity	(10,395.80)
Minority interest	0.81
Total Shareholders' Funds	**77,534.34**
Borrowings	
Borrowings from related parties	5,350.72
Long term borrowings	98,943.95
Current maturities of long term borrowings	784.93
Total Debt	**1,05,079.60**
Total Capitalisation	**1,82,613.94**

Note 43: Earnings Per Unit (EPU)

EPU amounts are calculated by dividing the profit for the period attributable to unit holders by the weighted average number of Units outstanding during the year.

The following reflects the income and share data used in the EPU computations:

(Rs in millions)

	March 31, 2023	**March 31, 2022**
Profit attributable to unit holders for earnings	(2,271.59)	(4,435.98)
Weighted average number of Units for EPU	87,79,64,498	84,29,14,666
Face value per unit (in Rs)	100	100
Earning per unit (in Rs.)	(2.59)	(5.26)

Note 44 : Corporate Social Responsibility (CSR) Activities :

(₹ in Millions)

	As at March 31, 2023	**As at March 31, 2022**
Gross amount required to be spent by the company during the period	-	5.69

a) Amount spent during the year ending on March 31, 2023	**In cash**	**Yet to be paid in**	**Total**
i) Construction/acquisition of any asset	-	-	-
ii) On purposes other than (i) above (including previous year unspent amount)	-	-	-
	-	**-**	**-**

	In cash	**Yet to be paid in**	**Total**
a) Amount spent during the year ending on March 31, 2022			
i) Construction/acquisition of any asset	-	-	-
ii) On purposes other than (i) above	8.00	-	8.00
b) Yet to be paid in cash for ongoing project	-	-	-
	8.00	**-**	**8.00**

Amount spent in the current is inclusive of unspent amount of precious year

Note 45 : Contributed Equity

Units are classified as equity. Incremental costs attributable to the issue of units are directly recorded in equity, net of tax.

Note 46 : Other Statutory information

i) The Group have not traded or invested in Crypto currency or Virtual Currency during the financial year.

ii) The Group does not hold benami property and no proceedings under Benami transaction (Prohibition) Act 1988 have been initiated against the Group.

iii) The Group do not have any transactions with companies struck off.

iv) The Group have not any such transaction which is not recorded in the books of accounts that has been surrendered or disclosed as income during the year in the tax assessments under the Income Tax Act, 1961 (such as, search or survey or any other relevant provisions of the Income Tax Act, 1961.

v) The Group did not have any long-term contracts including derivative contract for which there were any material foreseeable losses.

vi) The Group has not declared a wilful defaulter by any bank/ financial institution or any other lender during the year.

Note 47 : Previous year comparatives

Previous period's figures have been regrouped/reclassified, wherever necessary, to confirm current period's classification.

Note 48 : Disclosure pursuant to Appendix - A to Ind AS 11 - " Service Concession Arrangements" ('SCA')

(A) Disclosures with regard to Toll Collection Rights (Intangible Assets)

Sr. No.	Name of Concessionaire	Start of concession period under concession agreement (Appointed date)	End of concession period under concession agreement	Period of concession since the appointed date	Construction completion date or expected construction completion date, as applicable
1	IRB Westcoast Tollway Limited	March 3, 2014	March 2, 2042	28 years	June 30, 2022
2	Solapur Yedeshi Tollway Limited	January 21, 2015	January 20, 2044	29 years	October 15, 2019
3	Yedeshi Aurangabad Tollway Limited	July 1, 2015	June 30, 2041	26 years	September 24, 2020
4	Kaithal Tollway Limited	July 15, 2015	July 14, 2042	27 years	March 29, 2019
5	AE Tollway Limited	August 1, 2016	July 31, 2040	24 years	November 24, 2020
6	Udaipur Tollway Limited	September 3, 2017	September 2, 2038	21 years from Appointed Date	June 01, 2021
7	CG Tollway Limited	November 4, 2017	November 3, 2037	20 years from Appointed Date	August 14, 2021
8	Kishangarh Gulabpura Tollway Limited	February 21, 2018	February 20, 2038	20 years from Appointed Date	June 30, 2022
9	IRB Hapur Moradabad Tollway Limited	May 28, 2019	May 26, 2041	22 years from Appointed Date	June 30, 2022
10	Palsit Dankuni Tollway Private Limited	April 2, 2022	April 1, 2039	17 years from Appointed Date	Under construction

Note:

The above BOT/ DBFOT projects shall have following rights/ obligations in accordance with the Concession Agreement entered into with the Respective Government Authorities:-

a. Rights to use the Specified assets
b. Obligations to provide or rights to expect provision of services
c. Obligations to deliver or rights to receive at the end of the Concession.

Note 49 : Segment reporting

The Group's activities comprise of Toll collection in various parts of India based on the guiding principles given in Ind AS - 108 "Operating Segments", this activity falls within a single operating segment and accordingly the disclosures of the standard have not separately been given.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

Place: Mumbai
Date: 12.05.2023

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Place : Mumbai
Date: 12.05.2023

gokhale & sathe (regd.)
chartered accountants
308/309, Udyog Mandir No. 1,
7-C, Bhagoji Keer Marg,
Mahim, Mumbai 400 016

INDEPENDENT AUDITOR'S REPORT
To the Unit Holders of IRB Infrastructure Trust
REPORT ON THE AUDIT OF THE CONSOLIDATED IND AS FINANCIAL STATEMENTS

OPINION

We have audited the accompanying Consolidated Ind AS Financial Statements of IRB Infrastructure Trust ("the InvIT" or "the Trust") and its subsidiaries (the Trust and its subsidiaries together referred to as "the Group"), which comprise the Consolidated Balance Sheet as at 31 March 2022, the Consolidated Statement of Profit and Loss including Other Comprehensive Income, the Consolidated Statement of Cash Flows, the Consolidated Statement of Changes in Unit Holder's Equity and the Consolidated Statement of Total Returns at Fair Value for the year ended 31 March 2022, the Consolidated Statement of Net Assets at Fair value as at 31 March 2022 and notes to the Consolidated Financial Statements including a Summary of Significant Accounting Policies and Other Explanatory Information (hereinafter referred to as "the Consolidated Financial Statements").

In our opinion and to the best of our information and according to the explanations given to us and based on the consideration of reports of other auditors on separate financial statements and on the other financial information of the subsidiaries, the aforesaid consolidated financial statements give the information required by the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time including any guidelines and circulars issued thereunder (together referred to as the "SEBI lnvlT Regulations") in the manner so required and give a true and fair view in conformity with the Indian Accounting Standards prescribed under Rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015 ("Ind AS"), as amended and other accounting principles generally accepted in India, of the consolidated State of Affairs of the Group as at 31 March 2022, its consolidated Loss including other comprehensive income, its consolidated Cash Flows, consolidated changes in Unit Holders' Equity, the consolidated total Returns at fair value for the year ended 31 March 2022 and the consolidated Net Assets at fair value as at 31 March 2022.

BASIS FOR OPINION

We conducted our audit of the Consolidated Financial Statements in accordance with the Standards on Auditing ("SAs") issued by the Institute of Chartered Accountants of India. Our responsibilities under those Standards are further described in the Auditor's Responsibilities for the Audit of the consolidated financial statements section of our report. We are independent of the Group in accordance with the Code of Ethics issued by the Institute of Chartered Accountants of India together with the ethical requirements that are relevant to our audit of the Consolidated Financial Statements under the provisions of the SEBI InvIT Regulations and we have fulfilled our other ethical responsibilities in accordance with these requirements and the Code of Ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on the Consolidated Financial Statements.

KEY AUDIT MATTERS

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the Consolidated Financial Statements of the current period. These matters were addressed in the context of our audit of the Consolidated Financial Statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. We have determined the matters described below to be the key audit matters to be communicated in our report.

PARTICULARS	HOW THEY WERE ADDRESSED IN OUR AUDIT
1. Loss on fair value measurement of other payable / deferred consideration payable to IRB Group. Pursuant to settlement of IRB Infrastructure Trust by IRB Infrastructure Developers Limited (Sponsor), as a Private INVIT, the Trust has entered into Debt Novation Agreements (DNA). As per the terms of DNA, in consideration of assets taken over in 9 SPVs, Trust has issued units and agreed to transfer to the Sponsor, the claim amounts when and to the extent the same are eventually received by Project SPVs, on account of Sponsor Claims. Such Sponsor Claims shall be lodged after obtaining COD by respective SPVs. The amount realizable against claims has been estimated by the valuers appointed by the Management based on the weighted average of probabilities of realization of such claims. Based on the fair value of liability as estimated by the valuers, a resultant impact in the value of liability has been recognized under the head 'Loss on fair value measurement of other payable'.	• We reviewed the Placement Memorandum filed with SEBI and the consequential legal documentation entered into by the Trust, including inter alia the Debt Novation Agreements and their reflection in the underlying SPVs. • We have reviewed the methodology adopted by the valuer in deriving the value including the assumptions made. • We assessed the estimates of Fair Value provided in the Valuation Report and realizability of claims as indicated therein. • We also reviewed the reasonableness of the variables applied in the said computation. • Based on the above, the fair value of liability to the Sponsor, as estimated by the valuer, taking into consideration the weighted average of probabilities of realization has been validated.
2. Impairment Testing The Group has toll collection rights as intangible assets pursuant to the concession agreement. The carrying value of these rights acquired under BOT basis is being compared to the recoverable value (which is value in use in the instant case) thereof to ascertain if there is any impairment. The process involves estimating the value in use of the asset which is determined by forecasting and discounting future cash flows. The same is sensitive to changes in discount rate, traffic growth rates, toll growth rates etc. The determination of the recoverable amount of the toll collection right involves significant judgment due to inherent uncertainty in the assumptions supporting the recoverable amount of these rights.	• We evaluated management's assessment on impairment for intangible assets under development and intangible assets – toll collection rights by testing the assumptions and methodologies used by the Management. • Referred to valuation reports and Traffic Growth Study Reports and determined reasonableness of future toll revenue. • Evaluated the potential changes in major components as compared to previous year vis-à-vis actual performance in order to evaluate whether the inputs and assumptions used in the cash flow forecasts were suitable. • Assessed the appropriateness of the weighted average cost of capital used in determining

PARTICULARS	HOW THEY WERE ADDRESSED IN OUR AUDIT
Accordingly, the evaluation of impairment of toll collection rights has been determined as a Key Audit Matter.	recoverable amount. • Performed sensitivity analysis of key assumptions used in valuation. • Tested the arithmetical accuracy of the model.
3. Cost Overrun We have been informed that, since April 2020, Due to pandemic situation, construction of certain projects have been affected and delayed, which has resulted into additional costs to projects in relation to machinery idling, labor expenses, material prices, restoration of damaged works etc. Considering above, SPVs have been charged with such additional costs. We were further informed that SPVs will raise claim with NHAI in this regard which shall, repay the costs immediately upon receipt of claims. Based on nature of transactions, the same are considered to be Key Audit Matter.	• We perused the legal opinion obtained in an earlier matter in case of one of the project SPVs, IRB WC, over similar issue to understand the tenability of the claims to be filed with the Authority. • We reviewed addendum to the Project Implementation Agreement. • We also referred to the invoices raised on the SPVs. • Tested the arithmetical accuracy of fair valuation of trade payables towards Cost Overrun.

INFORMATION OTHER THAN THE CONSOLIDATED FINANCIAL STATEMENTS AND AUDITOR'S REPORT THEREON

The Board of Directors of the Investment Manager is responsible for the preparation of the other information. The other information comprises the information included in the Management Discussion and Analysis, Report of Investment Manager including annexures to Investment Manager's Report and other information as required to be given by SEBI InvIT Regulations but, does not include the Consolidated Financial Statements and our report thereon.

Our opinion on the Consolidated Financial Statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the Consolidated Financial Statements or our knowledge obtained during the course of our audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

RESPONSIBILITIES OF THE BOARD OF DIRECTORS OF INVESTMENT MANAGER FOR THE CONSOLIDATED FINANCIAL STATEMENTS

The Board of Directors of Investment Manager is responsible for the preparation of these Consolidated Financial Statements that give a true and fair view of the consolidated financial position as at 31 March 2022, consolidated financial performance including other comprehensive income, consolidated cash flows and consolidated changes in unit holder's equity and the consolidated total returns at fair value for the year ended 31

March 2022, the consolidated net assets at fair value as at 31 March 2022 in accordance with the accounting principles generally accepted in India, including the Indian Accounting Standards specified under Rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended and relevant rules issued thereunder read with read with the SEBI InvIT Regulations. This responsibility also includes maintenance of adequate accounting records in accordance with the provisions of the SEBI InvIT Regulations for safeguarding of the assets of the Group and for preventing and detecting frauds and other irregularities; selection and application of appropriate accounting policies; making judgements and estimates that are reasonable and prudent; and design, implementation and maintenance of adequate internal financial controls for ensuring the accuracy and completeness of accounting records, relevant to the preparation and presentation of the consolidated financial statements that give a true and fair view and are free from material misstatement, whether due to fraud and error.

In preparing the Consolidated Financial Statements, the Board of Directors of Investment Manager and respective Board of Directors of the subsidiary companies included in the Group are responsible for assessing the ability of the Group to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors of Investment Manager and respective Board of Directors of the subsidiary companies included in the Group either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

The Board of Directors of the Investment Manager and the respective Board of Directors of the subsidiary companies included in the Group are also responsible for overseeing the financial reporting process.

AUDITOR'S RESPONSIBILITY FOR THE AUDIT OF THE CONSOLIDATED IND AS FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance whether the Consolidated Financial Statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with SAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also,

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances.

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- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board of Directors of the Investment Manager.

- Conclude on the appropriateness of use of the going concern basis of accounting by the Board of Directors of Investment Manager and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the Consolidated Financial Statements. We are responsible for the direction, supervision and performance of the audit of the Financial Statements of such entities included in the Consolidated Financial Statements.

Materiality is the magnitude of misstatements in the Consolidated Financial Statements that, individually or in aggregate, makes it probable that the economic decisions of a reasonably knowledgeable user of the financial statements may be influenced. We consider quantitative materiality and qualitative factors in (i) planning the scope of our audit work and in evaluating the results of our work; and (ii) to evaluate the effect of any identified misstatements in the Financial Statements.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the Consolidated Financial Statements of the current period and are therefore the Key Audit Matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

OTHER MATTERS

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We did not audit the Financial Statements of 4 subsidiaries, whose Financial Statements reflect Total Assets of Rs. 1,01,778.62 million and Net Assets of Rs. 34261.74 million as at 31 March 2022, Total Revenues of Rs. 4,936.64 million, Losses after taxes of Rs. 3944.85 million and Net Cash Outflows amounting to Rs. 25.66 million for the year ended on 31 March 2022, as considered in the Consolidated Financial Statements. These Financial Statements have been audited by other auditor whose reports have been furnished to us by the Investment Manager and our opinion on the Consolidated Financial Statements, in so far as it relates to the amounts and disclosures included in respect of these subsidiaries, is based solely on the reports of the other auditor.

Our opinion above, on the Consolidated Financial Statements, and our report on other legal and regulatory requirements below, are not modified in respect of the above matters with respect to our reliance on the work done by and the reports of the other auditor.

REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

Based on our audit and as required by SEBI InvIT Regulations, we report that**:**

a. We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit of the aforesaid Consolidated Financial Statements.

b. In our opinion, proper books of account as required by law relating to preparation of the aforesaid Consolidated Financial Statements have been kept by the Trust so far as it appears from our examination of those books and the reports of the other auditors.

c. The consolidated Balance Sheet, the consolidated Statement of Profit and Loss, the consolidated Statement of Cash Flows, the consolidated Statement of Changes in Unit Holders' Equity, the consolidated Statement of Net Assets at fair value and the consolidated Statement of Total Returns at fair value are in agreement with the books of account.

d. In our opinion, the aforesaid financial statements comply with the Indian Accounting Standards specified under Rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended.

For Gokhale & Sathe,
Chartered Accountants
Firm Registration No.: 103264W

SD/-
CA Kaustubh Deshpande,
Partner
Membership No. 121011
UDIN: 22121011AJBCRQ6176
Date: 06th May 2022
Place: Mumbai

tel.: (22) 43 48 42 42 | fax: (22) 43 48 42 41 | office@gokhalesathe.in

IRB Infrastructure Trust
Consolidated Balance sheet as at March 31, 2022

(Amount in Millions.)

	Notes	As at March 31, 2022	As at March 31, 2021
ASSETS			
Non-current assets			
Property, Plant and Equipment	4	8.85	10.59
Goodwill		604.54	604.54
Other Intangible assets	4	2,21,859.48	2,11,717.65
Intangible assets under development	4	1,290.89	4,684.26
Financial assets			
i) Others	7	2.74	3.28
Other non-current assets	9	656.55	0.14
Deferred tax assets (net)	8	287.67	-
		2,24,710.72	**2,17,020.47**
Current assets			
Financial assets			
i) Investments	5	659.54	572.50
ii) Trade receivables	6	51.55	100.24
iii) Cash and cash equivalents	10	287.23	413.49
iv) Bank balance other than (iii) above	11	2,469.97	1,744.35
v) Others	7	1,604.18	635.99
Current tax assets (net)	12	114.22	147.11
Other current assets	13	1,677.46	2,166.40
		6,864.15	**5,780.08**
Total assets		**2,31,574.87**	**2,22,800.55**
EQUITY AND LIABILITIES			
Equity			
Equity share capital	14	85,504.33	81,688.00
Other equity	15		
Other reserves		(8,108.29)	(3,669.05)
Total Equity		**77,396.04**	**78,018.95**
Non-controlling interests			
		77,396.04	**78,018.95**
Non-current liabilities			
Financial liabilities			
i) Borrowings	16	92,559.82	89,161.31
ii) Other financial liabilities	18	35,168.79	24,720.81
iii) Trade payables	19	5,998.85	2,463.41
Provisions	20	1,350.57	357.84
Deferred tax liabilities (net)	8	-	424.33
		1,35,078.03	**1,17,127.70**
Current liabilities			
Financial liabilities			
i) Borrowings	16	4,719.18	4,784.87
ii) Trade payables	17		
a) total outstanding dues of micro enterprises and small enterprises		3.69	13.18
b) total outstanding dues of creditors other than micro enterprises and small enterprises		11,214.65	2,547.07
iii) Other financial liabilities	18	3,023.13	20,198.86
Other current liabilities	21	140.15	109.78
Current tax liabilities (net)		-	0.14
		19,100.80	**27,653.90**
Total liabilities		**1,54,178.83**	**1,44,781.60**
Total equity and liabilities		**2,31,574.87**	**2,22,800.55**

Summary of significant accounting policies 3

The accompanying summary of significant accounting policies and other explanatory information (notes) are an integral part of Consolidated Financial Statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
Kaustubh Deshpande
Partner
Membership No. 121011

Place: Mumbai
Date: 06/05/2022

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.:A27833

Place: Mumbai
Date: 06/05/2022

IRB Infrastructure Trust
Consolidated Statement of Profit and Loss for the year ended March 31, 2022

(Amount in Millions.)

Particulars	Notes	For the year ended March 31, 2022	For the year ended March 31, 2021
Income			
Revenue from operations	22	12,404.84	10,361.51
Other income	23	100.13	112.71
Total income		**12,504.97**	**10,474.22**
Expenses			
Road work and site expenses	24	3,989.80	3,983.41
Depreciation and amortisation expenses	25	1,674.90	1,255.69
Finance costs	26	9,538.70	8,228.17
Investment Manager Fees		42.48	46.25
Other expenses	27	2,406.43	138.32
Total expenses		**17,652.31**	**13,651.84**
Profit/(loss) before tax		**(5,147.34)**	**(3,177.62)**
Tax expenses			
Current tax		8.87	46.20
Deferred tax		(720.23)	369.63
MAT Credit utilisation / (Entitlement)		-	(340.97)
Total tax expenses		**(711.36)**	**74.86**
Profit/(loss) after tax		**(4,435.98)**	**(3,252.48)**
Other comprehensive income			
Item that will not be reclassified to profit or loss:			
(a) Re-measurement (loss)/gain on defined benefit plans (net of taxes)		-	-
Other comprehensive income/ (loss) for the year, net of tax		-	-
Total comprehensive income /(loss) for the year		**(4,435.98)**	**(3,252.48)**
Profit/(loss) after tax		**(4,435.98)**	**(3,252.48)**
Attributable to:			
Owners of the Project SPV Group		(4,435.98)	(3,252.48)
Non-controlling interests			-
Total comprehensive income for the year			
Attributable to:			
Equity holders of the Project SPV Group		(4,435.98)	(3,252.48)
Non-controlling interests		-	-
Earnings per unit (of Rs 100 each)			
Basic		(5.26)	(4.14)
Diluted		(5.26)	(4.14)

Summary of significant accounting policies 3

The accompanying summary of significant accounting policies and other explanatory information (notes) are an integral part of Consolidated Financial Statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
Kaustubh Deshpande
Partner
Membership No. 121011

Place: Mumbai
Date: 06/05/2022

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.:A27833

Place: Mumbai
Date: 06/05/2022

IRB Infrastructure Trust
DISCLOSURES PURSUANT TO SEBI CIRCULARS
(SEBI Circular No. CIR/IMD/DF/114/2016 dated 20-Oct-2016 and No. CIR/IMD/DF/127/2016 dated 29-Nov-2016

A. Consolidated statement of net assets at fair value

(Rs. in Millions)

	As at March 31, 2022		As at March 31, 2021	
Particulars	**Book value**	**Fair value**	**Book value**	**Fair value**
A. Assets	2,31,574.87	2,52,287.18	2,22,800.55	2,45,589.09
B. Liabilities (at book value)	1,54,178.83	1,52,169.83	1,42,318.19	1,31,113.67
C. Net Assets (A-B)	77,396.04	1,00,117.36	80,482.36	1,14,475.43
D. Number of units (in millions)	855.04	855.04	816.88	816.88
E. NAV (C/D) (Amount in Rs.)	**90.52**	**117.09**	**98.52**	**140.14**

Project wise break up of fair value of total assets:

Name of the project	**As at March 31, 2022**
IRB Westcoast Tollway Limited (IRBWTL)	29,419.81
Solapur Yedeshi Tollway Limited (SYTL)	19,669.34
Yedeshi Aurangabad Tollway Limited (YATL)	35,731.21
Kaithal Tollway Limited (KTL)	28,036.76
AE Tollway Limited (AETL)	29,936.78
Udaipur Tollway Limited (UTL)	27,731.21
CG Tollway Limited (CGTL)	25,806.63
Kishangarh Gulabpura Tollway Limited (KGTL)	19,940.03
IRB Hapur Moradabad Tollway Limited (IRBHMTL)	35,707.46
Subtotal	**2,51,979.23**
Add : IRB Infrastructure Trust Assets	**307.96**
Total assets	**2,52,287.18**

B. Consolidated statement of total returns at fair value :

Particulars	**For the year ended March 31, 2022**	**For the year ended March 31, 2021**
Total Comprehensive Income (As per the Statement of Profit and Loss)	(4,435.98)	(3,252.48)
Add/Less: other changes in fair value (e.g., in investment property, property, plant & equipment (if cost model is followed)) not recognized in total comprehensive income	22,721.31	33,993.07
Total Return	**18,285.33**	**30,740.59**

Notes :
Fair value of assets as at March 31, 2022 and March 31, 2021 and other changes in fair value for the year then ended as disclosed in the above tables are derived based on the fair valuation reports issued by the independent valuer appointed under the InvIT Regulations.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
Kaustubh Deshpande
Partner
Membership No. 121011

Place: Mumbai
Date: 06/05/2022

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
Virendra D.Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.:A27833

Place: Mumbai
Date: 06/05/2022

IRB Infrastructure Trust
Consolidated Statement of Cash Flows for the year ended March 31, 2022

(Amount in Millions.)

Particulars	For the year ended March 31, 2022	For the year ended March 31, 2021
Cash flow from operating activities		
Profit/(loss) before tax	(5,147.34)	(3,177.62)
Adjustment to reconcile profit before tax to net cash flows:		
Depreciation and amortisation	1,674.90	1,255.69
Resurfacing expenses	992.73	292.88
Fair value gain on mutual funds	(0.78)	(1.43)
Net (gain) on sale of current Investment	(13.93)	(13.08)
Finance costs	9,538.70	8,228.17
Interest income	(81.69)	(82.04)
Other non operative income	(3.73)	(13.28)
Gain/(loss) on fair value measurement of other payable	2,161.31	(2.86)
Operating profit before working capital changes	**9,120.17**	**6,486.41**
Movement in working capital:		
Increase/ (decrease) in trade payables	12,193.54	2,277.55
Increase/ (decrease) in other financial liabilities	306.46	(2,516.37)
(Decrease)/ increase in other liabilities	30.37	(52.75)
Decrease / (increase) in trade receivables	48.69	251.88
(Decrease) in loans	-	(4.53)
(Increase) / decrease in other financial assets	(989.59)	(213.15)
(Increase) / decrease in other assets	(167.46)	1,232.51
Cash generated from operations	**20,542.18**	**7,461.55**
Taxes paid (net)	32.09	14.70
Net cash flows generated from operating activities (A)	**20,574.27**	**7,476.25**
Cash flows from investing activities		
Purchase of property, plant and equipment including CWIP, intangible assets including intangible assets under development and capital advances	(17,617.12)	(18,933.90)
Proceeds from sale/ (purchase) of current investments (net)	(72.33)	(557.99)
Investments in bank deposits (having original maturity of more than three months) (net)	(725.62)	(167.95)
Interest received	107.36	75.08
Net cash flows (used in) investing activities (B)	**(18,307.71)**	**(19,584.76)**
Cash flows from financing activities		
Proceeds from non-current borrowings	4,066.31	9,204.86
Repayment of non-current borrowings	(775.43)	(39.62)
Proceed of current borrowings	4759.00	4,155.57
Repayment of current borrowings	(4828.83)	-
Issue of equity share capital	3,816.33	5,105.50
Unit issue expenses	(3.26)	(103.82)
Finance cost paid	(9,426.95)	(5,990.16)
Net cash flows (used in)/generated from financing activities (C)	**(2,392.82)**	**12,332.32**
Net increase / (decrease) in cash and cash equivalents (A+B+C)	**(126.26)**	**223.81**
Cash and cash equivalents at the beginning of the year	413.49	189.70
Cash and cash equivalents at the end of the year (refer note 10)	**287.23**	**413.49**
Components of cash and cash equivalents		
Balances with scheduled banks:		
- Trust, retention and other escrow accounts	161.56	113.94
- Others	118.03	288.60
- In deposit accounts with original maturity less than 3 months	-	-
Cash on hand	7.64	10.96
Total cash and cash equivalents	**287.23**	**413.49**

IRB Infrastructure Trust
Consolidated Statement of Cash Flows for the year ended March 31, 2022

(Amount in Millions.)

Particulars	For the year ended March 31, 2022	For the year ended March 31, 2021
Debt reconciliation statement in accordance with Ind AS 7		
Opening balances		
Long term borrowing	90,833.34	78,815.63
Short term borrowing	4,155.57	-
Movements		
Cash Flows		
Long term borrowing	3,290.88	9,165.24
Short term borrowing	(69.83)	4,155.57
Non-cash changes		
Long term borrowing	-	2,852.47
Short term borrowing	-	-
Closing balances		
Long term borrowing	94,124.22	90,833.34
Short term borrowing	4,085.74	4,155.57

Notes :
1. All figures in bracket are outflow.
2. Taxes paid are treated as arising from operating activities and are not bifurcated between investing and financing activities.

3. The Consolidated cash flow statement has been prepared under Indirect Method as per Ind AS 7 "Statement of Cash Flows".

Summary of significant accounting policies 3
The accompanying summary of significant accounting policies and other explanatory information (notes)are an integral part of Consolidated Financial Statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
Kaustubh Deshpande
Partner
Membership No. 121011

Place: Mumbai
Date: 06/05/2022

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.:A27833

Place: Mumbai
Date: 06/05/2022

Statement of changes in equity
A. Unit capital:

(Amount in Millions.)

	March 31, 2022		March 31, 2021	
i) Units issued, subscribed and fully paid	**No.**	**Rs.**	**No.**	**Rs.**
Units having face value of Rs. 100/-				
Balance at the beginning of the year	81,68,80,000	81,688.00	76,58,25,000	76,582.50
Issue of Unit capital (Note 14)	3,81,63,265	3,816.33	5,10,55,000	5,105.50
Balance at the end of the year	**85,50,43,265**	**85,504.33**	**81,68,80,000**	**81,688.00**

B. Other equity

(Amount in Millions.)

	March 31, 2022	March 31, 2021
Retained earnings		
Balance at the beginning of the year	(3,669.05)	(312.75)
Profit/(loss) for the year	(4,435.98)	(3,252.48)
Pre-incorporation profit		
Unit Issue expenses	(3.26)	(103.82)
Balance at the end of the year	**(8,108.29)**	**(3,669.05)**

Summary of significant accounting policies 3

The accompanying summary of significant accounting policies and other explanatory information (notes)are an integral part of Consolidated Financial Statements.

As per our report of even date attached

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
Kaustubh Deshpande
Partner
Membership No. 121011

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.:A27833

Place: Mumbai
Date: 06/05/2022

Place: Mumbai
Date: 06/05/2022

IRB Infrastructure Trust
Notes to Consolidated Financial Statements for the year ended March 31, 2022

1 **Corporate Information**

The IRB Infrastructure Trust (the "Fund" / "Trust") is a trust settled pursuant to the indenture of trust dated August 27, 2019 which is registered under the Registration Act, 1908 and under the Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time. The Fund is settled by the Sponsor, IRB Infrastructure Developers Limited ("IRB" or the "Sponsor"), an infrastructure development company in India. The Trustee to the Fund is IDBI Trusteeship Services Limited (the "Trustee"). Investment manager for the Fund is MMK Toll Road Private Limited (the "Investment Manager"). The Trust has received registraion certificate from SEBI on November 25, 2019.

The Fund has been formed to invest in infrastructure assets primarily being in the road sector in India. The Fund's road projects are eligible infrastructure projects under the InvIT Regulations and held through special purpose vehicles ("Project SPVs" together as "Project SPV Group"). The Fund's portfolio comprises of nine road projects as listed below:-

Project SPV Name**	Residual Concession life*	Proposed shareholding	Nature of Investment	Status	Principal Activities	Country of incorporation
IRB Westcoast Tollway Limited (IRBWTL)	19 years 11 Months 2 days	100%	Subsidiary	Tolling and Construction	Construction and operation of road including toll collection.	India
Solapur Yedeshi Tollway Limited (SYTL)	21 years 9 Months 21 days	100%	Subsidiary	Operating		India
Yedeshi Aurangabad Tollway Limited (YATL)	19 years 3 Months 1 days	100%	Subsidiary	Operating		India
Kaithal Tollway Limited (KTL)	20 years 3 Months 14 days	100%	Subsidiary	Operating		India
AE Tollway Limited (AETL)	18 years 4 Months 2 days	100%	Subsidiary	Operating		India
Udaipur Tollway Limited (UTL)	16 years 5 Months 3 days	100%	Subsidiary	Operating		India
CG Tollway Limited (CGTL)	15 years 7 Months 5 days	100%	Subsidiary	Operating		India
Kishangarh Gulabpura Tollway Limited (KGTL)	15 years 10 Months 22 days	100%	Subsidiary	Tolling and Construction		India
IRB Hapur Moradabad Tollway Limited (IRBHMTL)	19 years 1 Months 25 days	100%	Subsidiary			India

* Represents residual concession life as at March 31, 2022 as per original concession period (without considering extension of concession period, if any).

** Of the above Project SPVs, IRBWTL, SYTL, YATL, AETL, CGTL, UTL and IRBHMTL have been converted to public companies on November 13, 2019 and KTLand KGTL on November 14, 2019 .

2 **Basis of preparation**

A. Statement of compliance

The Consolidated Financial Statements of Project SPV Group comprises of Consolidated Balance Sheet as at March 31 2022 and 31 March 2021 , the Consolidated Statement of Profit and Loss (including Other Comprehensive Income) of the Project SPV group, the Consolidated Statement of Cash Flow Statement, the Consolidated Statement of Changes in Equity of the movement of the unit holders for the year ended March 31 2022 and March 31, 2021 , the consolidated statement of net assets at fair value as at March 31 2022 and March 31, 2021 and the consolidated statement of total returns at fair value for the year ended March 31, 2022 and March 31, 2021, a summary of significant accounting policies, notes and other explanatory Information.

The Consolidated Financial Statements of the Project SPV Group have been prepared in accordance with Indian Accounting Standards (Ind AS) as per the Companies (Indian Accounting Standards) Rules, 2015 notified under Section 133 of the Act, read with other relevant provisions of the Act.The ConsolidatedFinancial Statements have been prepared on a historical cost basis, except for certain assets and liabilities which have been measured at fair value.

The Consolidated Financial Statements are presented in Rs. in millions, except when otherwise indicated.Wherever the amount represented '0' (zero) construes value less than Rupees five thousand.

B Basis of preparation of Consolidated Financial Statements

The Consolidated Financial Statements comprise the financial statements of the Project SPV Group.

Consolidated Financial Statements are prepared using uniform accounting policies for like transactions and other events in similar circumstances.

The financial statements of all Project SPVs used for the purpose of consolidation are drawn up to the same reporting date i.e. year ended on March 31.

Consolidation procedure:

(a) Consolidate like items of assets, liabilities, equity, income, expenses and cash flows of Project SPVs.

(b) Eliminate in full intra Project SPVs assets and liabilities, income, expenses and cash flows relating to transactions between Project SPVs of the Project SPV Group (profits or losses resulting from intra Project SPV Group transactions that are recognised in assets, such as inventory and property, plant and equipment, are eliminated in full). Profit or loss and each component of other comprehensive income (OCI) are attributed to the equity holders of the Project SPV Group and to the non-controlling interests, even if this results in the non-controlling interests having a deficit balance.

3 **Summary of significant accounting policies**

3.01 **Current versus non-current classification**

The Project SPV Group has identified twelve months as its operating cycle. The operating cycle is the time between the acquisition of assets for processing and their realisation in cash and cash equivalents.

The Project SPV Group presents assets and liabilities in the balance sheet based on current/ non-current classification. An asset is treated as current when it is:

- Expected to be realised or intended to be sold or consumed in normal operating cycle
- Held primarily for the purpose of trading
- Expected to be realised within twelve months after the reporting period, or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

All other assets are classified as non-current.

A liability is current when:

- It is expected to be settled in normal operating cycle
- It is held primarily for the purpose of trading
- It is due to be settled within twelve months after the reporting period, or
- There is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period

The Project SPV Group classifies all other liabilities as non-current.

Deferred tax assets and liabilities are classified as non-current assets and liabilities respectively.

3.02 **Use of estimates and judgements**

The preparation of the Project SPV Group's financial statements requires management to make judgements, estimates and assumptions that affect the reported amounts of revenue, expenses, assets and liabilities, and the accompanying disclosures, and the disclosure of contingent liabilities. Uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of assets or liabilities affected in future years.

Estimates and assumptions

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the year in which the estimates are revised and future periods are affected.

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are described below. The Project SPV Group based its assumptions and estimates on parameters available when the financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising that are beyond the control of the Group. Such changes are reflected in the assumptions when they occur.

Fair value measurement of financial instruments (refer note 31)

Provision for major maintenance (refer note 20)
Impairment of non financial assets (refer note 3.17)

3.03 **Fair value measurement**

The Project SPV Group measures financial instruments, (refer note 31) at fair value at each balance sheet date.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:

- In the principal market for the asset or liability, or
- In the absence of a principal market, in the most advantageous market for the asset or liability

The principal or the most advantageous market must be accessible by the Project SPV Group.
The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The Project SPV Group uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

Level 1 - Quoted (unadjusted) market prices in active markets for identical assets or liabilities
Level 2- Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable
Level 3 -Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable

For assets and liabilities that are recognised in the financial statements on a recurring basis, the Project SPV Group determines whether transfers have occurred between levels in the hierarchy by re-assessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

The Project SPV Group's Management determines the policies and procedures for both recurring fair value measurement, such as derivative instruments and unquoted financial assets measured at fair value, and for non-recurring measurement, such as assets held for distribution in discontinued operations.

At each reporting date, the Management analyses the movements in the values of assets and liabilities which are required to be remeasured or re-assessed as per the Project SPV Group's accounting policies. For this analysis, the Management verifies the major inputs applied in the latest valuation by agreeing the information in the valuation computation to contracts and other relevant documents.

The management also compares the change in the fair value of each asset and liability with relevant external sources to determine whether the change is reasonable.

On an annual basis, the Management presents the valuation results to the Investment Manager and the Project SPV Group's independent auditors. This includes a discussion of the major assumptions used in the valuations.

For the purpose of fair value disclosures, the Project SPV Group has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy as explained above.

This note summarises accounting policy for fair value. Other fair value related disclosures are given in the relevant notes.

Disclosures for valuation methods, significant estimates and assumptions (note 3.02)

Financial instruments (including those carried at amortised cost) (note 5,6,7,8,11,17,18,19,31)

Quantative disclosure of fair value measurement hierarchy (note 32)

3.04 **Revenue recognition**

The Project SPV Group has applied the following accounting policy for revenue recognition:

Revenue from contracts with customers:

The Project SPV Group recognises revenue from contracts with customers based on a five step model as set out in Ind AS 115:
Step 1. Identify the contract(s) with a customer: A contract is defined as an agreement between two or more parties that creates enforceable rights and obligations and sets out the criteria for every contract that must be met.

Step 2. Identify the performance obligations in the contract: A performance obligation is a promise in a contract with a customer to transfer a good or service to the customer.

Step 3. Determine the transaction price: The transaction price is the amount of consideration to which the Company expects to be entitled in exchange for transferring promised goods or services to a customer, excluding amounts collected on behalf of third parties.

Step 4. Allocate the transaction price to the performance obligations in the contract: For a contract that has more than one performance obligation, the Company will allocate the transaction price to each performance obligation in an amount that depicts the amount of consideration to which the Company expects to be entitled in exchange for satisfying each performance obligation.

Step 5. Recognise revenue when (or as) the entity satisfies a performance obligation.

The Project SPV Group satisfies a performance obligation and recognises revenue over time, if one of the following criteria is met:
1. The customer simultaneously receives and consumes the benefits provided by the Project SPV Group's performance as the Project SPV Group performs; or
2. The Project SPV Group's performance creates or enhances an asset that the customer controls as the asset is created or enhanced; or
3. The Project SPV Group's performance does not create an asset with an alternative use to the Project SPV Group and the entity has an enforceable right to payment for performance completed to date.

Contract revenue

Contract revenue associated with the utility shifting incidental to construction of road are recognized as revenue by reference to the stage of completion of the projects at the balance sheet date. The stage of completion of project is determined by the proportion that contract cost incurred for work performed up to the balance sheet date bears to the estimated total contract costs. Project SPVs operations involve levying of GST on the construction work. Goods and Service tax is not received by the project SPVs on its own account, rather, it is tax collected on value added to the commodity by the seller on behalf of the government. Accordingly, it is excluded from revenue.

Income from the concession arrangements earned under the intangible asset model consists of the (i) fair value of contract revenue, which is deemed to be fair value of consideration transferred to acquire the asset; and (ii) payments actually received from the users. The intangible asset is amortised over its expected useful life in a way that reflects the pattern in which the asset's economic benefits are consumed by the Project SPV Group, starting from the date when the right to operate starts to be used. Based on these principles, the intangible asset is amortised in line with the actual usage of the specific public utility facility, with a maximum of the duration of the concession.

Income from toll contracts

The income from Toll Contracts on BOT basis are recognised on actual collection of toll revenue (net of Premium and revenue share payable to NHAI) as per Concession Agreement. Revenue from electronic toll collection is recognised on accrual basis.

Interest income

For all financial assets measured either at amortised cost or at fair value through other comprehensive income, interest income is recorded using the effective interest rate (EIR). EIR is the rate that exactly discounts the estimated future cash payments or receipts over the expected life of the financial instrument or a shorter period, where appropriate, to the gross carrying amount of the financial asset or to the amortised cost of a financial liability. When calculating the effective interest rate, the Project SPV Group estimates the expected cash flows by considering all the contractual terms of the financial instrument (for example, prepayment, extension, call and similar options) but does not consider the expected credit losses. Interest income is included in finance income in the statement of profit and loss.

Dividends

Revenue is recognised when the Project SPV Group's right to receive the payment is established, which is generally when shareholders approve the dividend.

Trade receivables

A receivable represents the Project SPV Group's right to an amount of consideration that is unconditional i.e. only the passage of time is required before payment of consideration is due.

3.05 **Government Grants**

Grants and subsidies from the government are recognised if the following conditions are satisfied.

There is reasonable assurance that the Project SPV Group will comply with the conditions attached to it.
Such benefits are earned and reasonable certainty exists of the collection.
Government grants are recognised in accordance with the terms of the respective grant on accrual basis considering the status of compliance of prescribed conditions and ascertainment that the grant will be received.

Grant received are considered as a part of the total outlay of the construction project and accordingly, the same is reduced from the gross value of assets.

3.06 **Taxes**

Current income tax

Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities in accordance the Income Tax Act, 1961. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted at the reporting date in the country where the Company operates and generates taxable income.

Current income tax relating to items recognised outside profit or loss (either in other comprehensive income or in equity). Current tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity. Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

Deferred tax

Deferred tax is provided using the liability method on temporary differences between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date.

Deferred tax liabilities are recognised for all taxable temporary differences, except:

- When the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and at the time of the transaction, affects neither the accounting profit nor taxable profit or loss.
- In respect of taxable temporary differences associated with investments in subsidiaries, when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future

Deferred tax assets are recognised for all deductible temporary differences, the carry forward of unused tax credits and any unused tax losses. Deferred tax assets are recognised to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilised, except:

- When the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction. affects neither the accounting profit nor taxable profit or loss.

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised. Unrecognised deferred tax assets are re-assessed at each reporting date and are recognised to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax relating to items recognised outside statement of profit and loss is recognised outside statement of profit and loss (either in other comprehensive income or in equity). Deferred tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity .

Deferred tax assets and deferred tax liabilities are offset if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

Tax benefits acquired as part of a business combination, but not satisfying the criteria for separate recognition at that date, are recognised subsequently if new information about facts and circumstances change. Acquired deferred tax benefits recognised within the measurement period reduce goodwill related to that acquisition if they result from new information obtained about facts and circumstances existing at the acquisition date. If the carrying amount of goodwill is zero, any remaining deferred tax benefits are recognised in OCI/ capital reserve depending on the principle explained for bargain purchase gains. All other acquired tax benefits realised are recognised in the consolidated statement of profit and loss. Deferred tax is recognised in consolidated statement of profit and loss on the consolidated adjustments.

Minimum Alternate Tax (MAT)

Minimum Alternate Tax (MAT) paid as per Indian Income Tax Act, 1961 is in the nature of unused tax credit which can be carried forward and utilised when the Project SPV Group will pay normal income tax during the specified period. Being DTA tax credit is recognised to the extent that it is probable that the unused tax credit can be utilised in the specified future period. The net amount of tax recoverable from, or payable to, the taxation authority is included as part of receivables or payables in the balance sheet.

3.07 **Property, plant and equipment**

Property, plant and equipment are stated at cost, less accumulated depreciation and impairment losses if any. Cost comprises the purchase price and any attributable cost of bringing the asset to its working condition for its intended use.Any trade discount or rebates are deducted in arriving at the purchase price.

Depreciation is calculated on written down value method (WDV) using the useful lives as prescribed under the Schedule II to the Companies Act, 2013 or re-assessed by the Project SPV Group based on technical evaluation. The Project SPV Group has estimated the following useful lives for its tangible fixed assets:

Asset class	Useful life
Building	30 years*
Office equipment	5 years
Computers	3 years
Furniture & fixtures	10 years

* The useful life of building has been calculated by management as per their technical estimate.

3.08 **Intangible assets**

The Project SPV Group exercised first time adoption under Ind AS 101 and has elected to continue with the carrying value of its "Toll Collection Rights" (Intangible Assets) including corresponding obligation, as recognised in the financial statements as at the date of transition April 1, 2016 measured as per the Previous GAAP and uses that as its deemed cost as at date of transition.

Toll collection rights are stated at cost, less accumulated amortisation , impairment losses and grant from government. Cost includes:
a) For acquired Toll Collection Rights - Upfront payments towards acquisition and incidental expenses related thereto.
b) Toll Collection Rights awarded by the grantor against construction service rendered by the Project SPV Group on BOT / DBFOT basis - Direct and indirect expenses on construction of roads, bridges, culverts, infrastructure and other assets at the toll plazas.

c) Toll Collection Rights in lieu of premium - Undiscounted premium obligation over the concession period.

Amortisation

Toll Collection Rights are amortised over the period of concession, using revenue based amortisation as prescribed in Ind As-36. Under this method, the carrying value of the rights is amortised in the proportion of actual toll revenue for the year to projected revenue for the balance toll period, to reflect the pattern in which the assets economic benefits will be consumed. At each balance sheet date, the projected revenue for the balance toll period is reviewed by the management. If there is any change in the projected revenue from previous estimates, the amortisation of toll collection rights is changed prospectively to reflect any changes in the estimates.

Intangible assets under development

Expenditure related to and incurred during implementation of project are included under "Intangible Assets under Development". The same will be transferred to the respective intangible assets on completion of project.

3.09 **Borrowing costs**

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of the asset. All other borrowing costs are expensed in the period in which they occur. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds. Borrowing cost also includes exchange differences between the foreign currency borrowing and the functional currency borrowing to the extent regarded as an adjustment to the borrowing costs.

3.10 **Leases**

The determination of whether an arrangement is (or contains) a lease is based on the substance of the arrangement at the inception of the lease. The arrangement is, or contains, a lease if fulfilment of the arrangement is dependent on the use of a specific asset or assets and the arrangement conveys a right to use the asset or assets, even if that right is not explicitly specified in an arrangement.

Project SPV Group as a lessee

A leased asset is depreciated over the useful life of the asset. However, if there is no reasonable certainty that the Project SPV Group will obtain ownership by the end of the lease term, the asset is depreciated over the shorter of the estimated useful life of the asset and the lease term.

A lease is classified at the inception date as a finance lease or an operating lease. A lease that transfers substantially all the risks and rewards incidental to ownership to the Project SPV Group is classified as a finance lease.

Operating lease payments are recognised as an expense in the consolidated statement of profit and loss on a straight-line basis over the lease term.

Ind AS 116 - Leases

Ind AS 116, Leases, it sets out principles for the recognition, measurement, presentation and disclosure of leases and requires lessees to account for all leases, except short-term leases and leases for low-value items, under a single on-balance sheet lease accounting model. A lessee recognises a right-of-use asset representing its right to use the underlying asset and a lease liability representing its obligation to make lease payments. Lessor accounting largely unchanged from the existing standard – i.e. lessors continue to classify leases as finance or operating leases.

Based on the preliminary assessment, the Company does not expect any significant impacts on transition to Ind AS 116. This assessment is based on currently available information and may be subject to changes arising from further reasonable and supportable information when the standard will be adopted.

Project SPV Group as a lessor

Leases in which the Project SPV Group does not transfer substantially all the risks and rewards of ownership of an asset are classified as operating leases. Rental income from operating lease is recognised on a straight-line basis over the term of the relevant lease. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognised over the lease term on the same basis as rental income.Contingent rents are recognised as revenue in the period in which they are earned.

Leases are classified as finance leases when substantially all of the risks and rewards of ownership transfer from the Project SPV Group to the lessee. Amounts due from lessees under finance leases are recorded as receivables at the Project SPV Group's net investment in the leases. Finance lease income is allocated to accounting periods so as to reflect a constant periodic rate of return on the net investment outstanding in respect of the lease.

3.11 **Provisions**

Provisions are recognised when the Project SPV Group has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. When the Project SPV Group expects some or all of a provision to be reimbursed, for example, under an insurance contract, the reimbursement is recognised as a separate asset, but only when the reimbursement is virtually certain. The expense relating to a provision is presented in the statement of profit and loss net of any reimbursement.

If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, when appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost. Provisions are reviewed at each balance sheet date and adjusted to reflect the current best estimates.

3.12 **Resurfacing expenses**

As per the Concession Agreements, the Project SPV Group is obligated to carry out resurfacing of the roads under concession. Provision for the planned expenditure is made for the period upto end of the period for which periodic maintenance is required, out of the total entitiled period.The same is stated in the consolidated statement of profit and loss in accordance with Ind AS 37 "Provisions, Contingent Liabilities and Contingent Assets."

3.13 **Contingent liability and Contingent assets**

A contingent liability is a possible obligation that arises from past events whose existence will be confirmed by the occurrence or non-occurrence of one or more uncertain future events beyond the control of the Project SPV Group or a present obligation that is not recognised because it is not probable that an outflow of resources will be required to settle the obligation. A contingent liability also arises in extremely rare cases where there is a liability that cannot be recognised because it cannot be measured reliably. The Project SPV Group does not recognise a contingent liability but discloses its existence in the financial statements.

A contingent assets is not recognised unless it becomes virtually certain that an inflow of economic benefits will arise. When an inflow of economic benefits is probable, contingent assets are disclosed in the financial statements.

Contingent liabilities and contingent assets are reviewed at each balance sheet date.

3.14 **Financial instruments**

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

Financial assets

Initial recognition and measurement

All financial assets are recognised initially at fair value plus, in the case of financial assets not recorded at fair value through statement of profit and loss, transaction costs that are attributable to the acquisition of the financial asset.

On initial recognistion, a financial asset is classified as measured of
- amortised cost
- FVOCI - Debt instruments
- FVOCI - equity instruments
- FVTPL

Financial assets are not reclassified subsequent to their initial recognition, except if and in the year, the Project SPV Group changes its business model for managing financial assets.

Debt instruments at amortised cost

A 'debt instrument' is measured at the amortised cost if both the following conditions are met:
- The asset is held within a business model whose objective is to hold assets for collecting contractual cash flows, and
- Contractual terms of the asset give rise on specified dates to cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

After initial measurement, such financial assets are subsequently measured at amortised cost using the effective interest rate (EIR) method. Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included in finance income in the statement of profit and loss. The losses arising from impairment are recognised in the statement of profit and loss.

Debt instrument at FVTOCI

A 'debt instrument' is classified as at the FVTOCI if both of the following criteria are met:
- The objective of the business model is achieved both by collecting contractual cash flows and selling the financial assets, and
- The asset's contractual cash flows represent SPPI.

Debt instruments included within the FVTOCI category are measured initially as well as at each reporting date at fair value. Fair value movements are recognized in the other comprehensive income (OCI). However, the Project SPV Group recognizes interest income, impairment losses and reversals and foreign exchange gain or loss in the statement of profit and loss. On derecognition of the asset, cumulative gain or loss previously recognised in OCI is reclassified from the equity to Statement of profit and loss.Interest earned whilst holding FVTOCI debt instrument is reported as interest income using the EIR method.

Debt instrument at FVTPL

FVTPL is a residual category for debt instruments. Any debt instrument, which does not meet the criteria for categorization as at amortized cost or as at FVTOCI, is classified as at FVTPL.

In addition, the Project SPV Group may elect to designate a debt instrument, which otherwise meets amortized cost or FVTOCI criteria, as at FVTPL. However, such election is allowed only if doing so reduces or eliminates a measurement or recognition inconsistency (referred to as 'accounting mismatch'). The Project SPV Group has designated certain debt instrument as at FVTPL.

Debt instruments included within the FVTPL category are measured at fair value with all changes recognized in the Statement of profit and loss.

Equity investments

All equity investments in scope of Ind AS 109 are measured at fair value. Equity instruments which are held for trading are classified as at FVTPL. For all other equity instruments, the Project SPV Group may make an irrevocable election to present in other comprehensive income subsequent changes in the fair value. The Project SPV Group makes such election on an instrument-byinstrument basis. The classification is made on initial recognition and is irrevocable.

If the Project SPV Group decides to classify an equity instrument as at FVTOCI, then all fair value changes on the instrument, excluding dividends, are recognized in the OCI. There is no recycling of the amounts from OCI to P&L, even on sale of investment. However, the Project SPV Group may transfer the cumulative gain or loss within equity.

Equity instruments included within the FVTPL category are measured at fair value with all changes recognized in the Statement of profit and loss.

Derecognition

A financial asset (or, where applicable, a part of a financial asset or part of a Project SPV Group of similar financial assets) is primarily derecognised (i.e. removed from the Project SPV Group's consolidated balance sheet) when:

- The rights to receive cash flows from the asset has expired, or
- The Project SPV Group has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Project SPV Group has transferred substantially all the risks and rewards of the asset, or (b) the Project SPV Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Project SPV Group has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if and to what extent it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all of the risks and rewards of the asset, nor transferred control of the asset, the Project SPV Group continues to recognise the transferred asset to the extent of the Project SPV Group's continuing involvement. In that case, the Project SPV Group also recognises an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Project SPV Group has retained.

Continuing involvement that takes the form of a guarantee over the transferred asset is measured at the lower of the original carrying amount of the asset and the maximum amount of consideration that the Project SPV Group could be required to repay.

Impairment of financial assets

In accordance with Ind AS 109, the Project SPV Group applies expected credit loss (ECL) model for measurement and recognition of impairment loss on the following financial assets and credit risk exposure:

-Financial assets that are debt instruments, and are measured at amortised cost e.g., loans, debt securities, deposits, trade receivables and bank balance
-Financial assets that are debt instruments and are measured as at FVTOCI
-Lease receivables under Ind AS 17
-Trade receivables or any contractual right to receive cash or another financial asset that result from transactions that are within the scope of Ind AS 18 (referred to as contractual revenue receivables' in these financial statements)

-Loan commitments which are not measured as at FVTPL
-Financial guarantee contracts which are not measured as at FVTPL
The Project SPV Group follows 'simplified approach' for recognition of impairment loss allowance on:
-Trade receivables; and
-Other receivables
The application of simplified approach does not require the Project SPV Group to track changes in credit risk. Rather, it recognises impairment loss allowance based on lifetime ECLs at each reporting date, right from its initial recognition.

For recognition of impairment loss on other financial assets and risk exposure, the Project SPV Group determines that whether there has been a significant increase in the credit risk since initial recognition. If credit risk has not increased significantly, 12-month ECL is used to provide for impairment loss. However, if credit risk has increased significantly, lifetime ECL is used. If, in a subsequent period, credit quality of the instrument improves such that there is no longer a significant increase in credit risk since initial recognition, then the entity reverts to recognising impairment loss allowance based on 12-month ECL.

Lifetime ECL are the expected credit losses resulting from all possible default events over the expected life of a financial instrument. The 12-month ECL is a portion of the lifetime ECL which results from default events that are possible within 12 months after the reporting date.

ECL is the difference between all contractual cash flows that are due to the Project SPV Group in accordance with the contract and all the cash flows that the entity expects to receive (i.e., all cash shortfalls), discounted at the original EIR. When estimating the cash flows, an entity is required to consider:

-All contractual terms of the financial instrument (including prepayment, extension, call and similar options) over the expected life of the financial instrument. However, in rare cases when the expected life of the financial instrument cannot be estimated reliably, then the entity is required to use the remaining contractual term of the financial instrument. -

-Cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms
-Financial assets measured as at amortised cost, contractual revenue receivables and lease receivables: ECL is presented as an allowance, i.e., as an integral part of the measurement of those assets in the balance sheet. The allowance reduces the net carrying amount. Until the asset meets write-off criteria, the Project SPV Group does not reduce impairment allowance from the gross carrying amount.

Financial liabilities

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through Statement of profit and loss, loans and borrowings, or payables, as appropriate.

All financial liabilities are recognised initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.
The Project SPV Group's financial liabilities include trade and other payables, loans and borrowings including bank overdrafts and derivative financial instruments.

Subsequent measurement

The measurement of financial liabilities depends on their classification, as described below:

Financial liabilities at fair value through Statement of profit and loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through statement of profit and loss. Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Project SPV Group that are not designated as hedging instruments in hedge relationships as defined by Ind AS 109.

Gains or losses on liabilities held for trading are recognised in the consolidated statement of profit and loss.

Loans and borrowings

This is the category most relevant to the Project SPV Group. After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortised cost using the EIR method. Gains and losses are recognised in statement of profit and loss when the liabilities are derecognised as well as through the EIR amortisation process.

Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included as finance costs in the statement of profit and loss.

This category generally applies to borrowings. For more information refer note 16.

Derecognition

A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognised in the consolidated statement of profit and loss.

Offsetting of financial instruments

Financial assets and financial liabilities are offset and the net amount is reported in the standalone balance sheet if there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, to realise the assets and settle the liabilities simultaneously.

3.15 **Cash and cash equivalents**

Cash and cash equivalent in the balance sheet comprises of cash at banks and on hand and short-term deposits with an original maturity of three months or less, which are subject to an insignificant risk of changes in value.

For the purpose of the statement of cash flows, cash and cash equivalents consist of cash and short-term deposits, as defined above, as they are considered an integral part of the Project SPV Group's cash management.

3.16 **Cash dividend to equity holders of the Project SPV Group**

The Project SPV Group recognises a liability to make cash or non-cash distributions to equity holders of the parent when the distribution is authorised and the distribution is no longer at the discretion of the Project SPV Group. As per the corporate laws in India, a distribution is authorised when it is approved by the shareholders. A corresponding amount is recognised directly in equity.

3.17 **Impairment of non-financial assets**

The Project SPV Group assesses, at each reporting date, whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Project SPV Group estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs of disposal and its value in use. Recoverable amount is determined for an individual asset. unless the asset does not generate cash inflows that are largely independent of those from other assets or Project SPV Group's of assets. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs of disposal, recent market transactions are taken into account. If no such transactions can be identified, an appropriate valuation model is used. These calculations are corroborated by valuation multiples, quoted share prices for publicly traded companies or other available fair value indicators.

The Project SPV Group bases its impairment calculation on detailed budgets and forecast calculations, which are prepared separately for each of the Project SPV Group's CGUs to which the individual assets are allocated. These budgets and forecast calculations generally cover a period of five years. For longer periods, a long-term growth rate is calculated and applied to project future cash flows after the fifth year. To estimate cash flow projections beyond periods covered by the most recent budgets/forecasts, the Project SPV Group extrapolates cash flow projections in the budget using a steady or declining growth rate for subsequent years, unless an increasing rate can be justified. In any case, this growth rate does not exceed the long-term average growth rate for the products, industries, or country or countries in which the entity operates, or for the market in which the asset is used.

For assets excluding goodwill, an assessment is made at each reporting date to determine whether there is an indication that previously recognised impairment losses no longer exist or have decreased. If such indication exists, the Project SPV Group estimates the asset's or CGU's recoverable amount. A previously recognised impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognised. The reversal is limited so that the carrying amount of the asset does not exceed its recoverable amount, nor exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognised for the asset in prior years. Such reversal is recognised in the statement of profit and loss.

Goodwill is tested for impairment annually as at 31 March and when circumstances indicate that the carrying value may be impaired.

Impairment is determined for goodwill by assessing the recoverable amount of each CGU (or Project SPV Group of CGUs) to which the goodwill relates. When the recoverable amount of the CGU is less than its carrying amount, an impairment loss is recognised. Impairment losses relating to goodwill cannot be reversed in future periods.

Intangible assets with indefinite useful lives are tested for impairment annually as at 31 March at the CGU level, as appropriate, and when circumstances indicate that the carrying value may be impaired.

3.18 **Segment information**

Based on "Management Approach" as defined in Ind AS 108 - Operating Segments, the Management ("the Board of Directors") evaluates the Project SPV Group's performance and allocates the resources based on an analysis of various performance indicators by business segments. Inter segment sales and transfers are reflected at market prices.

Unallocable items includes general corporate income and expense items which are not allocated to any business segment.

Segment policies:

Based on "Management Approach" as defined in Ind AS 108 -Operating Segments, the Management evaluates the Project SPV Group's performance and allocates the resources based on an analysis of various performance indicators by business segments. Inter segment sales and transfers are reflected at market prices.

Unallocable items includes general corporate income and expense items which are not allocated to any business segment.

The Project SPV Group prepares its segment information in conformity with the accounting policies adopted for preparing and presenting the financial statements of the Project SPV Group as a whole. Common allocable costs are allocated to each segment on an appropriate basis.

3.19 **Earnings per unit**

Basic earnings per unit are calculated by dividing the net profit or loss for the period attributable to unitholders by the weighted average number of units outstanding during the period. For the purpose of calculating diluted earnings per unit, the net profit or loss for the period attributable to unitholders and the weighted average number of units outstanding during the period are adjusted for the effects of all dilutive potential units.

Note 4 : Property, Plant and Equipment and Capital work in progress

(Amount in Millions.)

	Premises	Computer	Office Equipments	Furniture and Fixture	Total
Cost or deemed cost					
At 31 March 2021	**16.09**	**0.30**	**1.40**	**0.39**	**18.18**
Additions					-
Disposals/ Adjustments					-
At 31 March 2022	**16.09**	**0.30**	**1.40**	**0.39**	**18.18**
Depreciation					
At 31 March 2021	**5.79**	**0.28**	**1.18**	**0.34**	**7.59**
Additions	1.61	0.00	0.09	0.04	1.74
Disposals/ Adjustments	-	-	-	-	-
At 31 March 2022	**7.40**	**0.29**	**1.28**	**0.38**	**9.33**
Net Book value					
At 31 March 2022	**8.69**	**0.02**	**0.12**	**0.02**	**8.85**
At 31 March 2021	**10.30**	**0.01**	**0.22**	**0.05**	**10.59**

Net Book value	**March 31, 2022**	**March 31, 2021**
Property, Plant and Equipment	8.85	10.59

Note 4 : Intangible Assets and Intangible Assets under development

Intangible Assets	(Amount in Millions.)	
Particulars	**Toll Collection Rights**	**Total**
Cost or deemed cost		
At 31 March 2021	**2,16,344.42**	**2,16,344.42**
Additions	11,814.99	11,814.99
Deletions		-
Adjustments	-	-
At 31 March 2022	**2,28,159.42**	**2,28,159.42**
Amortisation		
At 31 March 2021	**4,626.78**	**4,626.78**
Additions	1,673.16	1,673.16
Deletions	-	-
Adjustments	-	-
At 31 March 2022	**6,299.93**	**6,299.93**
Net Book value		
At 31 March 2022	2,21,859.48	
At 31 March 2021	2,11,717.65	

Particulars	**March 31, 2022**	**March 31, 2021**
Toll Collection Rights	2,21,859.48	2,11,717.65
Total	**2,21,859.48**	**2,11,717.65**

Intangible assets under development

Particulars	**March 31, 2022**	**March 31, 2021**
Toll Collection Rights		
At the beginning of the year	4,684.26	13,853.63
Add : development during the year	835.34	1,274.74
	5,519.60	15,128.37
Less : Transfer to Intangible Asset (Toll Collection Rights)	4,228.70	10,444.11
Closing balance	**1,290.89**	**4,684.26**
Total	**1,290.89**	**4,684.26**

Tangible and Intangible assets given as security

Tangible and Intangible assets are subject to first charge to secured long-term borrowings from the lenders.

(Amount in Millions.)

Particulars	March 31, 2022				March 31, 2021			
	Face Value Rs.	No of Units	Current	Non-current	Face Value Rs.	No of Units	Current	Non-current
Financial Assets								
Note 5 : Investment								
i) Investments in Mutual Funds (quoted)								
Fair Value Through Profit or Loss (FVTPL)								
IDBI Liquid Fund - Direct Plan - Growth	1,000	48,116.73	110.24		1,000	1,57,836.12	349.34	
ABSL Liquid Fund - Direct Plan - Growth	100	53,926.78	18.50	-	100	20,666.89	23.00	-
SBI Liquid Fund - Direct Growth	1,000	1,53,238.96	510.75	-	1,000	13,342.03	43.00	-
SBI Overnight Fund - Direct Growth	1,000	5,790.54	20.04		1,000	47,796.46	157.16	
			659.54	**-**			**572.50**	**-**
Total			**659.54**	**-**			**572.50**	**-**
Aggregate book value of quoted investments			**658.76**				**571.07**	
Market value of quoted investments			**659.54**				**572.50**	
Aggregate amount of unquoted investments			-				-	
Aggregate amount of impairment in value of investments			-				-	
Refer note 31 for determination of fair value of investments			-				-	

(Amount in Millions.)

	March 31, 2022		March 31, 2021	
	Current	**Non-current**	**Current**	**Non-current**
Note 6 : Trade receivable				
(Unsecured, considered good)				
Related parties	0.51	-	-	-
Others	51.03	-	100.24	-
Total	**51.55**	**-**	**100.24**	**-**
Less: Allowances for expected credit loss/ bad and doubtful debt	-	-	-	-
Total	**51.55**	**-**	**100.24**	**-**

The Group has not identifed any credit impairment loss as at March 31, 2022 and March 31, 2021.

Note 7 : Other financial assets				
(Unsecured, considered good)				
Interest accrued on fixed deposits	25.64	-	47.57	-
Interest receivable from banks	23.99	-	117.00	-
Retention money receivable	526.28	-	446.62	-
BG Margin receivable	-	-	-	0.54
Receivable from Government Authorities (NHAI)	965.24	-	1.44	-
Other receivable	56.15	-	16.47	-
Security and other deposits	6.89	2.74	6.89	2.74
Total	**1,604.18**	**2.74**	**635.99**	**3.28**

(Amount in Millions.)

	March 31, 2022	March 31, 2021
Note 8 : Deferred tax assets		
Deferred tax liabilities (net):		
Deferred tax liabilities:		
Difference in Depreciation and other differences in block of Property, Plant and equipment and Intangible assets as per tax books & financial books	1,350.50	2,636.80
Deferred tax assets:		
Effect of expenditure debited to profit and loss account in the current year but allowed for tax purposes in following years		
Deferred tax liabilities (net)	**1,350.50**	**2,636.80**
Deferred tax assets:		
Deferred tax assets:		
Depreciation	428.55	1,629.65
MAT credit entitlement	582.83	582.82
Expenses allowed for tax purposes on payment basis - Gratuity		
Deferred Tax assets on Fair valuation	626.79	
Deferred Tax Assets	**1,638.17**	**2,212.47**
Deferred Tax liabilities:		
Difference in Depreciation/ amortisation and other differences		
Tax losses	-	-
Deferred tax (assets) / liabilities	**(287.67)**	**424.33**
Note 9 : Other non - current assets		
(Unsecured, considered good)		
Capital advances	-	0.14
Duties and taxes receivable	656.55	-
Total	**656.55**	**0.14**

(Amount in Millions.)

	March 31, 2022	March 31, 2021

IRB Infrastructure Trust
Notes to Consolidated Financial Statements for the year ended March 31, 2022

Note 10 : Cash and cash equivalents

Cash and Bank balances		
Balances with banks:		
-on current accounts	118.03	288.60
-on trust, retention and other escrow accounts*	161.56	113.94
Deposits with banks		
-Original maturity less than 3 months	-	-
Cash on hand	7.64	10.96
Total	**287.23**	**413.49**

Note 11 : Bank balance other than cash and cash equivalent

Maturity more than 3 months less than 12 months		
Other deposits	102.53	76.09
Debt service reserve account with banks /earmarked balance**	2,365.43	-
Maturity more than 12 months		
Debt service reserve account with banks /earmarked balance**	-	1,668.23
Other deposits	2.00	0.03
Total	**2,469.97**	**1,744.35**

Debt service reserve account/ major maintenance reserve account and trust, retention and other escrow accounts
Bank deposits are marked lien / pledged against the non current secured loan as per term loan agreement with the lender, further the lenders have first charge on trust, retention and other escrow accounts.

* First charge on above to the extent of amount payable as per the waterfall mechanism as defined in the Concession Agreement / Common Loan Agreement.

** The deposits to the extent of Rs. 2,365.43 millions (March 31, 2021 : Rs. 1,668.23 millions) maintained by the Project SPV Group with bank includes time deposits, which are held against Debt Service Reserve (DSR), are considered as current portion under the head “Other bank balances” since the same are encashable by the lenders in the event of default by the Project SPV Group, if any.

Current deposits are made for varying periods of between one day and three months, depending on the immediate cash requirements of the group and earn interest at the respective current deposit rates. Other time deposits earn interest at the rate of 3 % to 5.10% p.a.

Refer note 16 for details of security against term loans.

For the purpose of statement of cash flows, cash and cash equivalents comprise the following:

	March 31, 2022	March 31, 2021
Balance with banks:		
-on current accounts	118.03	288.60
-on trust, retention and other escrow accounts	161.56	113.94
Fixed deposits less than 3 months	-	-
Cash on hand	7.64	10.96
Total	**287.23**	**413.49**

Note 12 : Current tax assets (net)

Advance income-tax (net of provision for tax)	114.22	147.11
Total	**114.22**	**147.11**

Note 13 : Other current assets

(Unsecured, considered good unless otherwise stated)		
Advance with suppliers		
- Related parties (refer note 39)	502.89	1,014.28
- Others	32.22	22.05
Mobilisation advances (refer note 39)	435.80	610.61
Prepaid expenses	0.51	47.68
Duties and taxes receivable	706.04	471.78
Total	**1,677.46**	**2,166.40**

Note : 14 : Unit capital (Amount in Millions.)

	March 31, 2022		March 31, 2021	
Unit capital				
Authorised Unit capital				
Units having face value of Rs.100 each	85,50,43,265	85,504.33	81,68,80,000	81,688.00
	85,50,43,265	**85,504.33**	**81,68,80,000**	**81,688.00**
Issued Unit capital				
Units having face value of Rs.100 each	85,50,43,265	85,504.33	81,68,80,000	81,688
Total	**85,50,43,265**	**85,504.33**	**81,68,80,000**	**81,688**

Terms / rights attached to equity shares

The Project SPVs have only one class of equity shares having par value of Rs. 100/- per share Each holder of equity shares is entitled to one vote per share. The Project SPVs declares and pays dividend in Indian rupees.

In the event of liquidation of the Project SPV, the holders of equity shares will be entitled to receive remaining assets of the Project SPV, after distribution of all preferential amounts. The distribution will be in proportion to the number of equity shares held by the shareholders.

Reconciliation of the number of unit outstanding and the amount of Unit capital:

	March 31, 2022		March 31, 2021	
Units issued, subscribed and fully paid	**No. of units**	**Rs.**	**No. of units**	**Rs.**
Units having face value of Rs. 100/-				
At the beginning of the year	81,68,80,000	81,688.00	76,58,25,000	76,582.50
lssued during the year	3,81,63,265	3,816.33	5,10,55,000	5,105.50
At the end of the year	**85,50,43,265**	**85,504.33**	**81,68,80,000**	**81,688.00**

Details of unit holders holding more than 5% units:

	March 31, 2022		March 31, 2021	
	No. of units	**% of total unit capital**	**No. of units**	**% of total unit capital**
IRB Infrastructure Developers Limited	43,60,72,332	51%	41,66,09,067	51%
Anahera Investments Pte Ltd	21,37,60,685	25%	20,42,19,865	25%
Bricklayers Investments Pte Ltd	5,13,02,562	6%	4,90,12,767	6%
Chiswick Investments Pte Ltd	5,13,02,562	6%	4,90,12,767	6%
Stretford End Investments Pte Ltd	5,13,02,562	6%	4,90,12,767	6%
Dangenham Investments Pte Ltd	5,13,02,562	6%	4,90,12,767	6%

Details of Sponsor units	**March 31, 2022**		**March 31, 2021**	
IRB Infrastructure Developers Limited	43,60,72,332	51%	41,66,09,067	51%

Note : 15 : Other equity

Attributable to the equity holders

Other reserves	**March 31, 2022**	**March 31, 2021**
Retained earnings		
At the beginning of the year	(3,669.05)	(312.75)
Profit for the year	(4,435.98)	(3,252.48)
Less: Appropriations		
Pre-incoporation Profits		
Unit Issue expenses	(3.26)	(103.82)
At the end of the year	**(8,108.29)**	**(3,669.05)**
Total	**(8,108.29)**	**(3,669.05)**

(Amount in Millions.)

	March 31, 2022	March 31, 2021
Financial liabilities		
Note : 16 : Borrowings		
Non-current Borrowings		
Term loans		
Indian rupee loan from banks (secured)		
Project loans for SPVs	78,298.59	74,939.04
Less : current maturities expected to be settled within 12 month from balance sheet date	(429.15)	(467.24)
Total (a)	**77,869.44**	**74,471.80**
Indian rupee loan from financial institutions (secured)		
Project loans for SPVs	10,328.45	10,330.67
Less : current maturities expected to be settled within 12 month from balance sheet date	(59.79)	(99.91)
Total (b)	**10,268.66**	**10,230.76**
Non-convertible debentures (secured)	5,497.18	5,563.63
Less : current maturities expected to be settled within 12 month from balance sheet date	(110.76)	(62.15)
Total (c)	**5,386.42**	**5,501.48**
Less: Unamortised transaction cost **(d)**	(964.70)	(1,042.72)
Total non current borrowings (e = a + b + c + d)	**92,559.82**	**89,161.31**
Current Borrowings		
Short-term borrowings (secured)		
Current maturity of long term loans		
Indian rupee loan from banks (secured)	429.15	467.24
Indian rupee loan from financial institutions (secured)	59.79	99.91
Non convertible debentures (secured)	110.76	62.15
Interest accrued but not due on borrowings	33.73	-
(Unsecured, repayable on demand and interest free)		
Loan from related parties (refer note 39)	4,085.74	4,155.57
Total current borrowings (f)	**4,719.18**	**4,784.87**
Total borrowings (e+f)	**97,279.00**	**93,946.18**
Aggregate secured loans	93,159.52	89,161.31
Aggregate unsecured loans	4,085.74	4,155.57

(i) Project loans for SPVs

March 31, 2022: Rs. 94,124.22 millions; March 31, 2021: Rs. 90,833.34 millions; pertains to term loans taken by SPV's (Special Purpose Vehicles) for Project financing.

Rate of interest

Rate of interest on the Indian Rupee loan from banks and financial institutions varies from 8.25% to 10.40% p.a. (March 31, 2021: 9.85% to 11.90%) and are secured by pledge of shares of its subsidiaries and subservient charge on the current assets of the company to the extent of 125% of the outstanding loan.

Nature of security

i) Secured by first charge on the movable/immovable asset by way of mortgage/hypothecation; first charge on all intangible assets, present and future; assignment of all receivables; book debts and all rights and interest in project, both present and future, excluding the Project Assets of respective companies;

ii) Secured by first charge on the Escrow Account, Debt Service Reserve Account and any other reserves and other bank accounts of the respective Companies.

iii) An irrevocable and unconditional corporate guarantee from IRB Infrastructure Developers Limited to meet shortfall (if any) between debt due and termination payments received from Concessioning Authority in case of termination of Concession Agreement for any reason in case of Project SPV's.

Repayment terms

The Indian rupee loans are repayable in structured monthly installments commencing after commercial operation date such that the total tenor does not exceed 17 years and repayable as per the repayment schedule specified in common loan agreement with the Lenders.

Note : 17 : Trade payables		
Total outstanding dues of micro enterprises and small enterprises (refer note 29)	3.69	13.18
Total outstanding dues of creditors other than micro and small enterprises		
- Related parties (refer note 39)	10,022.93	1,655.04
- Others	1,191.71	892.03
Total	**11,218.34**	**2,560.24**

(Amount in Millions.)

	March 31, 2022		March 31, 2021	
	Current	**Non-current**	**Current**	**Non-current**
Note 18 : Other financial liabilities				
Obligation for construction	2,009.01	-	11,204.52	-
Directors sitting fees payable	0.36	-	0.25	-
Deposit	1.13	-	1.07	-
Retention money payable				
- Related parties (refer note 39)	256.48	-	190.34	-
- Others	336.92	-	318.04	3.05
Revenue share payable	225.81	-	51.97	-
Other payable				
- Related parties (refer note 39)	193.42	35,168.79	8,432.67	24,717.75
Total	**3,023.13**	**35,168.79**	**20,198.86**	**24,720.81**

	March 31, 2022	**March 31, 2021**
Note : 19 : Trade payables		
a) Total outstanding dues of micro enterprises and small enterprises		
micro and small enterprises		
'- Related parties	5,998.85	2,463.41
'- Others	-	-
	5,998.85	**2,463.41**

Note 20 : Provisions

	March 31, 2022		March 31, 2021	
	Current	**Non-current**	**Current**	**Non-current**
Others				
Major maintenance expenses	-	1,350.57	-	357.84
Total	**-**	**1,350.57**	**-**	**357.84**

The movement in provision for resurfacing expenses is as follows:

	March 31, 2022	**March 31, 2021**
Opening balance	357.84	64.96
Obligation on new toll projects	992.73	292.88
Utilised / reversed during the year	-	-
Closing balance	**1,350.57**	**357.84**

The above provisions are based on current best estimation of expenses that may be required to fulfill the resurfacing obligation as per the service concession agreement with regulatory authorities. It is expected that significant portion of the costs will be incurred over the period. The actual expense incurred may vary from the above. No reimbursements are expected from any sources against the above obligation.

	March 31, 2022	**March 31, 2021**
Note 21 : Other current liabilities		
Advance from customers		
Duties and taxes payable	129.65	59.05
Advance from customer- Others	10.50	50.73
Total	**140.15**	**109.78**

(Amount in Millions.)

	March 31, 2022	March 31, 2021
Note 22 : Revenue from operations		
Contract revenue (road construction)	1,054.48	1,863.70
Income arising out of toll collection (net)	10,598.07	8,549.77
Revenue share to NHAI- Fastag	(212.87)	(51.97)
Other operating revenue	965.16	-
Total	**12,404.84**	**10,361.51**
Note 23 : Other income		
Interest income on		
- Bank deposits	73.64	74.46
- Others	8.05	7.59
Profit on sale of investments	13.93	13.08
Fair value gain on mutual funds	0.78	1.43
Other non operating income	3.73	13.28
Gain/(loss) on fair value measurement of other payable	-	2.86
Total	**100.13**	**112.71**
Note 24 : Road work and site expenses		
Contract expenses	1,036.47	1,807.12
Operation and maintenance expenses	2,899.41	2,113.67
Site and other direct expenses	-	41.03
Sub-contracting / Security expenses	0.72	5.31
Technical consultancy and supervision charges	53.20	16.28
Total	**3,989.80**	**3,983.41**
Note 25 : Depreciation and amortisation expenses		
Depreciation on property, plant and equipment (refer note 4)	1.74	2.59
Amortisation on intangible assets (refer note 4)	1,673.16	1,253.09
Total	**1,674.90**	**1,255.69**
Note 26 : Finance cost		
Interest expense		
- Banks and financial institutions	8,670.13	8,046.33
- Unwinding of retention money	48.71	48.70
Other borrowing costs	-	
- Amortisation of Transaction cost	78.02	78.43
- Unwinding of discount on provision of MMR	39.64	5.47
- Interest unwinding of Trade Payable- Associates	655.78	-
- Others	46.44	49.24
Total	**9,538.70**	**8,228.17**

(Amount in Millions.)

	March 31, 2022	March 31, 2021
Note 27 : Other expenses		
Rent	0.24	0.29
Rates and taxes	31.64	15.40
Insurance	1.12	11.43
Director sitting fees	1.61	1.24
Legal and professional expenses	192.64	69.25
Payment to auditor (including GST)	3.13	3.88
Corporate social responsibilities expenditure	8.00	31.40
Bank charges	5.54	3.01
Miscellaneous expenses	1.19	2.43
Fair value loss on measurement of other payable	2,161.31	-
Total	**2,406.43**	**138.32**
Payment to auditor (including GST)		
As auditors:		
- Statutory audit fees	1.23	2.19
- Limited review fees	1.70	1.12
In other capacity	-	-
- Other services (certification fees)	0.17	0.56
Reimbursement of expenses	0.04	0.02
Total	**3.13**	**3.88**

Note 28 : Commitment and Contingencies

a. Leases

Rent / lease payments under operating lease are recognised as an expense in the Consolidated Statement of profit and loss on a straight line basis over the lease term.

Operating lease		(Rs in millions)
	March 31, 2022	**March 31, 2021**
a) Future lease rental payments under non-cancellable operating lease are as follows:-		
i) Not later than one year	-	-
ii) Later than one year and not more than five year	-	-
iii) Later than five year	-	-
b) Lease payment recognised in the consolidated statement of profit and loss	0.24	0.29
c) General description of the leasing agreement		
i) Leased assets – accommodation for employees	-	-
ii) Future lease rentals are determined on agreed terms	-	-

b. Capital commitments

	March 31, 2022	**March 31, 2021**
Estimated value of contracts in capital account remaining to be executed	625.98	10,679.14

c. Contingent liabilities
Contingent liabilities not provided for

	March 31, 2022	**March 31, 2021**
Guarantees given by the Group to suppliers, government bodies and performance guarantee		
For Service Tax, ESIC, Custom Duty, Other Finance expenses and Stamp duty matters	-	-
Total	-	-

UTL, CGTL and KGTL have filed Writ petition with Hon'ble Rajasthan High Court with prayer to commence payment of Premium to National Highways Authority of India (NHAI) six months post actual completion of the project construction work. The Hon'ble High Court prima facie agreed with the contention of these companies and had provided interim relief from payment of premium. Vide judgement order dated 25th August, 2021, the Hon'ble High Court found merit in the contention of the companies and has directed the parties to resolve the dispute under Arbitration. The said matter is currently pending under Arbitration.

Note 29 : Trade payable

Under the Micro, Small and Medium Enterprises Development Act, 2006 ('MSMED') which came into force from 2 October 2006, certain disclosures are required to be made relating to Micro, Small and Medium enterprises. On the basis or the informntion and records available with the management, there are no overdue amount to the Micro and Small enterprises as defined in the Micro, Small Medium Enterprises Development Act, 2006 as set out in the following disclosures:

The disclosure in respect of the amount payable to enterprises which have provided goods and services to the Group and which qualify under the definition of micro and small enterprises, as defined under Micro, Small and Medium Enterprises Development Act, 2006 has been made in the consolidated financial statement as at March 31, 2022 based on the information received and available with the Group.

Particulars	**March 31, 2022**	**March 31, 2021**
Principal amount remaining unpaid to any supplier as at the period end	3.69	13.18
Interest due thereon	-	-
Amount of interest paid by the Company in terms of section 16 of the MSMED, along with the amount of the payment made to the supplier beyond the appointed day during the accounting period.	-	-
Amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed day during the period) but without adding the interest specified under the MSMED, 2006	-	-
Amount of interest accrued and remaining unpaid at the end of the accounting period	-	-
The amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues as above are actually paid to the small enterprise for the purpose of disallowance as a deductible expenditure under the MSMED Act, 2006	-	-

MSME ageing schedule as at

Particulars	**March 31, 2022**	**March 31, 2021**
MSME Undisputed Dues	-	-
Less than 1 year	3.69	13.18
1-2 Years	-	-
2-3 Years	-	-
More than 3 years	-	-
Total dues to micro and small enterprises as per MSMED Act, 2006	**3.69**	**13.18**

There are no disputed dues to micro and small enterprises as per MSMED Act, 2006. The amounts payable to MSME are not due for payments.

b) Ageing of creditors other than micro enterprises and small enterprises as at

Particulars	**March 31, 2022**	**March 31, 2021**
Undisputed Dues		
Less than 1 year	13,369.16	3,347.92
1-2 Years	3,808.21	1,639.89
2-3 Years	12.82	22.11
More than 3 years	23.32	0.56
Total dues to creditors other than micro enterprises and small enterprises as at	**17,213.50**	**5,010.48**

There are no disputed dues to creditors other than micro enterprises and small enterprises.

Note 30 : Intangble Asset under development ageing schedule

a) Intangible asset under development (Rs in millions)

Particulars	**March 31, 2022**	**March 31, 2021**
Less than 1 year	1,055.74	1,289.86
1-2 Years	59.90	1,376.22
2-3 Years	175.24	1,699.63
More than 3 years	-	318.55
Total	**1,290.89**	**4,684.26**

b) Intangible asset under development

Particulars	**March 31, 2022**	**March 31, 2021**
To be completed in		
Less than 1 year	1,290.89	4,684.26
1-2 Years	-	-
2-3 Years	-	-
More than 3 years	-	-
Total	**1,290.89**	**4,684.26**

Note 31 : Fair values

The carrying values of financials instruments of the Group are reasonable and approximations of fair values.

	Carrying amount		**Fair Value**	
	March 31, 2022	**March 31, 2021**	**March 31, 2022**	**March 31, 2021**
Financial assets				
Financial assets measured at amortised cost				
Loans	-	-	-	-
Other Financial assets	1,606.92	639.27	1,606.92	639.27
Financial assets measured at fair value through statement of Profit & Loss				
Investments (Quoted)	659.54	572.50	659.54	572.50
Financial assets measured at amortised cost				
Investments (Unquoted)	-	-	-	-
Trade receivable	51.55	100.24	51.55	100.24
Cash and cash equivalents	287.23	413.49	287.23	413.49
Other Bank balances	2,469.97	1,744.35	2,469.97	1,744.35
Financial liabilities				
Financial liabilities measured at amortised cost				
Trade payables	17,217.19	5,023.65	17,217.19	5,023.65
Borrowings	97,279.00	93,946.18	97,279.00	93,946.18
Other financial liabilities	38,191.92	44,919.67	38,191.92	44,919.67

The management assessed that the fair value of cash and cash equivalents, trade receivables, trade payables, bank overdrafts and other current liabilities approximate their carrying amounts largely due to the short-term maturities of these instruments.

The fair value of the financial assets and liabilities is included at the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.

The discount for lack of marketability represents the amounts that the Group has determined that market participants would take into account when pricing the investments.

Note 32 : Fair value hierarchy

All financial instruments for which fair value is recognised or disclosed are categorised within the fair value hierarchy described as follows, based on the lowest level input that is significant to the fair value measurement as a whole.

Level 1: Quoted (unadjusted) price in active market for identical assets or liabilities

Level 2: Valuation technique for which the lowest level input that has a significant effect on the fair value measurement are observed, either directly or indirectly

Level 3: Valuation technique for which the lowest level input has a significant effect on the fair value measurement is not based on observable market data.

Quantitative disclosures fair value measurement hierarchy for financial instruments as at March 31, 2022:

(Rs in millions)

	As on Mar 31, 2022	Fair value measurement at end of the reporting year using		
		Level 1	Level 2	Level 3
Assets				
Investments (Quoted)	**659.54**	659.54	-	-
Trade Receivable	**51.55**	-	-	51.55
Cash and cash equivalents	**287.23**	-	-	287.23
Bank balance other than above	**2,469.97**	-	-	2,469.97
Loans	**-**	-	-	-
Other Financial assets	**1,606.92**	-	-	1,606.92
Liabilities				
Borrowings	**97,279.00**	-	-	97,279.00
Trade Payable	**17,217.19**	-	-	17,217.19
Other financial liabilities	**38,191.92**	-	-	38,191.92

Quantitative disclosures fair value measurement hierarchy for financial instruments as at March 31, 2021:

(Rs in millions)

	As on March 31, 2021	Fair value measurement at end of the reporting year using		
		Level 1	Level 2	Level 3
Assets				
Investments (Quoted)	**572.50**	572.50	-	-
Trade Receivable	**100.24**	-	-	100.24
Cash and cash equivalents	**413.49**	-	-	413.49
Bank balance other than above	**1,744.35**	-	-	1,744.35
Loans	**-**	-	-	-
Other Financial assets	**639.27**	-	-	639.27
Liabilities				
Borrowings	**93,946.18**	-	-	93,946.18
Trade Payable	**5,023.65**	-	-	5,023.65
Other financial liabilities	**44,919.67**	-	-	44,919.67

Note 33 : Financial risk management objectives and policies

The Group's risk management policies are established to identify and analyse the risks faced by the Group, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Group's activities.

The Board of Directors have overall responsibility for the establishment and oversight of the Group's risk management framework.

In performing its operating, investing and financing activities, the Group is exposed to the Credit risk, Liquidity risk and Currency risk.

Market risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: interest rate risk, currency risk and other price risk, such as equity price risk and commodity risk. Financial instruments affected by market risk include loans and borrowings, deposits, FVTOCI investments and derivative financial instruments.

Credit risk on financial assets

Credit risk is the risk that counterparty will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The Company is exposed to credit risk from its operating activities (primarily trade receivables) and from its financing activities, including deposits with banks and financial institutions, foreign exchange transactions and other financial instruments.

Financial instruments

Credit risk from balances with banks, trade receivables, loans and advances and financial institutions is managed by the Group's management in accordance with the Group's policy. Investments of surplus funds are made only with approved counterparties and within credit limits assigned to each counterparty. Counterparty credit limits are reviewed by the top management on an annual basis, and may be updated throughout the year subject to approval of the Company's board of directors. The limits are set to minimise the concentration of risks and therefore mitigate financial loss through counterparty's potential failure to make payments.

Trade receivables and Loans and Advances
Customer credit risk and Loans and advances is managed by each business unit subject to the Group's established policy, procedures and control relating to customer credit risk management. An impairment analysis is performed at each reporting date on an individual basis for major trade receivables and loan and advances. The Group has not identifed any impairment loss as at March 31, 2022

The following table provides information about the ageing of gross carrying amount of trade recievables as at :

(Rs in millions)

Gross Carrying Amount	**March 31, 2022**	**March 31, 2021**
Undisputed Trade recievables -	-	-
Less than 6 months	-	78.58
6 months - 1 year	29.37	-
1-2 Years	0.51	21.66
2-3 Years	21.66	
Total	**51.55**	**100.24**

Other financial assets
Credit risk from balances with banks and financial institutions is managed by the Group in accordance with the Group's policy. Investments of surplus funds are made only in highly marketable debt instruments with appropriate maturities to optimise the cash return on instruments while ensuring sufficient liquidity to meet its liabilities.

Interest rate risk
Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Group's exposure to the risk of changes in market interest rates relates primarily to the Group's long-term debt obligations with floating interest rates.

The Group manages its interest rate risk by having a balanced portfolio of fixed and variable rate borrowings.

Interest rate sensitivity
The following table demonstrates the sensitivity to a reasonably possible change in interest rates on that portion of loans and borrowings affected, after excluding the credit exposure on fixed rate borrowing. With all other variables held constant, the Group's profit before tax is affected through the impact on floating rate borrowings, as follows:

	Borrowings	**Fixed Deposits**	**Borrowings**	**Fixed Deposits**
Balance of Fixed Deposit and Borrowings	**March 31, 2022**		**March 31, 2021**	
- INR Millions	94,124.22	2,469.97	90,833.34	1,744.35
Increase in basis points - INR	50 bps	50 bps	50 bps	50 bps
Effect on profit before tax - INR Millions	(470.62)	12.35	(454.17)	8.72
Decrease in basis points - INR	50 bps	50 bps	50 bps	50 bps
Effect on profit before tax - INR Millions	470.62	(12.35)	454.17	(8.72)

Liquidity risk
Liquidity risk is the risk that the Group may not be able to meet its present and future cash and collateral obligations without incurring unacceptable losses. The Group's objective is to, at all times maintain optimum levels of liquidity to meet its cash and collateral requirements. The Group closely monitors its liquidity position and deploys a robust cash management system. It maintains adequate sources of financing including debt from banks at an optimised cost.

The table below summarises the maturity profile of the Group's financial liabilities based on contractual undiscounted payments:

As at March 31, 2022	**Carrying amt**	**Total**	**On Demand**	**Less than 1 year**	**1 to 5 years**	**> 5 years**
Long term Borrowings (Gross of unamortised transaction cost)#	98,243.70	98,243.70	4,085.74	633.43	14,152.24	79,372.29
Other financial liabilities	38,191.92	38,191.92	-	3,023.13	35,168.79	-
Trade payables	17,217.19	17,217.19	-	11,218.34	5,998.85	-
Total	**1,53,652.81**	**1,53,652.81**	**219.09**	**14,874.90**	**38,387.32**	**78,216.92**

As at March 31, 2021	**Carrying amt**	**Total**	**On Demand**	**Less than 1 year**	**1 to 5 years**	**> 5 years**
Borrowings	93,946.19	93,946.19	219.09	4,307.07	11,203.11	78,216.92
Other financial liabilities	44,919.67	44,919.67	-	20,198.87	24,720.80	-
Trade payables	5,023.65	5,023.64	-	2,560.23	2,463.41	-
Total	**1,43,889.52**	**1,43,889.51**	**219.09**	**27,066.17**	**38,387.32**	**78,216.92**

Note 34 : Capital management

Capital includes equity attributable to the equity holders to ensure that it maintains an efficient capital structure and healthy capital ratios in order to support its business and maximise shareholder value. The Group manages its capital structure and makes adjustments to it, in light of changes in economic conditions or its business requirements. To maintain or adjust the capital structure, the Project SPV Group may adjust the dividend payment to shareholders, return capital to shareholders or issue new shares. No changes were made in the objectives, policies or processes during the year ended March 31, 2022.

The Group monitors capital using a gearing ratio, which is net debt divided by total capital plus net debt. Net debt is calculated as loans and borrowings less cash and cash equivalents.

	March 31, 2022	March 31, 2021
Borrowings	97,279.00	93,946.18
Less: cash and cash equivalents (Note 10)	(287.23)	(413.49)
Net debt	96,991.77	93,532.69
Equity (Note 14 and 15)	77,396.04	78,018.95
Total equity	77,396.04	78,018.95
Capital and net debt	1,74,387.81	1,71,551.64
Gearing ratio (%)	55.62%	54.52%

In order to achieve this overall objective, the Group's capital management, amongst other things, aims to ensure that it meets financial covenants attached to the interest-bearing loans and borrowings that define capital structure requirements. Breaches in meeting the financial covenants would permit the bank to immediately call loans and borrowings. There have been no breaches in the financial covenants of any interest-bearing borrowings in the current period.

Note 35

(a) During the year ended March 31, 2022, the Group has paid/accrued Rs. 1,779.36 millions (March 31, 2021, Rs. 875.53 millions) as Revenue Share to National Highways Authority of India ("NHAI") out of its toll collection in accordance with the Concession Agreements entered with NHAI. Income from Operations in the financials for the above periods is net off the above Revenue Share to NHAI.

(b) During the year ended March 31, 2017, AE Tollway Limited (AETL) has entered into a Concession agreement (CA) with NHAI for a period of 24 years. As per the terms of the CA, AETL has agreed to pay a premium in the form of "Additional Concession Fee" equal to Rs. 810.00 millions for the first year and each subsequent year such premium shall be determined by increasing the amount of premium in the respective year by an additional 5% as compared to the immediately preceding year. Management based on the legal opinion obtained and their evaluations of the terms of the CA, believes that such premium payable is restricted to the toll collection during the year and is in the form of revenue sharing arrangement. Accordingly, the premium payable for the year is accounted for as revenue share. The said treatment has been followed in case of CGTL and UTL where premium payment has commenced during the current year.

Note 36: Grant from Government Authorities

As per Article 25 of the respective Concession Agreement with the National Highways Authority of India ('NHAI' or 'the Grantor'), the Concessionaires are entitled to receive Grant for meeting the part of the project cost subject to the conditions laid down in the concession agreement. The details are as under:

(Rs in millions)

Name of the Company	Eligible for Grant	Grant received in FY 2016-17	Grant received in FY 2017-18	Grant received in FY 2018-19	Grant yet to be received
SYTL	1,890.00	1,391.70	403.80	**94.50**	-
KTL	2,340.00	1,533.79	806.21	-	-
YATL	5,580.00	-	4,230.24	**1,349.76**	-
IRBWTL	5,362.20	4,512.30	-	**849.90**	-
Total	**15,172.20**	**7,437.79**	**5,440.25**	**2,294.16**	-

Note 37 : Events after reporting period

No subsequent event has been observed which may require an adjustment to the balance sheet.

Note 38: Information on segment reporting pursuant to Ind AS 108 - Operating Segments

The Project SPV Group has identified business segment in accordance with Indian Accounting Standard 108 "Operating Segment" notified under section 133 of the Companies Act 2013, read together with relevant rules issued thereunder. The Group has identified Built, Operate and Transfer ('BOT') as its single reportable segment. Moreover the Group's activities are restricted within India and hence no separate geographical segment disclosure is considered necessary.

IRB Infrastructure Trust
Notes to Consolidated Financial Statements for the year ended March 31, 2022

Note 39 : Related party disclosures

List of Related parties of the Fund

(i)	Parties to the InvIT	IRB Infrastructure Developers Limited (Sponsor and Project Manager)
		MMK Toll Road Private Limited (Investment Manager)
		IDBI Trusteeship Services Limited (Trustee of the IRB Infrastructure Trust)
(ii)	Associates, Promoters, Directors and Partners of the persons mentioned in clause (i) and (ii)	As per table below

List of associates, promoters, directors and partners of the persons mentioned in clause (i) and (ii)

Particulars	**IRB Infrastructure Developers Limited (Sponsor and Project Manager)**	**MMK Toll Road Private Limited (Investment Manager)**	**IDBI Trusteeship Services Limited (Trustee of IRB Infrastructure Trust)**
Promoters	Mr. Virendra D. Mhaiskar Mrs. Deepali V. Mhaiskar Mr. Virendra D. Mhaiskar (HUF)	IRB Infrastructure Developers Limited (IRBIDL)	IDBI Bank Limited LIC Corporation Limited General Insurace Corporation
Directors	Mr. Virendra D. Mhaiskar, Chairman and Managing Director Mrs. Deepali V. Mhaiskar, Whole Time Director Mr. Mukeshlal Gupta, Joint Managing Director (utpo 29 December 2021) Mr. Sudhir Rao Hoshing, Joint Managing Director (utpo 29 December 2021) and Chief Executive Officer Mr. Jose Angel Tamariz Martel Goncer, Additional Non-Executive Director (wef 29 Deember 2021) Mr. Carlos Ricardo Ugarte Cruz Coke, Additional Non-Executive Director (wef 29 Deember 2021) **Independent Directors** Mr. Chandrashekhar S. Kaptan Mr. Sunil H. Talati Mr. Sandeep J. Shah Ms. Priti Savla, Independent Director (wef February 10, 2022) Mrs. Heena Raja, Independent Director (utpo February 10, 2022)	Mr. Virendra D. Mhaiskar Mr. Boon Chin Hau **Independent Directors** Mr. K.G. Krishnamurty Ms. Ranjana Paranjape	Mr. J. Samuel Joseph Mr. Ravishankar G. Shinde Ms. Madhuri J. Kulkarni Mr. Swapan Kumar Bagchi Ms. Jayashree Ranade Ms. Padma Betai Ms. Sashikala Muralidharan (upto Jan 16, 2020)
Associates	**A) Holding Company of Sponsor / Project Manager** IRB Holding Private Limited (Formerly known as Mhaiskar Ventures Private Limited) **B) Subsidiary Companies of Sponsor / Project Manager** **Project SPVs** 1. IRB Westcoast Tollway Limited (IRBWTL) (upto 26 February 2020) 2. Solapur Yedeshi Tollway Limited (SYTL) (upto 26 February 2020) 3. Yedeshi Aurangabad Tollway Limited (YATL) (upto 26 February 2020) 4. Kaithal Tollway Limited (KTL) (upto 26 February 2020) 5. AE Tollway Limited (AETL) (upto 26 February 2020) 6. Udaipur Tollway Limited (UTL) (upto 26 February 2020) 7. CG Tollway Limited (CGTL) (upto 26 February 2020) 8. Kishangarh Gulabpura Tollway Limited (KGTL) (upto 26 February 2020) 9. IRB Hapur Muradabad Tollway Limited (IRBHMTL) (upto 26 February 2020)		

Others

1. Ideal Road Builders Private Limited (IRBPL)
2. Mhaiskar Infrastructure Private Limited (MIPL)
3. Modern Road Makers Private Limited (MRMPL)
4. Aryan Toll Road Private Limited (ATRPL)
5. ATR Infrastructure Private Limited (ATRFL)
6. IRB Infrastructure Private Limited (IRBFL)
7. Thane Ghodbunder Toll Road Private Limited (TGTRPL)
8. Aryan Infrastructure Investments Private Limited (AIIPL)
9. IRB MP Expressway Private Limited (formerly known as NKT Road and Toll Private Limited)
10. MMK Toll Road Private Limited (MMK) (upto 26 February 2020)
11. IRB Kolhapur Integrated Road Development Company Private Limited (IRBK)
12. Aryan Hospitality Private Limited (AHPL)
13. IRB Sindhudurg Airport Private Limited (IRBSA)
14. IRB Goa Tollway Private Limited (IRB Goa)
15. IRB PS Highway Private Limited (formerly known as MRM Highways Private Limited) (IRBPS)
16. IRB Ahmedabad Vadodara Super Express Tollway Private Limited (IRBAV)
17. MRM Mining Private Limited (Formerly "J J Patel Infrastructural and Engineering Private Limited") (Subsidiary of MRMPL)
18. GE1 Expressway Private Limited (formerly known as IRB PP Project Private Limited)
19. VK1 Expressway Private Limited (VK1)
20. Modern Estate (Partnership Firm) (upto 23 November 2020)
21. Pathankot Mandi Highway Private Limited (w.e.f. 23 April 2021)
22. Chittoor Thachur Highway Private Limited (w.e.f. 13 October 2021)
23 .VM7 Expressway Private Limited (w.e.f. 14 August 2020)
24. Palshit Dhankuni Tollway Private Limited (w.e.f. 15 April 2021)
25. Meerut Budaun Expressway Private Limited (w.e.f. 5 January 2022)

C) Other Associate Companies of Sponsor / Project Manager

1. VCR Toll Services Private Limited
2. VDM Ventures Private Limited
3. DEUX Farming Films Private Limited
4. IRB Charitable Foundation

Key Managerial personnel of Project SPV Group (Only with whom Project SPV Group had transactions during the year/ there was balance outstanding at the year end)

1. Mr. Rajendra Kumar Agarwal (upto March 30, 2018)
2. Mr. Darshan Sangurdekar
3. Mr. Omprakash Singh
4. Jitendra Sharma (upto February 28, 2022)
5. Mrs. Heena Raja (upto October 01, 2021)
6. Mr. C. S. Kaptan
7. Ms. Shilpa Todankar
8. Mrs. Ranjana Paranjape (w.e.f October 06, 2021)
9. Mr.Abhay Phatak (w.e.f. March 09, 2022)

I. Related Party Transactions (Rs. in millions)

Sr. No.	Particulars	Sponsor and Project Manager		Fellow subsidaries of Project SPV Group		Key Management Personnel of Project SPV Group	
		March 31, 2022	March 31, 2021	March 31, 2022	March 31, 2021	March 31, 2022	March 31, 2021
1	**Contract expenses**	**-**	**-**	**629.52**	**921.31**	**-**	**-**
	Modern Road Makers Private Limited	-	-	629.52	921.31	-	-
2	**Operation & Main. Expenses**	**1,906.45**	**1,826.29**	-	-	-	-
	IRB Infrastructure Developers Limited	1,906.45	1,826.29	-	-	-	-
3	**Finance Cost -Interest unwinding on Trade payable**	-	-	**655.79**	-	-	-
	Modern Road Makers Private Limited	-	-	655.79	-	-	-
4	**Share application money received**	**-**	**2,603.81**	-	-	-	-
	IRB Infrastructure Developers Limited	-	2,603.81	-	-	-	-
	IRB Goa Tollway Private Limited	-	-	-	-	-	-
5	**Allotment of Equity Share**	**-**	**2,603.81**	-	-	-	-
	IRB Infrastructure Developers Limited	-	2,603.81	-	-	-	-
	IRB Goa Tollway Private Limited	-	-	-	-	-	-
6	**Expenses incurred on our behalf**	**-**	**5.71**	**-**	**6.05**	**-**	**-**
	IRB Infrastructure Developers Limited	-	5.71	-	-	-	-
	Modern Road Makers Private Limited	-	-		6.05	-	-
7	**Mobilisation advances recovered**	**743.02**	**1,672.70**	-	-	-	-
	IRB Infrastructure Developers Limited	743.02	1,672.70	-	-	-	-
8	**Material Aggregate Purchase**	-	**-**	**1,555.19**	**2,062.51**	-	-
	Modern Road Makers Private Limited	-	-	1,555.19	2,062.51	-	-
9	**Advance given including BG margin given**	**451.03**	**208.50**	**62.57**	**75.42**	**-**	**-**
	IRB Infrastructure Developers Limited	451.03	208.50	-	-	-	-
	Modern Road Makers Private Limited	-	-	62.57	75.42	-	-
10	**General advance recovered - EPC**	**394.25**	**183.71**	**62.48**	**75.42**	**-**	**-**
	IRB Infrastructure Developers Limited	394.25	183.71	-	-	-	-
	Modern Road Makers Private Limited	-	-	62.48	75.42	-	-
11	**Construction cost**	**8,484.71**	**13,535.60**	**-**	**2,194.10**	-	-
	IRB Infrastructure Developers Limited	8,484.71	13,535.60	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	2,194.10	-	-
12	**Amount held up**	-	-	**2.76**	**7.51**	-	-
	Modern Road Makers Private Limited	-	-	2.76	7.51	-	-
13	**Other payable**	**-**	**3.88**	**-**	**5.85**	-	-
	IRB Infrastructure Developers Limited		3.88	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	5.85	-	-
	IRB Goa Tollway Private Limited	-	-	-	-	-	-
	Mhaiskar Infrastrcture Private Limited	-	-		-	-	-

I. Related Party Transactions (Rs. in millions)

Sr. No.	Particulars	Sponsor and Project Manager		Fellow subsidaries of Project SPV Group		Key Management Personnel of Project SPV Group	
		March 31, 2022	March 31, 2021	March 31, 2022	March 31, 2021	March 31, 2022	March 31, 2021
14	**Other payable**	**-**	**-**	**48.71**	**48.71**	-	-
	IRB Infrastructure Developers Limited	-		-	-	-	-
	Mhaiskar Infrastructure Private Limited	-	-	48.71	48.71	-	-
15	**Fair value loss on measurement of other payable**	**2,161.31**	**-**				
	IRB Infrastructure Developers Limited	2,161.31	-				
16	**Expenses incurred on our behalf**	**1.77**					
	IRB Infrastructure Developers Limited	1.77					
17	**Unsecured Loan received**	**4,759.00**	**3,677.76**				
	IRB Infrastructure Developers Limited	4,759.00	3,677.76				
18	**Other payable repayment**	**-**	**5,105.50**	**-**	**1.17**	-	-
	IRB Infrastructure Developers Limited	-	5,105.50	-	-	-	-
	Mhaiskar Infrastructure Private Limited	-	-		1.17	-	-
19	**Unsecured Loan repaid**	**4,828.83**	**-**				
	IRB Infrastructure Developers Limited	4,828.83	-				
20	**Units Issued**	**1,946.33**	**-**	-	-	-	-
	IRB Infrastructure Developers Limited	1,946.33	-	-	-	-	-
21	**Trade payable**	**-**	-	**12.88**	-	-	-
	MMK Toll Road Private Limited	-	-	12.88	-	-	-
22	**Additional Intangible Asset**	-	-	**7,148.39**	-	-	-
	Modern Road Makers Private Limited	-	-	7,148.39	-	-	-
23	**Short - term borrowings taken (unsecured)**	-	**477.81**	-	-	-	-
	IRB Infrastructure Developers Limited	-	477.81	-	-	-	-
24	**Director sitting fees paid**	-	-	-	-	**1.65**	**1.23**
	Mr. Darshan Sangurdekar	-	-	-	-	0.23	0.17
	Mr.Omprakash Singh	-	-	-	-	0.23	0.18
	Mr. Jitendra Sharma	-	-	-	-	0.41	0.37
	Mrs. Heena Raja	-	-	-	-	0.06	0.08
	Mr. C S Kaptan	-	-	-	-	0.39	0.24
	Ms. Shilpa Todankar	-	-	-	-	0.26	0.19
	Mrs.Ranjana Paranjape	-	-	-	-	0.05	-
	Mr. Abhay Pathak	-	-	-	-	0.02	-

II. Related party balances

(Rs. in millions)

Sr. No.	Particulars	Sponsor and Project Manager		Fellow subsidiaries of Project SPV Group		Key Management Personnel of Project SPV	
		March 31, 2022	March 31, 2021	March 31, 2022	March 31, 2021	March 31, 2022	March 31, 2021
1	**Short-term borrowings**	**477.81**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	477.81	-	-	-	-	-
2	**Trade payable**	**1,189.05**	**1,119.15**	**11,968.59**	**2,925.97**	**-**	**-**
	IRB Infrastructure Developers Limited	1,189.05	1,119.15	-	-	-	-
	Modern Road Makers Private Limited	-	-	11,888.28	2,925.97	-	-
	MMK Toll Road Private Limited	-	-	80.31	-	-	-
3	**Mobilisation advances**	**435.80**	**1,522.77**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	435.80	1,522.77	-	-	-	-
4	**Advance given**	**502.86**	**102.14**	**0.03**	**1.17**	**-**	**-**
	IRB Infrastructure Developers Limited	502.86	102.14	-	-	-	-
	Modern Road Makers Private Limited	-	-	0.03	1.17	-	-
5	**Retention payable**	**-**	**-**	**256.49**	**190.35**	**-**	**-**
	Modern Road Makers Private Limited	-	-	256.49	190.35	-	-
6	**Other payable including BG margin payable**	**31,711.77**	**29,550.45**	**3,648.68**	**3,599.97**	**-**	**-**
	IRB Infrastructure Developers Limited	31,711.77	29,550.45	-	-	-	-
	Modern Road Makers Private Limited	-	-	1,800.83	1,800.83	-	-
	IRB Goa Tollway Private Limited	-	-	1,544.86	1,544.86	-	-
	Mhaiskar Infrastructure Private Limited	-	-	302.98	254.28	-	-
7	**Other payable (Exp incurred on our behalf)**	**1.77**	**-**				
	IRB Infrastructure Developers Limited	1.77	-				
8	**Unsecured Loan / other payable**	**3,607.93**	**4155.57**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	3,607.93	4155.57	-	-	-	-
9	**Trade Receivable**	**-**	**-**	**0.51**	**0.51**	**-**	**-**
	Modern Road Makers Private Limited	-	-	0.51	0.51	-	-
10	**BG margin money receivable**	**-**	**0.54**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	-	0.54	-	-	-	-
11	**Expense payable**	**938.23**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	938.23	-	-	-	-	-
12	**Director sitting fees Payable**	**-**	**-**	**-**	**-**	**0.43**	**0.28**
	Mr. Rajendra kumar Agarwal	-	-	-	-	0.01	-
	Mr. Darshan Sangurdekar	-	-	-	-	0.05	0.04
	Mr. Omprakash Singh	-	-	-	-	0.05	0.04
	Mr. Jitendra Sharma	-	-	-	-	0.09	0.09
	Mrs. Heena Raja	-	-	-	-	-	0.02
	Mr. C S Kaptan	-	-	-	-	0.11	0.08
	Miss Shilpa Todankar	-	-	-	-	0.09	0.01
	Mrs. Ranjana Paranjape	-	-	-	-	0.03	-

Note 40 : Disclosure pursuant to Appendix - A to Ind AS 11 - " Service Concession Arrangements" ('SCA')

(A) Disclosures with regard to Toll Collection Rights (Intangible Assets)

Sr. No.	Name of Concessionaire	Start of concession period under concession agreement (Appointed date)	End of concession period under concession agreement	Period of concession since the appointed date	Construction completion date or expected construction completion date, as applicable
1	IRB Westcoast Tollway Limited	March 3, 2014	March 2, 2042	28 years	June 30, 2022
2	Solapur Yedeshi Tollway Limited	January 21, 2015	January 20, 2044	29 years	October 15, 2019
3	Yedeshi Aurangabad Tollway Limited	July 1, 2015	June 30, 2041	26 years	September 24, 2020
4	Kaithal Tollway Limited	July 15, 2015	July 14, 2042	27 years	March 29, 2019
5	AE Tollway Limited	August 1, 2016	July 31, 2040	24 years	November 24, 2020
6	Udaipur Tollway Limited	September 3, 2017	September 2, 2038	21 years from Appointed Date	June 01, 2021
7	CG Tollway Limited	November 4, 2017	November 3, 2037	20 years from Appointed Date	August 14, 2021
8	Kishangarh Gulabpura Tollway Limited	February 21, 2018	February 20, 2038	20 years from Appointed Date	June 30, 2022
9	IRB Hapur Moradabad Tollway Limited	May 28, 2019	May 26, 2041	22 years from Appointed Date	June 30, 2022

Note:

The above BOT/ DBFOT projects shall have following rights/ obligations in accordance with the Concession Agreement entered into with the Respective Government Authorities:-

a. Rights to use the Specified assets
b. Obligations to provide or rights to expect provision of services
c. Obligations to deliver or rights to receive at the end of the Concession.

Note 41: Earnings Per Unit (EPU)

EPU amounts are calculated by dividing the profit for the period attributable to unit holders by the weighted average number of Units outstanding during the year.

The following reflects the income and share data used in the EPU computations:

(Rs in millions)

	March 31, 2022	March 31, 2021
Profit attributable to unit holders for earnings	(4,435.98)	(3,252.48)
Weighted average number of Units for EPU	84,29,14,666	78,47,08,356
Face value per unit (in Rs)	100	100
Earning per unit (in Rs.)	(5.26)	(4.14)

Note 42 : COVID-19

The outbreak of Coronavirus (COVID-19) pandemic globally and in India is causing significant disturbance and slowdown of economic activity. As per the directions of the Ministry of Road Transport & Highways (MoRTH)/ National Highway Authority of India (NHAI), in order to follow MHA guidelines about commercial and private establishment in the wake of COVID-19 epidemic in the country, operations at the toll plaza of the Group were closed down w.e.f. 26th March, 2020. The toll operations were resumed from 20th April, 2020 by ensuring compliance with preventive measures in terms of guidelines/ instructions issue by Govt. of India to contain spread of Covid -19. Due to this, traffic for the toll road has been impacted. Management believes this is temporary and expects traffic will be normalised looking at the recent toll collection. In accordance with the Concession Agreement and NHAI policy no. 8.3.33/2020 and 8.4.20/2020 dated 26th May, 2020, the Group is eligible for extension of concession period with NHAI towards loss of revenue due to COVID-19 pandemic and NHAI is also extending COVID-19 loan to the Concessionaire for shortfall in cashflow.

The management has assessed and determined that considering the nature of its operations and overall revenue model, COVID-19 does not have material impact on the Group's financial position as at March 31, 2022 and its financial performance for the year then ended.

Note 43 : Other Statutory information

i) The Group have not traded or invested in Crypto currency or Virtual Currency during the financial year.

ii) The Group does not hold benami property and no proceedings under Benami transaction (Prohibition) Act 1988 have been initiated against the Group.

iii) The Group do not have any transactions with companies struck off.

iv) The Group have not any such transaction which is not recorded in the books of accounts that has been surrendered or disclosed as income during the year in the tax assessments under the Income Tax Act, 1961 (such as, search or survey or any other relevant provisions of the Income Tax Act, 1961.

v) The Group have not received any fund from any person(s) or entity(ies), including foreign entities (Funding Party) with the understanding (whether recorded in writing or otherwise) that the Group shall:

(a) directly or indirectly lend or invest in other persons or entities identified in any manner whatsoever by or on behalf of the Funding Party (Ultimate Beneficiaries) or

(b) provide any guarantee, security or the like on behalf of the Ultimate Beneficiaries.

vi) The Group have not advance or loaned or invested (either from borrowed fund or share premium or any other source or kind of fund) by the company to or in any person(s) or entity(ies), including foreign entities (Funding Party) with the understanding (whether recorded in writing or otherwise) that the Group shall:

(a) directly or indirectly lend or invest in other persons or entities identified in any manner whatsoever by or on behalf of the Group (Ultimate Beneficiaries) or

(b) provide any guarantee, security or the like on behalf of the Ultimate Beneficiaries.

vii) The Group did not have any long-term contracts including derivative contract for which there were any material foreseeable losses.

viii) The Group has not declared a wilful defaulter by any bank/ financial institution or any other lender during the year.

Note 44 : Subsequent events

IRB Infrastructure Trust ("the Trust") has successfully completed fund raising by way of Rights Issue of Units amounting to Rs. 242.50 Crores from existing unitholders. The IRB Infrastructure Developers Limited (IRBIDL) being the Sponsor and 51% unitholder of the Private InvIT, invested Rs. 123.68 Crores and GIC Affiliates holding 49% units have invested Rs. 118.82 Crores. Post the rights issue, IRBIDL will continue to hold 51% units and GIC affiliates will continue to hold 49% units in the Trust.

Further, IRBIDL being the Sponsor of the Trust, has executed necessary Agreement/ documents for implementation of Palsit Dankuni Tollway Private Limited (PDTPL) by the Trust and accordingly, the Project will be executed by the IRBIDL and the Trust.

Note 45 : Previous year comparatives

Consequent to the issuance of " Guidance Note on Division II – Ind AS Schedule III to the Companies Act, 2013" certain items of financial statements have been regouped/ reclassified.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
Kaustubh Deshpande
Partner
Membership No. 121011

Place: Mumbai
Date: 06/05/2022

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.:A27833

Place : Mumbai
Date: 06/05/2022

C. STANDALONE FINANCIAL INORMATION

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Gokhale & Sathe
Chartered Accountants
304/308/309, Udyog Mandir No.1,
7-C, Bhagoji Keer Marg,
Mahim, Mumbai 400 016.
Telephone + 91 (22) 43484242
Fax + 91 (22) 43484241

M S K A & Associates
Chartered Accountants
602, Floor 6, Raheja Titanium
Western Express Highway,
Geetanjali Railway Colony,
Ram Nagar, Goregaon (E),
Mumbai 400063, India
Tel: +91 22 6238 0519

Independent Auditors' Review Report on Unaudited Interim Standalone Financial Information for the six months period ended September 30, 2024 of IRB Infrastructure Trust

To
The Board of Directors,
MMK Toll Road Private Limited
The Investment Manager of the IRB Infrastructure Trust ("the Investment Manager")

1. We have jointly reviewed the accompanying Unaudited Interim Standalone Financial Information of IRB Infrastructure Trust ("the Trust") which comprises Unaudited Interim Standalone Balance Sheet as on September 30, 2024, Unaudited Interim Standalone Statement of Profit and Loss, including other comprehensive income, Unaudited Interim Standalone Statement of Cash Flow, Unaudited Interim Standalone Statement of Changes in Unitholders Equity, Unaudited Interim Standalone statement of Net Assets at Fair Value, Unaudited Interim Standalone statement of total return at fair value and Net Distributable cashflows ('NDCF') of the Trust as an additional disclosure in accordance with the Securities and Exchange Board of India ("SEBI") Master Circular SEBI/ HO/DDHS-PoD-2/P/CIR/2024/44 dated May 15, 2024, as amended for the six months period then ended and notes to the standalone financial information including material accounting policies and other explanatory notes (together hereinafter referred to as the "Unaudited Interim Standalone Financial Information"). These unaudited interim standalone financial information for the period from April 01, 2024 to September 30, 2024 have been prepared solely for inclusion in the Letter of Offer ("LOF") in connection with the proposed right issue of units of the Trust.

2. The Unaudited Interim Standalone Financial Information, which is the responsibility of the Investment Manager and approved by the Investment Manager's Board of Directors, has been prepared in accordance with the requirements of SEBI (Infrastructure Investment Trusts) Regulations, 2014, as amended from time to time read with the Paragraph 3.21 of Chapter 3 and Paragraph 4.6 of Chapter 4 of the Securities and Exchange Board of India ("SEBI") Master Circular No. SEBI/HO/DDHS-PoD-2/P/CIR/2024/44 dated May 15, 2024, as amended ("SEBI Circular"), together known as ("InvIT Regulations"), and principles laid down in Indian Accounting Standard 34, Interim Financial Reporting ('Ind AS 34') prescribed under rule 2(1)(a) of Companies (Indian Accounting Standards) Rules 2015, as amended and other recognised accounting principles generally accepted in India, to the extent not inconsistent with the InvIT Regulations.

3. We conducted our review of the Unaudited Interim Standalone Financial Information in accordance with the Standard on Review Engagements (SRE) 2410 "Review of Interim Financial Information Performed by the Independent Auditor of the Entity" issued by the Institute of Chartered Accountants of India. A review consists of making inquiries, primarily of Investment Manager's personnel responsible for financial and accounting matters and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with Standards on Auditing and consequently does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

4. Based on our review conducted as stated in paragraph 3 above, nothing has come to our attention that causes us to believe that the accompanying Unaudited Interim Standalone Financial Information, prepared in accordance with the recognition and measurement principles laid down in the aforesaid Indian Accounting Standards and other recognised accounting principles generally accepted in India, to the extent not inconsistent with InvIT Regulations, has not disclosed the information required to be disclosed in terms of the Regulations 23 of the SEBI (Infrastructure Investments Trust) Regulation, 2014, as amended, read with SEBI Circular including the manner in which it is to be disclosed, or that it contains any material misstatement.

Gokhale & Sathe
Chartered Accountants
304/308/309, Udyog Mandir No.1,
7-C, Bhagoji Keer Marg,
Mahim, Mumbai 400 016.
Telephone + 91 (22) 43484242
Fax + 91 (22) 43484241

M S K A & Associates
Chartered Accountants
602, Floor 6, Raheja Titanium
Western Express Highway,
Geetanjali Railway Colony,
Ram Nagar, Goregaon (E),
Mumbai 400063, India
Tel: +91 22 6238 0519

5. We draw attention to Note 11 of the accompanying Unaudited Interim Standalone Financial Information, which describes the presentation of 'Unit Capital' as 'Equity' to comply with the InvIT Regulations.

   Our conclusion is not modified in respect of this matter.

6. The Unaudited Interim Standalone Financial Information of the Trust for the period April 01, 2023 to September 30, 2023 included in the Unaudited Interim Standalone Financial Information, were reviewed by Gokhale & Sathe, one of the Joint Auditor of the Trust, whose report dated December 09, 2024 expressed an unmodified conclusion of those Unaudited Interim Standalone Financial Information. Our conclusion is not modified in respect of the above matter.

7. The report is addressed to the Board of Directors of the Investment Manager and submitted solely for inclusion in the LOF in connection with the proposed right issue of units of the Trust.

   Accordingly, we do not accept or assume any liability or any duty of care for any other purpose or to any other person to whom this report is shown or into whose hands it may come without our prior consent in writing.

   Our conclusion is not modified in respect of this matter.

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration No.103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No.: 121011
UDIN: 24121011BKAAVS6202

Place: Mumbai
Date: December 09, 2024

For M S K A & Associates
Chartered Accountants
ICAI Firm Registration No.105047W

SD/-
Nitin Tiwari
Partner
Membership No.: 118894
UDIN: 24118894BKGQLH3677

Place: Mumbai
Date: December 09, 2024

IRB Infrastructure Trust

Unaudited Interim Standalone Balance Sheet as on September 30, 2024

(₹ in million)

Particulars	Note No.	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)
I ASSETS			
(1) Non-current assets			
Financial assets			
i) Investments	**4**	52,855.81	69,752.19
ii) Loans	**5**	1,68,373.72	1,54,248.07
iii) Other financial assets	**6**	-	613.15
Total non-current assets (A)		**2,21,229.53**	**2,24,613.41**
(2) Current assets			
Financial assets			
i) Investments	**4**	818.55	86.84
ii) Cash and cash equivalents	**8**	96.82	150.39
iii) Bank balance other than cash and cash equivalents	**9**	3,191.40	2,041.10
iv) Loans	**5**	11,317.88	8,451.47
v) Other financial assets	**6**	28,816.71	21,008.09
Current tax assets (net)	**10**	20.08	9.52
Other current assets	**7**	8.45	-
Total current assets (B)		**44,269.89**	**31,747.41**
Total assets (A+B)		**2,65,499.42**	**2,56,360.82**
II EQUITY AND LIABILITIES			
Equity			
Unit capital	**11**	1,34,645.75	1,35,091.23
Other equity	**12**	25,675.21	18,052.09
Total unit holder's equity (A)		**1,60,320.96**	**1,53,143.32**
LIABILITIES			
(1) Non-current liabilities			
Financial liabilities			
i) Borrowings	**13**	61,087.51	61,702.15
ii) Other financial liabilities	**15**	42,013.08	40,760.96
Total non-current liabilities (B)		**1,03,100.59**	**1,02,463.11**
(2) Current liabilities			
Financial liabilities			
i) Borrowings	**13**	1,965.68	647.39
ii) Trade payables	**14**		
a) total outstanding dues of micro enterprises and small enterprises		-	0.27
b) total outstanding dues of creditors other than micro enterprises		109.51	102.05
Other current liabilities	**16**	2.68	4.68
Total current liabilities (C)		**2,077.87**	**754.39**
Total liabilities (D=B+C)		**1,05,178.46**	**1,03,217.50**
TOTAL EQUITY AND LIABILITIES (A+D)		**2,65,499.42**	**2,56,360.82**

Summary of material accounting policies **3**

The accompanying notes are an integral part of the unaudited interim standalone financial information.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No.: 121011

For M S K A & Associates
Chartered Accountants
ICAI Firm Registration Number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No.: 118894

Place : Mumbai
Date : December 09. 2024

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN: 00183554

SD/-
Dhananjay K. Joshi
Chief Executive Officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No. A27833

Place : Mumbai
Date : December 09, 2024

IRB Infrastructure Trust

Unaudited Interim Standalone Statement of Profit and Loss for the period April 01, 2024 to September 30, 2024

(₹ in million)

Particulars	Note No.	Six month ended September 30, 2024 (Unaudited)	Six month ended September 30, 2023 (Unaudited)
Incomes and gains			
Interest on Loan		11,634.89	6,334.88
Interest on bank deposits		97.51	14.32
Profit on sale of investments		16.43	1.23
Other Income	17	499.32	-
Total Incomes and Gains		**12,248.15**	**6,350.43**
Expenses and losses			
Valuation Expenses		2.12	1.21
Audit Fees	19A	4.42	0.24
Investment management fees		52.65	87.56
Custodian Fees		0.76	-
Trustee Fees		0.65	-
Finance Cost (Interest)		2,732.64	5.70
Finance Cost (Others)	18	46.72	1.26
Legal & Professional Fees		11.07	18.25
Fair value loss on measurement of other payable		1,227.70	1,178.97
Other Expenses	19	0.59	0.84
Total Expenses and Losses		**4,079.32**	**1,294.03**
Profit before tax		**8,168.83**	**5,056.41**
Tax expenses			
Current tax		-	-
MAT Credit utilisation / (Entitlement)		-	-
Deferred tax (credit) / charge		-	-
Total tax expenses		-	-
Profit after tax		**8,168.83**	**5,056.41**
Other comprehensive income for the period / year (net of tax)		-	-
Total comprehensive income for the period / year (net of tax)		**8,168.83**	**5,056.41**
Earnings per unit			
Basic		7.33	5.50
Diluted		7.33	5.50

Summary of material accounting policies 3

The accompanying notes are an integral part of the unaudited interim standalone financial information.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No.: 121011

For M S K A & Associates
Chartered Accountants
ICAI Firm Registration Number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No.: 118894

Place : Mumbai
Date : December 09. 2024

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN: 00183554

SD/-
Dhananjay K. Joshi
Chief Executive Officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No. A27833

Place : Mumbai
Date : December 09, 2024

IRB Infrastructure Trust

Unaudited Interim Standalone Statement of Cash Flow for the period April 01, 2024 to September 30, 2024

(₹ in million)

Particulars	Six months ended September 30, 2024 (Unaudited)	Six months ended September 30, 2023 (Unaudited)
Cash flow from operating activities		
Profit / (Loss) before tax	8,168.83	5,056.41
Adjustments to reconcile profit before tax to net cash flows:		
Finance costs	2,779.36	6.96
Fair value loss on investments	0.15	-
Profit on sale of investments	(16.43)	(1.23)
Fair value loss on measurement of other payable	1,227.70	1,178.97
Interest Paid on Interest Free Loan		24.42
Interest income on		
- Fixed deposits	(97.51)	(14.32)
- loan to related parties	(11,634.89)	(6,334.88)
- Interest Free Loan	(499.47)	(24.42)
Operating profit/(loss) before working capital changes	**(72.26)**	**(108.09)**
Movement in working capital:		
Increase/(decrease) in trade payables	7.19	20.68
Increase/(decrease) in other financial liabilities	24.42	-
Increase/(decrease) in other current liabilities	(2.00)	2.83
(Increase)/decrease in Other current assets	(8.45)	3.89
(Increase)/decrease in loans		
(Increase)/decrease in Other Financial assets	(16.42)	(15.80)
Cash generated from/(used in) operations	**(67.52)**	**(96.49)**
Direct taxes paid (net of refunds)	(10.56)	(0.43)
Net cash flows from/(used in) operating activities (A)	**(78.08)**	**(96.92)**
Cash flows from investing activities		
Proceeds from Sale/(purchase) of current investments (net)	(715.42)	21.31
Loans (given) / recovered - (Secured Interest bearing)	783.60	(15,300.00)
Loans (given) / recovered - (Unsecured Interest bearing)	187.00	(113.65)
Loans (given) / recovered - (Interest Free)	-	(24.42)
Loans (given) / recovered - (MMR Loans)	19.94	-
Loans (given) / recovered - (Subordinated Debt)	827.50	(20,647.40)
Loans (given) / recovered - (Short Term Loans)	(1,913.73)	(752.80)
Equity Investment in subsidiaries	-	(7,154.50)
Investments in Bank deposits (having maturity of more than twelve months)	-	-
Investments in Bank deposits (having maturity of more than three months less than twelve months)	(568.10)	-
Interest received on fixed deposit	95.71	4.25
Interest received from related parties	4,374.91	1,349.42
Net cash flows from/(used in) investing activities (B)	**3,091.41**	**(42,617.79)**
Cash flow from financing activities		
Return of unit capital / Proceeds from right issue	(445.48)	28,619.50
Proceeds from interest free loan (related parties)	1,135.00	250.00
Repayments from interest free loan (related parties)	(135.00)	
Net Repayment / Proceeds of long term borrowings	(317.44)	24,170.30
Transaction cost on long term borrowings		(324.58)
Unit issue expenses	-	(51.82)
Interest Distribution	(545.71)	-
Finance Cost paid	(2,758.27)	(3.62)
Net cash flows from/(used in) financing activities (C)	**(3,066.90)**	**52,659.78**
Net increase/(decrease) in cash and cash equivalents (A+B+C)	**(53.57)**	**9,945.07**
Cash and cash equivalents at the beginning of the period	**150.39**	**6.56**
Cash and cash equivalents at the end of the period (refer note 8)	**96.82**	**9,951.63**
Components of cash and cash equivalents		
Balance with banks		
- In current accounts	17.85	130.42
- In escrow accounts	78.97	8,753.62
Deposits with banks		
- Maturoty less then 3 months	-	1,067.60
Total Cash and cash equivalents	**96.82**	**9,951.63**

Debt reconciliation statement in accordance with Ind AS 7

(₹ in million)

Particulars	Six months ended September 30, 2024 (Unaudited)	Six months ended September 30, 2023 (Unaudited)
Opening balances as at beginning of the period		
Long term borrowings	63,030.66	-
Short term borrowings	-	4,872.91
Movements		
Long term borrowings	(317.44)	24,170.30
Short term borrowings	1,000.00	250.00
Closing balances as at end of the period		
Long term borrowings	62,713.22	24,170.30
Short term borrowings	1,000.00	5,122.91

The accompanying notes are an integral part of the unaudited interim standalone statement of cash flow

Notes:
1. All figures in bracket are outflow.
2. Taxes paid are treated as arising from operating activities and are not bifurcated between investing and financing activities.
3. The Standalone Statement of cash flows has been prepared under Indirect Method as per Ind AS 7 "Statement of Cash Flows" .
4. The Borrowings reflected in above Debt Reconciliation Statement are gross of Unamortised Transaction Cost.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
CA Kaustubh Deshpande
Partner
Membership No.: 121011

SD/-
Virendra D. Mhaiskar
Chairman
DIN: 00183554

SD/-
Dhananjay K. Joshi
Chief Executive Officer

For M S K A & Associates
Chartered Accountants
ICAI Firm Registration Number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No.: 118894

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No. A27833

Place : Mumbai
Date : December 09. 2024

Place : Mumbai
Date : December 09, 2024

IRB Infrastructure Trust
DISCLOSURES PURSUANT TO SEBI CIRCULARS
(SEBI Circular No. SEBI/HO/DDHS-PoD-2/P/CIR/2024/44 dated 15-May-2024)

A. Unaudited Interim Standalone Statement of Net Asset at Fair Value

(₹ in million)

Particulars	As at September 30, 2024		As at March 31, 2024	
	Book value	Fair value	Book value	Fair value
A. Assets	2,65,499.42	4,33,406.14	2,56,360.82	4,03,257.61
B. Liabilities (at book value)	1,05,178.46	1,05,178.46	1,03,217.50	1,03,217.50
C. Net Assets (A-B)	1,60,320.96	3,28,227.68	1,53,143.32	3,00,040.10
D. Number of units (in million)	1,113.69	1,113.69	1,113.69	1,113.69
E. NAV (C/D) (Amount in ₹)	**143.95**	**294.72**	**137.51**	**269.41**

B. Unaudited Interim Standalone Statement of Total Returns at Fair Value

Particulars	As at September 30, 2024	As at March 31, 2024
Total Comprehensive Income (As per the Statement of Profit and Loss)	8,168.83	9,043.83
Add/(less): Other Changes in Fair Value	1,67,906.72	1,46,896.78
Comprehensive Income	**1,76,075.55**	**1,55,940.61**

Notes :

Fair value of assets as at September 30, 2024 and March 31, 2024 and other changes in fair value for the year then ended as disclosed in the above tables are derived based on the fair valuation reports issued by the independent valuer appointed under the InvIT Regulations.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No.: 121011

For M S K A & Associates
Chartered Accountants
ICAI Firm Registration Number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No.: 118894

Place : Mumbai
Date : December 09. 2024

For and on behalf of the Board of Directors of
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CIN : U45200MH2002PTC135512

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Virendra D. Mhaiskar
Chairman
DIN: 00183554

SD/-
Shilpa Todankar
Chief Financial Officer

Place : Mumbai
Date : December 09, 2024

SD/-
Dhananjay K. Joshi
Chief Executive Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No. A27833

IRB Infrastructure Trust

Unaudited Interim Standalone Statement of Changes in Unitholder's Equity for the period April 01, 2024 to September 30, 2024

(₹ in million)

Particulars	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)
I. Unit capital		
Issued, subscribed and fully paid up Unit Capital		
Unit Capital of ₹ 100 each issued, subscribed and fully paid up		
At the beginning of the period	1,35,091.23	87,929.33
Issued during the period	-	51,146.50
Less: Capital reduction during the period	(445.48)	(3,984.60)
At the end of the period	**1,34,645.75**	**1,35,091.23**

II. Reconciliation of the number of units outstanding and the amount of unit capital:

Particulars	As at September 30, 2024 (Unaudited)		As at March 31, 2024 (Audited)	
	No. of units	Amount in Million	No. of units	Amount in Million
At the beginning of the period	1,11,36,93,265	1,35,091.23	87,92,93,265	87,929.33
Issued during the period	-	-	23,44,00,000	51,146.50
Less: Capital Reduction during the period	-	(445.48)	-	(3,984.60)
At the end of the period	**1,11,36,93,265**	**1,34,645.75**	**1,11,36,93,265**	**1,35,091.23**

Other Equity

(₹ in million)

Particulars	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)
Retained earnings		
At the beginning of the period	18,052.09	9,526.42
Profit/(Loss) for the period	8,168.83	9,043.83
Unit Issue expenses	-	(68.61)
Interest Distribution	(545.71)	(449.55)
At the end of the period	**25,675.21**	**18,052.09**

The accompanying notes are an integral part of the Unaudited Interim Standalone Statement of changes in unitholder's equity

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No.: 121011

For M S K A & Associates
Chartered Accountants
ICAI Firm Registration Number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No.: 118894

Place : Mumbai
Date : December 09. 2024

For and on behalf of the Board of Directors of
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CIN : U45200MH2002PTC135512

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Chief Financial Officer

Place : Mumbai
Date : December 09, 2024

SD/-
Dhananjay K. Joshi
Chief Executive Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No. A27833

Additional disclosures as required by paragraph 6 of chapter 4 to the master circular no. SEBI/HO/DDHS-POD-2/P/CIR/2024/44 dated 15th May 2024 as amended including any guidelines and circulars issued thereunder ("SEBI circulars")

Net Distributable Cash Flow for the six months ended September 30, 2024

(i) IRB Infrastructure Trust

(₹ in million)

Sr No.	Particulars	Six months ended September 30, 2024
1	Cashflows from operating activities as per Cash Flow Statement of the Trust	(102.49)
2	(+) Cash flows received from SPV's / Investment entities which represent distributions of NDCF computed as per relevant framework	4,977.23
3	(+) Treasury income / income from investing activities of the Trust (interest income received from FD, any investment entities as defined in Regulation 18(5), tax refund, any other income in interest, profit on sale of Mutual funds, investments, assets etc., dividend income etc., excluding any Ind AS adjustments. Further clarified that these amounts will be considered on a cash receipt basis)	112.14
4	(+) Proceeds from sale of infrastructure investments, infrastructure assets or shares of SPVs/Holdcos or Investment Entity adjusted for the following: • Applicable capital gains and other taxes • Related debts settled or due to be settled from sale proceeds • Directly attributable transaction costs • Proceeds reinvested or planned to be reinvested as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations	-
5	(+) Proceeds from sale of infrastructure investments, infrastructure assets or sale of shares of SPVs or Investment Entity not distributed pursuant to an earlier plan to re invest as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations, if such proceeds are not intended to be invested subsequently	-
6	(-) Finance cost on Borrowings, excluding amortisation of any transaction costs as per Profit and Loss Account of the Trust	(2,732.65)
7	(-) Debt repayment at Trust level (to include principal repayments as per scheduled EMI's except if refinanced through new debt including overdraft facilities and to exclude any debt repayments / debt refinanced through new debt, in any form or funds raised through issuance of units)	(317.44)
8	(-) Any reserve required to be created under the terms of, or pursuant to the obligations arising in accordance with, any: (i). loan agreement entered with financial institution or (ii). terms and conditions, covenants or any other stipulations applicable to debt securities issued by the Trust or any of its SPVs/ HoldCos, or (iii). terms and conditions, covenants or any other stipulations applicable to external commercial borrowings availed by the Trust or any of its SPVs/ HoldCos, or (iv). agreement pursuant to which the SPV/ HoldCo operates or owns the infrastructure asset, or generates revenue or cashflows from such asset (such as, concession agreement, transmission services agreement, power purchase agreement, lease agreement, and any other agreement of a like nature, by whatever name called); or (v). statutory, judicial, regulatory, or governmental stipulations;	(445.10)
9	(-) any capital expenditure on existing assets owned / leased by the InvIT, to the extent not funded by debt / equity or from contractual reserves created in the earlier years	-
10	**NDCF at Trust Level**	**1,491.69**

Notes:

1. As per the master circular SEBI/HO/DDHS-PoD-2/P/CIR/2024/44 dated May 15, 2024, details of NDCF distributable is as below:

Particulars	Rs. (in million)
NDCF of Trust(A)	1,491.69
(+) NDCF of SPV's (B)#	4,994.36
(-) Amount distributed by SPV's (C)	4,977.23
Amount of NDCF Distributable D=(A+B-C)	**1,508.82**

NDCF of SPV's excludes NDCF for certain SPVs, where funds are not available for distribution on account of restrictions placed vide the terms of

Trust has ensured that minimum 90% of the above amount will be distributed as NDCF.

2. In accordance with the SEBI circular no SEBI/HO/DDHS-PoD-2/P/CIR/2024/44 dated May 15, 2024, the framework for computation of Net Distributable cash flows ("NDCF") is revised at Trust level for the period from April 01, 2024 to September 30, 2024. Accordingly, NDCF for the period April 01, 2024 to September 30, 2024 has been calculated and presented in accordance with the new framework. NDCF for the periods for on or before March 31, 2024, has been calculated and presented as per the earlier framework and has been disclosed / reproduced in NDCF of IRB Infrastructure Trust for the six months ended September 30, 2023, six months ended March 31, 2024 and year ended March 31, 2024.

Additional Disclosures as required by paragraph 6 of chapter 4 to the master circular no. SEBI/HO/DDHS-PoD-2/P/CIR/2023/115 dated 06 July 2023 as amended for the comparable periods

(ii) Net Distributable Cash Flow of IRB Infrastructure Trust for the six months ended September 30, 2023, six months ended March 31, 2024 and year ended March 31, 2024

(₹ in million)

Sr. No.	Particulars	Six months ended September 30, 2023	Six months ended March 31, 2024	Year ended March 31, 2024
1	Cash flows received from Project SPVs in the form of Interest[1]	1,325.00	2,423.20	3,748.20
2	Cash flows received from Project SPVs in the form of Dividend	-	-	-
3	Any other income accruing at the Trust level and not captured above, including but not limited to interest/return on surplus cash invested by the Trust	15.55	183.94	199.49
4	Cash flows received from the project SPVs towards the repayment (Net) of the debt issued to the Project SPVs by the Trust[2]	(752.80)	9,650.56	8,897.76
5	**Total cash inflow at the Trust level (A)**	**587.75**	**12,257.70**	**12,845.45**
	Less:			
6	Any payment of fees, interest and expense incurred at the Trust level, including but not limited to the fees of the Investment Manager	(115.06)	(2,519.48)	(2,634.54)
7	Income tax (if applicable) at the Standalone Trust Level	-	-	-
8	Repayment of external debt	-	(646.69)	(646.69)
9	Promoter contribution in under construction Project SPVs	-	(4,855.00)	(4,855.00)
10	**Total cash outflows / retention at the Trust level (B)**	**(115.06)**	**(8,021.17)**	**(8,136.23)**
11	**Net Distributable Cash Flows (C) = (A+B)**	**472.69**	**4,236.53**	**4,709.22**

Note :

1 Excludes interest due but not received of Rs. 5,009.88 millions, Rs.7,703.64 millions and Rs. 12,713.52 millions for the six months ended September 30, 2023, six months ended March 31, 2024 and year ended March 31, 2024.

2 Netted - off with disbursement of short-term unsecured loan to related parties. (Refer RPT disclosures of Standalone Unaudited Financial Information).

3 The same is earmarked towards capex for ongoing projects.

IRB Infrastructure Trust

Notes to Unaudited Interim Standalone Financial Information as at September 30, 2024

1. Trust Information and Nature of Operations

IRB Infrastructure Trust (the "Trust") is a trust settled pursuant to the indenture of trust dated August 27, 2019 which is registered under Indian Trust Act, 1882 and under the Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time. The Trust is settled by the Sponsor, IRB Infrastructure Developers Limited (“IRB” or the “Sponsor”), an infrastructure development company in India. The Trustee to the Trust is IDBI Trusteeship Services Limited (the “Trustee”). Investment manager for the Trust is MMK Toll Road Private Limited (the "Investment Manager”). The Trust has received registration certificate from SEBI having registration number IN/InviT/19-20/0012.

The Trust has been formed to invest in infrastructure assets primarily being in the road sector in India. The Trust’s road projects are eligible infrastructure projects under the InvIT Regulations and held through special purpose vehicles (“Project SPVs” together as "Project SPV Group"). The Trust’s portfolio comprises of fifteen road projects as listed below:-

The Trust had acquired the projects at Sr no 1 to 11 and 13 from the Sponsor. The SPV at Sr. no 11 has been added to portfolio from 11.08.2023. The SPV at Sr. no 12 has been added to portfolio from 10.11.2023. The SPV at Sr. no 13 has been added to portfolio from 28.12.2023. The SPV at Sr. no 14 & 15 has been added to portfolio from 01.01.2024.

Sr No.	Project SPV Name	Type
1	AE Tollway Limited (AETL)	DBFOT
2	CG Tollway Limited (CGTL)	DBFOT
3	IRB Hapur Moradabad Tollway Limited (IRBHMTL)	DBFOT
4	IRB Westcoast Tollway Limited (IRBWTL)	DBFOT
5	Kishangarh Gulabpura Tollway Limited (KGTL)	DBFOT
6	Kaithal Tollway Limited (KTL)	DBFOT
7	Solapur Yedeshi Tollway Limited (SYTL)	DBFOT
8	Udaipur Tollway Limited (UTL)	DBFOT
9	Yedeshi Aurangabad Tollway Limited (YATL)	DBFOT
10	Palsit Dankuni Tollway Private Limited (PDTPL) (w.e.f 02.04.2022)	DBFOT
11	IRB Golconda Expressway Private Limited (IGEPL) (w.e.f 11.08.2023)	TOT
12	IRB Lalitpur Tollway Private Limited (ILTPL) (w.e.f 10.11.2023)	TOT
13	Samakhiyali Tollway Private Limited (STPL) (w.e.f 28.12.2023)	DBFOT
14	IRB Kota Tollway Private Limited (IKTPL) (w.e.f 01.01.2024)	TOT

Sr No.	Project SPV Name	Type
15	IRB Gwalior Tollway Private Limited (IGTPL) (w.e.f 01.01.2024)	TOT

The registered office of the Investment Manager is Off No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai Mumbai 400076.

The financial statements were authorised for issue in accordance with resolution passed by the board of directors of the Investment manager on December 09, 2024.

The Trust has been listed on NSE w.e.f. 03.04.2023

2. Basis of preparation

The Unaudited Interim Standalone Financial Information which comprises Unaudited Interim Standalone Balance Sheet as on September 30, 2024, Unaudited Interim Standalone Statement of Profit and Loss, including other comprehensive income, Unaudited Interim Standalone Statement of Net Asset at Fair Value, Unaudited Interim Standalone Statement of total returns at Fair Value, Unaudited Interim Standalone Statement of Cash Flow, Net Distributable Cash Flows (NDCF) of the Trust and Unaudited Interim Standalone Statement of Changes in Unitholders Equity for the six months period then ended and a summary of material accounting policies and other explanatory information (together hereinafter referred to as the "Unaudited Interim Standalone Financial Information"). These unaudited interim standalone financial Information for the period from April 01, 2024 to September 30, 2024 have been prepared solely for inclusion in the Letter of Offer ("LOF") in connection with the proposed right issue of units of the Trust.

The Unaudited Interim Standalone Financial Information has been prepared in accordance with the requirements of SEBI (Infrastructure Investment Trusts) Regulations, 2014, as amended from time to time read with the Paragraph 3.21 of Chapter 3 and the Paragraph 4.6 of Chapter 4 of the SEBI Circular No. SEBI/HO/DDHS-PoD-2/P/CIR/2024/44 dated May 15, 2024 ("SEBI Circular"), together known as ("lnvlT Regulations"); recognition and measurement principles laid down in Indian Accounting Standard 34, Interim Financial Reporting (Ind AS 34) prescribed under rule 2(1)(a) of Companies (Indian Accounting Standards) Rules 2015, as amended and other recognised accounting principles generally accepted in India, to the extent not inconsistent with the InvIT Regulations, (refer Note 11 below on presentation of "Unit Capital" as "Equity" instead of compound instruments under Ind AS 32 - Financial Instruments : Presentation).

These Unaudited Interim Standalone Financial Information for the period from April 01, 2024 to September 30, 2024 have been prepared solely for inclusion in the Letter of Offer in connection with the proposed right issue of units of the Trust, and should not be relied upon for any other purpose.

These Unaudited Interim Standalone Financial Information are not the statutory accounts for the purpose of any statutory compliances or for regulatory requirements in any jurisdiction. The Standalone Financial Statements of the Trust for the period from April 01, 2024 to September 30, 2024 were approved by the Board of Directors of the Investment Manager and authorised for inclusion in the Letter of Offer of the Trust on December 09, 2024.

The financial statements have been prepared on an accrual basis except for Statement of Cash flows and under the historical cost convention except for certain financial assets and liabilities (refer accounting policy regarding financial instruments) which have been measured at fair value and on Going Concern Basis.

The financial statements are presented in Indian Rupee ('INR') which is the functional currency of the Trust and all values are rounded to the nearest millions, except when otherwise indicated. Wherever the amount represented '0' (zero) construes value less than Rupees five thousand.

The accounting policies adopted, and methods of computation followed are consistent with those of the previous financial year, except for items disclosed below:

The Ministry of Corporate Affairs has notified Companies (Indian Accounting Standard) Amendment Rules 2023 dated 31 March 2023 to amend the following Ind AS which are effective from 1 April 2023

Ind AS 1, Presentation of Financial Statements An entity shall disclose material accounting policy information. Accounting policy information is material if, when considered together with other information included in an entity's financial statements, it can reasonably be expected to influence decisions that the primary users of general purpose financial statements make on the basis of those financial statements.

Ind AS 8, Accounting policies, Change in Accounting Estimates and Errors Definition of 'Change in Accounting Estimates' in account has been replaced by revised definition of 'Accounting Estimate'. As per revised definition, accounting estimates are monetary amounts in the financial statements that are subject to measurement uncertainty. An entity develops an accounting estimate to achieve the objective set out by the accounting policy. Developing accounting estimates involves the use of judgements or assumptions based on the latest available, reliableinformation. An entity may need to change an accounting estimate if changes occur in the circumstances on which the accounting estimate was based or as a result of new information, new developments or more experience. By its nature, a change in an accounting estimate does not relate to prior periods and is not the correction of an error.

3. Summary of material accounting policies

3.1. Use of estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent liabilities at the date of the financial statements and the results of operations during the reporting period end. Although these estimates are based upon management's best knowledge of current events and actions, actual results could differ from these estimates.

3.2. Current versus non-current classification

The Trust presents assets and liabilities in the balance sheet based on current/ non-current classification.
An asset is treated as current when it is:
- Expected to be realised or intended to be sold or consumed in normal operating cycle

- Held primarily for the purpose of trading
- Expected to be realised within twelve months after the reporting period, or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.
All other assets are classified as non-current.

A liability is current when:
- It is expected to be settled in normal operating cycle
- It is held primarily for the purpose of trading
- It is due to be settled within twelve months after the reporting period, or
- There is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period.

All other liabilities are classified as non-current.

Deferred tax assets and liabilities are classified as non-current assets and liabilities respectively.

The operating cycle is the time between the acquisition of assets for processing and their realisation in cash and cash equivalents. The Trust has identified twelve months as its operating cycle.

3.3. Revenue recognition

Revenue is recognised to the extent that it is probable that the economic benefits will flow to the Trust and the revenue can be reliably measured, regardless of when the payment is being made. Revenue is measured at the transaction price of the consideration received or receivable, taking into account contractually defined terms of payment and excluding taxes or duties collected on behalf of the government.

The specific recognition criteria described below must also be met before revenue is recognised:

Interest income
Revenue is recognised on a time proportion basis taking into account the amount outstanding and the rates applicable. For all debt instruments measured either at amortised cost or at fair value through other comprehensive income, interest income is recorded using the effective interest rate (EIR).

Dividends
Revenue is recognised when the Trust's right to receive the payment is established, which is generally when shareholders approve the dividend.

3.4. Taxes

Current income tax
Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted at the reporting date in the countries where the Trust operates and generates taxable income.

Current income tax relating to items recognised outside the Statement of Profit and Loss is recognised outside the Statement of Profit and Loss (either in other comprehensive income or in equity). Current tax items are recognised in correlation to the underlying transaction either in OCI or

directly in equity. Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

Deferred tax
Deferred tax is provided using the liability method on temporary differences between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date.

Deferred tax liabilities are recognised for all taxable temporary differences, except:
- When the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and at the time of the transaction, affects neither the accounting profit nor taxable profit or loss.

- In respect of taxable temporary differences associated with investments in subsidiaries, when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets are recognised for all deductible temporary differences, the carry forward of unused tax credits and any unused tax losses. Deferred tax assets are recognised to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilised, except:

- When the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction affects neither the accounting profit nor taxable profit or loss

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised. Unrecognised deferred tax assets are re-assessed at each reporting date and are recognised to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax relating to items recognised outside statement of profit and loss is recognised outside statement of profit and loss (either in other comprehensive income or in equity).

Deferred tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity. Deferred tax assets and deferred tax liabilities are offset if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

3.5. Goods and Services Tax (GST) paid on acquisition of assets or on incurring expenses

Expenses and assets are recognised net of the amount of goods and service tax paid, except:

When the tax incurred on a purchase of assets or services is not recoverable from the tax authority, in which case, the tax paid is recognised as part of the cost of acquisition of the asset or as part of the expense item, as applicable.

When receivables and payables are stated with the amount of tax included. The net amount of tax recoverable from, or payable to, the tax authority is included as part of receivables or payables in the balance sheet unless the tax is available for Input tax credit.

3.6. Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of the asset. All other borrowing costs are expensed in the period in which they occur. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of Trusts. Borrowing cost also includes exchange differences to the extent regarded as an adjustment to the borrowing costs.

3.7. Provisions

Provisions are recognised when the Trust has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. When the Trust expects some or all of a provision to be reimbursed, for example, under an insurance contract, the reimbursement is recognised as a separate asset, but only when the reimbursement is virtually certain. The expense relating to a provision is presented in the Statement of Profit and Loss net of any reimbursement.

If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, when appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost.

3.8. Contingent liabilities and contingent assets

A contingent liability is a possible obligation that arises from past events whose existence will be confirmed by the occurrence or non-occurrence of one or more uncertain future events beyond the control of the Trust or a present obligation that is not recognised because it is not probable that an outflow of resources will be required to settle the obligation. A contingent liability also arises in extremely rare cases where there is a liability that cannot be recognised because it cannot be measured reliably. The Trust does not recognise a contingent liability but discloses its existence in the financial statements.
A contingent asset is not recognised unless it becomes virtually certain that an inflow of economic benefits will arise. When an inflow of economic benefits is probable, contingent assets are disclosed in the financial statements.
Contingent liabilities and contingent assets are reviewed at each balance sheet date.

3.9. Financial instrument

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

Financial assets

Initial recognition and measurement

All financial assets are recognised initially at fair value plus, in the case of financial assets not recorded at fair value through Statement of Profit and Loss, directly attributable transaction cost to the acquisition of the financial asset. Purchases or sales of financial assets that require delivery of assets within a time frame established by regulation or convention in the market place (regular way trades) are recognised on the trade date, i.e., the date that the Trust commits to purchase or sell the asset.

Subsequent measurement

For purposes of subsequent measurement, financial assets are classified in following categories;

- at amortised cost
- at fair value through profit or loss (FVTPL)
- at fair value through other comprehensive income (FVTOCI)

Financial Assets at amortised cost

A financial asset is measured at the amortised cost if both the following conditions are met:

a) The asset is held within a business model whose objective is to hold assets for collecting contractual cash flows, and

b) Contractual terms of the asset give rise on specified dates to cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

This category is the most relevant to the Trust. All the Loans and other receivables under financial assets (except Investments) are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market.

After initial measurement such financial assets are subsequently measured at amortised cost using the effective interest rate (EIR) method. Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The losses arising from impairment are recognised in the Statement of Profit and Loss.

Financial Assets at Fair Value through Statement of Profit and Loss/Other comprehensive income

All investments in scope of Ind AS 109 are measured at fair value. The Trust has investment in Debt oriented mutual Trust which are held for trading, are classified as at FVTPL. The Trust makes such election on an instrument by instrument basis. The classification is made on initial recognition and is irrevocable. The gain/ loss on sale of investments are recognised in the Statement of Profit and Loss. Instruments included within the FVTPL category are measured at fair value with all changes recognized in the Statement of Profit and Loss.

Derecognition

A financial asset is primarily derecognised (i.e. removed from the Trust's balance sheet) when:
The rights to receive cash flows from the asset have expired, or
The Trust has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Trust has transferred substantially all the risks and rewards of the asset, or (b) the Trust has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Trust has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if and to what extent it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all of the risks and rewards of the asset, nor transferred control of the asset, the Trust continues to recognise the transferred asset to the extent of the Trust's continuing involvement. In that case, the Trust also recognises an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Trust has retained.

3.10. Impairment of assets

Impairment of financial assets

Expected credit losses are recognized for all financial assets subsequent to initial recognition other than financial assets in FVTPL category.

For financial assets other than trade receivables, as per Ind AS 109, the Trust recognizes 12 month expected credit losses for all originated or acquired financial assets if at the reporting date the credit risk of the financial asset has not increased significantly since its initial recognition. The expected credit losses are measured as lifetime expected credit losses if the credit risk on financial assets increases significantly since its initial recognition.

The impairment losses and reversals are recognized in Statement of Profit and Loss.

Impairment of non-financial assets

The Trust assesses, at each reporting date, whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Trust estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs of disposal and its value in use. Recoverable amount is determined for an individual asset unless the asset does not generate cash inflows that are largely independent of those from other assets or Trust's assets. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

Financial liabilities

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss, loans and borrowings, or payables, as appropriate.

All financial liabilities are recognised initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.

The Trust’s financial liabilities include trade and other payables, loans and borrowings.

Subsequent measurement
The measurement of financial liabilities depends on their classification, as described below:

Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through profit or loss. Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Trust that are not designated as hedging instruments in hedge relationships as defined by Ind AS 109.

Gains or losses on liabilities held for trading are recognised in the statement of profit and loss.

Loans and borrowings

This is the category most relevant to the Trust. After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortised cost using the EIR method. Gains and losses are recognised in profit or loss when the liabilities are de-recognised as well as through the EIR amortisation process.

Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included as finance costs in the statement of profit and loss.

De-recognition

A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the de-recognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognised in the statement of profit and loss.

Offsetting of financial instruments

Financial assets and financial liabilities are offset and the net amount is reported in the standalone balance sheet if there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, to realise the assets and settle the liabilities simultaneously.

3.11 Investment in subsidiaries

Investments (equity instruments as well as subordinate debt) in subsidiaries are carried at cost less accumulated impairment losses, if any. Where an indication of impairment exists, the carrying amount of the investment is assessed and written down immediately to its recoverable amount. On disposal of investments in subsidiaries, the difference between net disposal proceeds and carrying amounts are recognised in the Statement of Profit and Loss.

3.12 Foreign currencies

The Trust's financial statements are presented in INR, which is also the Trust's functional currency. The Trust does not have any foreign operation and has assessed the functional currency to be INR.

Transactions and balances

Transactions in foreign currencies are initially recorded by the Trust at their respective functional currency spot rates at the date the transaction first qualifies for recognition. Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency spot rates of exchange at the reporting date.

Differences arising on settlement or translation of monetary items are recognised in the statement of profit or loss.

Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates at the dates of the initial transactions.

3.13 Fair value measurement

The Trust measures financial instruments, such as, derivatives at fair value at each balance sheet date.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:

► In the principal market for the asset or liability, or

► In the absence of a principal market, in the most advantageous market for the asset or liability.

The principal or the most advantageous market must be accessible by the Trust.

The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The Trust uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

► Level 1 — Quoted (unadjusted) market prices in active markets for identical assets or liabilities
► Level 2 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable
► Level 3 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable

For assets and liabilities that are recognised in the financial statements on a recurring basis, the Trust determines whether transfers have occurred between levels in the hierarchy by re-assessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

The Trust's Management determines the policies and procedures for both recurring fair value measurement, such as derivative instruments and unquoted financial assets measured at fair value, and for non-recurring measurement, such as assets held for distribution in discontinued operations.

At each reporting date, the Management analyses the movements in the values of assets and liabilities which are required to be remeasured or re-assessed as per the Trust's accounting policies. For this analysis, the Management verifies the major inputs applied in the latest valuation by agreeing the information in the valuation computation to contracts and other relevant documents.

The management also compares the change in the fair value of each asset and liability with relevant external sources to determine whether the change is reasonable.

On an annual basis, the Management of Investment Manager presents the valuation results to the Audit Committee and the Trust's independent auditors. This includes a discussion of the major assumptions used in the valuations.

For the purpose of fair value disclosures, the Trust has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy as explained above.

This note summarises accounting policy for fair value. Other fair value related disclosures are given in the relevant notes.

- Disclosures for Significant accounting judgement, estimates and assumptions (note 31)
- Financial instruments (including those carried at amortised cost) (note 25 and 26)
- Quantitative disclosure of fair value measurement hierarchy (note 25 and 26)

3.14 Distribution to unit holders

The Trust recognises a liability to make cash distributions to unit holders when the distribution is authorised and a legal obligation has been created. As per the InvIT Regulations, a distribution is authorised when it is approved by the Board of Directors of the Investment Manager. A corresponding amount is recognised directly in equity.

3.15 Cash and cash equivalents

Cash and cash equivalents in the balance sheet comprise cash at banks and on hand and short-term deposits with an original maturity of three months or less, which are subject to an insignificant risk of changes in value.
For the purpose of the statement of cash flows, cash and cash equivalents consist of cash and short-term deposits, as defined above, net of outstanding bank overdrafts as they are considered an integral part of the Trust's cash management.

3.16 Earnings Per Unit (EPU)

Basic earnings per unit are calculated by dividing the net profit for the period attributable to unit holders by the weighted average number of units outstanding during the period.

For the purpose of calculating diluted earnings per unit, the weighted average number of units outstanding during the period are adjusted for the effects of all dilutive potential units.

3.17 New pronouncements issued but not effective

Ministry of Corporate Affairs ("MCA") notifies new standards or amendments to the existing standards under Companies (Indian Accounting Standards) Rules as issued from time to time. For the period ended September 30, 2024, MCA has not notified any new standards or amendments to the existing standards applicable to the Trust.

IRB Infrastructure Trust

Notes to Unaudited Interim Standalone Financial Information as at September 30, 2024

(₹ in million)

Particulars	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)
Note 4 : Investments		
Non-Current Investments		
Investments at cost		
A. Investments in equity instruments of subsidiaries (unquoted) (refer note 32)		
436,500,000 equity shares of AE Tollway Limited	4,365.00	4,365.00
203,500,000 equity shares of CG Tollway Limited	2,035.00	2,035.00
371,500,000 equity shares of IRB Hapur Moradabad Tollway Limited	3,715.00	3,715.00
174,194,303 equity shares of IRB Westcoast Tollway Limited	1,741.94	1,741.94
155,500,000 equity shares of Kishangarh Gulabpura Tollway Limited	1,555.00	1,555.00
328,000,000 equity shares of Kaithal Tollway Limited	3,280.00	3,280.00
98,250,000 equity shares of Solapur Yedeshi Tollway Limited	982.50	982.50
116,800,000 equity shares of Udaipur Tollway Limited	1,168.00	1,168.00
215,757,001 equity shares of Yedeshi Aurangabad Tollway Limited	2,157.57	2,157.57
121,200,000 equity shares of Palsit Dankuni Tollway Private Limited	1,212.00	1,212.00
715,450,000 equity shares of IRB Golconda Expressway Private Limited	7,154.50	7,154.50
116,200,000 equity shares of Samakhiyali Tollway Private Limited	1,162.00	1,162.00
420,580,000 equity shares of IRB Lalitpur Tollway Private Limited	4,205.80	4,205.80
39,347,500 equity shares of IRB Kota Tollway Private Limited	393.48	393.48
103,285,000 equity shares of IRB Gwalior Tollway Private Limited	1,032.85	1,032.85
Investments in Equity Instuments of subsidiaries (unquoted) (A)	**36,160.64**	**36,160.64**
B. Investments in sub debt of subsidiaries (refer note 32)		
CG Tollway Limited	2,896.26	2,896.26
Udaipur Tollway Limited	8,893.41	8,893.41
Palsit Dankuni Tollway Private Limited	3,637.50	3,637.50
Samakhiyali Tollway Private Limited	1,268.00	1,268.00
IRB Lalitpur Tollway Private Limited	-	12,617.40
IRB Kota Tollway Private Limited	-	1,180.43
IRB Gwalior Tollway Private Limited	-	3,098.55
Investments in sub debt of subsidiaries (B)	**16,695.17**	**33,591.55**
Total non-current investments (A + B)	**52,855.81**	**69,752.19**
Aggregate amount of unquoted investments	52,855.81	69,752.19
Current Investments		
Investment at fair value through Profit & Loss		
Investments in Mutual Fund (quoted)	818.55	86.84
(ABSL Liquid Fund Direct Growth - 7,42,795.638 units - September 30, 2024; Canara Robeco Liquid Fund Direct Growth - 37,870.971 units - September 30, 2024; Canara Robeco Overnight Fund Direct Growth - 89,820.041 units - September 30, 2024; UBI Liquid Fund Direct Growth - 99,465.962 units - September 30, 2024; UBI Overnight Fund Direct Growth - 38,403.080 units - September 30, 2024)		
Total	**818.55**	**86.84**

IRB Infrastructure Trust
Notes to Unaudited Interim Standalone Financial Information as at September 30, 2024

(₹ in million)

Particulars	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)
Financial assets		
Note 5: Loans		
Non-current		
Secured, considered good, unless otherwise stated		
Loans to related parties (Interest Bearing) (refer note 32)	44,971.02	45,754.62
Less: Current maturities of loan to related parties	(1,993.74)	(1,567.20)
Total (A)	**42,977.28**	**44,187.42**
Unsecured, considered good, unless otherwise stated		
Loans to related parties (Interest Bearing) (refer note 32)	32,612.76	32,819.71
Less: Current maturities of loan to related parties	(539.50)	(413.89)
Loans to related parties (Interest Free) (refer note 32)	-	400.53
Subordinated Debt (Interest Bearing) (refer note 32)	93,323.18	77,254.30
Total (B)	**1,25,396.44**	**1,10,060.65**
Total (A+B)	**1,68,373.72**	**1,54,248.07**
Current		
Secured, considered good, unless otherwise stated		
Current maturities of long term loans to related parties (Interest Bearing)	1,993.74	1,567.20
Total (A)	**1,993.74**	**1,567.20**
Unsecured, considered good, unless otherwise stated		
Loans to related parties (Interest Bearing) (refer note 32)	4,680.06	3,025.94
Loans to related parties (Interest Free) (refer note 32)	4,104.58	3,444.44
Current maturities of long term loan to related parties	539.50	413.89
Total (B)	**9,324.14**	**6,884.27**
Total (A+B)	**11,317.88**	**8,451.47**

IRB Infrastructure Trust
Notes to Unaudited Interim Standalone Financial Information as at September 30, 2024

(₹ in million)

Particulars	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)
Note 6: Other financial assets		
Non-current		
Unsecured, considered good, unless otherwise stated		
Bank guarantee margin receivable		
- related parties (refer note 32)	-	30.95
Bank deposits with more than 12 months maturity	-	582.20
Total	**-**	**613.15**
Current		
Unsecured, considered good, unless otherwise stated		
Interest accrued on fixed deposits	21.49	19.69
Interest receivable from related parties (refer note 32)	28,456.01	20,696.56
BG margin receivable		
- related parties (refer note 32)	30.95	-
Other receivables		
- related parties (refer note 32)	308.26	291.48
- other parties	-	0.36
Total	**28,816.71**	**21,008.09**
Note 7: Other assets		
Current		
Prepaid expenses	8.45	-
Total	**8.45**	**-**
Note 8: Cash and cash equivalents		
Balances with banks:		
- In current accounts	17.85	141.83
- In escrow accounts	78.97	8.56
Total	**96.82**	**150.39**
Note 9: Other bank balances		
Earmarked balances with bank		
- Maturity more than 3 but less than 12 months	2,395.20	1,950.10
- Maturity more than 12 months	582.20	-
Balances with bank held as margin money*		
- Maturity more than 3 but less than 12 months	214.00	91.00
Total	**3,191.40**	**2,041.10**
Note 10: Current tax assets (net)		
Advance income tax (net of provision : Rs. Nil, March 31, 2024 : Rs. Nil)	20.08	9.52
Total	**20.08**	**9.52**

*** The balance has been held as margin money with the bank for guarantee given for SYTL, YATL and IGEPL**

IRB Infrastructure Trust
Notes to Unaudited Interim Standalone Financial Information as at September 30, 2024
Note 11 : Unit Capital

(₹ in million)

Particulars	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)
I. Unit capital *		
Issued, subscribed and paid up equity share capital		
At the beginning of the period	1,35,091.23	87,929.33
Issued during the period	-	51,146.50
Less: Capital reduction during the period	(445.48)	(3984.60)
At the end of the period	**1,34,645.75**	**1,35,091.23**

* Under the provisions of the InvIT Regulations, Trust is required to distribute to Unitholders not less than 90% of the net distributable cash flows of the Trust for each financial year. Accordingly, a portion of the Unit Capital contains a contractual obligation of the Trust to pay to its Unitholdcrs cash distributions. Hence, the Unit Capital is a compound financial instrument which contains equity ond liability components in accordance with Ind AS 32 - Financial Instruments. However, in accordance with Chapter 3 and Chapter 4 of the SEBI circular, the Unit capital have been presented as "Equity" in order to comply with the requirements of Section H of Chapter 3 lo the SEBI circular, dealing with the minimum presentation and disclosure requirements for key financial statements. Consistent with Unit Cupital being classified as equity, the distributions to Unitholders is also presented in Statement of Changes in Unitholders' Equity when the distributions are approved by the Board of Directors of Investment Manager.

Units are classified as equity. Incremental costs attributable to the issue of units are directly recorded in equity, net of tax

II. Reconciliation of the number of units outstanding and the amount of unit capital:

Particulars	As at September 30, 2024 (Unaudited)		As at March 31, 2024 (Audited)	
	No. of shares	Rs. in million	No. of shares	Rs. in million
At the beginning of the period	1,11,36,93,265	1,35,091.23	87,92,93,265	87,929.33
Issued during the period	-	-	23,44,00,000	51,146.50
Less: Capital Reduction during the period	-	(445.48)		(3984.60)
At the end of the period	**1,11,36,93,265**	**1,34,645.75**	**1,11,36,93,265**	**1,35,091.23**

*a) The Trust offered rights issue of up to 9,20,00,000 units of the Trust (the 'units'), for cash at a price of Rs. 244.86 per unit (the 'issue price'), aggregating to Rs. 22,527.00 million to the eligible unitholders (as defined in the Letter of Offer) on a rights basis to Sponsor and GIC affiliates in the ratio of 51:49 held by them on the record date, being on March 12, 2024 (the 'Issue') in accordance with the InvIT Regulations. The Board of Directors of MMK Toll Road Private Limited ('Investment Manager'), considered and approved allotment of 9,20,00,000 rights units to the eligible unitholders of IRB Infrastructure Trust on March 21, 2024.

b) The Trust offered rights issue of up to 14,24,00,000 units of the Trust (the 'units'), for cash at a price of Rs. 200.98 per unit (the 'issue price'), aggregating to Rs. 28,619.50 million to the eligible unitholders (as defined in the Letter of Offer) on a rights basis to Sponsor and GIC affiliates in the ratio of 51:49 held by them on the record date, being on July 28, 2023 (the 'Issue') in accordance with the InvIT Regulations. The Board of Directors of MMK Toll Road Private Limited ('Investment Manager'), considered and approved allotment of 14,24,00,000 rights units to the eligible unitholders of IRB Infrastructure Trust on August 10, 2023.

III. Details of Promoter

Particulars	As at September 30, 2024 (Unaudited)		As at March 31, 2024 (Audited)		% Change during the period
	No. of shares	% of total share	No. of shares	% of total share	
IRB Infrastructure Developers Limited	56,82,39,840	51.02	56,82,39,840	51.02	0.00%
Anahera Investments Pte Ltd	7,44,23,181	6.68	27,86,23,181	25.02	-73.29%
Bricklayers Investments Pte Ltd	6,65,57,561	5.98	6,65,57,561	5.98	0.00%
Chiswick Investments Pte Ltd	6,65,57,561	5.98	6,65,57,561	5.98	0.00%
Stretford End Investments Pte Ltd	5,27,57,561	4.74	6,67,57,561	5.99	-20.97%
Dangenham Investments Pte Ltd	1,79,57,561	1.61	6,69,57,561	6.01	-73.18%
Cintra InvIT Investments B.V.	26,72,00,000	23.99	-	-	0.00%
Total	**1,11,36,93,265**	**100**	**1,11,36,93,265**	**100**	

(₹ in million)

Note: 12 Other Equity

Particulars	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)
Attributable to the equity holders		
At the beginning of the period	18,052.09	9,526.42
Profit for the period	8,168.83	9,043.83
Unit Issue expenses	-	(68.61)
Interest distribution	(545.71)	(449.55)
Total retained earnings	**25,675.21**	**18,052.09**
Total Other Equity	**25,675.21**	**18,052.09**

IRB Infrastructure Trust
Notes to Unaudited Interim Standalone Financial Information as at September 30, 2024

(₹ in million)

Particulars	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)
Financial liabilities		
Note 13: Borrowings		
Non-current Borrowing		
Term Loans		
Indian rupee loan from banks (secured)	34,248.59	34,421.27
Less: Current maturities	(523.50)	(349.00)
Total (A)	**33,725.09**	**34,072.27**
Indian rupee loan from financial institutions (secured)	28,464.63	28,609.39
Less: Current maturities	(435.00)	(290.00)
Total (B)	**28,029.63**	**28,319.39**
Less: Unamortised transaction cost	(667.21)	(689.51)
Total (C)	**(667.21)**	**(689.51)**
Total (D=A+B+C)	**61,087.51**	**61,702.15**
Borrowing		
Current		
Current maturities of long-term borrowings		
- Indian rupee loan from banks	523.50	349.00
- Indian rupee loan from financial institutions	435.00	290.00
Unsecured loan		
- Interest free	1,000.00	-
Interest accrued but not due on borrowings	7.18	8.39
Total (E)	**1,965.68**	**647.39**
Total (D+E)	**63,053.19**	**62,349.54**

Rate of Interest
Rate of interest on the Indian Rupee loan from banks and financial institutions varies from 8.60% to 9.00% p.a. (March 31, 2024: 8.60% to 8.70% p.a.)

Nature of Security
i) Secured by first charge on the movable/immovable asset by way of mortgage/hypothecation; first charge on all intangible assets, assignment of all receivables; book debts, loans and advanves extended by the Borrower to SPVs and all rights and interest in project, both present and future, excluding the Project Assets of respective companies;
ii) Secured by first charge over all the equity shares, Preference shares, Debentures representing 100% of such securities.
iii) Secured by first charge on the Escrow Account, Debt Service Reserve Account and any other reserves and other bank accounts of the respective Companies.
iv) Unconditional and irrevocable corporate guarantee by each of the RG SPVs , in a form and manner satisfactory to the Finance Parties (the " Corporate Guarantee")
v) Pledged of Securities of obligators created pursuant to the terms of loan Agreement held as common security for the benefit of Rupee Lenders

Repayment Terms
The Indian rupee loans from Banks and Financial Institutions are repayable in structured monthly installments such that the total tenor does not exceed 16 years and repayable as per the repayment schedule specified in common loan agreement with the Lenders.

Note 14: Trade Payables		
Current		
a) total outstanding dues of micro enterprises and small small enterprises	-	0.27
b) total outstanding dues of creditors other than micro and small enterprises		
- related parties (refer note 32)	95.73	95.19
- others	13.78	6.86
Total	**109.51**	**102.32**
Note 15: Other financial liabilities		
Non-current		
Other payable (refer note 32)	42,013.08	40,760.96
Total	**42,013.08**	**40,760.96**
Note 16: Other liabilities		
Current		
Statutory dues payable (including TDS & GST)	2.68	4.68
Total	**2.68**	**4.68**

IRB Infrastructure Trust

Notes to Unaudited Interim Standalone Financial Information as at September 30, 2024

(₹ in million)

Particulars	Six month ended September 30, 2024 (Unaudited)	Six month ended September 30, 2023 (Unaudited)
Note 17 : Other income		
Interest income on		
Fair value gain/(loss) on investments	-0.15	-
Interest unwinding on financial assets	499.47	-
Other non operating income		
Total	**499.32**	**-**
Note 18 : Finance costs		
Interest expense		
- others	24.42	-
Amortisation of transaction cost	22.30	0.67
Other finance costs	0.00	0.59
Total	**46.72**	**1.26**
Note 19 : Other expenses		
Rates & taxes	0.18	0.61
Miscellaneous expenses	0.25	0.22
Bank charges	0.16	0.01
Total	**0.59**	**0.84**
Note 19A : Auditor's Remuneration		
As auditors:		
- Statutory audit fees	1.70	0.09
- Limited review fees	2.64	0.14
- Other services (certification fees)	0.02	
In other capacity:		
Reimbursement of expenses	0.06	0.01
Total	**4.42**	**0.24**

Note 20 : Earnings per unit (EPU)

The following reflects the income and unit data used in the basic and diluted EPU computations:

(₹ in million)

Particulars	Six month ended September 30, 2024 (Unaudited)	Six month ended September 30, 2023 (Unaudited)
Profit attributable to unit holders of the Trust for basic earnings	8,168.83	5,056.41
Weighted average number of units	1,11,36,93,265	91,97,56,653
Earnings per unit (in ₹)		
Basic earning per unit (Amount in ₹)	7.33	5.50
Diluted earning per unit (Amount in ₹)	7.33	5.50

Note 21 : Capital and other commitments

There are no capital and other commitments as at September 30, 2024. (As at March 31, 2024: Nil)

Note 22 : Contingent Liabilities

The Trust has provided Corporate guarantee for the subsidiary companies i.e. SYTL and YATL in respect of the NCDs issued during the FY 2022-23.

Note 23 : Details of dues to micro and small enterprises as per MSMED Act, 2006

The following details regarding Micro and small Enterprises has been determined to the extent such parties has been identified on the basis of information available with the Trust.

Particulars	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)
Principal amount remaining unpaid to any supplier as at the period end	-	0.27
Interest due thereon	-	-
Amount of interest paid by the company in the terms of section 16 of the MSMED, along with the amount of the payment made to the supplier beyond the appointed date during the accounting period	-	-
Amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed day during the period) but without adding the interest specified under the MSMED, 2006	-	-
Amount of interest accrued and remaining unpaid at the end of the accounting period	-	-
The amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues as above are actually paid to the small enterprise for the purpose of disallowance as a deductible expenditure under the MSMED Act, 2006	-	-

a) MSME ageing schedule as at

Particulars	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)
MSME Undisputed Dues		
Unbilled dues	-	0.27
Less than 1 year	-	-
1-2 Years	-	-
2-3 Years	-	-
More than 3 years	-	-
Total	**-**	**0.27**

b) Ageing of creditors other than micro enterprises and small enterprises as at

Particulars	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)
Undisputed Dues		
Unbilled dues	7.62	6.68
Less than 1 year	0.73	16.83
1-2 Years	44.53	47.76
2-3 Years	46.39	30.78
More than 3 years	10.24	-
Total	**109.51**	**102.07**

Note 24 : Operating Segments

The Trust comprise of owning and investing in infrastructure SPVs to generate cash flow for the distribution to the beneficiaries. Based on the guiding principles given in Ind AS 108 'Operating Segment', this activity falls within a single operating segment and accordingly the disclosures of the Ind AS 108 have not separately been provided.

IRB Infrastructure Trust
Notes to Unaudited Interim Standalone Financial Information as at September 30, 2024

Note 25 : Fair Values

Financial assets and liabilities

The carrying values of financials instruments of the Trust are reasonable and approximations of fair values.

The accounting classification of each category of financial instruments, their carrying amounts and the categories of financial assets and liabilities measured at fair value, are set out below:

(₹ in million)

Particulars	Carrying Value		Fair Value	
	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)
Financial assets				
Financial assets measured at amortised cost				
Investment in subsidiaries	52,855.81	69,752.19	-	-
Loans	1,79,691.60	1,62,699.54	-	-
Other financial assets	28,816.71	21,621.24	-	-
Cash and cash equivalents	96.82	150.39	-	-
Other Bank balances	3,191.40	2,041.10	-	-
Financial assets measured at fair value through statement of Profit & Loss				
Investments in Mutual funds	817.26	85.40	818.55	86.84
Financial liabilities				
Financial liabilities measured at amortised cost				
Trade payables	109.51	102.32	-	-
Borrowings (net of unamortised Tranasaction cost)	63,053.19	62,349.54	-	-
Financial liabilities				
Financial liabilities measured at fair value through statement of Profit & Loss				
Other financial liabilities	42,013.08	40,760.96	42,013.08	40,760.96

The management assessed that the fair value of other cash and cash equivalents, other bank balance, trade payables, borrowings and other financial liabilities approximate their carrying amounts largely due to the short-term maturities of these instruments.

The fair value of the financial assets and liabilities is included at the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.

The discount for lack of marketability represents the amounts that the Trust has determined that market participants would take into account when pricing the investments.

The Trust is required to present the Statement of total assets at fair value and Statement of total returns at fair value as per SEBI Circular No. CIR/IMD/DF/114/2016 dated October 20, 2016 as a part of these financial statements - Refer Statement of Net assets at fair value and Statement of Total Returns at fair value.

The above investments does not include equity investments in joint ventures which are carried at cost and hence are not required to be disclosed as per Ind AS 107 'Financial Instrument Disclosure'.

Note 26 : Fair Value Hierarchy

All financial instruments for which fair value is recognised or disclosed are categorised within the fair value hierarchy described as follows, based on the lowest level input that is significant to the fair value measurement as a whole.

Level 1: Quoted (unadjusted) price is active market for identical assets or liabilities

Level 2: Valuation technique for which the lowest level input that has a significant effect on the fair value measurement are observed, either directly or indirectly.

Level 3: Valuation technique for which the lowest level input has a significant effect on the fair value measurement is not based on observable market data.

There were no transfers between Level 1, Level 2 and Level 3 during the year.

The following table presents fair value hierarchy of assets and liabilities measured at fair value on a recurring basis as of September 30, 2024:

(₹ in million)

Particulars	As at September 30, 2024 (Unaudited)	Fair value measurement at end of the reporting period using		
		Level 1	Level 2	Level 3
Assets				
Investments in mutual fund (Quoted)	818.55	818.55	-	-
Liabilities				
Other financial liabilities	42,013.08	-	-	42,013.08

The following table presents fair value hierarchy of assets and liabilities measured at fair value on a recurring basis as of March 31, 2024:

(₹ in million)

Particulars	As at March 31, 2024 (Audited)	Fair value measurement at end of the reporting period using		
		Level 1	Level 2	Level 3
Assets				
Investments in mutual fund (Quoted)	86.84	86.84	-	-
Liabilities				
Other financial liabilities	40,760.96	-	-	40,760.96

There has been no transfer between Level 1, Level 2 & Level 3 during the year.

Sensitivity: Higher probability by 5% and lower discount rate by 0.5% will increase the fair value by Rs. 4,491.25 million (31 March 2024 - Rs. 4,397.66 million). Lower probability by 5% and higher discount rate by 0.5% will reduce fair value by Rs. 4,274.96 million (31 March 2024 - Rs. 4,171.25 million).

Fair value movement for Payable to IRB Infrastructure Developers Limited is as under:

Particulars	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)
Opening balance as at April 01, 2024 (Previous period: April 01, 2023)	40,760.95	35,778.03
Add: Recognised during the year	1,227.70	4,935.37
Less: Payment of deferred consideration	-	-
Add: Adjustment on account of interest unwinding	24.42	47.55
Closing balance of payable as on September 30, 2024 (Previous period: March 31, 2024)	**42,013.08**	**40,760.95**

Note 27 : Taxes

In accordance with section 10 (23FC) of the Income Tax Act, the income of business Trust in the form of interest received or receivable from Project SPV is exempt from tax. Accordingly, the Trust is not required to provide any current tax liability. Further, deferred tax assets on carry forward losses is not being created since there is no virtual certainty of reversal of the same in the near future.

Note 28 : Investment Management Fees

Pursuant to the terms of the Investment Management Agreement, the fees will be paid to the Investment Manager for the services provided by it ("Management Fees"). The Management Fees have been revised from the previous Financial Year with the approval of the Unitholders, where the votes cast by Unitholders so entitled and voting in favor of a resolution are not less than one-and-a-half times the votes cast against such resolution.

Note 29 : Financial Risk Management objectives and policies

The Trust's risk management policies are established to identify and analyse the risks faced by the Trust, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Trust's activities.

The Board of Directors of Investment Manager have overall responsibility for the establishment and oversight of the Trust's risk management framework.

In performing its operating, investing and financing activities, the Trust is exposed to the Credit risk, Liquidity risk and Market risk.

a. Market Risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: interest rate risk, currency risk and other price risk, such as equity price risk and commodity risk. Financial instruments affected by market risk include loans borrowings and deposits.

b. Credit risk

Credit risk is the risk that a counter party will not meet its obligations under a financial instrument, leading to a financial loss. The Trust is exposed to credit risk from its investing activities including loans to subsidiaries, deposits with banks and other financial instruments. As at September 30, 2024, the credit risk is considered low since substantial transactions of the Trust are with its subsidiaries.

c. Interest Rate Risk

Interest rate risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Trust's exposure to the risk of changes in market interest rates relates primarily to the Trust's long-term debt obligations with floating interest rates.

Interest rate sensitivity

The following table demonstrates the sensitivity to a reasonably possible change in interest rates on that portion of loans and borrowings affected, after excluding the credit exposure for fixed rate borrowings. With all other variables held constant, the Trust's profit before tax is affected through the impact on floating rate borrowings, as follows:

(₹ in million)

Particulars	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)
If the interest rate is 50 basis point higher (lower), the impact on profit or loss would be		
- Decreased by	313.57	315.15
- Increased by	(313.57)	(315.15)

d. Liquidity risk

Liquidity risk is the risk that the Trust may not be able to meet its present and future cash and collateral obligations without incurring unacceptable losses. The Trust's objective is to, at all times maintain optimum levels of liquidity to meet its cash and collateral requirements.

The Trust closely monitors its liquidity position and deploys a robust cash management system. It maintains adequate sources of financing including debt and overdraft from banks at an optimised cost.

(₹ in million)

September 30, 2024	Carrying Amount	Total	On demand	Less than 1 year	1 to 5 years	> 5 years
Borrowings (Gross of unamortised transaction cost)	63,720.40	63,720.40	1,000.00	958.50	7,668.00	54,093.90
Other financial liabilities	42,013.08	42,013.08	-	-	42,013.08	-
Trade payables	109.51	109.51	-	109.51	-	-
Total	**1,05,842.99**	**1,05,842.99**	**1,000.00**	**1,068.01**	**49,681.08**	**54,093.90**

March 31, 2024	Carrying Amount	Total	On demand	Less than 1 year	1 to 5 years	> 5 years
Borrowings (Gross of unamortised transaction cost)	63,030.66	63,030.66	-	647.39	6,390.00	55,993.27
Other financial liabilities	40,760.96	40,760.96	-	-	40,760.96	-
Trade payables	102.34	102.34	0.27	102.07	-	-
Total	**1,03,893.95**	**1,03,893.95**	**0.27**	**749.46**	**47,150.96**	**55,993.27**

At present, the Trust does expects to repay all liabilities at their contractual maturity. In order to meet such cash commitments, the operating activity is expected to generate sufficient cash inflows.

e. Financial Instruments

Credit risk from balances with banks and financial institutions, loans and advances is managed by the Trust's management in accordance with the Trust's policy. Investments of surplus funds are made only with approved counterparties and within credit limits assigned to each counterparty. Counterparty credit limits are reviewed by the top management on an annual basis, and may be updated throughout the year subject to approval of the Company's board of directors. The limits are set to minimise the concentration of risks and therefore mitigate financial loss through counterparty's potential failure to make payments.

f. Investment in Equity shares of Subsidiaries

The Trust has investments in equity shares of Subsidiaries. The settlement of such instruments is linked to the completion of the respective underlying projects. Such Financial Assets are not impaired as on the reporting date.

Note 30 : Capital management

Capital includes equity attributable to the Unit holders to ensure that it maintains an efficient capital structure and healthy capital ratios in order to support its business and maximise shareholder value. The Trust manages its capital structure and makes adjustments to it, in light of changes in economic conditions or its business requirements. To maintain or adjust the capital structure, the Trust may adjust the distribution of cash flow of return capital to Unit holders or issue new units. No changes were made in the objectives, policies or processes during the period ended September 30, 2024 and year ended March 31, 2024.

The Trust monitors capital using a gearing ratio, which is net debt divided by total equity. Net debt is calculated as loans and borrowings (gross of unamortised transaction cost) less cash and cash equivalents.

(₹ in million)

Particulars	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)
Borrowings (Secured)	63,713.22	63,030.66
Less: cash and cash equivalents	(96.82)	(150.39)
Net debt	**63,616.40**	**62,880.27**
Unit capital	1,34,645.75	1,35,091.23
Other equity	25,675.21	18,052.09
Total equity	**1,60,320.96**	**1,53,143.32**
Gearing ratio (%)	39.68%	41.06%

In order to achieve this overall objective, the Trust's capital management, amongst other things, aims to ensure that it meets financial covenants attached to the interest-bearing loans and borrowings that define capital structure requirements. Breaches in meeting the financial covenants would permit the bank to immediately call loans and borrowings. There have been no breaches in the financial covenants of any interest-bearing borrowings in the current year.

Note 31 : Significant accounting judgement, estimates and assumptions

The preparation of the Trust's financial statements requires management to make judgments, estimates and assumptions that affect the reported amounts of revenue, expenses, assets and liabilities and the accompanying disclosures and the disclosure of contingent liabilities. Uncertainty about these assumptions and estimates could result in out comes that require a material adjustment to the carrying amount of assets or liabilities affected in future periods.

Judgement

In the process of applying the Trust's accounting policies, management has made the judgement, which have the most significant effect on the amounts recognised in the financial statements.

Classification of unit holders Trusts

Under the provisions of the InvIT Regulations, Trust is required to distribute to Unit holders not less than ninety percent of the net distributable cash flows of Trust for each financial year. Accordingly, a portion of the unit holders' Trusts contains a contractual obligation of the Trust to pay to its Unit holders cash distributions. The Unit holder's Trusts could therefore have been classified as compound financial instrument which contain both equity and liability components in accordance with Ind AS 32- Financial Instruments: Presentation.

However, in accordance with SEBI Circulars(No.CIR/IMD/DF/114/2016 dated 20-Oct-2016 and No.CIR/IMD/DF/127/2016 dated 29-Nov-2016) issued under the InvIT Regulations, the unit holders' Trusts have been classified as equity in order to comply with the mandatory requirements of Section H of Annexure A to the SEBI Circular dated 20-Oct-2016 dealing with the minimum disclosures for key financial statements. In line with the above, the income distribution payable to unit holders is recognized as liability when the same is approved by the Investment Manager.

Estimates and assumptions

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities or fair value disclosures within the next financial year. The Trust based its assumptions and estimates on parameters available when the financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising that are beyond the control of the Trust. Such charges are reflected in the assumptions when they occur.

Fair valuation and disclosures

SEBI Circulars issued under the InvIT Regulations required is diclosures relating to net assets at fair value and total returns at fair value. In estimating the fair value of investments in subsidiaries (which constitute substantial portion of the net assets), the Trust engages independent qualified external valuers to perform the valuation. The management works closely with the valuers to establish the appropriate valuation techniques and inputs to the model. The management reports the valuation report and findings to the Board of the Investment Manager half yearly to explain the cause of fluctuations in the fair value of the road projects. The inputs to the valuation models are taken from observable markets where possible, but where this is not feasible, a degree of judgement is required in establishing fair values. Judgements include considerations of inputs such as WACC, Tax rates, Inflation rates etc. Changes in assumptions about these factors could affect the fair value.

Impairment of non-financial assets

Non-financial assets of the Trust primarily comprise of investments in subsidiaries, Impairment exists when the carrying value of an asset or cash generating unit exceeds its recoverable amount, which is the higher of its fair value less costs of disposal and its value in use. The recordable amounts for the investments in subsidiaries are based on value in use of the underlying projects. The value in use calculation is based on a DCF model. The cash flows are derived from budgets / forecasts over the life of the projects.

Note 32 : Related Party Disclosures

I - List of Related parties of the Trust

List of Related parties of the Trust [As per Regulation 2 (1) (zv)]

1	Parties to the InvIT	Sponsor Group and Project Manager (as per 'Table A' below)*
		MMK Toll Road Private Limited (Investment Manager)
		IDBI Trusteeship Services Limited (Trustee of the IRB Infrastructure Trust)
2	Promoters, Directors and Partners of the persons mentioned in clause 1	As per 'Table B' below#

*** Table A - Sponsor Group and Project Manager**

(i) The sponsor(s)	**(ii) Entities or person(s) which are controlled by such sponsor**	**(iii) Entities or person(s) who control such body corporate**	**(iv) Entities or person(s) which are controlled by entities or person(s) specified in clause (iii)**
IRB Infrastructure Developers Limited	Modern Road Makers Private Limited (MRMPL) IRB Ahmedabad Vadodara Super Express Tollway Private Limited (IRBAV) Mhaiskar Infrastructure Private Limited (MIPL) Thane Ghodbunder Toll Road Private Limited (TGTRPL) IRB Kolhapur Integrated Road Development Company Private Limited (IRBK) ATR Infrastructure Private Limited (ATRFL) Ideal Road Builders Private Limited (IRBPL) Aryan Toll Road Private Limited (ATRPL) GE1 Expressway Private Limited (Formerly known as IRB PP Project Private Limited) IRB PS Highway Private Limited (IRBPS) IRB Sindhudurg Airport Private Limited (IRBSA) IRB Infrastructure Private Limited (IRBFL) Aryan Infrastructure Investments Private Limited (AIIPL) Aryan Hospitality Private Limited (AHPL) IRB MP Expressway Private Limited IRB Goa Tollway Private Limited (IRB Goa) MRM Mining Private Limited (Subsidiary of MRMPL) VM7 Expressway Private Limited Pathankot Mandi Highway Private Limited Chittoor Thachur Highway Private Limited IRB Golconda Expressway Private Limited (Subsidiary upto 10.08.2023) Samakhiyali Tollway Private Limited (Subsidiary upto 27.12.2023) Meerut Budaun Expressway Limited - JV MMK Toll Road Private Limited (MMK) - JV IRB Infrastructure Trust - JV Project SPV's of IRB Infrastructure Trust as mentioned below: 1. IRB Westcoast Tollway Limited (IRBWTL) 2. Solapur Yedeshi Tollway Limited (SYTL) 3. Yedeshi Aurangabad Tollway Limited (YATL) 4. Kaithal Tollway Limited (KTL) 5. AE Tollway Limited (AETL) 6. Udaipur Tollway Limited (UTL) 7. CG Tollway Limited (CGTL) 8. Kishangarh Gulabpura Tollway Limited (KGTL) 9. IRB Hapur Muradabad Tollway Limited (IRBHMTL) 10. Palsit Dankuni Tollway Private Limited (PDTPL) 11. IRB Golconda Expressway Private Limited (IRBGEPL) w.e.f 11.08.2023 12. IRB Lalitpur Tollway Private Limited w.e.f 10.11.2023 13. Samakhiyali Tollway Private Limited w.e.f. 28.12.2023 14. IRB Kota Tollway Private Limited w.e.f. 01.01.2024 15. IRB Gwalior Private Limited w.e.f. 01.01.2024	Mr. Virendra D. Mhaiskar, Promoter of Sponsor IRB Holding Private Limited Ms. Deepali V. Mhaiskar, Promoter of Sponsor Virendra D. Mhaiskar HUF (Karta Mr. Virendra Mhaiskar), promoter of Sponsor	VDM Ventures Private Limited Duex Farming Films Private Limited

Table B - List of promoters, directors and partners of the persons mentioned in clause 1

Parties to the Trust	Promoters	Directors
(i) IRB Infrastructure Developers Limited (Sponsor and Project Manager)	1. Mr. Virendra D. Mhaiskar 2. Mrs. Deepali V. Mhaiskar 3. Mr. Virendra D. Mhaiskar (HUF)	1. Mr. Virendra D. Mhaiskar, Chairman and Managing Director 2. Mrs. Deepali V. Mhaiskar, Whole Time Director 3. Mr. Jose Tamariz Martel Goncer 4. Mr. Ravindra Dhariwal 5. Mr. Chandrashekhar S. Kaptan- Independent director (up to March 31, 2024) 6. Mr. Sunil H. Talati -Independent director (up to March 31, 2024) 7. Mr. Sandeep J. Shah - Independent director 8. Ms. Priti Savla - Independent director 9. Mr. Bajrang Lal Gupta-Independent Director (w.e.f April 1, 2024) 10. Mr. Vijay Nautamlal Bhatt- Independent Director (w.e.f April 1, 2024)
(ii) Entities or person(s) which are controlled by such sponsor	IRB Infrastructure Developers Limited (IRBIDL)	1. Mr. Virendra D. Mhaiskar 2. Mrs. Deepali V. Mhaiskar 3. Mr. Dhananjay K. Joshi 4. Mrs. Arati Taskar 5. Mr. Sudhir Rao Hoshing 6. Mr. Rajpaul Sharma 7. Mr. Amitabh Murarka 8. Mr. Aryan V. Mhaiskar 9. Mrs. Kshama Vengsarkar 10. Mr. Nikhil Maniar 11. Mr. Tushar Kawedia 12. Mr. Rajinder Pal Singh 13. Mr. Vinod Kumar Menon 12. Mr. Sunil Tandon -Independent Director 14. Mr. Nikesh Jain -Independent Director 15. Mr. Rushabh Gandhi 16. Mrs. Anusha Date-Independent Director 17. Mr. Kulumani Gopalratnam Krishnamurthy-Independent Director 18. Mrs. Ranjana Paranjape -Independent Director 19. Mr. Kunnasagaran Chinniah (Ceased to be director of MMK w.e.f. June 15, 2024) 20. Mr. Sandeep Shah -Independent Director 21. Ms. Shilpa Todankar 22. Mr. Abhay Phatak 23. Mr. Darshan Sangurdekar 24. Mr. Omprakash Singh 25. Mr. Chandrashekhar Kaptan 26. Mr. Boon Chin Hau 27. Mr. Nagendraa Parakh 28. Mr. Amyn Jassani (Ceased to be director of MMK w.e.f. May 31, 2024)
(iii) Entities or person(s) who control such body corporate	1. Mr. Virendra D. Mhaiskar 2. Mrs. Deepali V. Mhaiskar 3. Mr. Virendra D. Mhaiskar (HUF)	1. Mr. Virendra D. Mhaiskar 2. Mrs. Deepali V. Mhaiskar
(iv) Entities or person(s) which are controlled by entities or person(s)	1. Mr. Virendra D. Mhaiskar 2. Mrs. Deepali V. Mhaiskar 3. Mr. Aryan V. Mhaiskar	1. Mr. Virendra D. Mhaiskar 2. Mrs. Deepali V. Mhaiskar 3. Mr. Aryan V. Mhaiskar
MMK Toll Road Private Limited (Investment Manager)	IRB Infrastructure Developers Limited (IRBIDL)	Mr. Virendra D. Mhaiskar Mr. Kunnasagaran Chinniah (Ceased to be director of MMK w.e.f. June 15, 2024) Mr. Boon Chin Hau Mr. Aryan Mhaiskar Mr. K G Krishnamurthy -Independent director Mrs.Ranjana Paranjape - Independent director Mr. Nagendraa Parakh- Independent director Mr. Amyn Jassani - Independent director (Ceased to be director of MMK w.e.f. May 31, 2024)
IDBI Trusteeship Services Limited (Trustee of IRB Infrastructure Trust)	IDBI Bank Limited LIC Corporation Limited General Insurace Corporation	Mr. Jayakumar Subramonia Pillai Mr. Pradeep Kumar Jain Mrs. Jayashree Vijay Ranade (ceased to be director w.e.f April 18, 2024) Mr. Pradeep Kumar Malhotra Ms. Baljinder Kaur Mandal Mr. Arun Kumar Agarwal (Appointed w.e.f. July 19, 2024) Mr. Hare Krushna Dandapani Panda (Appointed w.e.f. July 19, 2024) Mr. Balkrishna Varier (Appointed w.e.f. June 24, 2024)

II) Related party transaction during the peiod

(Rs. in million)

Sr. No.	Particulars	Relation	Six months ended September 30, 2024	Six months ended September 30, 2023
1	**Equity Investment**		**-**	**7,154.50**
	IRB Golconda Expressway Private Limted	Subsidiary	-	7,154.50
	Samakhiyali Tollway Private Limited	Subsidiary	-	-
	IRB Lalitpur Tollway Private Limted	Subsidiary	-	-
	IRB Kota Tollway Private Limited	Subsidiary	-	-
	IRB Gwalior Tollway Private Limited	Subsidiary	-	-
2	**Subordinated Debt**		**-**	**20,647.40**
	AE Tollway Limited	Subsidiary	-	-
	CG Tollway Limited	Subsidiary	-	-
	IRB Hapur Moradabad Tollway Limited	Subsidiary	-	250.00
	IRB Westcoast Tollway Limited	Subsidiary	-	-
	Kishangarh Gulabpura Tollway Limited	Subsidiary	-	-
	Kaithal Tollway Limited	Subsidiary	-	-
	Solapur Yedeshi Tollway Limited	Subsidiary	-	-
	Udaipur Tollway Limited	Subsidiary	-	-
	Yedeshi Aurangabad Tollway Limited	Subsidiary	-	-
	Palshit Dankuni Tollway Private Limited	Subsidiary	-	-
	IRB Golconda Expressway Private Limted	Subsidiary	-	20,397.40
	Samakhiyali Tollway Private Limited	Subsidiary	-	-
	IRB Lalitpur Tollway Private Limted	Subsidiary	-	-
	IRB Kota Tollway Private Limited	Subsidiary	-	-
	IRB Gwalior Tollway Private Limited	Subsidiary	-	-
3	**Subordinated Debt repaid**		**827.50**	**-**
	IRB Hapur Muradabad Tollway Limited	Subsidiary	-	-
	IRB Westcoast Tollway Limited	Subsidiary	-	-
	Kishangarh Gulabpura Tollway Limited	Subsidiary	-	-
	Solapur Yedeshi Tollway Limited	Subsidiary	282.50	-
	Yedeshi Aurangabad Tollway Limited	Subsidiary	545.00	-
4	**Unsecured long term loan (Interest bearing)**		**-**	**113.65**
	AE Tollway Limited	Subsidiary	-	-
	IRB Hapur Muradabad Tollway Limited	Subsidiary	-	-
	IRB Westcoast Tollway Limited	Subsidiary	-	67.86
	Kishangarh Gulabpura Tollway Limited	Subsidiary	-	-
	Kaithal Tollway Limited	Subsidiary	-	45.80
5	**Unsecured long term loan repaid (Interest bearing)**		**187.00**	**-**
	AE Tollway Limited	Subsidiary	28.36	-
	IRB Hapur Muradabad Tollway Limited	Subsidiary	0.41	-
	IRB Westcoast Tollway Limited	Subsidiary	58.18	-
	Kishangarh Gulabpura Tollway Limited	Subsidiary	5.10	-
	Kaithal Tollway Limited	Subsidiary	94.95	-
6	**Short Term Loan given**		**2,334.76**	**732.80**
	AE Tollway Limited	Subsidiary	167.42	15.00
	CG Tollway Limited	Subsidiary	402.08	176.30
	IRB Hapur Muradabad Tollway Limited	Subsidiary	15.03	-
	IRB Westcoast Tollway Limited	Subsidiary	82.78	139.00
	Kishangarh Gulabpura Tollway Limited	Subsidiary	310.41	-
	Kaithal Tollway Limited	Subsidiary	952.75	-
	Solapur Yedeshi Tollway Limited	Subsidiary	46.23	-
	Udaipur Tollway Limited	Subsidiary	258.06	402.50
	Yedeshi Aurangabad Tollway Limited	Subsidiary	64.02	-
	IRB Golconda Expressway Private Limted	Subsidiary	31.98	-
	IRB Lalitpur Tollway Private Limted	Subsidiary	4.00	-
	IRB Kota Tollway Private Limited	Subsidiary	-	-
	IRB Gwalior Tollway Private Limited	Subsidiary	-	-
7	**Short Term Loan repaid**		**20.50**	**-**
	AE Tollway Limited	Subsidiary	-	-
	IRB Westcoast Tollway Limited	Subsidiary	16.50	-
	Kishangarh Gulabpura Tollway Limited	Subsidiary	-	-
	Kaithal Tollway Limited	Subsidiary	-	-
	Solapur Yedeshi Tollway Limited	Subsidiary	-	-
	Yedeshi Aurangabad Tollway Limited	Subsidiary	-	-
	IRB Lalitpur Tollway Private Limted	Subsidiary	4.00	-
	IRB Kota Tollway Private Limited	Subsidiary	-	-
	IRB Gwalior Tollway Private Limited	Subsidiary	-	-
8	**Unit Capital Issued**		**-**	**14,631.32**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	-	14,631.32

Sr. No.	Particulars	Relation	Six months ended September 30, 2024	Six months ended September 30, 2023
9	**Interest income**		**11,634.91**	**6,334.88**
	AE Tollway Limited	Subsidiary	1,955.43	1,411.54
	IRB Hapur Muradabad Tollway Limited	Subsidiary	1,721.32	687.48
	IRB Westcoast Tollway Limited	Subsidiary	1,706.64	1,298.44
	Kishangarh Gulabpura Tollway Limited	Subsidiary	878.36	172.97
	Kaithal Tollway Limited	Subsidiary	1,381.66	912.34
	Solapur Yedeshi Tollway Limited	Subsidiary	568.26	587.94
	Yedeshi Aurangabad Tollway Limited	Subsidiary	730.24	875.44
	IRB Golconda Expressway Private Limted	Subsidiary	1,507.00	388.74
	IRB Lalitpur Tollway Private Limted	Subsidiary	885.65	-
	IRB Kota Tollway Private Limited	Subsidiary	82.86	-
	IRB Gwalior Tollway Private Limited	Subsidiary	217.49	-
10	**Receipt of Interest Income**		**3,875.44**	**1,325.00**
	AE Tollway Limited	Subsidiary	400.00	-
	IRB Hapur Muradabad Tollway Limited	Subsidiary	1,076.72	-
	IRB Westcoast Tollway Limited	Subsidiary	150.00	-
	Kishangarh Gulabpura Tollway Limited	Subsidiary	60.00	-
	Kaithal Tollway Limited	Subsidiary	336.70	215.00
	Solapur Yedeshi Tollway Limited	Subsidiary	-	390.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	-	720.00
	IRB Golconda Expressway Private Limted	Subsidiary	1,645.14	-
	IRB Lalitpur Tollway Private Limted	Subsidiary	206.88	-
11	**Interest income unwinding on loan (Interest Fee)**		**499.47**	**24.42**
	Kaithal Tollway Limited	Subsidiary	499.47	24.42
12	**Investment Management Fees**		**52.65**	**87.56**
	MMK Toll Road Private Limited	Investment Manager	52.65	87.56
13	**Expenses incurred on behalf of others**		**11.78**	**46.28**
	AE Tollway Limited	Subsidiary	0.01	0.03
	CG Tollway Limited	Subsidiary	-	-
	IRB Hapur Muradabad Tollway Limited	Subsidiary	0.00	3.60
	IRB Westcoast Tollway Limited	Subsidiary	0.01	4.95
	Kishangarh Gulabpura Tollway Limited	Subsidiary	0.00	10.27
	Kaithal Tollway Limited	Subsidiary	0.00	5.10
	Solapur Yedeshi Tollway Limited	Subsidiary	0.00	0.00
	Udaipur Tollway Limited	Subsidiary	0.00	0.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	0.36	0.00
	Palshit Dankuni Tollway Private Limited	Subsidiary	1.42	21.47
	IRB Golconda Expressway Private Limted	Subsidiary	0.01	0.41
	Samakhiyali Tollway Private Limited	Subsidiary	0.89	-
	IRB Lalitpur Tollway Private Limted	Subsidiary	6.51	-
	IRB Kota Tollway Private Limited	Subsidiary	0.80	-
	IRB Gwalior Tollway Private Limited	Subsidiary	1.77	-
	MMK Toll Road Private Limited	Investment Manager	-	0.45
14	**Unsecured Loan received**		**1,135.00**	**250.00**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	135.00	250.00
	IRB Golconda Expressway Private Limited	Subsidiary	1,000.00	-
15	**Unsecured Loan paid**		**135.00**	**-**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	135.00	-
16	**Long Term loan given - MMR**		**-**	**-**
	AE Tollway Limited	Subsidiary	-	-
	IRB Hapur Muradabad Tollway Limited	Subsidiary	-	-
	IRB Westcoast Tollway Limited	Subsidiary	-	-
	Kaithal Tollway Limited	Subsidiary	-	-
17	**Long Term loan repaid-MMR**		**19.94**	**-**
	AE Tollway Limited	Subsidiary	1.97	-
	IRB Hapur Muradabad Tollway Limited	Subsidiary	0.56	-
	IRB Westcoast Tollway Limited	Subsidiary	9.02	-
	Kaithal Tollway Limited	Subsidiary	8.39	-
18	**Secured Long Term Loan given**		**-**	**15,300.00**
	AE Tollway Limited	Subsidiary	-	-
	IRB Hapur Muradabad Tollway Limited	Subsidiary	-	-
	IRB Westcoast Tollway Limited	Subsidiary	-	10,020.00
	Kishangarh Gulabpura Tollway Limited	Subsidiary	-	-
	Kaithal Tollway Limited	Subsidiary	-	5,280.00
19	**Secured Long Term Loan repaid**		**783.61**	**-**
	AE Tollway Limited	Subsidiary	34.18	-
	CG Tollway Limited	Subsidiary	-	
	IRB Hapur Muradabad Tollway Limited	Subsidiary	193.60	
	IRB Westcoast Tollway Limited	Subsidiary	209.88	
	Kishangarh Gulabpura Tollway Limited	Subsidiary	256.40	
	Kaithal Tollway Limited	Subsidiary	89.55	

Sr. No.	Particulars	Relation	Six months ended September 30, 2024	Six months ended September 30, 2023
20	**Expenses Payable**		**1,252.12**	**1,203.39**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	1,227.70	1,178.97
	Mhaiskar Infrastructure Private Limited	Subsidiaries Company of Sponsor and Project Manager	24.42	24.42
21	**Interest Distribution**		**278.44**	-
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	278.44	
22	**Capital Reduction**		**227.30**	**-**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	227.30	
23	**Expenses incurred on our behalf**		**-**	**-**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	-	-
24	**Trustee Fees**		**0.65**	**0.41**
	IDBI Trusteeship Services Limited	Trustee	0.65	0.41

Amount 0.00 refers value less than Rs. 5,000/-

III) Related party outstanding balances

Sr. No	Particulars	Relation	As on	
			Sep-24	Mar-24
1	**Equity Investment**		**36,160.64**	**36,160.64**
	AE Tollway Limited	Subsidiary	4,365.00	4,365.00
	CG Tollway Limited	Subsidiary	2,035.00	2,035.00
	IRB Hapur Muradabad Tollway Limited	Subsidiary	3,715.00	3,715.00
	IRB Westcoast Tollway Limited	Subsidiary	1,741.94	1,741.94
	Kishangarh Gulabpura Tollway Limited	Subsidiary	1,555.00	1,555.00
	Kaithal Tollway Limited	Subsidiary	3,280.00	3,280.00
	Solapur Yedeshi Tollway Limited	Subsidiary	982.50	982.50
	Udaipur Tollway Limited	Subsidiary	1,168.00	1,168.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	2,157.57	2,157.57
	Palshit Dankuni Tollway Private Limited	Subsidiary	1,212.00	1,212.00
	IRB Golconda Expressway Private Limted	Subsidiary	7,154.50	7,154.50
	Samakhiyali Tollway Private Limited	Subsidiary	1,162.00	1,162.00
	IRB Lalitpur Tollway Private Limted	Subsidiary	4,205.80	4,205.80
	IRB Kota Tollway Private Limited	Subsidiary	393.48	393.48
	IRB Gwalior Tollway Private Limited	Subsidiary	1,032.85	1,032.85
2	**Subordinated Debt**		**16,695.17**	**33,591.55**
	CG Tollway Limited	Subsidiary	2,896.26	2,896.26
	Udaipur Tollway Limited	Subsidiary	8,893.41	8,893.41
	Palshit Dankuni Tollway Private Limited	Subsidiary	3,637.50	3,637.50
	Samakhiyali Tollway Private Limited	Subsidiary	1,268.00	1,268.00
	IRB Lalitpur Tollway Private Limted	Subsidiary	-	12,617.40
	IRB Kota Tollway Private Limited	Subsidiary	-	1,180.43
	IRB Gwalior Tollway Private Limited	Subsidiary	-	3,098.55
3	**Unsecured long term loan (Interest bearing)**		**31,344.01**	**31,531.00**
	AE Tollway Limited	Subsidiary	9,912.95	9,941.31
	IRB Hapur Muradabad Tollway Limited	Subsidiary	31.18	31.59
	IRB Westcoast Tollway Limited	Subsidiary	4,387.37	4,445.55
	Kishangarh Gulabpura Tollway Limited	Subsidiary	191.73	196.83
	Kaithal Tollway Limited	Subsidiary	8,820.78	8,915.73
	Solapur Yedeshi Tollway Limited	Subsidiary	4,000.00	4,000.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	4,000.00	4,000.00
4	**Subordinated debt - (Interest bearing)**		**93,323.18**	**77,254.30**
	AE Tollway Limited	Subsidiary	10,425.40	10,425.40
	IRB Hapur Muradabad Tollway Limited	Subsidiary	9,712.69	9,712.69
	IRB Westcoast Tollway Limited	Subsidiary	7,788.81	7,788.81
	Kishangarh Gulabpura Tollway Limited	Subsidiary	2,399.43	2,399.43
	Kaithal Tollway Limited	Subsidiary	4,472.86	4,472.86
	Solapur Yedeshi Tollway Limited	Subsidiary	3,927.17	4,209.67
	Yedeshi Aurangabad Tollway Limited	Subsidiary	16,235.44	16,780.44
	IRB Golconda Expressway Private Limted	Subsidiary	21,465.00	21,465.00
	IRB Lalitpur Tollway Private Limted	Subsidiary	12,617.40	-
	IRB Kota Tollway Private Limited	Subsidiary	1,180.43	-
	IRB Gwalior Tollway Private Limited	Subsidiary	3,098.55	-

Sr. No	Particulars	Relation	As on	
			Sep-24	Mar-24
5	**Long term loan (Interest bearing) -MMR**		**1,268.77**	**1,288.71**
	AE Tollway Limited	Subsidiary	388.74	390.71
	IRB Hapur Muradabad Tollway Limited	Subsidiary	42.67	43.23
	IRB Westcoast Tollway Limited	Subsidiary	398.24	407.26
	Kaithal Tollway Limited	Subsidiary	439.12	447.51
6	**Long term loan (Interest free)**		**-**	**400.53**
	Kaithal Tollway Limited	Subsidiary	-	400.53
7	**Secured Long Term Loan (Interest bearing)**		**44,971.01**	**45,754.62**
	AE Tollway Limited	Subsidiary	6,730.34	6,764.52
	IRB Hapur Muradabad Tollway Limited	Subsidiary	14,655.44	14,849.04
	IRB Westcoast Tollway Limited	Subsidiary	9,261.91	9,471.79
	Kishangarh Gulabpura Tollway Limited	Subsidiary	9,636.64	9,893.04
	Kaithal Tollway Limited	Subsidiary	4,686.68	4,776.23
8	**Short Term Loan**		**8,784.64**	**6,470.38**
	AE Tollway Limited	Subsidiary	487.01	319.59
	CG Tollway Limited	Subsidiary	1,571.17	1,169.09
	IRB Hapur Muradabad Tollway Limited	Subsidiary	15.03	-
	IRB Westcoast Tollway Limited	Subsidiary	2,428.08	2,361.80
	Kishangarh Gulabpura Tollway Limited	Subsidiary	370.41	60.00
	Kaithal Tollway Limited	Subsidiary	1,237.30	284.55
	Solapur Yedeshi Tollway Limited	Subsidiary	46.23	-
	Udaipur Tollway Limited	Subsidiary	2,533.41	2,275.35
	Yedeshi Aurangabad Tollway Limited	Subsidiary	64.02	-
	IRB Golconda Expressway Private Limted	Subsidiary	31.98	-
9	**Other Payable**		**42,012.59**	**40,760.47**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	38,258.65	37,030.95
	Mhaiskar Infrastructure Private Limited	Subsidiaries Company of Sponsor and Project Manager	424.95	400.53
	Modern Road Makers Private Limited	Subsidiaries Company of Sponsor and Project Manager	1,784.13	1,784.13
	IRB Goa Tollway private Limited	Subsidiaries Company of Sponsor and Project Manager	1,544.86	1,544.86
10	**Other payable (Reimbursement of Expenses incurred on our behalf)**		**0.49**	**0.49**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	0.49	0.49

Sr. No	Particulars	Relation	As on	
			Sep-24	Mar-24
11	**Other Receivable**		**308.26**	**291.48**
	AE Tollway Limited	Subsidiary	0.00	0.01
	CG Tollway Limited	Subsidiary	47.34	47.35
	IRB Hapur Muradabad Tollway Limited	Subsidiary	27.14	27.14
	IRB Westcoast Tollway Limited	Subsidiary	-	0.02
	Kishangarh Gulabpura Tollway Limited	Subsidiary	182.68	182.70
	Kaithal Tollway Limited	Subsidiary	0.00	0.01
	Solapur Yedeshi Tollway Limited	Subsidiary	4.89	4.89
	Udaipur Tollway Limited	Subsidiary	13.97	13.97
	Yedeshi Aurangabad Tollway Limited	Subsidiary	6.75	6.74
	Palshit Dankuni Tollway Private Limited	Subsidiary	1.42	8.30
	IRB Golconda Expressway Private Limted	Subsidiary	-	-
	Samakhiyali Tollway Private Limited	Subsidiary	0.91	0.24
	IRB Lalitpur Tollway Private Limted	Subsidiary	6.51	0.01
	IRB Kota Tollway Private Limited	Subsidiary	0.61	0.04
	IRB Gwalior Tollway Private Limited	Subsidiary	1.60	0.06
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	14.44	-
12	**Interest Receivable**		**28,456.00**	**16,378.71**
	AE Tollway Limited	Subsidiary	7,362.72	5,807.30
	IRB Hapur Muradabad Tollway Limited	Subsidiary	2,091.87	1,447.27
	IRB Westcoast Tollway Limited	Subsidiary	5,879.03	4.55
	Kishangarh Gulabpura Tollway Limited	Subsidiary	1,760.81	942.45
	Kaithal Tollway Limited	Subsidiary	4,709.77	3,664.81
	Solapur Yedeshi Tollway Limited	Subsidiary	1,910.41	1,342.15
	Yedeshi Aurangabad Tollway Limited	Subsidiary	2,017.56	1,287.32
	IRB Golconda Expressway Private Limted	Subsidiary	1,744.71	1,882.86
	IRB Lalitpur Tollway Private Limted	Subsidiary	678.77	-
	IRB Kota Tollway Private Limited	Subsidiary	82.86	-
	IRB Gwalior Tollway Private Limited	Subsidiary	217.49	-
13	**BG Margin Receivable**		**30.95**	**30.95**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	30.95	30.95
14	**Unsecured Loan received**		**1,000.00**	**-**
	IRB Golconda Expressway Private Limited	Subsidiary	1,000.00	-
15	**Unsecured Loan / other payable**		**-**	**-**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	-	-
16	**Trade payable**		**95.73**	**95.19**
	MMK Toll Road Pvt Limited	Investment Manager	95.73	95.19

Amount 0.00 refers value less than Rs. 5,000/-

Note 33 : Transfer of projects

On October 12, 2023, the Trust has executed arrangement with the Sponsor for implementation of Samakhiyali Tollway Private Limited ('SPV') by the Trust and accordingly, the project is being executed by the SPV and the Trust.

On July 29, 2023, the Trust has executed arrangement with the Sponsor for implementation of IRB Golconda Expressway Private Limited ('SPV') by the Trust and accordingly, the project is being executed by the SPV and the Trust.

Note 34 : Distribution made

(₹ in million)

Particulars	As at September 30, 2024 (Unaudited)	As at March 31, 2024 (Audited)
Distributed during the period as :		
Interest	545.71	449.55
Return of Capital	445.48	3,984.60
Total	**991.19**	**4,434.15**

Note: The Board of Directors of the Investment Manager have declared 3rd Distribution of Rs.0.24 per unit towards interest in their meeting held on May 03, 2024. The Board of Directors of the Investment Manager have declared 4th Distribution of Rs.0.65 per unit which comprises of Rs.0.40 per unit as return of capital and Rs.0.25 per unit as interest in their meeting held on August 05, 2024.

Note 35 : Subsequent Events

1. The Board of Directors of the Investment Manager declared Distribution of Rs.0.57 per unit which comprises of Rs.0.53 per unit as return of capital and Rs.0.04 per unit as interest in their meeting held on October 28, 2024.

2. The Board of Directors of Investment Manager to IRB Infrastructure Trust on November 14, 2024, has approved a preliminary and non-binding offer relates to the transfer of the five assets namely IRB Westcoast Tollway Limited, Kaithal Tollway Limited, AE Tollway Limited, Kishangarh Gulabpura Tollway Limited and IRB Hapur Moradabad Tollway Limited held by the Trust to be issued to the IRB InvIT Fund (''Public InvIT"), a publicly offered and listed Infrastructure Investment Trust.

Note 36 : Other Statutory Information

i) The Trust has not traded or invested in Crypto currency or Virtual Currency during the current or previous year.
ii) The Trust does not hold benami property and no proceedings under Benami transaction (Prohibition) Act 1988 have been initiated against the Trust.
iii) The Trust does not have any transactions with companies struck off.
iv) The Trust does not have any such transaction which is not recorded in the books of accounts that has been surrendered or disclosed as income during the year in the tax assessments under the Income Tax Act, 1961.
v) The Trust did not have any long-term contracts including derivative contract.
vi) The Trust has not been declared a wilful defaulter by any bank / financial institution or any other lender during the year.

Note 37 : Previous year comparatives

Previous year's figures has been reclassified / regrouped wherever necessary to confirm to current year classification. The impact of the same is not material to the user of the Standalone financial statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No.: 121011

For M S K A & Associates
Chartered Accountants
ICAI Firm Registration Number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No.: 118894

Place : Mumbai
Date : December 09. 2024

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN: 00183554

SD/-
Shilpa Todankar
Chief Financial Officer

Place : Mumbai
Date : December 09, 2024

SD/-
Dhananjay K. Joshi
Chief Executive Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No. A27833

Gokhale & Sathe
Chartered Accountants
304/308/309, Udyog Mandir No.1,
7-C, Bhagoji Keer Marg,
Mahim, Mumbai 400 016.
Telephone + 91 (22) 43484242
Fax + 91 (22) 43484241

M S K A & Associates
Chartered Accountants
602, Floor 6, Raheja Titanium
Western Express Highway,
Geetanjali Railway Colony,
Ram Nagar, Goregaon (E),
Mumbai 400063, India
Tel: +91 22 6238 0519

INDEPENDENT AUDITOR'S REPORT

To the Unit holders of IRB Infrastructure Trust

Report on the Audit of the Standalone Financial Statements

Opinion

We have jointly audited the accompanying standalone financial statements of IRB Infrastructure Trust ("the Trust"), which comprise the Standalone Balance Sheet as at March 31, 2024, the Standalone Statement of Profit and Loss (including Other Comprehensive Income) , Standalone Statement of Changes in Unit Holders' Equity, Standalone Statement of Cash Flows for the year then ended, Standalone Statement of Net Assets at Fair value as at March 31, 2024, Standalone Statement of Total Returns at Fair Value and Net Distributable cashflows ('NDCF') of the Trust for the year then ended as an additional disclosure in accordance with the Securities and Exchange Board of India ("SEBI") Master Circular SEBI/HO/DDHS-PoD-2/P/CIR/2023/115 dated July 06, 2023, as amended, ("the SEBI Circular") for the year ended March 31, 2024 and notes to the standalone financial statements, including material accounting policy information and other explanatory information (hereinafter referred to as the "standalone financial statements").

In our opinion and to the best of our information and according to the explanations given to us, the aforesaid standalone financial statements give the information required by SEBI (Infrastructure Investment Trusts) Regulations, 2014, as amended from time to time read with SEBI Circular, together known as ("InvIT Regulations") and give a true and fair view in conformity with the Indian Accounting Standards prescribed under rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended ("Ind AS") and other accounting principles generally accepted in India, to the extent not inconsistent with the InvIT Regulations, of the state of affairs of the Trust as at March 31, 2024, and profit (including other comprehensive income), changes in unit holders' equity, its cash flows for the year ended on that date, its net asset assets at fair value as at March 31, 2024, its total returns at fair value and net distributable cashflows of the Trust for the year ended as on date and other financial information of the Trust for the year ended March 31, 2024.

Basis for Opinion

We conducted our joint audit of the standalone financial statements in accordance with the Standards on Auditing (SAs) issued by the Institute of Chartered Accountants of India ("ICAI"). Our responsibilities under those Standards are further described in the 'Auditor's Responsibilities for the Audit of the Standalone Financial Statements' section of our report. We are independent of the Trust in accordance with the Code of Ethics issued by ICAI, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the Code of Ethics. We believe that the audit evidence obtained by us is sufficient and appropriate to provide a basis for our audit opinion on the standalone financial statements.

Emphasis of Matter

We draw attention to Note 8 of the accompanying standalone financial statements, which describes the presentation of 'Unit Capital' as 'Equity' to comply with InvIT Regulations. Our opinion is not modified in respect of this matter.

Gokhale & Sathe
Chartered Accountants
304/308/309, Udyog Mandir No.1,
7-C, Bhagoji Keer Marg,
Mahim, Mumbai 400 016.
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Chartered Accountants
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Ram Nagar, Goregaon (E),
Mumbai 400063, India
Tel: +91 22 6238 0519

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the standalone financial statements for the current year. These matters were addressed in the context of our audit of the standalone financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. We have determined the matters described below to be the key audit matters to be communicated in our report.

Sr. No	Key Audit Matter	How the Key Audit Matters were addressed in our audit
1	The Trust has significant investments (including sub-debt) and has granted loans to its subsidiaries amounting to Rs. 69,752.19 million and Rs. 1,62,699.54 million respectively. The value of investments and loans in aggregate comprise of 95% of the balance sheet. (Refer note 4.1, 4.2 and 5.4 of the standalone financial statements). The subsidiaries are licensed to collect toll from road infrastructure projects under concession arrangements with NHAI/HMDA under Toll-Operate-Transfer (TOT) and Build-Operate-Transfer (BOT) model. The Trust performs an annual assessment of impairment for its investments at each cash generating unit (CGU) level, to identify any indicators of impairment. The recoverable amount of the CGUs which is based on the higher of the value in use or fair value less costs to sell, has been derived from discounted forecast cash flow models which requires management to make significant estimates and assumptions related to future revenue growth, concession period, operations costs, the discount rate and assessments of the status of the project and cost to complete balance work.	Our audit procedures included: 1. Read the policy, evaluated the design and implementation and verified, on a test check basis the operating effectiveness of key controls placed around the impairment assessment process of the recoverability of the investments and loans. 2. Assessed the net worth of subsidiaries on the basis of latest available financial statements. Further: - Compared the carrying amount of investments and loans with the relevant subsidiaries balance sheet to identify their net assets, being an approximation of their minimum recoverable amount. Where the net assets are in excess of their carrying amount, also assessed that those subsidiaries have historically been profit making. - For the investments and loans where the carrying amount exceeded the net asset value, comparing the carrying amount of the investment with the expected value of the business based discounted cash flow analysis. 3. Tested and verified some of the key assumptions such as future revenue growth, concession period, traffic growth which were most sensitive to the recoverable value of the investments and loans. 4. Assessed the work performed by management as well as management's

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		external valuation expert, including the valuation methodology and the key assumptions used. Also assessed the competence, capabilities and objectivity of the expert used by the management in the process of evaluating impairment models. 5. Involved our internal valuation specialist, where appropriate, to evaluate the reasonability of the methodology, approach and key assumptions mainly weighted average cost of capital used in the valuation carried out for determining the fair value of respective subsidiaries.
2	The Trust has payable of Rs. 40,760.96 million as on March 31, 2024 to IRB Infrastructure Developers Limited ("Sponsor") on account of transfer of 9 project companies by the Sponsor (Refer note 10.2 of the standalone financial statements). Pursuant to settlement of IRB Infrastructure Trust ('Trust') by Sponsor, as a Private InvIT, the Trust has entered into Debt Novation Agreements (DNA). As per the terms of DNA, in consideration of assets taken over in 9 project companies, Trust has issued units and agreed to transfer to the Sponsor, the claim amounts when and to the extent the same are eventually received by project companies, on account of Sponsor claims. Such Sponsor claims are lodged after obtaining Commercial Operation Date by respective project companies. The amount realisable against claims has been estimated by the valuers based on the weighted average of probabilities of realisation of such claims. Based on the fair value of liability as estimated by the valuers, a resultant impact in the value of liability has been recognised under the head 'Loss of fair value measurement of other payables'. There is significant judgement involved on assessing fair value of these payables which	Our audit procedures included: 1. Evaluated the design and implementation and testing operating effectiveness of key controls placed around the assessment process of the amount payable to Sponsor. 2. Obtained Trust's assessment of the fair valuation of the deferred consideration payable. These projections are based on underlying infrastructure project cash flows which are sensitive to some of the claims to be settled with NHAI/HDMA. 3. Assessed the work performed by management as well as management's external valuation expert, including the valuation methodology and the key assumptions used. Further, also assessed the competence, capabilities and objectivity of the expert used by the management in the process of evaluating impairment models. 4. Involved our internal valuation specialist, where appropriate, to evaluate the reasonability of the methodology, approach and discount rate used in the valuation carried out for determining the fair value of deferred consideration payable.

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	is based on key assumptions such as timing of collection, the discount rate, and the probability of success in respect of the claims.	
3	Disclosures relating to Statement of Net Assets at Fair Value and Statement of Total returns at Fair value as per InvIT Regulations. The Trust is required to disclose Statement of Net Assets at Fair Value and Statement of Total Returns at Fair Value pursuant to SEBI Circulars issued under the InvIT Regulations which requires valuation of assets. Such fair valuation has been carried out by the independent valuer appointed by the Investment Manager of the Trust. For the above purpose, fair value is determined by the management using discounted cash flow ('DCF') valuation method which involves significant management judgement in respect of various estimates used as inputs such as determination of future cash flows, discount rates, revenue growth rates, inflation rates, tax rates, amongst others. The determination of fair value involves judgement due to inherent high estimation uncertainty in the underlying assumptions. Considering the judgement involved in determination of fair values due to inherent uncertainty and complexity of the assumptions used in determination of fair values, this is considered as a key audit matter for the current year audit.	Our audit procedures included: 1. Obtained an understanding of regulatory requirements by reading the requirements of SEBI Regulations along with the relevant SEBI circulars, pursuant to which the Statements are prepared by the Investment Manager. 2. Obtained an understanding of the Trust's policies and procedures adopted by the Investment Manager for computation and disclosure of the Statements. 3. Assessed the work performed by management as well as management's external valuation expert, including the valuation methodology and the key assumptions used. Also assessed the competence, capabilities and objectivity of the expert used by the management in the process. 4. Involved our internal valuation specialist, where appropriate, to evaluate the reasonability of the methodology, approach and discount rate used in the valuation carried out for determining the fair value. 5. Tested arithmetic accuracy of cash flows projections and sensitivity analysis. 6. Evaluated the appropriateness and adequacy of disclosures for compliance with the relevant requirements of SEBI regulations.

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Information Other than the Standalone Financial Statements and Auditor's Report Thereon

The Board of Directors of the Investment Manager (the "Board") are responsible for the other information. The other information comprises the Annual Report but does not include the standalone financial statements and our auditor's report thereon. The Annual report is expected to be made available to us after the date of auditor's report.

Our opinion on the standalone financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the standalone financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the standalone financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

When we read the Annual report, if we conclude that there is a material misstatement therein, we are required to communicate the matter to those charged with governance.

Responsibilities of the Investment Manager and Those Charged with Governance for the Standalone Financial Statements

The Board are responsible for the preparation of these standalone financial statements that give a true and fair view of the financial position, financial performance, changes in unit holders' equity, cash flows of the Trust, net assets at fair value as at March 31, 2024, total returns at fair value, net distributable cashflows for the year ended as on date and other financial information in accordance with the requirement of InvIT Regulations; the Indian Accounting Standards ('Ind AS') defined under Rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015 , as amended, and other accounting principles generally accepted in India, to the extent not inconsistent with the InvIT Regulations. This responsibility also includes maintenance of adequate accounting records for safeguarding of the assets of the Trust and for preventing and detecting frauds and other irregularities; selection and application of appropriate accounting policies; making judgments and estimates that are reasonable and prudent; and design, implementation and maintenance of adequate internal financial controls, that were operating effectively for ensuring the accuracy and completeness of the accounting records, relevant to the preparation and presentation of the standalone financial statement that give a true and fair view and are free from material misstatement, whether due to fraud or error.

In preparing the standalone financial statements, the Board are responsible for assessing the Trust's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board either intends to liquidate the Trust or to cease operations, or has no realistic alternative but to do so.

The Board are also responsible for overseeing the Trust's financial reporting process.

Auditor's Responsibilities for the Audit of the Standalone Financial Statements

Our objectives are to obtain reasonable assurance about whether the standalone financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material

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if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these standalone financial statements.

We give in "Annexure A" a detailed description of Auditor's responsibilities for Audit of the Standalone Financial Statements.

Other Matter

The standalone financial statements of the Trust for the year ended March 31, 2023, were audited by Gokhale & Sathe, Chartered Accountants, one of the joint auditor of the Trust, whose report dated May 12, 2023 expressed an unmodified opinion on those statements. Our opinion is not modified in respect of this matter.

Report on Other Legal and Regulatory Requirements

Based on our audit and as required by InvIT Regulations, we report that:

(a) We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit.

(b) The Standalone Balance Sheet, the Standalone Statement of Profit and Loss (including other comprehensive income), the Standalone Statement of changes in unit holder's equity, the Standalone statement of cash Flow, Standalone net assets at fair value as at March 31, 2024, Standalone total returns at fair value and net distributable cashflows of the Trust for the year ended dealt with by this Report are in agreement with the books of account.

(c) In our opinion, the aforesaid standalone financial statements comply with the Indian Accounting Standards ('Ind AS') as defined in Rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015, as amended, and other accounting principles generally accepted in India, to the extent not inconsistent with the InvIT Regulations.

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration No.103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No.: 121011
UDIN: 24121011BKAAOM3465

Place: Mumbai
Date: May 03, 2024

For M S K A & Associates
Chartered Accountants
ICAI Firm Registration No.105047W

SD/-
Nitin Tiwari
Partner
Membership No.: 118894
UDIN: 24118894BKGQHD3520

Place: Mumbai
Date: May 03, 2024

Gokhale & Sathe
Chartered Accountants
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ANNEXURE A TO THE INDEPENDENT AUDITOR'S REPORT ON EVEN DATE ON THE STANDALONE FINANCIAL STATEMENTS OF IRB INFRASTRUCTURE TRUST

Auditor's Responsibilities for the Audit of the Standalone Financial Statements

As part of an audit in accordance with SAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the standalone financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances but not for the purpose of expressing an opinion on whether the Trust has in place an adequate internal financial controls with reference to standalone financial statements in place and the operating effectiveness of such controls.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board.

- Conclude on the appropriateness of Board's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Trust's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the standalone financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Trust to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the standalone financial statements, including the disclosures, and whether the standalone financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our joint audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

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From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the standalone financial statements for the year ended March 31, 2024 and are therefore, the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration No.103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No.: 121011
UDIN: 24121011BKAAOM3465

Place: Mumbai
Date: May 03, 2024

For M S K A & Associates
Chartered Accountants
ICAI Firm Registration No.105047W

SD/-
Nitin Tiwari
Partner
Membership No.: 118894
UDIN: 24118894BKGQHD3520

Place: Mumbai
Date: May 03, 2024

IRB Infrastructure Trust
Standalone Balance Sheet as at March 31, 2024

(Rs. in million)

		Note No.	As at March 31, 2024	As at March 31, 2023
I	**ASSETS**			
(1)	**Non-current assets**			
	Financial assets	4		
	i) Investments	4.1	69,752.19	94,424.44
	ii) Loans	4.2	154,248.07	30,351.69
	iii) Other financial assets	4.3	613.15	-
	Total non-current assets		**224,613.41**	**124,776.13**
(2)	**Current assets**			
	Financial assets	5		
	i) Investments	5.1	86.84	20.08
	ii) Cash and cash equivalents	5.2	150.39	6.56
	iii) Bank balance other than cash and cash equivalents	5.3	2,041.10	-
	iv) Loans	5.4	8,451.47	5,421.29
	v) Other financial assets	5.5	21,008.09	7,965.17
	Current tax assets (net)	6	9.52	-
	Other current assets	7	-	4.48
	Total current assets		**31,747.41**	**13,417.58**
	Total assets		**256,360.82**	**138,193.71**
II	**EQUITY AND LIABILITIES**			
	Equity			
	Unit capital	8	135,091.23	87,929.33
	Other equity	9	18,052.09	9,526.42
	Total unit holder's equity		**153,143.32**	**97,455.75**
(1)	**Non-current liabilities**			
	Financial liabilities	10		
	i) Borrowings	10.1	61,702.15	-
	ii) Other financial liabilities	10.2	40,760.96	35,778.03
	Total non- current liabilities		**102,463.11**	**35,778.03**
(2)	**Current liabilities**			
	Financial liabilities	11		
	i) Borrowings	11.1	647.39	4,872.91
	ii) Trade payables	11.2		
	a) total outstanding dues of micro enterprises and small enterprises		0.27	0.01
	b) total outstanding dues of creditors other than micro enterprises and small enterprises		102.05	81.34
	Other Current liabilities	12	4.68	5.67
	Total current liabilities		**754.39**	**4,959.93**
	Total liabilities		**103,217.50**	**40,737.96**
	TOTAL EQUITY AND LIABILITIES		**256,360.82**	**138,193.71**
	Summary of material accounting policies	3		

The accompanying notes are an integral part of the Standalone Financial Statements

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

For M S K A & Associates
Chartered Accountants
ICAI registration number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No.: 118894

Place: Mumbai
Date : May 03, 2024

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive

SD/-
Shilpa Todankar
Chief Financial Officer

Place : Mumbai
Date : May 03, 2024

SD/-
Kaustubh Shevade
Company Secretary
Membership No. A27833

IRB Infrastructure Trust
Standalone Statement of Profit and Loss for the year ended March 31, 2024

(Rs. in million)

	Note No.	For the year ended March 31, 2024	For the year ended March 31, 2023
Income			
Other income	13	16,710.05	4,222.87
Total Income		**16,710.05**	**4,222.87**
Expenses			
Valuation Fees		5.41	-
Audit Fees		6.41	1.63
Investment Manager Fees		146.32	56.52
Custodian Fees		0.19	-
Trustee fees		7.18	-
Finance costs (Interest)	14	2,463.56	-
Finance costs (Others)	14	68.53	
Fair Value loss on measurement of other payable		4,935.37	560.53
Other Expenses	15	33.25	55.18
Total Expenses		7,666.22	673.86
Profit before tax		**9,043.83**	**3,549.01**
Tax expenses		-	-
Profit after tax (A)		**9,043.83**	**3,549.01**
Other comprehensive income for the year (net of tax)			
Re-measurement gains/ (losses) on defined benefit plans (net of taxes)		**-**	**-**
Other comprehensive income for the year (net of tax) (B)		-	-
Total comprehensive income for the year, net of tax : (A+B)		**9,043.83**	**3,549.01**
Earnings per unit	**16**		
Basic (INR)		**9.29**	**4.04**
Diluted (INR)		**9.29**	**4.04**
Summary of material accounting policies	3		

The accompanying notes are an integral part of the Standalone Financial Statements

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive Officer

For M S K A & Associates
Chartered Accountants
ICAI registration number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No.: 118894

Place: Mumbai
Date : May 03, 2024

SD/-
Shilpa Todankar
Chief Financial Officer

Place: Mumbai
Date : May 03, 2024

SD/-
Kaustubh Shevade
Company Secretary
Membership No. A27833

IRB Infrastructure Trust

Standalone statement of cash flows for the year ended March 31, 2024

(Rs. in million)

Particulars	For year ended March 31, 2024	For year ended March 31, 2023
Cash flow from operating activities		
Profit / (Loss) before tax	9,043.83	3,549.01
Adjustments to reconcile profit before tax to net cash flows:		
Finance costs	2,532.09	
Fair value gain on investments	(1.44)	(0.18)
Profit on sale of investments	(101.01)	(0.92)
Fair value loss on measurement of other payable	4,935.37	560.53
Interest income on		
- Fixed deposits	(97.04)	
- Others	(16,461.72)	(4,221.77)
Operating profit/(loss) before working capital changes	**(149.92)**	**(113.33)**
Movement in working capital:		
Increase/(decrease) in trade payables	20.97	(0.36)
Increase/(decrease) in other financial liabilities	47.57	48.71
Increase/(decrease) in other current liabilities	(0.99)	4.48
(Increase)/decrease in Other current assets	4.48	(4.48)
(Increase)/decrease in loans	-	(1,928.34)
(Increase)/decrease in Other Financial assets	(620.87)	(229.72)
Cash generated from/(used in) operations	**(698.77)**	**(2,223.06)**
Direct taxes paid (net of refunds)	(9.51)	-
Net cash flows from/(used in) operating activities (A)	**(708.28)**	**(2,223.06)**
Cash flows from investing activities		
Investment in subsidiaries	(13,948.63)	(1,212.00)
Investment in sub debt of subsidiaries	(27,866.12)	(2,282.64)
Repayment of sub debt from subsidiaries	6,553.77	-
Loan given to subsidiaries	(87,978.13)	(48.71)
Loan repayment from subsidiaries	20,984.80	-
Proceeds from sale/ (purchase) of current investments (net)	35.69	1.06
Investments in Bank deposits (having maturity of more than three months)	(2,041.10)	-
Interest received on fixed deposit	77.35	-
Interest received from related parties	3,446.20	2,097.00
Net cash flows from/(used in) investing activities (B)	**(100,736.17)**	**(1,445.29)**
Cash flow from financing activities		
Proceeds from issuance of unit capital	51,146.50	2,425.00
Return of unit capital	(3,984.60)	-
Proceeds from long term borrowings	63,677.20	-
Repayment of long term borrowings	(646.54)	-
Transaction cost on long term borrowings	(708.60)	-
Proceeds of curent borrowings	-	1,532.48
Repayment of current borrowings	-	(267.50)
Loan received from Sponsor	726.20	-
Loan repayment to Sponsor	(5,599.11)	-
Unit Issue Expenses	(68.61)	(15.33)
Interest Distribution	(449.55)	-
Finance Cost paid	(2,504.61)	-
Net cash flows from/(used in) financing activities (C)	**101,588.28**	**3,674.65**
Net increase/(decrease) in cash and cash equivalents (A+B+C)	**143.83**	**6.32**
Cash and cash equivalents at the beginning of the period	6.56	0.25
Cash and cash equivalents at the end of the period (refer 5.2)	**150.39**	**6.56**
Components of cash and cash equivalents		
Balances with banks		
- On Current Account	141.83	6.56
- On Escrow Account	8.56	-
Total Cash and cash equivalents (refer note 5.2)	**150.39**	**6.56**

IRB Infrastructure Trust
Standalone statement of cash flows for the year ended March 31, 2024

Debt reconciliation statement in accordance with Ind AS 7		
Particulars	**For year ended March 31, 2024**	**For year ended March 31, 2023**
Opening balances as at beginning of the period		
Long term borrowings	-	-
Short term borrowings	4,872.91	3,607.93
Movements		
Long term borrowings	63,030.66	-
Short term borrowings	4,872.91	(1,264.98)
Closing balances as at end of the period		
Long term borrowings	63,030.66	-
Short term borrowings	-	4,872.91

The accompanying notes are an integral part of the standalone statement of cash flows

Notes:

1. All figures in bracket are outflow.
2. Taxes paid are treated as arising from operating activities and are not bifurcated between investing and financing activities.
3. The Standalone Statement of cash flows has been prepared under Indirect Method as per Ind AS 7 "Statement of Cash Flows" .
4. The Borrowings reflected in above Debt Reconciliation Statement are gross of Unamortised Transaction Cost.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

For and on behalf of the Board of Directors of
(Investment Manager of IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive Officer

For M S K A & Associates
Chartered Accountants
ICAI registration number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No.: 118894

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No. A27833

Place: Mumbai
Date : May 03, 2024

Place : Mumbai
Date : May 03, 2024

IRB Infrastructure Trust
Standalone Statement of changes in Unitholders Equity for the year ended March 31, 2024

(Rs. in million)

	As at March 31, 2024	As at March 31, 2023
I. Unit Capital		
a. Issued, subscribed and fully paid up Unit Capital		
Unit Capital of Rs 100 each issued, subscribed and fully paid up		
At the beginning of the year	87,929.33	85,504.33
Issued during the year	51,146.50	2,425.00
Less: Capital reduction during the year	(3,984.60)	-
At the end of the year	**135,091.23**	**87,929.33**

II. Reconciliation of the number of units outstanding and the amount of unit capital:

	As at March 31, 2024		As at March 31, 2023	
	No. of units	Amount in Million	No. of units	Amount in Million
At the beginning of the year	879,293,265	87,929.33	855,043,265	85,504.33
Issued during the year	234,400,000	51,146.50	24,250,000	2,425.00
Less : Capital Reduction during the year	-	(3,984.60)	-	-
At the end of the year	**1,113,693,265**	**135,091.23**	**879,293,265**	**87,929.33**

Other Equity

(Rs. in million)

	As at March 31, 2024	As at March 31, 2023
Retained earnings		
At the beginning of the year	9,526.42	5,992.74
Profit / (Loss) for the year	9,043.83	3,549.01
Unit issue expenses	(68.61)	(15.33)
Interest Distribution	(449.55)	-
At the end of the year	**18,052.09**	**9,526.42**

The accompanying notes are an integral part of the standalone statement of changes in unitholder's equity

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

For M S K A & Associates
Chartered Accountants
ICAI registration number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No. 118894
Place: Mumbai
Date : May 03, 2024

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Shilpa Todankar
Chief Financial Officer

Place : Mumbai
Date : May 03, 2024

SD/-
Dhananjay K. Joshi
Chief Executive Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No. A27833

IRB Infrastructure Trust
DISCLOSURES PURSUANT TO SEBI CIRCULARS
(SEBI Circular No. SEBI/HO/DDHS-PoD-2/P/CIR/2023/115 dated 06-July-2023)

A. Standalone Statement of Net Asset at Fair Value

(Rs. in Million)

	As at March 31, 2024		As at March 31, 2023	
Particulars	**Book value**	**Fair value**	**Book value**	**Fair value**
A. Assets	256,360.82	403,257.61	138,193.71	223,482.48
B. Liabilities (at book value)	103,217.50	103,217.50	40,737.96	40,737.96
C. Net Assets (A-B)	153,143.32	300,040.10	97,455.75	182,744.52
D. Number of units (in millions)	1,113.69	1113.69	879.29	879.29
E. NAV (C/D) (Amount in Rs.)	**137.51**	**269.41**	**110.83**	**207.83**

B. Standalone Statement of total returns at Fair Value

Particulars	**As at March 31, 2024**	**As at March 31, 2023**
Total Comprehensive Income (As per the Statement of Profit and Loss)	9,043.83	3,549.01
Add/(less): Other Changes in Fair Value	146,896.78	85,288.77
Comprehensive Income	**155,940.61**	**88,837.78**

Notes :

Fair value of assets as at March 31, 2024 and March 31, 2023 and other changes in fair value for the year then ended as disclosed in the above tables are derived based on the fair valuation reports issued by the independent valuer appointed under the InvIT Regulations.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

For M S K A & Associates
Chartered Accountants
ICAI registration number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No.: 118894

Place: Mumbai
Date : May 03, 2024

For and on behalf of the Board of Directors of
(Investment Manager of IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Shilpa Todankar
Chief Financial Officer

Place: Mumbai
Date : May 03, 2024

SD/-
Dhananjay K. Joshi
Chief Executive Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No. A27833

Additional Disclosures as required by Paragraph 6 to SEBI Circular No.SEBI/HO/DDHS-PoD-2/P/CIR/2023/115

a. Net Distributable Cash Flow for the year ended March 31, 2024

(i) IRB Infrastructure Trust

(Rs. in Million)

Sr. No.	Particulars	Year ended March 31, 2024	Year ended March 31, 2023[3]
1	Cash flows received from Project SPVs in the form of Interest[1]	3,748.20	2,097.00
2	Cash flows received from Project SPVs in the form of Dividend	-	-
3	Any other income accruing at the Trust level and not captured above, including but not limited to interest/return on surplus cash invested by the Trust	199.49	0.92
4	Cash flows received from the project SPVs towards the repayment (Net) of the debt issued to the Project SPVs by the Trust[2]	8,897.76	(1,928.34)
5	**Total cash inflow at the Trust level (A)**	**12,845.45**	**169.58**
	Less:		
6	Any payment of fees, interest and expense incurred at the Trust level, including but not limited to the fees of the Investment Manager	(2,634.54)	(113.33)
7	Income tax (if applicable) at the Standalone Trust Level	-	-
8	Repayment of external debt	(646.69)	-
9	Promoter contribution in under construction Project SPVs	(4,855.00)	-
10	**Total cash outflows / retention at the Trust level (B)**	**(8,136.23)**	**(113.33)**
11	**Net Distributable Cash Flows (C) = (A+B)**	**4,709.22**	**56.25**

Note :

1 Excludes interest due but not received of Rs.7,703.64 millions, Rs.5,009.88 millions,Rs. 922.36 millions,Rs. 12,713.52 millions and Rs. 2,124.77 Millions for the six months ended March 31, 2024, six months ended September 30, 2023, six months ended March 31, 2023, year ended March 31, 2024 and year ended March 31, 2023.

2 Netted - off with disbursement of short-term unsecured loan to related parties. (Refer RPT disclosures of standalone financial results).

3 The same is earmarked towards capex for ongoing projects.

IRB Infrastructure Trust

Notes to financial statements for the year ended March 31, 2024

1. Trust Information and Nature of Operations

IRB Infrastructure Trust (the "Trust") is a trust settled pursuant to the indenture of trust dated August 27, 2019 which is registered under Indian Trust Act, 1882 and under the Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time. The Trust is settled by the Sponsor, IRB Infrastructure Developers Limited ("IRB" or the "Sponsor"), an infrastructure development company in India. The Trustee to the Trust is IDBI Trusteeship Services Limited (the "Trustee"). Investment manager for the Trust is MMK Toll Road Private Limited (the "Investment Manager"). The Trust has received registration certificate from SEBI having registration number IN/InviT/19-20/0012.

The Trust has been formed to invest in infrastructure assets primarily being in the road sector in India. The Trust's road projects are eligible infrastructure projects under the InvIT Regulations and held through special purpose vehicles ("Project SPVs" together as "Project SPV Group"). The Trust's portfolio comprises of fifteen road projects as listed below:-

The Trust had acquired the projects at Sr no 1 to 11 and 13 from the Sponsor. The SPV at Sr. no 11 has been added to portfolio from 11.08.2023. The SPV at Sr. no 12 has been added to portfolio from 10.11.2023. The SPV at Sr. no 13 has been added to portfolio from 28.12.2023. The SPV at Sr. no 14 & 15 has been added to portfolio from 01.01.2024.

Sr No.	Project SPV Name	Type
1	AE Tollway Limited (AETL)	DBFOT
2	CG Tollway Limited (CGTL)	DBFOT
3	IRB Hapur Moradabad Tollway Limited (IRBHMTL)	DBFOT
4	IRB Westcoast Tollway Limited (IRBWTL)	DBFOT
5	Kishangarh Gulabpura Tollway Limited (KGTL)	DBFOT
6	Kaithal Tollway Limited (KTL)	DBFOT
7	Solapur Yedeshi Tollway Limited (SYTL)	DBFOT
8	Udaipur Tollway Limited (UTL)	DBFOT
9	Yedeshi Aurangabad Tollway Limited (YATL)	DBFOT
10	Palsit Dankuni Tollway Private Limited (PDTPL) (w.e.f 02.04.2022)	DBFOT
11	IRB Golconda Expressway Private Limited (IGEPL) (w.e.f 11.08.2023)	TOT
12	IRB Lalitpur Tollway Private Limited (ILTPL) (w.e.f 10.11.2023)	TOT
13	Samakhiyali Tollway Private Limited (STPL) (w.e.f 28.12.2023)	DBFOT
14	IRB Kota Tollway Private Limited (IKTPL) (w.e.f 01.01.2024)	TOT

Sr No.	Project SPV Name	Type
15	IRB Gwalior Tollway Private Limited (IGTPL) (w.e.f 01.01.2024)	TOT

The registered office of the Investment Manager is Off No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai Mumbai 400076.

The financial statements were authorised for issue in accordance with resolution passed by the board of directors of the Investment manager on May 03, 2024.

The Trust has been listed on NSE w.e.f. 03.04.2023

2. Basis of preparation

The Standalone Financial Statements which comprises the Standalone Balance Sheet as at March 31, 2024, the Standalone Statement of Profit and Loss (including Other Comprehensive Income), the Standalone Statement of Changes in Unit Holder's Equity, the Standalone Statement of Cash Flows for the year then ended, Statement of Net Assets at Fair value as at March 31, 2024, Statement of Total Returns at Fair Value and Net Distributable cashflows for the year then ended as an additional disclosure in accordance with the Securities and Exchange Board of India ("SEBI") Master Circular SEBI/HO/DDHS-PoD-2/P/CIR/2023/115 dated July 06, 2023, as amended, ("the SEBI Circular") for the year ended March 31, 2024 and notes to the Standalone Financial Statements, including material accounting policy information and other explanatory information has been prepared in accordance with the requirements of SEBI (Infrastructure Investment Trusts) Regulations, 2014, as amended from time to time read with SEBI Circular, together known as ("lnvlT Regulations"); the Indian Accounting Standards prescribed under Rule 2(1) (a) of Companies (Indian Accounting Standards) Rules, 2015, as amended, and other accounting principles generally accepted in India to the extent not inconsistent with the lnvlT Regulations (refer note 8 below on presentation of "Unit Capital" as "Equity" instead of compound instruments under Ind AS 32 - Financial Instruments: Presentation).

The financial statements have been prepared on an accrual basis except for Statement of Cash flows and under the historical cost convention except for certain financial assets and liabilities (refer accounting policy regarding financial instruments) which have been measured at fair value and on Going Concern Basis.

The financial statements are presented in Indian Rupee ('INR') which is the functional currency of the Trust and all values are rounded to the nearest millions, except when otherwise indicated. Wherever the amount represented '0' (zero) construes value less than Rupees five thousand.

The accounting policies adopted, and methods of computation followed are consistent with those of the previous financial year, except for items disclosed below:

The Ministry of Corporate Affairs has notified Companies (Indian Accounting Standard) Amendment Rules 2023 dated 31 March 2023 to amend the following Ind AS which are effective from 1 April 2023

Ind AS 1, Presentation of Financial Statements
An entity shall disclose material accounting policy information. Accounting policy information is material if, when considered together with other information included in an entity's financial statements, it can reasonably be expected to influence decisions that the primary users of general purpose financial statements make on the basis of those financial statements.

Ind AS 8, Accounting policies, Change in Accounting Estimates and Errors
Definition of 'Change in Accounting Estimates' in account has been replaced by revised definition of 'Accounting Estimate'. As per revised definition, accounting estimates are monetary amounts in the financial statements that are subject to measurement uncertainty. An entity develops an accounting estimate to achieve the objective set out by the accounting policy. Developing accounting estimates involves the use of judgements or assumptions based on the latest available, reliableinformation.
An entity may need to change an accounting estimate if changes occur in the circumstances on which the accounting estimate was based or as a result of new information, new developments or more experience. By its nature, a change in an accounting estimate does not relate to prior periods and is not the correction of an error.

3. Summary of material accounting policies

3.1. Use of estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent liabilities at the date of the financial statements and the results of operations during the reporting period end. Although these estimates are based upon management's best knowledge of current events and actions, actual results could differ from these estimates.

3.2. Current versus non-current classification

The Trust presents assets and liabilities in the balance sheet based on current/ non-current classification.
An asset is treated as current when it is:
- Expected to be realised or intended to be sold or consumed in normal operating cycle
- Held primarily for the purpose of trading
- Expected to be realised within twelve months after the reporting period, or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

All other assets are classified as non-current.

A liability is current when:
- It is expected to be settled in normal operating cycle
- It is held primarily for the purpose of trading
- It is due to be settled within twelve months after the reporting period, or
- There is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period.

All other liabilities are classified as non-current.

Deferred tax assets and liabilities are classified as non-current assets and liabilities respectively.

The operating cycle is the time between the acquisition of assets for processing and their realisation in cash and cash equivalents. The Trust has identified twelve months as its operating cycle.

3.3. Revenue recognition

Revenue is recognised to the extent that it is probable that the economic benefits will flow to the Trust and the revenue can be reliably measured, regardless of when the payment is being made. Revenue is measured at the transaction price of the consideration received or receivable, taking into account contractually defined terms of payment and excluding taxes or duties collected on behalf of the government.

The specific recognition criteria described below must also be met before revenue is recognised:

Interest income
Revenue is recognised on a time proportion basis taking into account the amount outstanding and the rates applicable. For all debt instruments measured either at amortised cost or at fair value through other comprehensive income, interest income is recorded using the effective interest rate (EIR).

Dividends
Revenue is recognised when the Trust's right to receive the payment is established, which is generally when shareholders approve the dividend.

3.4. Taxes

Current income tax
Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted at the reporting date in the countries where the Trust operates and generates taxable income.

Current income tax relating to items recognised outside the Statement of Profit and Loss is recognised outside the Statement of Profit and Loss (either in other comprehensive income or in equity). Current tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity. Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

Deferred tax
Deferred tax is provided using the liability method on temporary differences between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date.

Deferred tax liabilities are recognised for all taxable temporary differences, except:
- When the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and at the time of the transaction, affects neither the accounting profit nor taxable profit or loss.

- In respect of taxable temporary differences associated with investments in subsidiaries, when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets are recognised for all deductible temporary differences, the carry forward of unused tax credits and any unused tax losses. Deferred tax assets are recognised to the extent that

it is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilised, except:

- When the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction affects neither the accounting profit nor taxable profit or loss

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised. Unrecognised deferred tax assets are re-assessed at each reporting date and are recognised to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax relating to items recognised outside statement of profit and loss is recognised outside statement of profit and loss (either in other comprehensive income or in equity).

Deferred tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity. Deferred tax assets and deferred tax liabilities are offset if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

3.5. Goods and Services Tax (GST) paid on acquisition of assets or on incurring expenses

Expenses and assets are recognised net of the amount of goods and service tax paid, except:

When the tax incurred on a purchase of assets or services is not recoverable from the tax authority, in which case, the tax paid is recognised as part of the cost of acquisition of the asset or as part of the expense item, as applicable.

When receivables and payables are stated with the amount of tax included. The net amount of tax recoverable from, or payable to, the tax authority is included as part of receivables or payables in the balance sheet unless the tax is available for Input tax credit.

3.6. Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of the asset. All other borrowing costs are expensed in the period in which they occur. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of Trusts. Borrowing cost also includes exchange differences to the extent regarded as an adjustment to the borrowing costs.

3.7. Provisions

Provisions are recognised when the Trust has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. When the Trust expects some or all of a provision to be reimbursed, for example,

under an insurance contract, the reimbursement is recognised as a separate asset, but only when the reimbursement is virtually certain. The expense relating to a provision is presented in the Statement of Profit and Loss net of any reimbursement.

If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, when appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost.

3.8. Contingent liabilities and contingent assets

A contingent liability is a possible obligation that arises from past events whose existence will be confirmed by the occurrence or non-occurrence of one or more uncertain future events beyond the control of the Trust or a present obligation that is not recognised because it is not probable that an outflow of resources will be required to settle the obligation. A contingent liability also arises in extremely rare cases where there is a liability that cannot be recognised because it cannot be measured reliably. The Trust does not recognise a contingent liability but discloses its existence in the financial statements.
A contingent asset is not recognised unless it becomes virtually certain that an inflow of economic benefits will arise. When an inflow of economic benefits is probable, contingent assets are disclosed in the financial statements.
Contingent liabilities and contingent assets are reviewed at each balance sheet date.

3.9. Financial instrument

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

Financial assets

Initial recognition and measurement
All financial assets are recognised initially at fair value plus, in the case of financial assets not recorded at fair value through Statement of Profit and Loss, directly attributable transaction cost to the acquisition of the financial asset. Purchases or sales of financial assets that require delivery of assets within a time frame established by regulation or convention in the market place (regular way trades) are recognised on the trade date, i.e., the date that the Trust commits to purchase or sell the asset.

Subsequent measurement
For purposes of subsequent measurement, financial assets are classified in following categories;

- at amortised cost
- at fair value through profit or loss (FVTPL)
- at fair value through other comprehensive income (FVTOCI)

Financial Assets at amortised cost
A financial asset is measured at the amortised cost if both the following conditions are met:

a) The asset is held within a business model whose objective is to hold assets for collecting contractual cash flows, and
b) Contractual terms of the asset give rise on specified dates to cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

This category is the most relevant to the Trust. All the Loans and other receivables under financial assets (except Investments) are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market.

After initial measurement such financial assets are subsequently measured at amortised cost using the effective interest rate (EIR) method. Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The losses arising from impairment are recognised in the Statement of Profit and Loss.

Financial Assets at Fair Value through Statement of Profit and Loss/Other comprehensive income

All investments in scope of Ind AS 109 are measured at fair value. The Trust has investment in Debt oriented mutual Trust which are held for trading, are classified as at FVTPL. The Trust makes such election on an instrument by instrument basis. The classification is made on initial recognition and is irrevocable. The gain/ loss on sale of investments are recognised in the Statement of Profit and Loss.
Instruments included within the FVTPL category are measured at fair value with all changes recognized in the Statement of Profit and Loss.

Derecognition

A financial asset is primarily derecognised (i.e. removed from the Trust's balance sheet) when:
The rights to receive cash flows from the asset have expired, or
The Trust has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Trust has transferred substantially all the risks and rewards of the asset, or (b) the Trust has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Trust has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if and to what extent it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all of the risks and rewards of the asset, nor transferred control of the asset, the Trust continues to recognise the transferred asset to the extent of the Trust's continuing involvement. In that case, the Trust also recognises an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Trust has retained.

3.10. Impairment of assets

Impairment of financial assets

Expected credit losses are recognized for all financial assets subsequent to initial recognition other than financial assets in FVTPL category.

For financial assets other than trade receivables, as per Ind AS 109, the Trust recognizes 12 month expected credit losses for all originated or acquired financial assets if at the reporting date the credit risk of the financial asset has not increased significantly since its initial recognition. The expected credit losses are measured as lifetime expected credit losses if the credit risk on financial assets increases significantly since its initial recognition.

The impairment losses and reversals are recognized in Statement of Profit and Loss.

Impairment of non-financial assets

The Trust assesses, at each reporting date, whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Trust estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs of disposal and its value in use. Recoverable amount is determined for an individual asset unless the asset does not generate cash inflows that are largely independent of those from other assets or Trust's assets. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

Financial liabilities

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss, loans and borrowings, or payables, as appropriate.

All financial liabilities are recognised initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.

The Trust's financial liabilities include trade and other payables, loans and borrowings.

Subsequent measurement
The measurement of financial liabilities depends on their classification, as described below:

Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through profit or loss. Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Trust that are not designated as hedging instruments in hedge relationships as defined by Ind AS 109.
Gains or losses on liabilities held for trading are recognised in the statement of profit and loss.

Loans and borrowings
This is the category most relevant to the Trust. After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortised cost using the EIR method. Gains and losses are recognised in profit or loss when the liabilities are de-recognised as well as through the EIR amortisation process.
Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included as finance costs in the statement of profit and loss.

De-recognition
A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the de-recognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognised in the statement of profit and loss.

Offsetting of financial instruments

Financial assets and financial liabilities are offset and the net amount is reported in the standalone balance sheet if there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, to realise the assets and settle the liabilities simultaneously.

3.11 Investment in subsidiaries

Investments (equity instruments as well as subordinate debt) in subsidiaries are carried at cost less accumulated impairment losses, if any. Where an indication of impairment exists, the carrying amount of the investment is assessed and written down immediately to its recoverable amount. On disposal of investments in subsidiaries, the difference between net disposal proceeds and carrying amounts are recognised in the Statement of Profit and Loss.

3.12 Foreign currencies

The Trust's financial statements are presented in INR, which is also the Trust's functional currency. The Trust does not have any foreign operation and has assessed the functional currency to be INR.

Transactions and balances
Transactions in foreign currencies are initially recorded by the Trust at their respective functional currency spot rates at the date the transaction first qualifies for recognition. Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency spot rates of exchange at the reporting date.

Differences arising on settlement or translation of monetary items are recognised in the statement of profit or loss.

Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates at the dates of the initial transactions.

3.13 Fair value measurement

The Trust measures financial instruments, such as, derivatives at fair value at each balance sheet date.
Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:
► In the principal market for the asset or liability, or
► In the absence of a principal market, in the most advantageous market for the asset or liability.
The principal or the most advantageous market must be accessible by the Trust.

The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The Trust uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

► Level 1 — Quoted (unadjusted) market prices in active markets for identical assets or liabilities
► Level 2 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable
► Level 3 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable

For assets and liabilities that are recognised in the financial statements on a recurring basis, the Trust determines whether transfers have occurred between levels in the hierarchy by re-assessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

The Trust's Management determines the policies and procedures for both recurring fair value measurement, such as derivative instruments and unquoted financial assets measured at fair value, and for non-recurring measurement, such as assets held for distribution in discontinued operations.

At each reporting date, the Management analyses the movements in the values of assets and liabilities which are required to be remeasured or re-assessed as per the Trust's accounting policies. For this analysis, the Management verifies the major inputs applied in the latest valuation by agreeing the information in the valuation computation to contracts and other relevant documents.

The management also compares the change in the fair value of each asset and liability with relevant external sources to determine whether the change is reasonable.

On an annual basis, the Management of Investment Manager presents the valuation results to the Audit Committee and the Trust's independent auditors. This includes a discussion of the major assumptions used in the valuations.

For the purpose of fair value disclosures, the Trust has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy as explained above.

This note summarises accounting policy for fair value. Other fair value related disclosures are given in the relevant notes.
- Disclosures for Significant accounting judgement, estimates and assumptions (note 28)
- Financial instruments (including those carried at amortised cost) (note 22 and 23)
- Quantitative disclosure of fair value measurement hierarchy (note 22 and 23)

3.14 Distribution to unit holders

The Trust recognises a liability to make cash distributions to unit holders when the distribution is authorised and a legal obligation has been created. As per the InvIT Regulations, a distribution is authorised when it is approved by the Board of Directors of the Investment Manager. A corresponding amount is recognised directly in equity.

3.14 Cash and cash equivalents

Cash and cash equivalents in the balance sheet comprise cash at banks and on hand and short-term deposits with an original maturity of three months or less, which are subject to an insignificant risk of changes in value.
For the purpose of the statement of cash flows, cash and cash equivalents consist of cash and short-term deposits, as defined above, net of outstanding bank overdrafts as they are considered an integral part of the Trust's cash management.

3.15 Earnings Per Unit (EPU)

Basic earnings per unit are calculated by dividing the net profit for the year attributable to unit holders by the weighted average number of units outstanding during the year.

For the purpose of calculating diluted earnings per unit, the weighted average number of units outstanding during the period are adjusted for the effects of all dilutive potential units.

3.16 New pronouncements issued but not effective

Ministry of Corporate Affairs ("MCA") notifies new standards or amendments to the existing standards under Companies (Indian Accounting Standards) Rules as issued from time to time. For the year ended March 31, 2024, MCA has not notified any new standards or amendments to the existing standards applicable to the Trust.

(Rs. in million)

	As at March 31, 2024	As at March 31, 2023
Note 4 : Financial assets (Non-current)		
4.1 Investments		
Investments at cost		
A. Investments in equity instruments of subsidiaries (unquoted)		
436,500,000 equity shares of AE Tollway Limited	4,365.00	4,365.00
203,500,000 equity shares of CG Tollway Limited	2,035.00	2,035.00
371,500,000 equity shares of IRB Hapur Moradabad Tollway Limited	3,715.00	3,715.00
174,194,303 equity shares of IRB Westcoast Tollway Limited	1,741.94	1,741.94
155,500,000 equity shares of Kishangarh Gulabpura Tollway Limited	1,555.00	1,555.00
328,000,000 equity shares of Kaithal Tollway Limited	3,280.00	3,280.00
98,250,000 equity shares of Solapur Yedeshi Tollway Limited	982.50	982.50
116,800,000 equity shares of Udaipur Tollway Limited	1,168.00	1,168.00
215,757,001 equity shares of Yedeshi Aurangabad Tollway Limited	2,157.57	2,157.57
121,200,000 equity shares of Palsit Dankuni Tollway Private Limited	1,212.00	1,212.00
715,450,000 equity shares of IRB Golconda Expressway Private Limited	7,154.50	-
116,200,000 equity shares of Samakhiyali Tollway Private Limited	1,162.00	-
420,580,000 equity shares of IRB Lalitpur Tollway Private Limited	4,205.80	-
39,347,500 equity shares of IRB Kota Tollway Private Limited	393.48	-
103,285,000 equity shares of IRB Gwalior Tollway Private Limited	1,032.85	-
Investments in Equity Instuments of subsidiaries (unquoted) (A)	**36,160.64**	**22,212.01**
	-	-
B. Investments in sub debt of subsidiaries		
AE Tollway Limited	-	10,265.88
CG Tollway Limited	2,896.26	2,727.80
IRB Hapur Moradabad Tollway Limited	-	9,798.52
IRB Westcoast Tollway Limited	-	12,203.92
Kishangarh Gulabpura Tollway Limited	-	2,495.38
Kaithal Tollway Private Limited	-	4,426.04
Solapur Yedeshi Tollway Limited	-	4,423.70
Udaipur Tollway Limited	8,893.41	8,338.40
Yedeshi Aurangabad Tollway Limited	-	16,319.79
Palsit Dankuni Tollway Private Limited	3,637.50	1,213.00
Samakhiyali Tollway Private Limited	1,268.00	-
IRB Lalitpur Tollway Private Limited	12,617.40	-
IRB Kota Tollway Private Limited	1,180.43	-
IRB Gwalior Tollway Private Limited	3,098.55	-
Investments in sub debt of subsidiaries (B)	**33,591.55**	**72,212.43**
Total non-current investments (A + B)	**69,752.19**	**94,424.44**
Aggregate amount of unquoted investments	**69,752.19**	**94,424.44**
4.2 Loans		
Secured, considered good, unless otherwise stated		
Loans to Related Parties (interest bearing) (refer note 21)	45,754.62	-
Less: Current maturities of loan to related parties	(1,567.20)	-
Total (A)	**44,187.42**	**-**

(Rs. in million)

	As at March 31, 2024	As at March 31, 2023
4.2 Loans (continued)		
Unsecured, considered good, unless otherwise stated		
Loans to Related Parties (interest bearing) (refer note 21)	32,819.71	30,000.00
Less: Current maturities of loan to related parties	(413.89)	-
Loans to Related Parties (interest free) (refer note 21)	400.53	351.69
Subordinate debt (interest bearing)	77,254.30	
Total (B)	**110,060.65**	**30,351.69**
Total (A+B)	**154,248.07**	**30,351.69**
4.3 Other Financial Assets		
Unsecured, considered good, unless otherwise stated		
Receivable from Related Parties		-
- Guarantee Margin receivable (refer note 21)	30.95	
Earmarked balance with bank (DSRA)		
Bank deposits with more than 12 months maturity	582.20	
	613.15	**-**
Note 5 : Financial assets (current)		
5.1 Investments		
Investments at fair value through Profit & Loss		
Investments in mutual fund (quoted)		
Investments in Mutual Funds (quoted)	86.84	20.08
(ABSL Liquid Fund Growth Direct - March 31,2024 - 2,22,851.68 units & NAV as on March 31, 2024 - Rs 389.68)		
	86.84	**20.08**
5.2 Cash and cash equivalent		
Balances with banks:		
- In current accounts	141.83	6.56
- In escrow accounts	8.56	-
	150.39	**6.56**
5.3 Other bank balances		
Earmarked balance with bank		
- Maturity more than 3 but less than 12 months	1,950.10	-
Balances with bank held as margin money*		
- Maturity more than 3 but less than 12 months	91.00	-
	2,041.10	**-**

*** The Balance has been held as Margin money with the bank for guarantee given for SYTL & YATL**

5.4 Loans		
Secured, considered good, unless otherwise stated		
Current maturities of long term loans (interest bearing)	1,567.20	-
Total (A)	**1,567.20**	**-**
Unsecured, considered good, unless otherwise stated		
Loans to Related Parties (interest bearing) (refer note 21)	3,025.94	-
Loans to Related Parties (interest free) (refer note 21)	3,444.44	5,421.29
Current maturities of Unsecured long term loan to related parties	413.89	-
Total (B)	**6,884.27**	**5,421.29**
Total (A+B)	**8,451.47**	**5,421.29**

(Rs. in million)

	As at March 31, 2024	As at March 31, 2023
5.5 Other financial assets		
Unsecured, considered good, unless otherwise stated		
Interest accrued on fixed deposits	19.69	-
Interest receivable from related parties (Refer note 21)	20,696.56	7,681.04
Other receivables		
- related parties (Refer note 21)	291.48	284.13
- other parties	0.36	-
	21,008.09	**7,965.17**
Note 6 : Current tax assets (net)		
Advance income tax (net of provision : Rs. Nil, March 31, 2023 : Rs. Nil)	9.52	-
	9.52	**-**
Note 7 : Other current assets		
Duties and taxes receivable	-	3.30
Prepaid expenses	-	1.18
	-	**4.48**

IRB Infrastructure Trust
Notes to Standalone Financial Statements as at March 31, 2024
Note 8 : Unit Capital

(Rs. in million)

	As at March 31, 2024	As at March 31, 2023
I. Unit capital*		
a. Issued, subscribed and fully paid up Unit Capital		
Unit capital issued, subscribed and fully paid up		
At the beginning the year	87,929.33	85,504.33
Issued during the year	51,146.50	2,425.00
Less : Capital Reduction during the year (refer note 30)	(3,984.60)	-
At the end of the year	**135,091.23**	**87,929.33**

* Under the provisions of the InvIT Regulations, Trust is required to distribute to Unitholders not less than 90% of the net distributable cash flows of the Trust for each financial year. Accordingly, a portion of the Unit Capital contains a contractual obligation of the Trust to pay to its Unitholdcrs cash distributions. Hence, the Unit Capital is a compound financial instrument which contains equity ond liability components in accordance with Ind AS 32 - Financial Instruments. However, in accordance with Chapter 3 and Chapter 4 of the SEBI circular, the Unit capital have been presented as "Equity" in order to comply with the requirements of Section H of Chapter 3 lo the SEBI circular, dealing with the minimum presentation and disclosure requirements for key financial statements. Consistent with Unit Cupital being classified as equity, the distributions to Unitholders is also presented in Statement of Changes in Unitholders' Equity when the distributions are approved by the Board of Directors of Investment Manager.

Units are classified as equity. Incremental costs attributable to the issue of units are directly recorded in equity, net of tax

II. Reconciliation of the number of units outstanding and the amount of unit capital:

	As at March 31, 2024		As at March 31, 2023	
	No. of units	Amount in Million	No. of units	Amount in Million
At the beginning of the year	879,293,265	87,929.33	855,043,265	85,504.33
Issued during the period/year*	234,400,000	51,146.50	24,250,000	2,425.00
Less : Capital Reduction during the period/year	-	(3,984.60)	-	-
At the end of the period/year	**1,113,693,265**	**135,091.23**	**879,293,265**	**87,929.33**

*a) The Trust offered rights issue of up to 9,20,00,000 units of the Trust (the 'units'), for cash at a price of Rs. 244.86 per unit (the 'issue price'), aggregating to Rs. 22,527.00 million to the eligible unitholders (as defined in the Letter of Offer) on a rights basis to Sponsor and GIC affiliates in the ratio of 51:49 held by them on the record date, being on March 12, 2024 (the 'Issue') in accordance with the InvIT Regulations. The Board of Directors of MMK Toll Road Private Limited ('Investment Manager'), considered and approved allotment of 9,20,00,000 rights units to the eligible unitholders of IRB Infrastructure Trust on March 21, 2024.
b) The Trust offered rights issue of up to 14,24,00,000 units of the Trust (the 'units'), for cash at a price of Rs. 200.98 per unit (the 'issue price'), aggregating to Rs. 28,619.50 million to the eligible unitholders (as defined in the Letter of Offer) on a rights basis to Sponsor and GIC affiliates in the ratio of 51:49 held by them on the record date, being on July 28, 2023 (the 'Issue') in accordance with the InvIT Regulations. The Board of Directors of MMK Toll Road Private Limited ('Investment Manager'), considered and approved allotment of 14,24,00,000 rights units to the eligible unitholders of IRB Infrastructure Trust on August 10, 2023.
c) The Trust offered rights issue of up to 2,44,29,805 units of the Trust (the 'units'), for cash at a price of Rs. 100 per unit (the 'issue price'), aggregating to Rs. 2,442.98 million to the eligible unitholders (as defined in the Letter of Offer) on a rights basis to Sponsor and GIC affiliates in the ratio of 51:49 held by them on the record date, being on April 8, 2022 (the 'Issue') in accordance with the InvIT Regulations. The Board of Directors of MMK Toll Road Private Limited ('Investment Manager'), considered and approved allotment of 2,44,29,805 rights units to the eligible unitholders of IRB Infrastructure Trust on April 13, 2022.

Note 8 : Unit Capital

(Rs. in million)

	As at March 31, 2024	As at March 31, 2023

III. Details of Promoter

	As at March 31, 2024		As at March 31, 2023	
	No. of units	**%**	**No. of units**	**%**
IRB Infrastructure Developers Limited	568,239,840	51%	448,439,840	51%
Anahera Investments Pte Ltd	278,623,181	25%	219,823,181	25%
Bricklayers Investments Pte Ltd	66,557,561	6%	52,757,561	6%
Chiswick Investments Pte Ltd	66,557,561	6%	52,757,561	6%
Stretford End Investments Pte Ltd	66,757,561	6%	52,757,561	6%
Dangenham Investments Pte Ltd	66,957,561	6%	52,757,561	6%
Total	**1,113,693,265**	**100%**	**879,293,265**	**100%**

Note 9 Other Equity

(Rs. in million)

	As at March 31, 2024	As at March 31, 2023
Retained earnings		
At the beginning of the year	9,526.42	5,992.74
Profit/(loss) for the year	9,043.83	3,549.01
Unit issue expenses	(68.61)	(15.33)
Interest Distribution (refer note 30)	(449.55)	-
Total Other Equity	**18,052.09**	**9,526.42**

(Rs. in million)

	As at March 31, 2024	As at March 31, 2023
Note 10 : Non-current financial liabilities		
Note 10.1 : Borrowings		
Non Current Borrowing		
Term loans		
Indian rupee loan from banks (Secured)	34,421.27	-
Less: Current maturities	(349.00)	-
Total (a)	**34,072.27**	**-**
Indian rupee loan from financial institutions (Secured)	28,609.39	-
Less: Current maturities	(290.00)	-
Total (b)	**28,319.39**	**-**
Less : Unamortised transaction cost (c)	(689.51)	-
Total (c)	**(689.51)**	**-**
Total Non Current Borrowing (d=a+b+c)	**61,702.15**	**-**
10.2 Other financial liabilities		
Other Payable		
- related party(Refer note 21)	40,760.96	35,778.03
	40,760.96	**35,778.03**
Note 11 : Current financial liabilities		
Note 11.1 : Current Borrowing		
Current maturities of long-term borrowings		
- Indian rupee loan from banks	349.00	-
- Indian rupee loan from financial institutions	290.00	-
Loan from related parties		
- Interest free (Refer note 21)	-	4,872.91
Interest accrued but not due on borrowings	8.39	-
Total Current Borrowings (e)	**647.39**	**4,872.91**
Total Borrowing (d+e)	**62,349.54**	**4,872.91**

Rate of Interest

Rate of interest on the Indian Rupee loan from banks and financial institutions varies from 8.60% to 8.70% p.a. (March 31, 2023: Nil)

Nature of security

i) Secured by first charge on the movable/immovable asset by way of mortgage/hypothecation; first charge on all intangible assets, assignment of all receivables; book debts, loans and advanves extended by the Borrower to SPVs and all rights and interest in project, both present and future, excluding the Project Assets of respective companies;

ii) Secured by first charge over all the equity shares, Preference shares, Debentures representing 100% of such securities.

iii) Secured by first charge on the Escrow Account, Debt Service Reserve Account and any other reserves and other bank accounts of the respective Companies.

iv) Unconditional and irrevocable corporate guarantee by each of the RG SPVs , in a form and manner satisfactory to the Finance Parties (the " Corporate Guarantee")

v) Pledged of Securities of obligators created pursuant to the terms of loan Agreement held as common security for the benefit of Rupee Lenders

Repayment terms

The Indian rupee loans from Banks and Financial Institutions are repayable in structured monthly installments such that the total tenor does not exceed 16 years and repayable as per the repayment schedule specified in common loan agreement with the Lenders.

(Rs. in million)

	As at March 31, 2024	As at March 31, 2023
11.2 Trade Payables		
a) total outstanding dues of micro enterprises and small enterprises	0.27	0.01
b) Total outstanding dues of creditors other than micro and small enterprises		
- related parties (Refer note 21)	95.19	78.54
- others	6.86	2.80
Total	**102.32**	**81.35**
Note 12 : Other current liabilities		
Statutory dues payable (including TDS & GST)	4.68	5.67
Total	**4.68**	**5.67**

(Rs. in million)

	For the year ended March 31, 2024	For the year ended March 31, 2023
Note 13 : Other income		
Interest income on		
-bank deposits	97.04	-
-loans to related parties (Refer Note 21)	16,461.72	4,221.77
Profit on sale of investment	101.01	0.92
Interest unwinding- loan (Refer Note 21)	48.84	-
Fair value gain on Mutual Fund	1.44	0.18
	16,710.05	**4,222.87**
Note 14 : Finance costs		
Interest expense on		
- Term loan from bank and financial institutions	2,463.56	-
- interest unwinding on loan (Refer Note 21)	48.84	-
Other borrowing costs	-	-
- Amortisation of transaction cost	19.09	-
- Other finance costs	0.60	-
	2,532.09	**-**
Note 15 : Other expenses		
Rates and taxes	1.61	0.60
Legal and professional fees	26.89	54.19
Bank charges	4.13	0.03
Miscellaneous expenses	0.62	0.36
	33.25	**55.18**
Auditors' remuneration		
As auditors:		
- Statutory audit	4.09	0.29
- Limited review	2.20	0.42
- Reimbursement of expenses	0.11	0.09
In other capacity:		
- Other services (certification fees)	0.01	0.82
	6.41	**1.63**

Note: The above values are inclusive of Goods & Services Tax (GST)

Note 16 : Earnings per unit (EPU)

The following reflects the income and unit data used in the basic and diluted EPU computations:

(Rs. in million)

	For the year ended March 31, 2024	For the year ended March 31, 2023
Profit attributable to unit holders of the Trust for basic earnings	9,043.83	3,549.01
Weighted average number of units	**973,489,986**	**877,964,498**
Earnings per unit (in Rs.)		
Basic earning per unit (Amount in Rs.)	9.29	4.04
Diluted earning per unit (Amount in Rs.)	9.29	4.04

Note 17 : Capital and other commitments

There are no capital and other commitments as at March 31, 2024. (As at March 31, 2023. Nil)

Note 18 :Contingent liabilities

The Trust has provided Corporate guarantee for the subsidiary companies i.e. SYTL and YATL in respect of the NCDs issued during the FY 2022-23.

Note 19 : Details of dues to micro and small enterprises as per MSMED Act, 2006

The following details regarding Micro and small Enterprises has been determined to the extent such parties has been identified on the basis of information available with the Trust.

(Rs. in million)

Particulars	As at March 31, 2024	As at March 31, 2023
Principal amount remaining unpaid to any supplier as at the period end	0.27	0.01
Interest due thereon	-	-
Amount of interest paid by the company in the terms of section 16 of the MSMED, along with the amount of the payment made to the supplier beyond the appointed date during the accounting period	-	-
Amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed day during the period) but without adding the interest specified under the MSMED, 2006	-	-
Amount of interest accrued and remaining unpaid at the end of the accounting period	-	-
The amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues as above are actually paid to the small enterprise for the purpose of disallowance as a deductible expenditure under the MSMED Act, 2006	-	-

a) MSME ageing schedule as at

Particulars	As at March 31, 2024	As at March 31, 2023
MSME Undisputed Dues		
Unbilled dues	0.27	-
Less than 1 year	-	0.01
1-2 Years	-	-
2-3 Years	-	-
More than 3 years	-	-
Total	**0.27**	**0.01**

b) Ageing of creditors other than micro enterprises and small enterprises as at

Particulars	As at March 31, 2024	As at March 31, 2023
Undisputed Dues		
Unbilled dues	6.68	0.27
Less than 1 year	16.83	50.29
1-2 Years	47.76	30.78
2-3 Years	30.78	-
More than 3 years	-	-
Total	**102.07**	**81.34**

Note 20 : Operating segment

The Trust comprise of owning and investing in infrastructure SPVs to generate cash flow for the distribution to the beneficiaries. Based on the guiding principles given in Ind AS 108 'Operating Segment', this activity falls within a single operating segment and accordingly the disclosures of the Ind AS 108 have not separately been provided.

IRB Infrastructure Trust
Notes to Standalone Financial Statements as at March 31, 2024

Note 21 : Related party disclosures

List of Related parties of the Trust

1	Parties to the InvIT	Sponsor Group and Project Manager (as per 'Table A' below)*
		MMK Toll Road Private Limited (Investment Manager)
		IDBI Trusteeship Services Limited (Trustee of the IRB Infrastructure Trust)
2	Associates, Promoters, Directors and Partners of the persons mentioned in clause 1	As per 'Table B' below#

*** Table A - Sponsor Group and Project Manager**

(i) The sponsor(s)	**(ii) Entities or person(s) which are controlled by such sponsor**	**(iii) Entities or person(s) who control such body corporate**	**(iv) Entities or person(s) which are controlled by entities or person(s) specified in clause (iii)**
IRB Infrastructure Developers Limited	Modern Road Makers Private Limited (MRMPL)	Mr. Virendra D. Mhaiskar, Promoter of Sponsor	VDM Ventures Private Limited
	IRB Ahmedabad Vadodara Super Express Tollway Private Limited (IRBAV)	IRB Holding Private Limited	Duex Farming Films Private Limited
	Mhaiskar Infrastructure Private Limited (MIPL)	Ms. Deepali V. Mhaiskar, Promoter of Sponsor	
	Thane Ghodbunder Toll Road Private Limited (TGTRPL)	Virendra D. Mhaiskar HUF (Karta Mr. Virendra Mhaiskar), promoter of Sponsor	
	IRB Kolhapur Integrated Road Development Company Private Limited (IRBK)		
	ATR Infrastructure Private Limited (ATRFL)		
	Ideal Road Builders Private Limited (IRBPL)		
	Aryan Toll Road Private Limited (ATRPL)		
	GE1 Expressway Private Limited (Formerly known as IRB PP Project Private Limited)		
	IRB PS Highway Private Limited (IRBPS)		
	IRB Sindhudurg Airport Private Limited (IRBSA)		
	IRB Infrastructure Private Limited (IRBFL)		
	Aryan Infrastructure Investments Private Limited (AIIPL)		
	Aryan Hospitality Private Limited (AHPL)		
	IRB MP Expressway Private Limited		
	IRB Goa Tollway Private Limited (IRB Goa)		
	MRM Mining Private Limited (Subsidiary of MRMPL)		
	VM7 Expressway Private Limited		
	Pathankot Mandi Highway Private Limited		
	Chittoor Thachur Highway Private Limited		
	Samakhiyali Tollway Private Limited (Subsidiary upto 27.12.2023)		
	Meerut Budaun Expressway Limited - JV		
	MMK Toll Road Private Limited (MMK) - JV		
	IRB Infrastructure Trust - JV		
	Project SPV's of IRB Infrastructure Trust as mentioned below:		
	1. IRB Westcoast Tollway Limited (IRBWTL)		
	2. Solapur Yedeshi Tollway Limited (SYTL)		
	3. Yedeshi Aurangabad Tollway Limited (YATL)		
	4. Kaithal Tollway Limited (KTL)		
	5. AE Tollway Limited (AETL)		
	6. Udaipur Tollway Limited (UTL)		
	7. CG Tollway Limited (CGTL)		
	8. Kishangarh Gulabpura Tollway Limited (KGTL)		
	9. IRB Hapur Muradabad Tollway Limited (IRBHMTL)		
	10. Palsit Dankuni Tollway Private Limited (PDTPL)		
	11. IRB Golconda Expressway Private Limited (IRBGEPL)		
	12. IRB Lalitpur Tollway Private Limited w.e.f 10.11.2023		
	13. Samakhiyali Tollway Private Limited w.e.f. 28.12.2023		
	14. IRB Kota Tollway Private Limited w.e.f. 01.01.2024		
	15. IRB Gwalior Private Limited w.e.f. 01.01.2024		

Table B - List of promoters, directors and partners of the persons mentioned in clause 1

Parties to the Trust	Promoters	Directors
(i) IRB Infrastructure Developers Limited (Sponsor and Project Manager)	1. Mr. Virendra D. Mhaiskar 2. Mrs. Deepali V. Mhaiskar 3. Mr. Virendra D. Mhaiskar (HUF)	1. Mr. Virendra D. Mhaiskar, Chairman and Managing Director 2. Mrs. Deepali V. Mhaiskar, Whole Time Director 3. Mr. Jose Tamariz Martel Goncer 4. Mr. Ravindra Dhariwal 5. Mr. Chandrashekhar S. Kaptan- Independent director 6. Mr. Sunil H. Talati -Independent director 7. Mr. Sandeep J. Shah - Independent director 8. Ms. Priti Savla - Independent director
(ii) Entities or person(s) which are controlled by such sponsor	IRB Infrastructure Developers Limited (IRBIDL)	1. Mr. Virendra D. Mhaiskar 2. Mrs. Deepali V. Mhaiskar 3. Mr. Dhananjay K. Joshi 4. Mrs. Arati Taskar 5. Mr. Sudhir Rao Hoshing 6. Mr. Rajpaul Sharma 7. Mr. Amitabh Murarka 8. Mr. Aryan V. Mhaiskar 9. Mrs. Kshama Vengsarkar 10. Mr. Nikhil Maniar 11. Mr. Tushar Kawedia 12. Mr. Rajinder Pal Singh 13. Mr. Vinod Kumar Menon 12. Mr. Sunil Tandon -Independent Director 14. Mr. Nikesh Jain -Independent Director 15. Mr. Rushabh Gandhi 16. Mrs. Anusha Date-Independent Director 17. Mr. Kulumani Gopalratnam Krishnamurthy-Independent Director 18. Mrs. Ranjana Paranjape -Independent Director 19. Mr. Kunnasagaran Chinniah 20. Mr. Sandeep Shah -Independent Director 21. Ms. Shilpa Todankar 22. Mr. Abhay Phatak 23. Mr. Darshan Sangurdekar 24. Mr. Omprakash Singh 25. Mr. Chandrashekhar Kaptan 26. Mr. Boon Chin Hau 27. Mr. Nagendraa Parakh 28. Mr. Amyn Jassani
(iii) Entities or person(s) who control such body corporate	1. Mr. Virendra D. Mhaiskar 2. Mrs. Deepali V. Mhaiskar 3. Mr. Virendra D. Mhaiskar (HUF)	1. Mr. Virendra D. Mhaiskar 2. Mrs. Deepali V. Mhaiskar
(iv) Entities or person(s) which are controlled by entities	1. Mr. Virendra D. Mhaiskar 2. Mrs. Deepali V. Mhaiskar 3. Mr. Aryan V. Mhaiskar	1. Mr. Virendra D. Mhaiskar 2. Mrs. Deepali V. Mhaiskar 3. Mr. Aryan V. Mhaiskar
MMK Toll Road Private Limited (Investment Manager)	IRB Infrastructure Developers Limited (IRBIDL)	Mr. Virendra D. Mhaiskar Mr. Kunnasagaran Chinniah Mr. Boon Chin Hau Mr. Aryan Mhaiskar Mr. K G Krishnamurthy -Independent director Mrs.Ranjana Paranjape - Independent director Mr. Nagendraa Parakh- Independent director Mr. Amyn Jassani - Independent director
IDBI Trusteeship Services Limited (Trustee of IRB Infrastructure Trust)	IDBI Bank Limited LIC Corporation Limited General Insurace Corporation	Mr. Jayakumar Subramonia Pillai Mr. Pradeep Kumar Jain Mrs. Jayashree Vijay Ranade Mr. Pradeep Kumar Malhotra Ms. Baljinder Kaur Mandal

IRB Infrastructure Trust
Notes to Standalone Financial Statements as at March 31, 2024

II) Related party transaction during the peiod

(Rs. in million)

Sr. No.	Particulars	Relation	Year ended March 31, 2024	Year ended March 31, 2023
1	**Equity Investment**		**13,948.63**	**1,212.00**
	IRB Golconda Expressway Private Limted	Subsidiary	7,154.50	-
	IRB Lalitpur Tollway Private Limited	Subsidiary	4,205.80	-
	Samakhiyali Tollway Private Limited	Subsidiary	1,162.00	-
	IRB Kota Tollway Private Limited	Subsidiary	393.48	-
	IRB Gwalior Tollway Private Limited	Subsidiary	1,032.85	-
	Palshit Dankuni Tollway Private Limited	Subsidiary	-	1,212.00
2	**Subordinated Debt**		**45,187.19**	**2,282.64**
	AE Tollway Limited	Subsidiary	159.52	-
	CG Tollway Limited	Subsidiary	168.46	-
	IRB Hapur Muradabad Tollway Limited	Subsidiary	454.18	383.76
	Kaithal Tollway Limited	Subsidiary	46.82	-
	Kishangarh Gulabpura Tollway Limited	Subsidiary	164.05	685.88
	Udaipur Tollway Limited	Subsidiary	555.01	-
	Solapur Yedeshi Tollway Limited	Subsidiary	299.47	-
	Yedeshi Aurangabad Tollway Limited	Subsidiary	828.35	-
	IRB Westcoast Tollway Limited	Subsidiary	457.45	-
	IRB Golconda Expressway Private Limted	Subsidiary	21,465.00	-
	Palshit Dankuni Tollway Private Limited	Subsidiary	2,424.50	1,213.00
	Samakhiyali Tollway Private Limited	Subsidiary	1,268.00	-
	IRB Lalitpur Tollway Private Limited	Subsidiary	12,617.40	-
	IRB Kota Tollway Private Limited	Subsidiary	1,180.43	-
	IRB Gwalior Tollway Private Limited	Subsidiary	3,098.55	-
3	**Subordinated Debt- repaid**		**6,553.77**	-
	IRB Hapur Muradabad Tollway Limited	Subsidiary	540.00	-
	IRB Westcoast Tollway Limited	Subsidiary	4,872.57	-
	Kishangarh Gulabpura Tollway Limited	Subsidiary	260.00	-
	Solapur Yedeshi Tollway Limited	Subsidiary	513.50	-
	Yedeshi Aurangabad Tollway Limited	Subsidiary	367.70	-
4	**Long term loan given (Unsecured)**		**13,627.54**	**-**
	Kishangarh Gulabpura Tollway Limited	Subsidiary	198.88	-
	IRB Hapur Moradabad Tollway Limited	Subsidiary	32.00	-
	IRB Westcoast Tollway Limited	Subsidiary	2,662.56	-
	Kaithal Tollway Limited	Subsidiary	5,118.40	-
	AE Tollway Limited	Subsidiary	5,615.70	-
5	**Long term loan repaid (Unsecured)**		**12,096.53**	-
	AE Tollway Limited	Subsidiary	5,202.81	-
	IRB Westcoast Tollway Limited	Subsidiary	2,217.01	-
	Kishangarh Gulabpura Tollway Limited	Subsidiary	2.05	-
	IRB Hapur Moradabad Tollway Limited	Subsidiary	0.41	-
	Kaithal Tollway Limited	Subsidiary	4,674.25	-

IRB Infrastructure Trust
Notes to Standalone Financial Statements as at March 31, 2024

II) Related party transaction during the peiod

(Rs. in million)

Sr. No.	Particulars	Relation	Year ended March 31, 2024	Year ended March 31, 2023
6	**Short Term Loan given**		**3,479.84**	**2,643.20**
	AE Tollway Limited	Subsidiary	265.00	-
	IRB Hapur Muradabad Tollway Limited	Subsidiary	-	46.50
	IRB Westcoast Tollway Limited	Subsidiary	335.72	1,231.10
	Kaithal Tollway Limited	Subsidiary	272.84	-
	Solapur Yedeshi Tollway Limited	Subsidiary	24.00	-
	Udaipur Tollway Limited	Subsidiary	940.04	1,120.90
	CG Tollway Limited	Subsidiary	610.59	242.20
	Kishangarh Gulabpura Tollway Limited	Subsidiary	160.00	-
	IRB Lalitpur Tollway Private Limited	Subsidiary	246.60	-
	IRB Kota Tollway Private Limited	Subsidiary	36.04	-
	IRB Gwalior Tollway Private Limited	Subsidiary	69.21	-
	Yedeshi Aurangabad Tollway Limited	Subsidiary	519.80	2.50
7	**Short Term Loan repaid**		**1,886.95**	**525.10**
	IRB Hapur Muradabad Tollway Limited	Subsidiary	-	-
	AE Tollway Limited	Subsidiary	424.30	-
	IRB Westcoast Tollway Limited	Subsidiary	322.00	-
	Kaithal Tollway Limited	Subsidiary	145.00	525.10
	Solapur Yedeshi Tollway Limited	Subsidiary	24.00	-
	Yedeshi Aurangabad Tollway Limited	Subsidiary	519.80	-
	IRB Lalitpur Tollway Private Limited	Subsidiary	246.60	-
	IRB Gwalior Tollway Private Limited	Subsidiary	69.21	-
	IRB Kota Tollway Private Limited	Subsidiary	36.04	-
	Kishangarh Gulabpura Tollway Limited	Subsidiary	100.00	-
8	**Unit Capital Issued**		**26,139.68**	**1,236.75**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	26,139.68	1,236.75
9	**Interest income**		**16,461.72**	**4,221.77**
	Solapur Yedeshi Tollway Limited	Subsidiary	1,192	560.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	1,522	581.77
	Kaithal Tollway Limited	Subsidiary	2,228	1,186.02
	IRB Westcoast Tollway Limited	Subsidiary	3,171	560.00
	AE Tollway Limited	Subsidiary	3,266	1,333.98
	Kishangarh Gulabpura Tollway Limited	Subsidiary	942	-
	IRB Hapur Muradabad Tollway Limited	Subsidiary	2,257	-
	IRB Golconda Expressway Private Limited	Subsidiary	1,883	-
10	**Receipt of Interest Income**		**3,836.20**	-
	Solapur Yedeshi Tollway Limited	Subsidiary	390.00	-
	Yedeshi Aurangabad Tollway Limited	Subsidiary	720.00	-
	Kaithal Tollway Limited	Subsidiary	675.60	-
	IRB Westcoast Tollway Limited	Subsidiary	400.60	-
	AE Tollway Limited	Subsidiary	450.00	-
	IRB Hapur Muradabad Tollway Limited	Subsidiary	1,200.00	-
11	**Interest income unwinding on loan (Interest Fee)**		**48.84**	**48.71**
	Kaithal Tollway Limited	Subsidiary	48.84	48.71

IRB Infrastructure Trust
Notes to Standalone Financial Statements as at March 31, 2024

II) Related party transaction during the peiod

(Rs. in million)

Sr. No.	Particulars	Relation	Year ended March 31, 2024	Year ended March 31, 2023
12	**Investment Management Fees**		**146.32**	**56.52**
	MMK Toll Road Pvt Limited	Investment Manager	146.32	56.52
13	**Expenses incurred on behalf of others**		**96.54**	**358.05**
	AE Tollway Limited	Subsidiary	4.55	1.11
	CG Tollway Limited	Subsidiary	0.01	48.45
	Kishangarh Gulabpura Tollway Limited	Subsidiary	11.38	194.00
	IRB Hapur Muradabad Tollway Limited	Subsidiary	4.25	32.63
	IRB Westcoast Tollway Limited	Subsidiary	8.05	7.61
	Udaipur Tollway Limited	Subsidiary	0.01	16.08
	Solapur Yedeshi Tollway Limited	Subsidiary	0.01	3.78
	Yedeshi Aurangabad Tollway Limited	Subsidiary	0.01	8.69
	Kaithal Tollway Limited	Subsidiary	5.13	0.01
	Palsit Dankuni Tollway Private Limited	Subsidiary	38.85	45.60
	MMK Toll Road Pvt Limited	Investment Manager	0.45	0.08
	IRB Golconda Expressway Private Limited	Subsidiary	0.39	-
	IRB Lalitpur Tollway Private Limited	Subsidiary	5.98	-
	Samakhiyali Tollway Private Limited	Subsidiary	0.24	-
	IRB Kota Tollway Private Limited	Subsidiary	4.67	-
	IRB Gwalior Tollway Private Limited	Subsidiary	12.57	-
14	**Unsecured Loan received**		**726.20**	**1,532.48**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	726.20	1,532.48
15	**Unsecured Loan paid**		**5,599.11**	**267.50**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	5,599.11	267.50
16	**Long Term loan given - MMR**		**1,300.00**	**-**
	IRB Westcoast Tollway Limited	Subsidiary	413.00	-
	Kaithal Tollway Limited	Subsidiary	452.30	-
	AE Tollway Limited	Subsidiary	390.90	-
	IRB Hapur Moradabad Tollway Limited	Subsidiary	43.80	-

IRB Infrastructure Trust
Notes to Standalone Financial Statements as at March 31, 2024

II) Related party transaction during the peiod

(Rs. in million)

Sr. No.	Particulars	Relation	Year ended March 31, 2024	Year ended March 31, 2023
17	**Long Term loan repaid-MMR**		**11.29**	-
	IRB Westcoast Tollway Limited	Subsidiary	5.74	-
	Kaithal Tollway Limited	Subsidiary	4.79	-
	AE Tollway Limited	Subsidiary	0.19	-
	IRB Hapur Moradabad Tollway Limited	Subsidiary	0.57	-
18	**Secured Long Term Loan given**		**46,239.70**	**-**
	IRB Westcoast Tollway Limited	Subsidiary	9,605.30	-
	Kaithal Tollway Limited	Subsidiary	4,827.40	-
	AE Tollway Limited	Subsidiary	6,767.90	-
	Kishangarh Gulabpura Tollway Limited	Subsidiary	9,996.00	-
	IRB Hapur Moradabad Tollway Limited	Subsidiary	15,043.10	-
19	**Secured Long Term Loan repaid**		**485.08**	-
	IRB Westcoast Tollway Limited	Subsidiary	133.51	-
	Kaithal Tollway Limited	Subsidiary	51.17	-
	AE Tollway Limited	Subsidiary	3.38	-
	Kishangarh Gulabpura Tollway Limited	Subsidiary	102.96	-
	IRB Hapur Moradabad Tollway Limited	Subsidiary	194.06	-
20	**Expenses Payable**		**4,984.22**	**609.23**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	4,935.38	560.52
	Mhaiskar Infrastructure Private Limited	Subsidiaries Company of Sponsor and Project Manager	48.84	48.71
21	**Interest Distribution**		**229.35**	**-**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	229.35	-
22	**Capital Reduction**		**2,032.84**	**-**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	2,032.84	-
23	**Expenses incurred on our behalf**		**4.10**	**-**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	4.10	-
24	**Trustee Fees**		**0.56**	**2.53**
	IDBI Trusteeship Services Limited	Trustee	0.56	2.53

IRB Infrastructure Trust
Notes to Standalone Financial Statements as at March 31, 2024

III) Related party outstanding balances

(Rs. in million)

Sr. No.	Particulars	Relation	As on March 31,2024	As on March 31,2023
1	**Equity Investment**		**36,160.64**	**22,212.01**
	AE Tollway Limited	Subsidiary	4,365.00	4,365.00
	CG Tollway Limited	Subsidiary	2,035.00	2,035.00
	IRB Hapur Muradabad Tollway Limited	Subsidiary	3,715.00	3,715.00
	IRB Westcoast Tollway Limited	Subsidiary	1,741.94	1,741.94
	Kishangarh Gulabpura Tollway Limited	Subsidiary	1,555.00	1,555.00
	Kaithal Tollway Limited	Subsidiary	3,280.00	3,280.00
	Solapur Yedeshi Tollway Limited	Subsidiary	982.50	982.50
	Udaipur Tollway Limited	Subsidiary	1,168.00	1,168.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	2,157.57	2,157.57
	Palshit Dankuni Tollway Private Limited	Subsidiary	1,212.00	1,212.00
	IRB Golconda Expressway Private Limted	Subsidiary	7,154.50	-
	Samakhiyali Tollway Private Limited	Subsidiary	1,162.00	
	IRB Lalitpur Tollway Private Limted	Subsidiary	4,205.80	-
	IRB Kota Tollway Private Limited	Subsidiary	393.48	
	IRB Gwalior Tollway Private Limited	Subsidiary	1,032.85	
2	**Subordinated Debt**		**33,591.55**	**72,212.43**
	AE Tollway Limited	Subsidiary	-	10,265.88
	CG Tollway Limited	Subsidiary	2,896.26	2,727.80
	IRB Hapur Muradabad Tollway Limited	Subsidiary	-	9,798.52
	IRB Westcoast Tollway Limited	Subsidiary	-	12,203.92
	Kishangarh Gulabpura Tollway Limited	Subsidiary	-	2,495.38
	Kaithal Tollway Limited	Subsidiary	-	4,426.04
	Solapur Yedeshi Tollway Limited	Subsidiary	-	4,423.70
	Udaipur Tollway Limited	Subsidiary	8,893.41	8,338.40
	Yedeshi Aurangabad Tollway Limited	Subsidiary	-	16,319.79
	Palshit Dankuni Tollway Private Limited	Subsidiary	3,637.50	1,213.00
	Samakhiyali Tollway Private Limited	Subsidiary	1,268.00	
	IRB Lalitpur Tollway Private Limited	Subsidiary	12,617.40	
	IRB Kota Tollway Private Limited	Subsidiary	1,180.43	
	IRB Gwalior Tollway Private Limited	Subsidiary	3,098.55	
3	**Unsecured long term loan (Interest bearing)**		**31,531.00**	**30,000.00**
	AE Tollway Limited	Subsidiary	9,941.31	9,528.41
	IRB Westcoast Tollway Limited	Subsidiary	4,445.55	4,000.00
	Kaithal Tollway Limited	Subsidiary	8,915.73	8,471.59
	Solapur Yedeshi Tollway Limited	Subsidiary	4,000.00	4,000.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	4,000.00	4,000.00
	Kishangarh Gulabpura Tollway Limited	Subsidiary	196.83	
	IRB Hapur Moradabad Tollway Limited	Subsidiary	31.59	

III) Related party outstanding balances

(Rs. in million)

Sr. No.	Particulars	Relation	As on March 31,2024	As on March 31,2023
4	**Subordinated debt - (Interest bearing)**		**77,254.30**	-
	AE Tollway Limited	Subsidiary	10,425.40	-
	IRB Hapur Moradabad Tollway Limited	Subsidiary	9,712.69	-
	IRB Westcoast Tollway Limited	Subsidiary	7,788.81	-
	Kishangarh Gulabpura Tollway Limited	Subsidiary	2,399.43	-
	Kaithal Tollway Private Limited	Subsidiary	4,472.86	-
	Solapur Yedeshi Tollway Limited	Subsidiary	4,209.67	-
	Yedeshi Aurangabad Tollway Limited	Subsidiary	16,780.44	-
	IRB Golconda Expressway Private Limted	Subsidiary	21,465.00	-
5	**Long term loan (Interest bearing) -MMR**		**1,288.71**	-
	IRB Westcoast Tollway Limited	Subsidiary	407.26	-
	Kaithal Tollway Limited	Subsidiary	447.51	-
	AE Tollway Limited	Subsidiary	390.71	-
	IRB Hapur Moradabad Tollway Limited	Subsidiary	43.23	-
6	**Long term loan (Interest free)**		**400.53**	**351.69**
	Kaithal Tollway Limited	Subsidiary	400.53	351.69
7	**Secured Long Term Loan (Interest bearing)**		**45,754.62**	-
	IRB Westcoast Tollway Limited	Subsidiary	9,472	-
	Kaithal Tollway Limited	Subsidiary	4,776	-
	AE Tollway Limited	Subsidiary	6,765	-
	Kishangarh Gulabpura Tollway Limited	Subsidiary	9,893	-
	IRB Hapur Moradabad Tollway Limited	Subsidiary	14,849	-
8	**Short Term Loan**		**6,470.38**	**5,421.29**
	AE Tollway Limited	Subsidiary	319.59	478.89
	IRB Hapur Muradabad Tollway Limited	Subsidiary	-	-
	IRB Westcoast Tollway Limited	Subsidiary	2,361.80	2,348.08
	Kaithal Tollway Limited	Subsidiary	284.55	156.71
	Solapur Yedeshi Tollway Limited	Subsidiary	-	24.00
	Udaipur Tollway Limited	Subsidiary	2,275.35	1,335.31
	Yedeshi Aurangabad Tollway Limited	Subsidiary	-	519.80
	IRB Lalitpur Tollway Private Limited	Subsidiary	-	-
	CG Tollway Limited	Subsidiary	1,169.09	558.50
	Kishangarh Gulabpura Tollway Limited	Subsidiary	60.00	-

IRB Infrastructure Trust
Notes to Standalone Financial Statements as at March 31, 2024

III) Related party outstanding balances

(Rs. in million)

Sr. No.	Particulars	Relation	As on March 31,2024	As on March 31,2023
9	**Other Payable**		**40,760.47**	**35,776.26**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	37,030.95	32,095.57
	Mhaiskar Infrastructure Private Limited	Subsidiaries Company of Sponsor and Project Manager	400.53	351.69
	Modern Road Makers Private Limited	Subsidiaries Company of Sponsor and Project Manager	1,784.13	1,784.13
	IRB Goa Tollway private Limited	Subsidiaries Company of Sponsor and Project Manager	1,544.86	1,544.86
10	**Other payable (Reimbursement of Expenses incurred on our behalf)**		**0.49**	**1.77**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	0.49	1.77
11	**Other Receivable**		**291.48**	**284.13**
	Solapur Yedeshi Tollway Limited	Subsidiary	4.89	4.89
	Yedeshi Aurangabad Tollway Limited	Subsidiary	6.74	8.17
	IRB Westcoast Tollway Limited	Subsidiary	0.02	13.76
	Udaipur Tollway Limited	Subsidiary	13.97	14.11
	AE Tollway Limited	Subsidiary	0.01	0.01
	CG Tollway Limited	Subsidiary	47.35	47.35
	Kishangarh Gulabpura Tollway Limited	Subsidiary	182.70	171.32
	IRB Hapur Moradabad Tollway Limited	Subsidiary	27.14	22.90
	Kaithal Tollway Limited	Subsidiary	0.01	0.00
	Palshit Dankuni Tollway Private Limited	Subsidiary	8.30	1.54
	IRB Golconda Expressway Private Limted	Subsidiary	-	
	Samakhiyali Tollway Private Limited	Subsidiary	0.24	
	IRB Gwalior Tollway Private Limited	Subsidiary	0.06	
	IRB Kota Tollway Private Limited	Subsidiary	0.04	
	IRB Lalitpur Tollway Private Limted	Subsidiary	0.01	
	MMK Toll Road Private Limited	Investment Manager	-	0.08
12	**Interest Receivable**		**16,378.71**	**7,681.04**
	Solapur Yedeshi Tollway Limited	Subsidiary	1,342	539.90
	Yedeshi Aurangabad Tollway Limited	Subsidiary	1,287	485.27
	Kaithal Tollway Limited	Subsidiary	3,665	2,112.74
	IRB Westcoast Tollway Limited	Subsidiary	5	1,552.00
	AE Tollway Limited	Subsidiary	5,807	2,991.13
	Kishangarh Gulabpura Tollway Limited	Subsidiary	942	

III) Related party outstanding balances

(Rs. in million)

Sr. No.	Particulars	Relation	As on March 31,2024	As on March 31,2023
	IRB Hapur Moradabad Tollway Limited	Subsidiary	1,447	
	IRB Golconda Expressway Private Limted	Subsidiary	1,883	
13	**BG Margin Receivable**		**30.95**	**-**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	30.95	-
14	**Trade payable**		**95.19**	**78.54**
	MMK Toll Road Pvt Limited	Investment Manager	95.19	78.54
15	**Unsecured Loan / other payable**		**-**	**4,872.91**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	-	4,872.91

Note 22 : Fair Values

Financial assets and liabilities

The carrying values of financials instruments of the Trust are reasonable and approximations of fair values.

The accounting classification of each category of financial instruments, their carrying amounts and the categories of financial assets and liabilities measured at fair value, are set out below:

(Rs. in million)

	Carrying amount		Fair Value	
	March 31, 2024	**March 31, 2023**	**March 31, 2024**	**March 31, 2023**
Financial assets				
Financial assets measured at amortised cost				
Investment in subsidiaries	69,752.19	94,424.44	-	-
Loans	162,699.54	35,772.98	-	-
Other financial assets	21,621.24	7,965.17	-	-
Cash and cash equivalents	150.39	6.56	-	-
Other Bank balances	2,041.10	-	-	-
Financial assets measured at fair value through statement of Profit & Loss				
Investments in Mutual funds	85.40	20.08	86.84	20.08
Financial liabilities				
Financial liabilities measured at amortised cost				
Trade payables	102.32	81.35	-	-
Borrowings (net of unamortised Tranasaction cost)	62,349.54	4,872.91	-	-
Financial liabilities				
Financial liabilities measured at fair value through statement of Profit & Loss				
Other financial liabilities	40,760.96	35,778.03	40,760.96	35,778.03

The management assessed that the fair value of other cash and cash equivalents, other bank balance, trade payables, borrowings and other financial liabilities approximate their carrying amounts largely due to the short-term maturities of these instruments.

The fair value of the financial assets and liabilities is included at the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.

The discount for lack of marketability represents the amounts that the Trust has determined that market participants would take into account when pricing the investments.
The above investments does not include equity investments in joint ventures which are carried at cost and hence are not required to be disclosed as per Ind AS 107 'Financial Instrument Disclosure.

Note 23 : Fair Value Hierarchy

All financial instruments for which fair value is recognised or disclosed are categorised within the fair value hierarchy described as follows, based on the lowest level input that is significant to the fair value measurement as a whole.

Level 1: Quoted (unadjusted) price is active market for identical assets or liabilities

Level 2: Valuation technique for which the lowest level input that has a significant effect on the fair value measurement are observed, either directly or indirectly.

Level 3: Valuation technique for which the lowest level input has a significant effect on the fair value measurement is not based on observable market data.

There were no transfers between Level 1, Level 2 and Level 3 during the year.

The following table presents fair value hierarchy of assets and liabilities measured at fair value on a recurring basis as of March 31, 2024:

(Rs. in million)

	As on March 31, 2024 (Audited)	Fair value measurement at end of the reporting period using		
		Level 1	**Level 2**	**Level 3**
Assets				
Investments in mutual fund (Quoted)	86.84	86.84	-	-
Liabilities				
Other financial liabilities	40,760.96	-	-	40,760.96

The following table presents fair value hierarchy of assets and liabilities measured at fair value on a recurring basis as of March 31, 2023:

(Rs. in million)

	As on March 31, 2023 (Audited)	Fair value measurement at end of the reporting year using		
		Level 1	Level 2	Level 3
Assets				
Investments in mutual fund (Quoted)	20.08	20.08	-	-
Liabilities				
Other financial liabilities	35,778.03	-	-	35,778.03

There has been no transfer between Level 1, Level 2 & Level 3 during the year.
Sensitivity: Higher probability by 5% and lower discount rate by 0.5% will increase the fair value by Rs.4,397.66 million (31 March 2023 - Rs.4,166.87 million). Lower probability by 5% and higher discount rate by 0.5% will reduce fair value by Rs.4,171.25 million (31 March 2023 - Rs.3,946.06 million).

Fair value movement for Payable to IRB Infrastructure Developers Limited is as under:

	March 31, 2024	March 31, 2023
Opening balance as at April 01, 2023 (Previous period: April 01, 2022)	35,778.03	35,168.79
Add: Recognised during the year	4,935.37	560.53
Less: Payment of deferred consideration	-	-
Add: Adjustment on account of interest unwinding	47.55	48.71
Closing balance of payable as on March 31, 2024 (Previous period: March 31, 2023)	**40,760.95**	**35,778.03**

Note 24 : Taxes
In accordance with section 10 (23FC) of the Income Tax Act, the income of business Trust in the form of interest received or receivable from Project SPV is exempt from tax. Accordingly, the Trust is not required to provide any current tax liability. Further, deferred tax assets on carry forward losses is not being created since there is no virtual certainty of reversal of the same in the near future.

Note 25 : Investment Management Fess
Pursuant to the terms of the Investment Management Agreement, the fees will be paid to the Investment Manager for the services provided by it ("Management Fees"). The Management Fees have been revised for the Financial Year with the approval of the Unitholders, where the votes cast by Unitholders so entitled and voting in favor of a resolution are not less than one-and-a-half times the votes cast against such resolution. Pursuant to a resolution of the Unitholders, the Management Fees for the year ended March 31, 2024 has been revised to Rs. 146.32 million

Note 26 : Financial Risk Management objectives and policies

The Trust's risk management policies are established to identify and analyse the risks faced by the Trust, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Trust's activities.

The Board of Directors of Investment Manager have overall responsibility for the establishment and oversight of the Trust's risk management framework.
In performing its operating, investing and financing activities, the Trust is exposed to the Credit risk, Liquidity risk and Market risk.

a. Market Risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: interest rate risk, currency risk and other price risk, such as equity price risk and commodity risk. Financial instruments affected by market risk include loans borrowings and deposits.

b. Credit risk

Credit risk is the risk that a counter party will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The Trust is exposed to credit risk from its investing activities including loans to subsidiaries, deposits with banks and other financial instruments. As at March 31, 2024, the credit risk is considered low since substantial transactions of the Trust are with its subsidiaries.

c. Interest Rate Risk

Interest rate risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Trust's exposure to the risk of changes in market interest rates relates primarily to the Trust's long-term debt obligations with floating interest rates.

Interest rate sensitivity

The following table demonstrates the sensitivity to a reasonably possible change in interest rates on that portion of loans and borrowings affected, after excluding the credit exposure for fixed rate borrowings. With all other variables held constant, the Trust's profit before tax is affected through the impact on floating rate borrowings, as follows:

(Rs. in million)

Particulars	March 31, 2024	March 31, 2023
If the interest rate is 50 basis point higher (lower), the impact on profit or loss would be		
- Decreased by	315.15	-
- Increased by	(315.15)	-

d. Liquidity risk

Liquidity risk is the risk that the Trust may not be able to meet its present and future cash and collateral obligations without incurring unacceptable losses. The Trust's objective is to, at all times maintain optimum levels of liquidity to meet its cash and collateral requirements.

The Trust closely monitors its liquidity position and deploys a robust cash management system. It maintains adequate sources of financing including debt and overdraft from banks at an optimised cost.

e. Financial Instruments
Credit risk from balances with banks and financial institutions, trade receivables, loans and advances is managed by the Group's management in accordance with the Group's policy. Investments of surplus funds are made only with approved counterparties and within credit limits assigned to each counterparty. Counterparty credit limits are reviewed by the top management on an annual basis, and may be updated throughout the year subject to approval of the Company's board of directors. The limits are set to minimise the concentration of risks and therefore mitigate financial loss through counterparty's potential failure to make payments.

f. Investment in Equity shares of Subsidiaries
The Trust has investments in equity shares of Subsidiaries. The settlement of such instruments is linked to the completion of the respective underlying projects. Such Financial Assets are not impaired as on the reporting date.

(Rs. in million)

March 31, 2024	Carrying Amount	Total	On demand	Less than 3 months	Less than 1 year	1 to 5 years	> 5 years
Borrowings (Gross of unamortised transaction cost)	63,030.66	63,030.66	-	-	647.39	6,390.00	55,993.27
Other financial liabilities	40,760.96	40,760.96	-	-	-	40,760.96	-
Trade payables	102.34	102.34	-	0.27	102.07	-	-
Total	**103,893.95**	**103,893.95**	**-**	**0.27**	**749.46**	**47,150.96**	**55,993.27**

March 31, 2023	Carrying Amount	Total	On demand	Less than 3 months	Less than 1 year	1 to 5 years	> 5 years
Borrowings (Gross of unamortised transaction cost)	4,872.91	**4,872.91**	-	-	4,872.91	-	-
Other financial liabilities	35,778.03	**35,778.03**	-	-	-	35,778.03	-
Trade payables	81.35	**81.35**	-	0.01	50.56	30.78	-
Total	**40,732.29**	**40,732.29**	**-**	**0.01**	**4,923.47**	**35,808.80**	**-**

At present, the Trust does expects to repay all liabilities at their contractual maturity. In order to meet such cash commitments, the operating activity is expected to generate sufficient cash inflows.

Note 27 : Capital management

Capital includes equity attributable to the Unit holders to ensure that it maintains an efficient capital structure and healthy capital ratios in order to support its business and maximise shareholder value. The Trust manages its capital structure and makes adjustments to it, in light of changes in economic conditions or its business requirements. To maintain or adjust the capital structure, the Trust may adjust the distribution of cash flow of return capital to Unit holders or issue new units. No changes were made in the objectives, policies or processes during the year ended March 31, 2024 and year ended March 31, 2023.

The Trust monitors capital using a gearing ratio, which is net debt divided by total equity. Net debt is calculated as loans and borrowings (gross of unamortised transaction cost) less cash and cash equivalents.

(Rs. in million)

	March 31, 2024	March 31, 2023
Borrowings (Secured)	63,030.66	4,872.91
Less: cash and cash equivalents	(150.39)	(6.56)
Net debt	**62,880.27**	**4,866.35**
Unit capital	135,091.23	87,929.33
Other equity	18,052.09	9,526.42
Total equity	**153,143.32**	**97,455.75**
Capital and net debt	**216,023.60**	**102,322.11**
Gearing ratio (%)	**41.06%**	**4.99%**

In order to achieve this overall objective, the Trust's capital management, amongst other things, aims to ensure that it meets financial covenants attached to the interest-bearing loans and borrowings that define capital structure requirements. Breaches in meeting the financial covenants would permit the bank to immediately call loans and borrowings. There have been no breaches in the financial covenants of any interest-bearing borrowings in the current year.

Note 28 : Significant accounting judgement, estimates and assumptions

The preparation of the Trust's financial statements requires management to make judgments, estimates and assumptions that affect the reported amounts of revenue, expenses, assets and liabilities and the acTrusting disclosures and the disclosure of contingent liabilities. Uncertainty about these assumptions and estimates could result in out comes that require a material adjustment to the carrying amount of assets or liabilities affected in future periods.

Judgement

In the process of applying the Trust's accounting policies, management has made the judgement, which have the most significant effect on the amounts recognised in the financial statements.

Classification of unit holders Trusts

Under the provisions of the InvIT Regulations, Trust is required to distribute to Unit holders not less than ninety percent of the net distributable cash flows of Trust for each financial year. Accordingly, a portion of the unit holders' Trusts contains a contractual obligation of the Trust to pay to its Unit holders cash distributions. The Unit holder's Trusts could therefore have been classified as compound financial instrument which contain both equity and liability components in accordance with Ind AS 32-Financial Instruments: Presentation.
However, in accordance with SEBI Circulars(No.CIR/IMD/DF/114/2016 dated 20-Oct-2016 and No.CIR/IMD/DF/127/2016 dated 29-Nov-2016) issued under the InvIT Regulations, the unit holders' Trusts have been classified as equity in order to comply with the mandatory requirements of Section H of Annexure A to the SEBI Circular dated 20-Oct-2016 dealing with the minimum disclosures for key financial statements. In line with the above, the income distribution payable to unit holders is recognized as liability when the same is approved by the Investment Manager.

Estimates and assumptions

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities or fair value disclosures within the next financial year. The Trust based its assumptions and estimates on parameters available when the financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising that are beyond the control of the Trust. Such charges are reflected in the assumptions when they occur.

Fair valuation and disclosures

SEBI Circulars issued under the InvIT Regulations required is diclosures relating to net assets at fair value and total returns at fair value. In estimating the fair value of investments in subsidiaries (which constitute substantial portion of the net assets), the Trust engages independent qualified external valuers to perform the valuation. The management works closely with the valuers to establish the appropriate valuation techniques and inputs to the model. The management reports the valuation report and findings to the Board of the Investment Manager half yearly to explain the cause of fluctuations in the fair value of the road projects. The inputs to the valuation models are taken from observable markets where possible, but where this is not feasible, a degree of judgement is required in establishing fair values. Judgements include considerations of inputs such as WACC, Tax rates, Inflation rates etc. Changes in assumptions about these factors could affect the fair value.

Impairment of non-financial assets

Non-financial assets of the Trust primarily comprise of investments in subsidiaries, Impairment exists when the carrying value of an asset or cash generating unit exceeds its recoverable amount, which is the higher of its fair value less costs of disposal and its value in use. The recordable amounts for the investments in subsidiaries are based on value in use of the underlying projects. The value in use calculation is based on a DCF model. The cash flows are derived from budgets / forecasts over the life of the projects.

Note 29 : Transfer of projects

On April 7, 2022, the Trust has executed arrangement with the Sponsor for implementation of Palsit Dankuni Tollway Private Limited ('SPV') by the Trust and accordingly, the project is being executed by the SPV and the Trust.

On October 12, 2023, the Trust has executed arrangement with the Sponsor for implementation of Samakhiyali Tollway Private Limited ('SPV') by the Trust and accordingly, the project is being executed by the SPV and the Trust.

On July 29, 2023, the Trust has executed arrangement with the Sponsor for implementation of IRB Golconda Expressway Private Limited ('SPV') by the Trust and accordingly, the project is being executed by the SPV and the Trust.

Note 30 : Distribution made

(Rs. in million)

	March 31, 2024	March 31, 2023
Distributed during the period as :		
Interest	449.55	-
Return of Capital	3,984.60	-
	4,434.15	**-**

Note: The Board of Directors of the Investment Manager have declared 1st Distribution of Rs.1.52 per unit which comprises of Rs.0.44 per unit as interest and Rs. 1.08 per unit as return of capital in their meeting held on October 25, 2023. The Board of Directors of the Investment Manager have declared 2nd Distribution of Rs.2.82 per unit towards return of capital in their meeting held on January 25, 2024

Note 31 : Subsequent Events

The Board of Directors of the Investment Manager have declared 3rd Distribution of Rs.0.24 per unit towards interest distribution in their meeting held on May 03, 2024.

Note 32 Other Statutory Information

i) The Trust has not traded or invested in Crypto currency or Virtual Currency during the current or previous year.
ii) The Trust does not hold benami property and no proceedings under Benami transaction (Prohibition) Act 1988 have been initiated against the Trust.
iii) The Trust does not have any transactions with companies struck off.
iv) The Trust does not have any such transaction which is not recorded in the books of accounts that has been surrendered or disclosed as income during the year in the tax assessments under the Income Tax Act, 1961.
v) The Trust did not have any long-term contracts including derivative contract.
vi) The Trust has not been declared a wilful defaulter by any bank / financial institution or any other lender during the year.

Note 33 : Previous year comparatives

Previous year's figures has been reclassified / regrouped wherever necessary to confirm to current year classification. The impact of the same is not material to the user of the Standalone financial statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

For M S K A & Associates
Chartered Accountants
ICAI registration number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No.: 118894

Place: Mumbai
Date : May 03, 2024

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Shilpa Todankar
Chief Financial Officer

Place: Mumbai
Date : May 03, 2024

SD/-
Dhananjay K. Joshi
Chief Executive Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No. A27833

INDEPENDENT AUDITOR'S REPORT

To the Unit Holders of IRB Infrastructure Trust

REPORT ON THE AUDIT OF THE STANDALONE IND AS FINANCIAL STATEMENTS

OPINION

We have audited the accompanying Standalone Ind AS Financial Statements of IRB Infrastructure Trust ("the InvIT" or "the Trust"), which comprise the Standalone Balance Sheet as at March 31, 2023, the Standalone Statement of Profit and Loss (including Other Comprehensive Income), the Standalone Statement of Cash Flows, the Standalone Statement of Changes in Unit Holders' Equity and the Standalone Statement of Net Assets at Fair value as at March 31, 2023 and the Standalone Statement of Total Returns at Fair Value and the Standalone Statement of Net Distributable Cash Flows ('NDCFs') for the year then ended, and notes to the Standalone Financial Statements including a Summary of Significant Accounting Policies and Other Explanatory Information (hereinafter referred to as "the standalone financial statements").

In our opinion and to the best of our information and according to the explanations given to us, the aforesaid Standalone Financial Statements give the information required by the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time including any guidelines and circulars issued thereunder (together referred to as the "SEBI InvIT Regulations") in the manner so required and give a true and fair view in conformity with the Indian Accounting Standards (Ind AS) and/or any addendum thereto as defined in the rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015, as amended ("Ind AS") and other accounting principles generally accepted in India, of the State of Affairs of the Trust as at March 31, 2023, its profits and total comprehensive income, movement of Unit Holders' fund and its Cash flows for the year ended March 31,2023, its Net Assets at fair value as at March 31, 2023, its total returns at Fair Value and the net distributable cash flow for the year ended on that date.

BASIS FOR OPINION

We conducted our audit of the Standalone Financial Statements in accordance with the Standards on Auditing ("SAs") issued by the Institute of Chartered Accountants of India. Our responsibilities under those Standards are further described in the Auditor's Responsibilities for the Audit of the Standalone Financial Statements section of this report. We are independent of the Trust in accordance with the code of ethics issued by the Institute of Chartered Accountants of India together with the ethical requirements that are relevant to our audit of the Standalone Financial Statements under the provisions of the SEBI InvIT Regulations and we have fulfilled our other ethical responsibilities in accordance with these requirements and the Code of Ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on the Standalone Financial Statements.

KEY AUDIT MATTERS

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the Standalone Financial Statements of the financial period. These matters were addressed in the context of our audit of the Standalone Financial Statements as a whole, and in forming our opinion thereon, and we do not provide a

separate opinion on these matters. We have determined the matters described below to be the key audit matters to be communicated in our report.

PARTICULARS	HOW THEY WERE ADDRESSED IN OUR AUDIT
1. <u>Loss on fair value measurement of other payable / deferred consideration payable to IRB Group.</u> Pursuant to settlement of IRB Infrastructure Trust by IRB Infrastructure Developers Limited (Sponsor), as a Private INVIT, the Trust has entered into Debt Novation Agreements (DNA). As per the terms of DNA, in consideration of assets taken over in 9 SPVs, Trust has issued units and agreed to transfer to the Sponsor, the claim amounts when and to the extent the same are eventually received by Project SPVs, on account of Sponsor Claims. Such Sponsor Claims shall be lodged after obtaining COD by respective SPVs. The amount realizable against claims has been estimated by the valuers appointed by the Management based on the weighted average of probabilities of realization of such claims. Based on the fair value of liability as estimated by the valuers, a resultant impact in the value of liability has been recognized under the head 'Loss on fair value measurement of other payable'.	• We reviewed the Placement Memorandum filed with SEBI and the consequential legal documentation entered into by the Trust, including inter alia the Debt Novation Agreements and their reflection in the underlying SPVs. • We have reviewed the methodology adopted by the valuer in deriving the value including the assumptions made. • We assessed the estimates of Fair Value provided in the Valuation Report and realizability of claims as indicated therein. • We also reviewed the reasonableness of the variables applied in the said computation. • Based on the above, the fair value of liability to the Sponsor, as estimated by the valuer, taking into consideration the weighted average of probabilities of realization has been validated.
2. <u>Impairment Testing</u> The Group has toll collection rights as intangible assets pursuant to the concession agreement. The carrying value of these rights acquired under BOT basis is being compared to the recoverable value (which is value in use in the instant case) thereof to ascertain if there is any impairment. The process involves estimating the value in use of the asset which is determined by forecasting and discounting future cash flows. The same is sensitive to changes in discount rate, traffic growth rates, toll growth rates etc. The determination of the recoverable amount of the toll collection right involves significant judgment due to inherent uncertainty in the assumptions supporting the recoverable amount of these rights. Accordingly, the evaluation of impairment of toll collection rights has been determined as a Key Audit Matter.	• We evaluated management's assessment on impairment for intangible assets under development and intangible assets – toll collection rights by testing the assumptions and methodologies used by the Management. • Referred to valuation reports and Traffic Growth Study Reports and determined reasonableness of future toll revenue. • Evaluated the potential changes in major components as compared to previous year vis-à-vis actual performance in order to evaluate whether the inputs and assumptions used in the cash flow forecasts were suitable. • Assessed the appropriateness of the weighted average cost of capital used in determining recoverable amount. • Performed sensitivity analysis of key assumptions used in valuation. • Tested the arithmetical accuracy of the model.

INFORMATION OTHER THAN THE STANDALONE FINANCIAL STATEMENTS AND AUDITOR'S REPORT THEREON

The Board of Directors of Investment Manager is responsible for the preparation of the other information. The other information comprises the information included in the Report of Investment Manager including annexures to Investment Manager's Report and other information as required to be given by SEBI InvIT Regulations, but does not include the standalone financial statements and our report thereon.

Our opinion on the standalone financial statements does not cover the other information and we do not express any form of assurance conclusion thereon. In connection with our audit of the standalone financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the standalone financial statements or our knowledge obtained during the course of our audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

RESPONSIBILITIES OF THE BOARD OF DIRECTORS OF INVESTMENT MANAGER FOR THE STANDALONE FINANCIAL STATEMENTS

The Board of Directors of Investment Manager is responsible for the preparation of these Standalone Financial Statements that give a true and fair view of the Standalone financial position as at 31 March 2023, financial performance including other comprehensive income, movement of Unit Holders' fund and its Cash flows for the year ended March 31, 2023, its Net Assets at fair value as at March 31, 2023, its total returns at Fair Value and the net distributable cash flow of the trust for the year ended March 31, 2023 in accordance with the accounting principles generally accepted in India, including the Indian Accounting Standards specified and/or any addendum thereto as defined in Rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended read with the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulation 2014 as amended from time to time including any guidelines and circulars issued thereunder (together referred to as the "InvIT Regulations").

This responsibility also includes maintenance of adequate accounting records in accordance with the provisions of the InvIT Regulations for safeguarding of the assets of the Trust and for preventing and detecting frauds and other irregularities; selection and application of appropriate accounting policies; making judgements and estimates that are reasonable and prudent; and design, implementation and maintenance of adequate internal financial controls for ensuring the accuracy and completeness of accounting records, relevant to the preparation and presentation of the Standalone financial statements that give a true and fair view and are free from material misstatement, whether due to fraud and error.

In preparing the Standalone Financial Statements, the Board of Directors of Investment Manager is responsible for assessing the Trust's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors of Investment Manager either intends to liquidate the Trust or to cease operations, or has no realistic alternative but to do so.

The Board of Directors of Investment Manager are also responsible for overseeing the Trust's financial reporting process.

AUDITOR'S RESPONSIBILITY FOR THE AUDIT OF THE STANDALONE IND AS FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance whether the Standalone Financial Statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with SAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also,

- Identify and assess the risks of material misstatement of the standalone financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations or the override of internal control.
- Obtain an understanding of internal financial control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of such controls.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by Board of Directors of Investment Manager.
- Conclude on the appropriateness of use of the going concern basis of accounting by the Board of Directors of Investment Manager and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Trust's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Trust to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

Materiality is the magnitude of misstatements in the standalone financial statements that, individually or in aggregate, makes it probable that the economic decisions of a reasonably knowledgeable user of the financial statements may be influenced. We consider quantitative materiality and qualitative factors in (i) planning the scope of our audit work and in evaluating the results of our work; and (ii) to evaluate the effect of any identified misstatements in the financial statements.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the Standalone Financial Statements of the current period and are therefore the key audit matters. We describe these matters in our report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

Based on our audit and as required by SEBI InvIT Regulations, we report that:

a. We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit;

b. The Balance Sheet and the Statement of Profit and Loss including other comprehensive income, dealt with by this Report are in agreement with the books of account of the Trust; and

c. In our opinion, the aforesaid standalone financial statements comply with the Indian Accounting Standards specified under Rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended.

For Gokhale & Sathe,
Chartered Accountants
Firm Registration No.: 103264W

SD/-
CA Kaustubh Deshpande,
Partner
Membership No. 121011
UDIN: 23121011BGXXWA9139
Date: 12th May 2023
Place: Mumbai

IRB Infrastructure Trust
Balance Sheet as at March 31, 2023

(Rs. in Millions)

		Note No.	As at March 31, 2023	As at March 31, 2022
I	**ASSETS**			
(1)	**Non-current assets**			
	Financial assets	4		
	i) Investments	4.1	94,424.44	90,929.80
	ii) Loans	4.2	30,351.69	30,302.98
	Total non-current assets		**1,24,776.13**	**1,21,232.78**
(2)	**Current assets**			
	Financial assets	5		
	i) Investments	5.1	20.08	20.04
	ii) Cash and cash equivalents	5.2	6.56	0.25
	iii) Loans	5.3	5,421.29	3,492.95
	iv) Other financial assets	5.4	7,965.17	5,610.67
	Other current assets	6	4.48	-
	Total current assets		**13,417.58**	**9,123.92**
	TOTAL ASSETS		**1,38,193.71**	**1,30,356.70**
II	**EQUITY AND LIABILITIES**			
	Equity			
	Unit capital	7	87,929.33	85,504.33
	Other equity	8	9,526.42	5,992.74
	Total unit holder's equity		**97,455.75**	**91,497.07**
(1)	**Non-current liabilities**			
	Financial liabilities			
	i) Other financial liabilities	9	35,778.03	35,168.79
	Total non- current liabilities		**35,778.03**	**35,168.79**
(2)	**Current liabilities**			
	Financial liabilities	10		
	i) Borrowings	10.1	4,872.91	3,607.93
	ii) Trade payables	10.2		
	small enterprises and small enterprises		0.01	-
	b) total outstanding dues of creditors other than micro enterprises and small enterprises		81.34	81.71
	Other Current liabilities	11	5.67	1.20
	Total current liabilities		**4,959.93**	**3,690.84**
	Total liabilities		**40,737.96**	**38,859.63**
	TOTAL EQUITY AND LIABILITIES		**1,38,193.71**	**1,30,356.70**
	Summary of significant accounting policies	3		

See accompanying notes to the financial statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

Place: Mumbai
Date : 12.05.2023

Place : Mumbai
Date : 12.05.2023

IRB Infrastructure Trust

Statement of Profit and Loss for the year ended March 31, 2023

(Rs. in Millions)

	Note No.	For the year ended March 31, 2023	For the year ended March 31, 2022
Income			
Other income	12	4,222.87	4,200.44
TOTAL INCOME		**4,222.87**	**4,200.44**
Expenses			
Investment Manager Fees		56.52	42.48
Other expenses	13	617.34	2,182.21
TOTAL EXPENSES		**673.86**	**2,224.69**
Profit / (Loss) before tax		**3,549.01**	**1,975.75**
Tax expenses			
Profit / (Loss) after tax (A)		**3,549.01**	**1,975.75**
Other comprehensive income / (loss) for the year (net of tax)			
Re-measurement gains/ (losses) on defined benefit plans (net of taxes)		-	-
Other comprehensive income/(loss) for the year (net of tax) (B)		-	-
Total comprehensive income for the year, net of tax : (A+B)		**3,549.01**	**1,975.75**
Earnings per unit			
Basic		**4.04**	**2.34**
Diluted		**4.04**	**2.34**
Summary of significant accounting policies	3		

See accompanying notes to the financial statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

Place: Mumbai
Date : 12.05.2023

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Shilpa Todankar
Chief Financial officer

Place: Mumbai
Date : 12.05.2023

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

IRB Infrastructure Trust

Statement of changes in Equity for the year ended March 31, 2023

(Rs. in Millions)

	As at March 31, 2023	As at March 31, 2022
a. Unit Capital		
At the beginning of the year	85,504.33	81,688.00
Issued during the year	2,425.00	3,816.33
At the end of the year	**87,929.33**	**85,504.33**
b. Other Equity		
Retained earnings		
At the beginning of the year	5,992.74	4,020.25
Profit for the year	3,549.01	1,975.75
Unit issue expenses	(15.33)	(3.26)
At the end of the year	**9,526.42**	**5,992.74**

Summary of Significant accounting policies (refer note no.3)

See accompanying notes to the financial statements.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

Place: Mumbai
Date : 12.05.2023

Place : Mumbai
Date : 12.05.2023

IRB Infrastructure Trust
DISCLOSURES PURSUANT TO SEBI CIRCULARS
(SEBI Circular No. CIR/IMD/DF/114/2016 dated 20-Oct-2016 and No. CIR/IMD/DF/127/2016 dated 29-Nov-2016

A. Statement of Net Asset at Fair Value

-

	As at March 31, 2023		As at March 31, 2022	
Particulars	**Book value**	**Fair value**	**Book value**	**Fair value**
A. Assets	1,38,193.71	1,87,704.45	1,30,356.70	1,50,647.12
B. Liabilities (at book value)	40,737.96	4,959.93	38,859.63	3,690.84
C. Net Assets (A-B)	97,455.75	1,82,744.52	91,497.07	1,46,956.29
D. Number of units (in millions)	879.29	879.29	855.04	855.04
E. NAV (C/D) (Amount in Rs.)	**110.83**	**207.83**	**107.01**	**171.87**

B. Statement of total returns at Fair Value

-

Particulars	**For the year ended March 31, 2023**	**For the year ended March 31, 2022**
Total Comprehensive Income (As per the Statement of Profit and Loss)	3,549.01	1,975.75
Add/(less): Other Changes in Fair Value	85,288.77	55,459.22
Comprehensive Income -	**88,837.78**	**57,434.97**

Notes :

Fair value of assets as at March 31, 2023 and other changes in fair value for the year then ended as disclosed in the above tables are derived based on the fair valuation reports issued by the independent valuer appointed under the InvIT Regulations.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
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Company secretary
Membership No. A27833

Place: Mumbai
Date : 12.05.2023

Place: Mumbai
Date : 12.05.2023

IRB Infrastructure Trust

Cash Flow statement for the year ended March 31, 2023

(Rs. in Millions)

Particulars	For year ended March 31, 2023	For year ended March 31, 2022
Cash flow from operating activities		
Profit / (Loss) before tax	3,549.01	1,975.75
Adjustments to reconcile profit before tax to net cash flows:		
Fair value gain on investments	(0.18)	-
Profit on sale of investments	(0.92)	(0.40)
Fair value loss on measurement of other payable	560.53	2,161.31
Interest income on		
- Others	(4,221.77)	(4,200.00)
Operating profit/(loss) before working capital changes	**(113.33)**	**(63.33)**
Movement in working capital:		
Increase/(decrease) in trade payables	(0.36)	14.10
Increase/(decrease) in other financial liabilities	48.71	50.48
Increase/(decrease) in other current liabilities	4.48	(0.50)
(Increase)/decrease in Other current assets	(4.48)	0.03
(Increase)/decrease in loans	(1,928.34)	(1,682.67)
(Increase)/decrease in Other Financial assets	(229.72)	(0.89)
Cash generated from/(used in) operations	**(2,223.05)**	**(1,682.80)**
Direct taxes paid (net of refunds)	-	-
Net cash flows from/(used in) operating activities (A)	**(2,223.05)**	**(1,682.80)**
Cash flows from investing activities		
Investment in subsidiaries	(1,212.00)	(615.00)
Investment in sub debt of subsidiaries	(2,282.64)	(2,264.49)
Loan given to subsidiaries Long term	(48.71)	(48.71)
Interest received from related parties	2,097.00	825.00
Purchase of units of Mutual Fund	(302.98)	(383.38)
Proceeds on sale of units of Mutual Fund	304.04	413.74
Net cash flows from/(used in) investing activities (B)	**(1,445.29)**	**(2,072.84)**
Cash flow from financing activities		
Other Equity		
Proceeds from issuance of unit capital	2,425.00	3,816.33
Proceeds of curent borrowings	1,532.48	4,266.50
Repayment of curent borrowings	(267.50)	(4,336.33)
Unit Issue Expenses	(15.33)	(3.26)
Net cash flows from/(used in) financing activities (C)	**3,674.65**	**3,743.24**
Net increase/(decrease) in cash and cash equivalents (A+B+C)	**6.32**	**(12.40)**
Cash and cash equivalents at the beginning of the period	0.25	12.65
Cash and cash equivalents at the end of the period (refer 5.2)	**6.56**	**0.25**
Components of cash and cash equivalents		
Cash on hand	-	-
Balances with scheduled banks		
- On Current Account	6.56	0.25
Total Cash and cash equivalents (refer note 5.2)	**6.56**	**0.25**

IRB Infrastructure Trust

Cash Flow statement for the year ended March 31, 2023

Debt reconciliation statement in accordance with Ind AS 7		
Particulars	**For year ended March 31, 2023**	**For year ended March 31, 2022**
Opening balances		
Long term borrowings	-	-
Short term borrowings	3,607.93	3,677.76
	-	-
Movements		
Long term borrowings	-	-
Short term borrowings	(1,264.98)	69.83
	-	-
Closing balances		
Long term borrowings	-	-
Short term borrowings	4,872.91	3,607.93

Summary of significant accounting policies (refer note 3)

See accompanying notes to the financial statements.

Notes:

1. All figures in bracket are outflow.
2. Taxes paid are treated as arising from operating activities and are not bifurcated between investing and financing activities.
3. Reconciliation between opening and closing balances for liabilities arising from financing activities
4. The cash flow statement has been prepared under Indirect Method as per Ind AS 7 "Statement of Cash Flows" as notified under section 133 of the Companies Act, 2013.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

Place: Mumbai
Date : 12.05.2023

For and on behalf of MMK Toll Road Private Limited
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Virendra D. Mhaiskar
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Place : Mumbai
Date : 12.05.2023

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

Additional Disclosures as required by Paragraph 6 of Annexure A to SEBI Circular No. CIR/IMD/DF/127/2016:
a) Net Distributable Cash Flows as at the Standalone Trust level

(Rs. in millions)

Sr. No.	Particulars	Year ended March 31, 2023#	Year ended March 31, 2022
1	Cash flows received from Project SPVs in the form of Interest (Refer note 1)	2,097.00	825.00
2	Cash flows received from Project SPVs in the form of Dividend	-	-
3	Any other income accruing at the Trust level and not captured above, including but not limited to interest/return on surplus cash invested by the Trust	0.92	0.40
4	Cash flows received from the project SPVs towards the repayment of the debt issued to the Project SPVs by the Trust (Net) (Refer note 2)	(1,928.34)	(1,682.67)
5	**Total cash inflow at the Trust level (A)**	**169.58**	**(857.27)**
	Less:		
6	Any payment of fees, interest and expense incurred at the Trust level, including but not limited to the fees of the Investment Manager	(113.33)	(63.38)
7	Income tax (if applicable) at the Standalone Trust Level	-	-
8	Repayment of external debt	-	-
9	**Total cash outflows / retention at the Trust level (B)**	**(113.33)**	**(63.38)**
10	**Net Distributable Cash Flows (C) = (A+B)**	**56.25**	**(920.65)**

The said amount would be utilised towards Capex in ongoing projects.

Notes:

1 Excludes interest due but not received of Rs. 2,124.77 millions and Rs. 3,375 Millions for the year ended March 31, 2023 and year ended March 31, 2022.

2 Netted - off with disbursement of short-term unsecured loan to project SPV.

IRB Infrastructure Trust

Notes to financial statements for the year ended March 31, 2023

1. Trust Information and Nature of Operations

IRB Infrastructure Trust (the "Trust") is a trust settled pursuant to the indenture of trust dated August 27, 2019 which is registered under Indian Trust Act, 1882 and under the Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time. The Trust is settled by the Sponsor, IRB Infrastructure Developers Limited ("IRB" or the "Sponsor"), an infrastructure development company in India. The Trustee to the Trust is IDBI Trusteeship Services Limited (the "Trustee"). Investment manager for the Trust is MMK Toll Road Private Limited (the "Investment Manager"). The Trust has received registration certificate from SEBI having registration number IN/InviT/19-20/0012.

The Trust has been formed to invest in infrastructure assets primarily being in the road sector in India. The Trust's road projects are eligible infrastructure projects under the InvIT Regulations and held through special purpose vehicles ("Project SPVs" together as "Project SPV Group"). The Trust's portfolio comprises of ten road projects as listed below:-

The Trust had acquired the projects at Sr no 1 to 9 from the Sponsor which are road infrastructure projects developed on DBFOT basis. The SPV at Sr. no 10 has been added to portfolio from 02.04.2022.

Sr. No.	**Project SPV Name**
1	AE Tollway Limited (AETL)
2	CG Tollway Limited (CGTL)
3	IRB Hapur Moradabad Tollway Limited (IRBHMTL)
4	IRB Westcoast Tollway Limited (IRBWTL)
5	Kishangarh Gulabpura Tollway Limited (KGTL)
6	Kaithal Tollway Limited (KTL)
7	Solapur Yedeshi Tollway Limited (SYTL)
8	Udaipur Tollway Limited (UTL)
9	Yedeshi Aurangabad Tollway Limited (YATL)
10	Palsit Dankuni Tollway Private Limited(PDTPL) (w.e.f. 02.04.2022)

The registered office of the Investment Manager is Off No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai Mumbai 400076.

The financial statements were authorised for issue in accordance with resolution passed by the board of directors of the Investment manager on May 12, 2023.

The Trust has been listed on NSE w.e.f. 03.04.2023

2. Basis of preparation

The financial statements of IRB Infrastructure Trust have been prepared in accordance with Indian Accounting Standards as defined in Rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015, as amended, prescribed under Section 133 of the Companies Act, 2013 ("Ind AS") read with SEBI (Infrastructure Investment Trusts) Regulations, 2014, as amended and the circulars issued thereunder ("InvIT Regulations") and other accounting principles generally accepted in India.

The financial statements have been prepared on an accrual basis and under the historical cost convention except for certain financial assets and liabilities (refer accounting policy regarding financial instruments) which have been measured at fair value.

The financial statements are presented in Indian Rupee ('INR') which is the functional currency of the Trust and all values are rounded to the nearest millions, except when otherwise indicated. Wherever the amount represented '0' (zero) construes value less than Rupees five thousand.

3. Summary of significant accounting policies

3.1. Use of estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent liabilities at the date of the financial statements and the results of operations during the reporting period end. Although these estimates are based upon management's best knowledge of current events and actions, actual results could differ from these estimates.

3.2. Current versus non-current classification

The Trust presents assets and liabilities in the balance sheet based on current/ non-current classification.
An asset is treated as current when it is:
- Expected to be realised or intended to be sold or consumed in normal operating cycle
- Held primarily for the purpose of trading

- Expected to be realised within twelve months after the reporting period, or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.
All other assets are classified as non-current.

A liability is current when:
- It is expected to be settled in normal operating cycle
- It is held primarily for the purpose of trading
- It is due to be settled within twelve months after the reporting period, or
- There is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period.

All other liabilities are classified as non-current.

Deferred tax assets and liabilities are classified as non-current assets and liabilities respectively.

The operating cycle is the time between the acquisition of assets for processing and their realisation in cash and cash equivalents. The Trust has identified twelve months as its operating cycle.

3.3. Revenue recognition

Revenue is recognised to the extent that it is probable that the economic benefits will flow to the Trust and the revenue can be reliably measured, regardless of when the payment is being made. Revenue is measured at the transaction price of the consideration received or receivable, taking into account contractually defined terms of payment and excluding taxes or duties collected on behalf of the government.

The specific recognition criteria described below must also be met before revenue is recognised:

Interest income
Revenue is recognised on a time proportion basis taking into account the amount outstanding and the rates applicable. For all debt instruments measured either at amortised cost or at fair value through other comprehensive income, interest income is recorded using the effective interest rate (EIR).

Dividends
Revenue is recognised when the Trust's right to receive the payment is established, which is generally when shareholders approve the dividend.

3.4. Taxes

Current income tax
Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted at the reporting date in the countries where the Trust operates and generates taxable income.

Current income tax relating to items recognised outside the Statement of Profit and Loss is recognised outside the Statement of Profit and Loss (either in other comprehensive income or in equity). Current tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity. Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

Deferred tax

Deferred tax is provided using the liability method on temporary differences between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date.

Deferred tax liabilities are recognised for all taxable temporary differences, except:

- When the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and at the time of the transaction, affects neither the accounting profit nor taxable profit or loss.

- In respect of taxable temporary differences associated with investments in subsidiaries, when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets are recognised for all deductible temporary differences, the carry forward of unused tax credits and any unused tax losses. Deferred tax assets are recognised to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilised, except:

- When the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction affects neither the accounting profit nor taxable profit or loss

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised. Unrecognised deferred tax assets are re-assessed at each reporting date and are recognised to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax relating to items recognised outside statement of profit and loss is recognised outside statement of profit and loss (either in other comprehensive income or in equity).

Deferred tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity. Deferred tax assets and deferred tax liabilities are offset if a

legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

3.5. Goods and Services Tax (GST) paid on acquisition of assets or on incurring expenses

Expenses and assets are recognised net of the amount of goods and service tax paid, except:

When the tax incurred on a purchase of assets or services is not recoverable from the tax authority, in which case, the tax paid is recognised as part of the cost of acquisition of the asset or as part of the expense item, as applicable.

When receivables and payables are stated with the amount of tax included. The net amount of tax recoverable from, or payable to, the tax authority is included as part of receivables or payables in the balance sheet.

3.6. Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of the asset. All other borrowing costs are expensed in the period in which they occur. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of Trusts. Borrowing cost also includes exchange differences to the extent regarded as an adjustment to the borrowing costs.

3.7. Provisions

Provisions are recognised when the Trust has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. When the Trust expects some or all of a provision to be reimbursed, for example, under an insurance contract, the reimbursement is recognised as a separate asset, but only when the reimbursement is virtually certain. The expense relating to a provision is presented in the Statement of Profit and Loss net of any reimbursement.

If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, when appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost.

3.8. Contingent liabilities and contingent assets

A contingent liability is a possible obligation that arises from past events whose existence will be confirmed by the occurrence or non-occurrence of one or more uncertain future events beyond the control of the Trust or a present obligation that is not recognised because it is not probable that an outflow of resources will be required to settle the obligation. A contingent liability also arises in extremely rare cases where there is a

liability that cannot be recognised because it cannot be measured reliably. The Trust does not recognise a contingent liability but discloses its existence in the financial statements.
A contingent asset is not recognised unless it becomes virtually certain that an inflow of economic benefits will arise. When an inflow of economic benefits is probable, contingent assets are disclosed in the financial statements.
Contingent liabilities and contingent assets are reviewed at each balance sheet date.

3.9. Financial instrument

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

Financial assets

Initial recognition and measurement
All financial assets are recognised initially at fair value plus, in the case of financial assets not recorded at fair value through Statement of Profit and Loss, directly attributable transaction cost to the acquisition of the financial asset. Purchases or sales of financial assets that require delivery of assets within a time frame established by regulation or convention in the market place (regular way trades) are recognised on the trade date, i.e., the date that the Trust commits to purchase or sell the asset.

Subsequent measurement
For purposes of subsequent measurement, financial assets are classified in following categories;
- at amortised cost
- at fair value through profit or loss (FVTPL)
- at fair value through other comprehensive income (FVTOCI)

Financial Assets at amortised cost
A financial asset is measured at the amortised cost if both the following conditions are met:
a) The asset is held within a business model whose objective is to hold assets for collecting contractual cash flows, and
b) Contractual terms of the asset give rise on specified dates to cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

This category is the most relevant to the Trust. All the Loans and other receivables under financial assets (except Investments) are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market.

After initial measurement such financial assets are subsequently measured at amortised cost using the effective interest rate (EIR) method. Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The losses arising from impairment are recognised in the Statement of Profit and Loss.

Financial Assets at Fair Value through Statement of Profit and Loss/Other comprehensive income

All investments in scope of Ind AS 109 are measured at fair value. The Trust has investment in Debt oriented mutual Trust which are held for trading, are classified as at FVTPL. The Trust makes such election on an instrument by instrument basis. The classification is made on initial recognition and is irrevocable. The gain/ loss on sale of investments are recognised in the Statement of Profit and Loss.
Instruments included within the FVTPL category are measured at fair value with all changes recognized in the Statement of Profit and Loss.

Derecognition

A financial asset is primarily derecognised (i.e. removed from the Trust's balance sheet) when:
The rights to receive cash flows from the asset have expired, or
The Trust has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Trust has transferred substantially all the risks and rewards of the asset, or (b) the Trust has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Trust has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if and to what extent it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all of the risks and rewards of the asset, nor transferred control of the asset, the Trust continues to recognise the transferred asset to the extent of the Trust's continuing involvement. In that case, the Trust also recognises an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Trust has retained.

3.10. Impairment of assets

Impairment of financial assets

Expected credit losses are recognized for all financial assets subsequent to initial recognition other than financial assets in FVTPL category.

For financial assets other than trade receivables, as per Ind AS 109, the Trust recognizes 12 month expected credit losses for all originated or acquired financial assets if at the reporting date the credit risk of the financial asset has not increased significantly since its initial recognition. The expected credit losses are measured as lifetime expected credit losses if the credit risk on financial assets increases significantly since its initial recognition.

The impairment losses and reversals are recognized in Statement of Profit and Loss.

Impairment of non-financial assets

The Trust assesses, at each reporting date, whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Trust estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs of disposal and its value in use. Recoverable amount is determined for an individual asset unless the asset does not generate cash inflows that are largely independent of those from other assets or Trust's assets. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

Financial liabilities

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss, loans and borrowings, or payables, as appropriate.

All financial liabilities are recognised initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.

The Trust’s financial liabilities include trade and other payables, loans and borrowings.

Subsequent measurement

The measurement of financial liabilities depends on their classification, as described below:

Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through profit or loss. Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Trust that are not designated as hedging instruments in hedge relationships as defined by Ind AS 109.

Gains or losses on liabilities held for trading are recognised in the statement of profit and loss.

Loans and borrowings
This is the category most relevant to the Trust. After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortised cost using the EIR method. Gains and losses are recognised in profit or loss when the liabilities are de-recognised as well as through the EIR amortisation process.

Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included as finance costs in the statement of profit and loss.

De-recognition
A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the de-recognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognised in the statement of profit and loss.

Offsetting of financial instruments
Financial assets and financial liabilities are offset and the net amount is reported in the standalone balance sheet if there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, to realise the assets and settle the liabilities simultaneously.

3.10 Investment in subsidiaries

Investments (equity instruments as well as subordinate debt) in subsidiaries are carried at cost less accumulated impairment losses, if any. Where an indication of impairment exists, the carrying amount of the investment is assessed and written down immediately to its recoverable amount. On disposal of investments in subsidiaries, the difference between net disposal proceeds and carrying amounts are recognised in the Statement of Profit and Loss.

3.11Foreign currencies

The Trust's financial statements are presented in INR, which is also the Trust's functional currency. The Trust does not have any foreign operation and has assessed the functional currency to be INR.

Transactions and balances
Transactions in foreign currencies are initially recorded by the Trust at their respective functional currency spot rates at the date the transaction first qualifies for recognition. Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency spot rates of exchange at the reporting date.

Differences arising on settlement or translation of monetary items are recognised in the statement of profit or loss.

Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates at the dates of the initial transactions.

3.12 Fair value measurement

The Trust measures financial instruments, such as, derivatives at fair value at each balance sheet date.
Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:

► In the principal market for the asset or liability, or
► In the absence of a principal market, in the most advantageous market for the asset or liability.
The principal or the most advantageous market must be accessible by the Trust.
The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.
A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.
The Trust uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.
All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:
► Level 1 — Quoted (unadjusted) market prices in active markets for identical assets or liabilities
► Level 2 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable
► Level 3 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable
For assets and liabilities that are recognised in the financial statements on a recurring basis, the Trust determines whether transfers have occurred between levels in the hierarchy by re-assessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.
The Trust's Management determines the policies and procedures for both recurring fair value measurement, such as derivative instruments and unquoted financial assets measured at fair value, and for non-recurring measurement, such as assets held for distribution in discontinued operations.
At each reporting date, the Management analyses the movements in the values of assets and liabilities which are required to be remeasured or re-assessed as per the Trust's accounting policies. For this analysis, the Management verifies the major inputs applied in the latest valuation by agreeing the information in the valuation computation to contracts and other relevant documents.
The management also compares the change in the fair value of each asset and liability with relevant external sources to determine whether the change is reasonable.
On an annual basis, the Management of Investment Manager presents the valuation results to the Audit Committee and the Trust's independent auditors. This includes a discussion of the major assumptions used in the valuations.
For the purpose of fair value disclosures, the Trust has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy as explained above.
This note summarises accounting policy for fair value. Other fair value related disclosures are given in the relevant notes.
- Disclosures for valuation methods, significant estimates and assumptions (note 28)
- Financial instruments (including those carried at amortised cost) (note 24 and 25)
- Quantitative disclosure of fair value measurement hierarchy (note 24 and 25)

3.13 Contributed Equity

Units are classified as equity. Incremental costs attributable to the issue of units are directly recorded in equity, net of tax.

3.14 Distribution to unit holders

The Trust recognises a liability to make cash distributions to unit holders when the distribution is authorised and a legal obligation has been created. As per the InvIT Regulations, a distribution is authorised when it is approved by the Board of Directors of the Investment Manager. A corresponding amount is recognised directly in equity.

3.15 Cash and cash equivalents

Cash and cash equivalents in the balance sheet comprise cash at banks and on hand and short-term deposits with an original maturity of three months or less, which are subject to an insignificant risk of changes in value.
For the purpose of the statement of cash flows, cash and cash equivalents consist of cash and short-term deposits, as defined above, net of outstanding bank overdrafts as they are considered an integral part of the Trust's cash management.

3.16 Earnings Per Unit (EPU)

Basic earnings per unit are calculated by dividing the net profit for the year attributable to unit holders by the weighted average number of units outstanding during the year.

For the purpose of calculating diluted earnings per unit, the weighted average number of units outstanding during the period are adjusted for the effects of all dilutive potential units.

3.17 Segment Information

The Trust is engaged in to invest in infrastructure assets primarily being in the road sector in India which in the context of Ind AS 108 - Operating Segments is considered as the only segment. The Trust's activities are restricted within India and hence no separate geographical segment disclosure is considered necessary.

3.17 New pronouncements issued but not effective

Ministry of Corporate Affairs ("MCA") notifies new standards or amendments to the existing standards under Companies (Indian Accounting Standards) Rules as issued from time to time. On March 31, 2023, MCA amended the Companies (Indian Accounting Standards) Amendment Rules, 2023, as below:

Ind AS 1: Disclosure of Material Accounting policy information and similar consequential amendment to Ind AS 34.

Ind AS 1: Disclosure of the judgements, apart from those involving estimations, that management has made in the process of applying the entity's accounting policies and that have the most significant effect on the amounts recognised in the financial statements.

Ind AS 8: Definition of Accounting Estimate as "Accounting estimates are monetary amounts in financial statements that are subject to measurement uncertainty". Further amendments to paragraphs delineating Changes to Accounting Estimates.

Ind AS 12: Amendments to taxable temporary difference, initial recognition of asset or liability and Deductible taxable differences.

Ind AS 12: Deferred tax related to assets and liabilities arising from Single Transaction.

Ind AS 107: Information about measurement basis (or bases) for financial instruments to be disclosed as material accounting policy.

Ind AS 109: Amendment to paragraph on reassessment of embedded derivative.

Ind AS 115: Amendments to Appendix 1 which gives there in the major differences, if any, between Indian Accounting Standard (Ind AS) 115 and the corresponding International Financial Reporting Standard (IFRS) 15, Revenue from Contracts with Customers, IFRIC 12, Service Concession Arrangements and SIC 29 Service Concession Arrangements: Disclosures, issued by the International Accounting Standards Board

IRB Infrastructure Trust
Notes to financial statement for the year ended March 31, 2023

(Rs. in Millions)

	As at March 31, 2023	As at March 31, 2022
Note 4 : Financial assets (Non-current)		
4.1 Investments		
A) Investments at cost		
Investments in equity instruments of subsidiaries (unquoted)		
436,500,000 equity shares of AE Tollway Limited	4,365.00	4,365.00
203,500,000 equity shares of CG Tollway Limited	2,035.00	2,035.00
371,500,000 equity shares of IRB Hapur Moradabad Tollway Limited	3,715.00	3,715.00
174,194,303 equity shares of IRB Westcoast Tollway Limited	1,741.94	1,741.94
155,500,000 equity shares of Kishangarh Gulabpura Tollway Limited	1,555.00	1,555.00
328,000,000 equity shares of Kaithal Tollway Limited	3,280.00	3,280.00
98,250,000 equity shares of Solapur Yedeshi Tollway Limited	982.50	982.50
116,800,000 equity shares of Udaipur Tollway Limited	1,168.00	1,168.00
215,757,001 equity shares of Yedeshi Aurangabad Tollway Limited	2,157.57	2,157.57
121,200,000 equity shares of Palshit Dankuni Tollway Private Limited	1,212.00	-
Investments in subsidiaries (unquoted)	**22,212.01**	**21,000.01**
Other equity instruments (unquoted) (FVTOCI)		
B) Investments at cost		
B) Investments in sub debt of subsidiaries (unquoted)		
AE Tollway Limited	10,265.88	10,265.88
CG Tollway Limited	2,727.80	2,727.80
IRB Hapur Moradabad Tollway Limited	9,798.52	9,414.76
IRB Westcoast Tollway Limited	12,203.92	12,203.92
Kishangarh Gulabpura Tollway Limited	2,495.38	1,809.50
Kaithal Tollway Private Limited	4,426.04	4,426.04
Solapur Yedeshi Tollway Limited	4,423.70	4,423.70
Udaipur Tollway Limited	8,338.40	8,338.40
Yedeshi Aurangabad Tollway Limited	16,319.79	16,319.79
Palshit Dankuni Tollway Private Limited	1,213.00	-
Subordinated Debt to Related parties (Interest free)	**72,212.43**	**69,929.79**
Total non-current investments (A + B)	**94,424.44**	**90,929.80**
Aggregate amount of unquoted investments	**94,424.44**	**90,929.80**

(Rs. in Millions)

	As at March 31, 2023	As at March 31, 2022
	-	-
AE Tollway Limited	9,528.41	9,528.41
IRB Westcoast Tollway Limited	4,000.00	4,000.00
Kaithal Tollway Limited	8,471.59	8,471.59
Solapur Yedeshi Tollway Limited	4,000.00	4,000.00
Yedeshi Aurangabad Tollway Limited	4,000.00	4,000.00
Less: Current maturities of loan to related parties	-	-
- Interest free	-	-
Kaithal Tollway Limited	351.69	302.98
Total	**30,351.69**	**30,302.98**

Note 5 : Financial assets (current)

5.1 Investments

Investments at fair value through Profit & Loss

Investments in mutual fund (quoted)

Investments in Mutual Funds (quoted) (FVTPL)	20.08	20.04
(SBI Liquid Fund Direct Growth - March 31,2023 - 3333.09 units)		
	20.08	**20.04**

5.2 Cash and cash equivalent

Balances with banks:		
- In current accounts	6.56	0.25
	6.56	**0.25**

(Rs. in Millions)

	As at March 31, 2023	As at March 31, 2022
5.3 Loans		
(Secured, considered good, unless otherwise stated)		
(Unsecured, considered good, unless otherwise stated)		
Loans to related parties		
AE Tollway Limited	478.89	478.89
IRB Hapur Moradabad Tollway Limited	-	37.26
IRB Westcoast Tollway Limited	2,348.08	1,116.98
Kaithal Tollway Limited	156.71	681.81
Solapur Yedeshi Tollway Limited	24.00	24.00
Udaipur Tollway Limited	1,335.31	214.41
CG Tollway Limited	558.50	316.30
Kishangarh Gulabpura Tollway Limited	-	106.00
Yedeshi Aurangabad Tollway Limited	519.80	517.30
	5,421.29	**3,492.95**
5.4 Other financial assets		
(Unsecured, considered good, unless otherwise stated)		
Interest receivable from others	7,681.04	5,556.27
Other receivables		
- related parties	284.13	54.40
	7,965.17	**5,610.67**
Note 6 : Other current assets		
Duties and taxes receivable	3.30	-
Prepaid expenses	1.18	-
Total	**4.48**	**-**

IRB Infrastructure Trust
Notes to financial statement for the year ended March 31, 2023
Note 7 : Equity

(Rs. in Millions)

	As at March 31 ,2023	As at March 31,2022
I. Unit capital		
a. Issued, subscribed and fully paid up Unit Capital		
Unit capital of Rs. 100 each issued, subscribed and fully paid up		
At the beginning the year	85,504.33	81,688.00
Issued during the year	2,425.00	3,816.33
At the end of the year	**87,929.33**	**85,504.33**

II. Reconciliation of the number of units outstanding and the amount of unit capital:

	As at March 31 ,2023		As at March 31,2022	
	No. of units	Amount in Millions	No. of units	Amount in Millions
At the beginning of the year	85,50,43,265	85,504.33	81,68,80,000	81,688.00
Issued during the year	2,42,50,000	2,425.00	3,81,63,265	3,816.33
At the end of the year	**87,92,93,265**	**87,929.33**	**85,50,43,265**	**85,504.33**

III. Details of Promoter

	As at March 31 ,2023		As at March 31,2022	
	No. of units	%	No. of units	%
IRB Infrastructure Developers Limited	44,84,39,840	51%	43,60,72,332	51%
Anahera Investments Pte Ltd	21,98,23,181	25%	21,37,60,685	25%
Bricklayers Investments Pte Ltd	5,27,57,561	6%	5,13,02,562	6%
Chiswick Investments Pte Ltd	5,27,57,561	6%	5,13,02,562	6%
Stretford End Investments Pte Ltd	5,27,57,561	6%	5,13,02,562	6%
Dangenham Investments Pte Ltd	5,27,57,561	6%	5,13,02,562	6%
Total	**87,92,93,265**	100%	**85,50,43,265**	100%

Note :8 Other Equity

	As at March 31 ,2023	As at March 31,2022
Retained earnings		
At the beginning of the year	5,992.74	4,020.25
Profit/(loss) for the year	3,549.01	1,975.75
Unit issue expenses	(15.33)	(3.26)
Total Other Equity	**9,526.42**	**5,992.74**

(Rs. in Millions)

	As at March 31, 2023	As at March 31, 2022
9 Other financial liabilities		
Other Payable		
- related party	35,778.03	35,168.79
	35,778.03	**35,168.79**
Note 10 : Current financial liabilities		
10.1 Borrowing		
Unsecured loan		
Loan from related parties		
- Interest free	4,872.91	3,607.93
Total	**4,872.91**	**3,607.93**
10.2 Trade Payables		
a) total outstanding dues of micro enterprises and small enterprises	0.01	-
b) Total outstanding dues of creditors other than micro and small enterprises		
- related parties	78.54	80.31
- others	2.80	1.40
Total	**81.35**	**81.71**
Note 11 : Other current liabilities		
Statutory dues payable (including PF, TDS, GST & others)	5.67	1.20
Total	**5.67**	**1.20**

(Rs. in Millions)

	For the year ended March 31, 2023	For the year ended March 31, 2022
Note 12 : Other income		
Interest income on		
Interest income from Related parties	4,221.77	4,200.00
Gain on sale of investment	0.92	0.40
Fair value gain on investments	0.18	0.04
	4,222.87	**4,200.44**
Note 13 : Other expenses		
Rates & taxes	0.60	4.73
Legal and professional fees	54.19	15.49
Payment to auditor (refer note below)	1.63	0.64
Bank charges	0.03	0.03
Miscellaneous expenses	0.36	-
Fair value loss on measurement of other payable	560.53	2,161.31
	617.34	**2,182.21**
Payment to auditor		
- Statutory audit fees	0.29	0.27
Special audit fees	0.80	-
- Limited review fees	0.42	0.36
- Other services (certification fees)	0.42	-
Reimbursement of expenses	0.09	0.01
	2.03	**0.64**

IRB Infrastructure Trust

Notes to financial statement for the year ended March 31, 2023

Note 14 : Earnings per unit (EPU)

The following reflects the income and unit data used in the basic and diluted EPU computations:

(Rs. in Millions)

	For the year ended March 31, 2023	For the year ended March 31, 2022
Profit attributable to unit holders of the Trust for basic & diluted earnings	3,549.01	1,975.75
Weighted average number of unit for basic & diluted EPU* (in Millions)	**87,79,64,498**	**84,29,14,666**
Basic earning per unit (Amount in Rs.)	4.04	2.34
Diluted earning per unit (Amount in Rs.)	4.04	2.34

Note 15 : Capital and other commitments

There are no capital and other commitments as at March 31, 2023. (As on 31.03.2022 Nil)

Note 16 :Contingent liabilities

The Trust has provided Corporate guarantee for the subsidiary companies i.e. SYTL and YATL in respect of the NCDs issued during the FY 2022-23.. (As on 31.03.2022 Nil)

Note 17 : Details of dues to micro and small enterprises as per MSMED Act, 2006

The following details regarding Micro and small Enterprises has been determined to the extent such parties has been identified on the basis of information available with the Trust.

(Rs. in Millions)

Particulars	As at March 31, 2023	As at March 31, 2022
Principal amount remaining unpaid to any supplier as at the period end	0.01	-
Interest due thereon	-	-
Amount of interest paid by the Company in terms of section 16 of the MSMED, along with the amount of the payment made to the supplier beyond the appointed day during the accounting period.	-	-
Amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed day during the period) but without adding the interest specified under the MSMED, 2006	-	-
Amount of interest accrued and remaining unpaid at the end of the accounting period	-	-
The amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues as above are actually paid to the small enterprise for the purpose of disallowance as a deductible expenditure under the MSMED Act, 2006	-	-

a) MSME ageing schedule as at

Particulars	As at March 31, 2023	As at March 31, 2022
MSME disputed Dues	-	-
MSME Undisputed Dues	-	-
Less than 1 year	0.01	-
1-2 Years	-	-
2-3 Years	-	-
More than 3 years	-	-
Total dues to micro and small enterprises as per MSMED Act, 2006	**0.01**	-

b) Ageing of creditors other than micro enterprises and small enterprises as at

Particulars	As at March 31, 2023	As at March 31, 2022
disputed Dues		
Undisputed Dues		
Less than 1 year	50.56	35.28
1-2 Years	30.78	46.43
2-3 Years		
More than 3 years		
Total dues to creditors other than micro enterprises and small enterprises as at	**81.34**	**81.71**
b) out of the above unbilled amount	0.27	0.87

IRB Infrastructure Trust

Notes to financial statement for the year ended March 31, 2023

Note 18 : Operating segment

The Trust is engaged in to invest in infrastructure assets primarily being in the road sector in India which in the context of Ind AS 108 - Operating Segments is considered as the only segment. The Trust's activities are restricted within India and hence no separate geographical segment disclosure is considered necessary.

Note 19 : Other Statutory Information

i) The Trust have not traded or invested in Crypto currency or Virtual Currency during the financial year.

ii) The Trust does not hold benami property and no proceedings under Benami transaction (Prohibition) Act 1988 have been initiated against the Trust.

iii) The Trust does not have any transactions with companies struck off.

iv) The Trust does not have any such transaction which is not recorded in the books of accounts that has been surrendered or disclosed as income during the year in the tax assessments under the Income Tax Act, 1961 (such as, search or survey or any other relevant provisions of the Income Tax Act, 1961.

v) The Trust did not have any long-term contracts including derivative contract for which there were any material foreseeable losses.

vi) The Trust has not declared a wilfull defaulter by any bank / financial institution or any other lender during the year.

Note 20 : Loans or advances to specified persons

(Rs. in Millions)

Types of borrower	As at March 31, 2023		As at March 31, 2022	
	Amount outstanding*	% of Total ^	Amount outstanding*	% of Total ^
Promoters	-	-	-	-
Directors	-	-	-	-
KMPs	-	-	-	-
Related Parties	35,772.98	100%	33,795.94	100%
Total aggregate loans	**35,772.98**	**100%**	**33,795.94**	**100%**

* represents loan or advance in the nature of loan

^ represents percentage to the total Loans and Advances in the nature of loan

Note 21 : Particulars in respect of loans and advances in the nature of loans given to subsidiaries as required by Regulation 53(f) of the SEBI (Listing Obligation and Disclosure Requirements) Regulation, 2015

	As at March 31, 2023		As at March 31, 2022	
	Balances outstanding	Maximum balance Outstanding during the year	Balances outstanding	Maximum balance Outstanding during year
AE Tollway Limited	10,007.30	10,007.30	10,007.30	10,007.30
Kaithal Tollway Limited	8,979.99	9,456.38	9,456.38	9,456.38
Kishangarh Gulabpura Tollway Limited	-	106.00	106.00	106.00
Udaipur Tollway Limited	1,335.31	1,335.31	214.41	214.41
CG Tollway Limited	558.50	558.50	316.30	316.30
IRB Hapur Muradabad Tollway Limited	-	-	37.26	37.26
IRB Westcoast Tollway Limited	6,348.08	6,348.08	5,116.98	5,116.98
Solapur Yedeshi Tollway Limited	4,024.00	4,024.00	4,024.00	4,024.00
Yedeshi Aurangabad Tollway Limited	4,519.80	4,519.80	4,517.30	4,517.30

Note 22 : Basis of preparation of financial statements

The Trust has presented these standalone financial information (for all the periods presented there in) in accordance with the requirement of SEBI (Infrastructure Investment Trusts) Regulations, 2014.

Note 23 : Related party transaction

I. List of Related Parties

i. Subsidiaries/ SPVs

AE Tollway Limited
CG Tollway Limited
Hapur Muradabad Tollway Limited
IRB Westcoast Tollway Limited
Kishangarh Gulabpura Tollway Limited
Kaithal Tollway Private Limited
Solapur Yedeshi Tollway Limited
Udaipur Tollway Limited
Yedeshi Aurangabad Tollway Limited
Palsit Dankuni Tollway Private Limited

ii. Parties to the Fund *

IRB Infrastructure Developers Limited (Sponsor and Project Manager)
MMK Toll Road Private Limited (Investment Manager)
IDBI Trusteeship Services Limited (Trustee of the IRB Infrastructure Trust)

iii. Subsidiaries Company of Sponsor and Project Manager

Mhaiskar Infrastructure Private Limited
Modern Road Makers Private Limited
IRB Goa Tollway private Limited

***As per Invit Regulation**

iii. Promoters/ Directors of the parties to the Fund specified in (ii) above

Particulars	**IRB Infrastructure Developers Limited (Sponsor and Project Manage)**	**MMK Toll Road Private Limited (Investment Manager)**	IDBI Trusteeship Services Limited (Trustee of the IRB Infrastructure Trust)
Promoters	Mr. Virendra D. Mhaiskar Mrs. Deepali V. Mhaiskar Virendra D. Mhaiskar HUF	IRB Infrastructure Developers Limited	IDBI Bank Limited Life Insurance Corporation of India General Insurance Corporation of India
Directors	Mr. Virendra D. Mhaiskar, Chairman and Managing Director Mrs. Deepali V. Mhaiskar, Whole Time Director Mr. Jose Tamariz Martel Goncer Mr. Ravindra Dhariwal	Virendra D Mhaiskar Mr. Kunnasagaran Chinniah	Mr. Samuel Joseph Jebaraj Mr. Pradeep Kumar Jain Mrs. Jayashree Vijay Ranade Mr. Pradeep Kumar Malhotra Ms. Baljinder Kaur Mandal
	Independent directors	**Independent directors**	
	Mr. Chandrashekhar S. Kaptan Mr. Sunil H. Talati Mr. Sandeep J. Shah Ms. Priti Savla, Independent Director (wef February 10, 2022) Mrs. Heena Raja, Independent Director (utpo February 10, 2022)	K G Krishnamurthy Ranjana Paranjape	

Associates	**A) Holding Company of Sponsor / Project Manager** IRB Holding Private Limited (Formerly Mhaiskar Ventures Private Limited) **B) Subsidiary Companies of Sponsor /** Ideal Road Builders Private Limited (IRBPL) Mhaiskar Infrastructure Private Limited Modern Road Makers Private Limited Aryan Toll Road Private Limited (ATRPL) ATR Infrastructure Private Limited (ATRFL) IRB Infrastructure Private Limited (IRBFL) Thane Ghodbunder Toll Road Private Limited (TGTRPL) Aryan Infrastructure Investments Private Limited (AIIPL) IRB MP Expressway Private Limited MMK Toll Road Private Limited (MMK) - Entity with Joint Control IRB Kolhapur Integrated Road Development Company Private Limited (IRBK) Aryan Hospitality Private Limited (AHPL) IRB Sindhudurg Airport Private Limited (IRBSA) IRB Goa Tollway Private Limited (IRB Goa) IRB PS Highway Private Limited (IRBPS) IRB Ahmedabad Vadodara Super Express Tollway Private Limited (IRBAV) MRM Mining Private Limited (Subsidiary of MRMPL) GE1 Expressway Private Limited (Formerly known as IRB PP Project Private Limited) VK1 Expressway Private Limited (VK1) - Upto October 12, 2022 IRB Infrastructure Trust - Entity with Joint Control VM7 Expressway Private Limited Palsit Dankuni Tollway Private Limited - Upto April 1, 2022 Pathankot Mandi Highway Private Limited Chittoor Thachur Highway Private Limited Meerut Budaun Expressway Limited - Subsidiary upto October 14, 2022 and Entity with Joint Control w.e.f. October 15,2022 Samakhiyali Tollway Private Limited w.e.f 14.03.2023 **C) Other Associate Companies of Sponsor / Project Manager** 1. Virendra D. Mhaiskar (HUF) 2. VCR Toll Services Private Limited 3. VDM Ventures Private Limited 4. DEUX Farming Films Private Limited 5. IRB Charitable Foundation **Key Managerial personnel of Project SPV Group** (Only with whom Project SPV Group had transactions during the year/ there was balance outstanding at the year end) 1. Ms. Shilpa Todankar 2. Mr. Abhay Phatak (w.e.f. March 09, 2022) 3. Mr. Darshan Sangurdekar 4. Mr. Omprakash Singh 5. Mr. Chandrashekhar Kaptan 6. Mrs. Ranjana Paranjape (w.e.f October 06, 2021) 7. Mrs. Arati Taskar 8. Mr. Sudhir Rao Hoshing 9. Mr. Amitabh Murarka 10. Mr. Jitendra Sharma (upto February 28, 2022) 11. Mrs. Heena Raja (upto October 01, 2021)

IRB Infrastructure Trust
Notes to financial statement for the year ended March 31, 2023

II) Related party transaction during the year

(Rs. in Millions)

Sr. No.	Particulars	Relation	Year ended March 31, 2023	Year ended March 31, 2022
1	**Equity Investment**		**1,212.00**	**615.00**
	IRB Hapur Muradabad Tollway Limited	Subsidiary	-	615.00
	Palshit Dankuni Tollway Private Limited	Subsidiary	1,212.00	-
2	**Subordinated Debt**		**2,282.64**	**2,264.49**
	CG Tollway Limited	Subsidiary	-	240.30
	IRB Hapur Muradabad Tollway Limited	Subsidiary	383.76	1,765.00
	IRB Westcoast Tollway Limited	Subsidiary	-	-
	Kishangarh Gulabpura Tollway Limited	Subsidiary	685.88	-
	Udaipur Tollway Limited	Subsidiary	-	259.19
	Palshit Dankuni Tollway Private Limited	Subsidiary	1,213.00	-
3	**Long term loan (Interest free)**		**48.71**	**48.71**
	Kaithal Tollway Limited	Subsidiary	48.71	48.71
4	**Short Term Loan given**		**2,643.20**	**1,682.67**
	AE Tollway Limited	Subsidiary	-	231.30
	IRB Hapur Muradabad Tollway Limited	Subsidiary	46.50	33.76
	IRB Westcoast Tollway Limited	Subsidiary	1,231.10	158.00
	Kaithal Tollway Limited	Subsidiary	-	502.40
	Solapur Yedeshi Tollway Limited	Subsidiary	-	4.00
	Udaipur Tollway Limited	Subsidiary	1,120.90	214.41
	CG Tollway Limited	Subsidiary	242.20	314.30
	Kishangarh Gulabpura Tollway Limited	Subsidiary	-	76.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	2.50	148.50
5	**Short Term Loan repaid**		**525.10**	**-**
	IRB Hapur Muradabad Tollway Limited	Subsidiary	-	-
	Kaithal Tollway Limited	Subsidiary	525.10	-
	Kishangarh Gulabpura Tollway Limited	Subsidiary	-	-
6	**Unit Capital Issued**		**1,236.75**	**1,946.33**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	1,236.75	1,946.33
7	**Interest income**		**4,221.77**	**4,200.00**
	Solapur Yedeshi Tollway Limited	Subsidiary	560.00	560.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	581.77	560.00
	Kaithal Tollway Limited	Subsidiary	1,186.02	1,186.02
	IRB Westcoast Tollway Limited	Subsidiary	560.00	560.00
	AE Tollway Limited	Subsidiary	1,333.98	1,333.98

IRB Infrastructure Trust
Notes to financial statement for the year ended March 31, 2023

II) Related party transaction during the year

8	**Inestment Management Fees**		**56.52**	**42.48**
	MMK Toll Road Pvt Limited	Investment Manager	56.52	42.48
9	**Expenses incurred on behalf of others**		**358.05**	**0.89**
	AE Tollway Limited	Subsidiary	1.11	-
	CG Tollway Limited	Subsidiary	48.45	-
	Kishangarh Gulabpura Tollway Limited	Subsidiary	194.00	-
	IRB Hapur Muradabad Tollway Limited	Subsidiary	32.63	-
	IRB Westcoast Tollway Limited	Subsidiary	7.61	-
	Udaipur Tollway Limited	Subsidiary	16.08	0.89
	Solapur Yedeshi Tollway Limited	Subsidiary	3.78	-
	Yedeshi Aurangabad Tollway Limited	Subsidiary	8.69	-
	Kaithal Tollway Limited	Subsidiary	0.01	-
	Palsit Dankuni Tollway Private Limited	Subsidiary	45.60	-
	MMK Toll Road Pvt Limited	Investment Manager	0.08	-
10	**Reimbursement received on expenses incurred on behalf of others**	-	**128.32**	**-**
	AE Tollway Limited	Subsidiary	1.10	
	CG Tollway Limited	Subsidiary	1.10	
	Kishangarh Gulabpura Tollway Limited	Subsidiary	22.68	
	IRB Hapur Muradabad Tollway Limited	Subsidiary	9.73	
	IRB Westcoast Tollway Limited	Subsidiary	7.77	
	Udaipur Tollway Limited	Subsidiary	2.95	
	Solapur Yedeshi Tollway Limited	Subsidiary	27.89	
	Yedeshi Aurangabad Tollway Limited	Subsidiary	11.02	
	Kaithal Tollway Limited	Subsidiary	0.01	
	Palsit Dankuni Tollway Private Limited	Subsidiary	44.06	
11	**Unsecured Loan received**		**1,532.48**	**4,759.00**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	1,532.48	4,759.00
12	**Unsecured Loan paid**		**267.50**	**4,828.83**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	267.50	4,828.83
13	**Expenses incurred on our behalf of (reimbursement)**		**-**	**1.77**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	-	1.77
14	**Other Payable**		**609.23**	**2,210.02**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	560.52	2,161.31
	Mhaiskar Infrastructure Private Limited	Subsidiaries Company of Sponsor and Project Manager	48.71	48.71
15	**Trustee Fees**		**2.53**	**0.38**
	IDBI Trusteeship Services Limited	Trustee	2.53	0.38

IRB Infrastructure Trust
Notes to financial statement for the year ended March 31, 2023

III) Related party outstanding balances

(Rs. in Millions)

Sr. No.	Particulars	Relation	As on March 31,2023	As on March 31,2022
1	**Equity Investment**		**22,212.01**	**21,000.01**
	AE Tollway Limited	Subsidiary	4,365.00	4,365.00
	CG Tollway Limited	Subsidiary	2,035.00	2,035.00
	IRB Hapur Muradabad Tollway Limited	Subsidiary	3,715.00	3,715.00
	IRB Westcoast Tollway Limited	Subsidiary	1,741.94	1,741.94
	Kishangarh Gulabpura Tollway Limited	Subsidiary	1,555.00	1,555.00
	Kaithal Tollway Limited	Subsidiary	3,280.00	3,280.00
	Solapur Yedeshi Tollway Limited	Subsidiary	982.50	982.50
	Udaipur Tollway Limited	Subsidiary	1,168.00	1,168.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	2,157.57	2,157.57
	Palshit Dankuni Tollway Private Limited	Subsidiary	1,212.00	-
2	**Subordinated Debt**		**72,212.43**	**69,929.79**
	AE Tollway Limited	Subsidiary	10,265.88	10,265.88
	CG Tollway Limited	Subsidiary	2,727.80	2,727.80
	IRB Hapur Muradabad Tollway Limited	Subsidiary	9,798.52	9,414.76
	IRB Westcoast Tollway Limited	Subsidiary	12,203.92	12,203.92
	Kishangarh Gulabpura Tollway Limited	Subsidiary	2,495.38	1,809.50
	Kaithal Tollway Limited	Subsidiary	4,426.04	4,426.04
	Solapur Yedeshi Tollway Limited	Subsidiary	4,423.70	4,423.70
	Udaipur Tollway Limited	Subsidiary	8,338.40	8,338.40
	Yedeshi Aurangabad Tollway Limited	Subsidiary	16,319.79	16,319.79
	Palshit Dankuni Tollway Private Limited	Subsidiary	1,213.00	-
3	**Long term loan (Interest bearing)**		**30,000.00**	**30,000.00**
	AE Tollway Limited	Subsidiary	9,528.41	9,528.41
	IRB Westcoast Tollway Limited	Subsidiary	4,000.00	4,000.00
	Kaithal Tollway Limited	Subsidiary	8,471.59	8,471.59
	Solapur Yedeshi Tollway Limited	Subsidiary	4,000.00	4,000.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	4,000.00	4,000.00
4	**Long term loan (Interest free)**		**351.69**	**302.98**
	Kaithal Tollway Limited	Subsidiary	351.69	302.98
5	**Short Term Loan**		**5,421.29**	**3,492.95**
	AE Tollway Limited	Subsidiary	478.89	478.89
	IRB Hapur Muradabad Tollway Limited	Subsidiary	-	37.26
	IRB Westcoast Tollway Limited	Subsidiary	2,348.08	1,116.98
	Kaithal Tollway Limited	Subsidiary	156.71	681.81
	Solapur Yedeshi Tollway Limited	Subsidiary	24.00	24.00
	Udaipur Tollway Limited	Subsidiary	1,335.31	214.41
	Yedeshi Aurangabad Tollway Limited	Subsidiary	519.80	517.30
	CG Tollway Limited	Subsidiary	558.50	316.30
	Kishangarh Gulabpura Tollway Limited	Subsidiary	-	106.00
6	**Other Payable**		**35,776.26**	**35,167.02**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	32,095.57	31,535.05
	Mhaiskar Infrastructure Private Limited	Subsidiaries Company of Sponsor and Project	351.69	302.98
	Modern Road Makers Private Limited	Subsidiaries Company of Sponsor and Project	1,784.13	1,784.13
	IRB Goa Tollway private Limited	Subsidiaries Company of Sponsor and Project Manager	1,544.86	1,544.86
7	**Other payable (Reimbursement of Expenses incurred on our behalf)**		**-**	**-**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	1.77	1.77

IRB Infrastructure Trust

Notes to financial statement for the year ended March 31, 2023

8	**Other Receivable**		**284.05**	**-**
	Solapur Yedeshi Tollway Limited	Subsidiary	4.89	29.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	8.17	10.50
	IRB Westcoast Tollway Limited	Subsidiary	13.76	13.92
	Udaipur Tollway Limited	Subsidiary	14.11	0.99
	AE Tollway Limited	Subsidiary	0.01	-
	CG Tollway Limited	Subsidiary	47.35	-
	Kishangarh Gulabpura Tollway Limited	Subsidiary	171.32	-
	IRB Hapur Moradabad Tollway Limited	Subsidiary	22.90	-
	Kaithal Tollway Limited	Subsidiary	0.00	-
	Palshit Dankuni Tollway Private Limited	Subsidiary	1.54	-
	MMK Toll Road Private Limited	Investment Manager	0.08	
9	**Interest Receivable**		**7,681.04**	**5,556.27**
	Solapur Yedeshi Tollway Limited	Subsidiary	539.90	547.40
	Yedeshi Aurangabad Tollway Limited	Subsidiary	485.27	636.00
	Kaithal Tollway Limited	Subsidiary	2,112.74	1,693.72
	IRB Westcoast Tollway Limited	Subsidiary	1,552.00	992.00
	AE Tollway Limited	Subsidiary	2,991.13	1,687.16
10	**Trade payable**		**78.54**	**80.31**
	MMK Toll Road Pvt Limited	Investment Manager	78.54	80.31
11	**Unsecured Loan / other payable**		**4,872.91**	**3,607.93**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	4,872.91	3,607.93

Note 24 : Fair Values

Financial assets and liabilities

The carrying values of financials instruments of the trust are reasonable and approximations of fair values.

The accounting classification of each category of financial instruments, their carrying amounts and the categories of financial assets and liabilities measured at fair value, are set out below:

(Rs. in Millions)

	Carrying amount	Fair Value	Carrying amount	Fair Value
	As at March 31, 2023	As at March 31, 2023	As at March 31, 2022	As at March 31, 2022
Financial assets				
Financial assets measured at amortised cost				
Loans	35,772.98	35,772.98	33,795.94	33,795.94
Other financial assets	7,965.17	7,965.17	5,610.67	5,610.67
Financial assets measured at fair value through statement of Profit & Loss				
Investments in mutual trusts	20.08	20.08	20.04	20.04
Financial assets measured at amortised cost				
Cash and cash equivalents	6.56	6.56	0.25	0.25
Other Bank balances	-	-	-	-
Financial liabilities				
Financial liabilities measured at amortised cost				
Trade payables	81.35	81.35	81.71	81.71
Borrowings	4,872.91	4,872.91	3,607.93	3,607.93
Other financial liabilities	35,778.03	35,778.03	35,168.79	35,168.79

The management assessed that the fair value of cash and cash equivalents, trade receivables, trade payables, bank overdrafts and other current liabilities approximate their carrying amounts largely due to the short-term maturities of these instruments.

The fair value of the financial assets and liabilities is included at the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.

The discount for lack of marketability represents the amounts that the trust has determined that market participants would take into account when pricing the investments.

The trust is required to present the Statement of total assets at fair value and Statement of total returns at fair value as per SEBI Circular No. CIR/IMD/DF/114/2016 dated October 20, 2016 as a part of these financial statements - Refer Statement of Net assets at fair value and Statement of Total Returns at fair value.

Note 25 : Fair Value Hierarchy

All financial instruments for which fair value is recognised or disclosed are categorised within the fair value hierarchy described as follows, based on the lowest level input that is significant to the fair value measurement as a whole.

Level 1: Quoted (unadjusted) price is active market for identical assets or liabilities

Level 2: Valuation technique for which the lowest level input that has a significant effect on the fair value measurement are observed, either directly or indirectly.

Level 3: Valuation technique for which the lowest level input has a significant effect on the fair value measurement is not based on observable market data.

There were no transfers between Level 1, Level 2 and Level 3 during the year.

The following table presents fair value hierarchy of assets and liabilities measured at fair value on a recurring basis as of March 31, 2023:

(Rs. in Millions)

	As at March 31, 2023	Fair value measurement at end of the reporting year using		
		Level 1	Level 2	Level 3
Assets				
Loans	35,772.98	-	-	35,772.98
Cash and cash equivalents	6.56			6.56
Other Financial assets	7,965.17	-	-	7,965.17
Investments in mutual fund (Quoted)	20.08	20.08	-	-
Liabilities				
Trade payable	81.35	-	-	81.35
Other financial liabilities	35,778.03	-	-	35,778.03
Borrowings	4,872.91			4,872.91

The following table presents fair value hierarchy of assets and liabilities measured at fair value on a recurring basis as of March 31, 2022:

(Rs. in Millions)

	As at March 31, 2022	Fair value measurement at end of the reporting year using		
		Level 1	Level 2	Level 3
Assets				
Loans	33,795.94	-	-	33,795.94
Other Financial assets	5,610.67	-	-	5,610.67
Investments in mutual fund (Quoted)	20.04	20.04	-	-
Liabilities				
Trade payable	81.71	-	-	81.71
Other financial liabilities	35,168.79	-	-	35,168.79

Note 26 : Financial risk management objectives and policies

The trust's risk management policies are established to identify and analyse the risks faced by the trust, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the trust's activities.

The Board of Directors of Investment Manager have overall responsibility for the establishment and oversight of the trust's risk management framework.

In performing its operating, investing and financing activities, the trust is exposed to the Credit risk, Liquidity risk and Market risk.

a. Market Risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: interest rate risk, currency risk and other price risk, such as equity price risk and commodity risk. Financial instruments affected by market risk include loans borrowings and deposits.

Credit risk

Credit risk is the risk that a counter party will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The trust is exposed to credit risk from its investing activities including loans to subsidiaries, deposits with banks and other financial instruments. As at March 31, 2023, the credit risk is considered low since substantial transactions of the trust are with its subsidiaries.

Interest Rate Risk

Interest rate risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The trust's exposure to the risk of changes in market interest rates relates primarily to the trust's long-term debt obligations with floating interest rates.

c. Liquidity risk

Liquidity risk is the risk that the trust may not be able to meet its present and future cash and collateral obligations without incurring unacceptable losses. The trust's objective is to, at all times maintain optimum levels of liquidity to meet its cash and collateral requirements.

The trust closely monitors its liquidity position and deploys a robust cash management system. It maintains adequate sources of financing including debt and overdraft from banks at an optimised cost.

The liquidity risk is managed on the basis of expected maturity dates of the financial liabilities. The average credit period taken to settle trade payables is about 30 to 90 days. The other payables are with short-term durations. The carrying amounts are assumed to be a reasonable approximation of fair value. The following table analyses financial liabilities by remaining contractual maturities:

(Rs. in Millions)

March 31, 2023	**On demand**	**Less than 3 months**	**Less than 1 year**	**1 to 5 years**	**> 5 years**	**Total**
Borrowings	-		4,872.91		-	**4,872.91**
Other financial liabilities			-	35,778.03		**35,778.03**
Trade payables	-	0.01	50.56	30.78	-	**81.35**
Total	**-**	**0.01**	**4,923.47**	**35,808.80**	**-**	**40,732.29**

March 31, 2022	**On demand**	**Less than 3 months**	**Less than 1 year**	**1 to 5 years**	**> 5 years**	**Total**
Borrowings	-		3,607.93		-	**3,607.93**
Other financial liabilities			-	35,168.79		**35,168.79**
Trade payables	-	-	35.28	46.43	-	**81.71**
Total	**-**	**-**	**3,643.21**	**35,215.22**	**-**	**38,858.44**

At present, the trust does expects to repay all liabilities at their contractual maturity. In order to meet such cash commitments, the operating activity is expected to generate sufficient cash inflows.

Note 27 : Capital management

Capital includes equity attributable to the equity holders to ensure that it maintains an efficient capital structure and healthy capital ratios in order to support its business and maximise shareholder value. The trust manages its capital structure and makes adjustments to it, in light of changes in economic conditions or its business requirements. To maintain or adjust the capital structure, the trust may adjust the distribution of cash flow of return capital to shareholders or issue new shares. No changes were made in the objectives, policies or processes during the year ended March 31, 2023
The trust monitors capital using a gearing ratio, which is net debt divided by total capital plus net debt. Net debt is calculated as loans and borrowings less cash and cash equivalents.

(Rs. in Millions)

	As at March 31, 2023	As at March 31, 2022
Borrowings	4,872.91	3,607.93
Less: cash and cash equivalents	(6.56)	(0.25)
Net debt (A)	**4,866.35**	**3,607.69**
Unit capital	87,929.33	85,504.33
Other equity	9,526.42	5,992.74
Total equity (B)	**97,455.75**	**91,497.07**
Capital and net debt C = A + B	**1,02,322.10**	**95,104.76**
Gearing ratio (%) (C / A)	**4.76%**	**3.79%**

In order to achieve this overall objective, the trust's capital management, amongst other things, aims to ensure that it meets financial covenants attached to the interest-bearing loans and borrowings that define capital structure requirements. Breaches in meeting the financial covenants would permit the bank to immediately call loans and borrowings. There have been no breaches in the financial covenants of any interest-bearing borrowings in the current year.

Note 28 : Significant accounting judgement, estimates and assumptions

The preparation of the trust's financial statements requires management to make judgments, estimates and assumptions that affect the reported amounts of revenue, expenses, assets and liabilities and the actrusting disclosures and the disclosure of contingent liabilities. Uncertainty about these assumptions and estimates could result in out comes that require a material adjustment to the carrying amount of assets or liabilities affected in future periods.

Judgement

In the process of applying the trust’s accounting policies, management has made the judgement, which have the most significant effect on the amounts recognised in the financial statements.

Classification of unit holders trusts

Under the provisions of the InvIT Regulations, trust is required to distribute to Unit holders not less than ninety percent of the net distributable cash flows of trust for each financial year. Accordingly, a portion of the unit holders’ trusts contains a contractual obligation of the trust to pay to its Unit holders cash distributions. The Unit holder's trusts could therefore have been classified as compound financial instrument which contain both equity and liability components in accordance with Ind AS 32-Financial Instruments: Presentation.
However, in accordance with SEBI Circulars(No.CIR/IMD/DF/114/2016 dated 20-Oct-2016 and No.CIR/IMD/DF/127/2016 dated 29-Nov-2016) issued under the InvIT Regulations, the unit holders’ trusts have been classified as equity in order to comply with the mandatory requirements of Section H of Annexure A to the SEBI Circular dated 20-Oct-2016 dealing with the minimum disclosures for key financial statements. In line with the above, the income distribution payable to unit holders is recognized as liability when the same is approved by the Investment Manager.

Estimates and assumptions

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities or fair value disclosures within the next financial year, are described below. The trust based its assumptions and estimates on parameters available when the financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising that are beyond the control of the trust. Such charges are reflected in the assumptions when they occur.

Fair valuation and disclosures

SEBI Circulars issued under the InvIT Regulations required is diclosures relating to net assets at fair value and total returns at fair value. In estimating the fair value of investments in subsidiaries (which constitute substantial portion of the net assets), the Trust engages independent qualified external valuers to perform the valuation. The management works closely with the valuers to establish the appropriate valuation techniques and inputs to the model. The management reports the valuation report and findings to the Board of the Investment Manager half yearly to explain the cause of fluctuations in the fair value of the road projects. The inputs to the valuation models are taken from observable markets where possible, but where this is not feasible, a degree of judgement is required in establishing fair values. Judgements include considerations of inputs such as WACC, Tax rates, Inflation rates etc. Changes in assumptions about these factors could affect the fair value. (refer note 24 for details).

Impairment of non-financial assets

Non-financial assets of the trust primarily comprise of investments in subsidiaries, Impairment exists when the carrying value of an asset or cash generating unit exceeds its recoverable amount, which is the higher of its fair value less costs of disposal and its value in use. The recordable amounts for the investments in subsidiaries are based on value in use of the underlying projects. The value in use calculation is based on a DCF model. The cash flows are derived from budgets / forecasts over the life of the projects.

Note 29 : Investment Manager Fees

Pursuant to the terms of the Investment Management Agreement, the fees will be paid to the Investment Manager for the services provided by it ("Management Fees"). The Management Fees have been revised for the Financial Year with the approval of the Unitholders, where the votes cast by Unitholders so entitled and voting in favor of a resolution are not less than one-and-a-half times the votes cast against such resolution. Pursuant to a resolution of the Unitholders, the Management Fees for the Financial Year 2023 has been revised to Rs.47.70 millions

Note 30 : Taxes

In accordance with section 10 (23FC) of the Income Tax Act, the income of business trust in the form of interest received or receivable from Project SPV is exempt from tax. Accordingly, the trust is not required to provide any current tax liability. Further, deferred tax assets on carry forward losses is not being created since there is no virtual certainty of reversal of the same in the near future.

Note 31

On April 7, 2022, the Trust has executed arrangement with the Sponsor for implementation of Palsit Dankuni Tollway Private Limited ('SPV') by the Trust and accordingly, the project is being executed by the SPV and the Trust.

Note 32 : Events after reporting period

There is no subsequent event after the reporting period which requires adjustments to the financial statements.

Note 33 : Previous period comparatives

Previous period's figures have been regrouped/reclassified, wherever necessary, to confirm to current period's classification.

Note 34 : Subsequent Events

The Trust has been listed on NSE w.e.f. 03.04.2023

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

Place: Mumbai
Date : 12.05.2023

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

Place: Mumbai
Date : 12.05.2023

INDEPENDENT AUDITOR'S REPORT

To the Unit Holders of IRB Infrastructure Trust

REPORT ON THE AUDIT OF THE STANDALONE IND AS FINANCIAL STATEMENTS

OPINION

We have audited the accompanying standalone financial statements of IRB Infrastructure Trust ("the InvIT" or "the Trust"), which comprise the Balance Sheet as at 31 March 2022, the Statement of Profit and Loss including Other Comprehensive Income, the Statement of Cash Flows and the Statement of Changes in Unit Holders' Equity and Statement of Total Returns at fair value for the year ended 31 March 2022 ("the financial period"), the Statement of Net Assets at fair value as at 31 March 2022, and Notes to the Standalone Financial Statements including a Summary of Significant Accounting Policies and Other Explanatory Information (hereinafter referred to as "the standalone financial statements").

In our opinion and to the best of our information and according to the explanations given to us, the aforesaid Standalone Financial Statements give the information required by the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time including any guidelines and circulars issued thereunder (together referred to as the "SEBI InvIT Regulations") in the manner so required and give a true and fair view in conformity with the Indian Accounting Standards prescribed under rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015, as amended ("Ind AS") and other accounting principles generally accepted in India, of the State of Affairs of the Trust as at 31 March 2022, its **Profit** including other Comprehensive Income, its Cash Flows, changes in Unit holders' Equity and the Total Returns at Fair Value for the year ended 31 March 2022 and the Net Assets at fair value as at 31 March 2022.

BASIS FOR OPINION

We conducted our audit of the Standalone Financial Statements in accordance with the Standards on Auditing ("SAs") issued by the Institute of Chartered Accountants of India. Our responsibilities under those Standards are further described in the Auditor's Responsibilities for the Audit of the Standalone Financial Statements section of this report. We are independent of the Trust in accordance with the code of ethics issued by the Institute of Chartered Accountants of India together with the ethical requirements that are relevant to our audit of the Standalone Financial Statements under the provisions of the SEBI InvIT Regulations and we have fulfilled our other ethical responsibilities in accordance with these requirements and the Code of Ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on the Standalone Financial Statements.

KEY AUDIT MATTERS

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the Standalone Financial Statements of the financial period. These matters were addressed in the context of our audit of the Standalone Financial Statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. We have determined the matters described below to be the key audit matters to be communicated in our report.

PARTICULARS	HOW THEY WERE ADDRESSED IN OUR AUDIT
1. <u>Loss on fair value measurement of other payable / deferred consideration payable to IRB Group.</u> Pursuant to settlement of IRB Infrastructure Trust by IRB Infrastructure Developers Limited (Sponsor), as a Private INVIT, the Trust has entered into Debt Novation Agreements (DNA). As per the terms of DNA, in consideration of assets taken over in 9 SPVs, Trust has issued units and agreed to transfer to the Sponsor, the claim amounts when and to the extent the same are eventually received by Project SPVs, on account of Sponsor Claims. Such Sponsor Claims shall be lodged after obtaining COD by respective SPVs. The amount realizable against claims has been estimated by the valuers appointed by the Management based on the weighted average of probabilities of realization of such claims. Based on the fair value of liability as estimated by the valuers, a resultant impact in the value of liability has been recognized under the head 'Loss on fair value measurement of other payable'.	• We reviewed the Placement Memorandum filed with SEBI and the consequential legal documentation entered into by the Trust, including inter alia the Debt Novation Agreements and their reflection in the underlying SPVs. • We have reviewed the methodology adopted by the valuer in deriving the value including the assumptions made. • We assessed the estimates of Fair Value provided in the Valuation Report and realizability of claims as indicated therein. • We also reviewed the reasonableness of the variables applied in the said computation. • Based on the above, the fair value of liability to the Sponsor, as estimated by the valuer, taking into consideration the weighted average of probabilities of realization has been validated.
2. <u>Impairment Testing</u> The Group has toll collection rights as intangible assets pursuant to the concession agreement. The carrying value of these rights acquired under BOT basis is being compared to the recoverable value (which is value in use in the instant case) thereof to ascertain if there is any impairment. The process involves estimating the value in use of the asset which is determined by forecasting and discounting future cash flows. The same is sensitive to changes in discount rate, traffic growth rates, toll growth rates etc. The determination of the recoverable amount of the toll collection right involves significant judgment due to inherent uncertainty in the assumptions supporting the recoverable amount of these rights. Accordingly, the evaluation of impairment of toll collection rights has been determined as a Key Audit Matter.	• We evaluated management's assessment on impairment for intangible assets under development and intangible assets – toll collection rights by testing the assumptions and methodologies used by the Management. • Referred to valuation reports and Traffic Growth Study Reports and determined reasonableness of future toll revenue. • Evaluated the potential changes in major components as compared to previous year vis-à-vis actual performance in order to evaluate whether the inputs and assumptions used in the cash flow forecasts were suitable. • Assessed the appropriateness of the weighted average cost of capital used in determining recoverable amount. • Performed sensitivity analysis of key assumptions used in valuation. • Tested the arithmetical accuracy of the model.

INFORMATION OTHER THAN THE STANDALONE FINANCIAL STATEMENTS AND AUDITOR'S REPORT THEREON

The Board of Directors of Investment Manager is responsible for the preparation of the other information. The other information comprises the information included in the Report of Investment Manager including annexures to Investment Manager's Report and other information as required to be given by SEBI InvIT Regulations, but does not include the standalone financial statements and our report thereon.

Our opinion on the standalone financial statements does not cover the other information and we do not express any form of assurance conclusion thereon. In connection with our audit of the standalone financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the standalone financial statements or our knowledge obtained during the course of our audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

RESPONSIBILITIES OF THE BOARD OF DIRECTORS OF INVESTMENT MANAGER FOR THE STANDALONE FINANCIAL STATEMENTS

The Board of Directors of Investment Manager is responsible for the preparation of these Standalone Financial Statements that give a true and fair view of the financial position as at 31 March 2022, financial performance including other comprehensive income, cash flows, changes in unit holders' equity and total returns at fair value for the year ended 31 March 2022 and the net assets at fair value as at 31 March 2022 in accordance with the accounting principles generally accepted in India, including the Indian Accounting Standards specified under Rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended and relevant rules issued thereunder read with the SEBI InvIT Regulations. This responsibility also includes maintenance of adequate accounting records in accordance with the provisions of the SEBI InvIT Regulations for safeguarding of the assets of the Trust and for preventing and detecting frauds and other irregularities; selection and application of appropriate accounting policies; making judgements and estimates that are reasonable and prudent; and for ensuring the accuracy and completeness of accounting records, relevant to the preparation and presentation of the Standalone Financial Statements that give a true and fair view and are free from material misstatement, whether due to fraud and error.

In preparing the Standalone Financial Statements, the Board of Directors of Investment Manager is responsible for assessing the Trust's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors of Investment Manager either intends to liquidate the Trust or to cease operations, or has no realistic alternative but to do so.

The Board of Directors of Investment Manager are also responsible for overseeing the Trust's financial reporting process.

AUDITOR'S RESPONSIBILITY FOR THE AUDIT OF THE STANDALONE IND AS FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance whether the Standalone Financial Statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with SAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the standalone financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations or the override of internal control.

- Obtain an understanding of internal financial control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of such controls.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by Board of Directors of Investment Manager.

- Conclude on the appropriateness of use of the going concern basis of accounting by the Board of Directors of Investment Manager and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Trust's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Trust to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

Materiality is the magnitude of misstatements in the standalone financial statements that, individually or in aggregate, makes it probable that the economic decisions of a reasonably knowledgeable user of the financial statements may be influenced. We consider quantitative materiality and qualitative factors in (i) planning the scope of our

audit work and in evaluating the results of our work; and (ii) to evaluate the effect of any identified misstatements in the financial statements.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the Standalone Financial Statements of the current period and are therefore the key audit matters. We describe these matters in our report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

Based on our audit and as required by SEBI InvIT Regulations, we report that:

a. We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit;

b. The Balance Sheet, the Statement of Profit and Loss, the Statement of Cash Flows, Statement of Changes in Unit Holder's Equity, the Statement of Net Assets at fair value and the Statement of Total Returns at fair value dealt with by this Report are in agreement with the books of account of the Trust; and

c. In our opinion, the aforesaid financial statements comply with the Indian Accounting Standards specified under Rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended.

For Gokhale & Sathe,
Chartered Accountants
Firm Registration No.: 103264W

SD /-
CA Kaustubh Deshpande,
Partner
Membership No. 121011
UDIN:22121011AJFJMR7003
Date: 06th May 2022
Place: Mumbai

IRB Infrastructure Trust
Balance Sheet as at March 31, 2022

(Rs. in Millions)

		Note No.	As at March 31, 2022	As at March 31, 2021
I	**ASSETS**			
(1)	**Non-current assets**			
	Financial assets	4		
	i) Investments	4.1	90,929.80	88,050.31
	ii) Loans	4.2	30,302.98	30,254.28
	Total non-current assets		**1,21,232.78**	**1,18,304.59**
(2)	**Current assets**			
	Financial assets	5		
	i) Investments	5.1	20.04	50.00
	ii) Cash and cash equivalents	5.2	0.25	12.65
	iii) Loans	5.3	3,492.95	1,810.28
	iv) Other financial assets	5.4	5,610.67	2,234.78
	Other current assets	6	-	0.03
	Total current assets		**9,123.92**	**4,107.74**
	TOTAL ASSETS		**1,30,356.70**	**1,22,412.32**
II	**EQUITY AND LIABILITIES**			
	Equity			
	Unit capital	7	85,504.33	81,688.00
	Other equity	8	5,992.74	4,020.25
	Total unit holder's equity		**91,497.07**	**85,708.25**
(1)	**Non-current liabilities**			
	Financial liabilities	9		
	i) Other financial liabilities	9	35,168.79	24,717.75
	Total non- current liabilities		**35,168.79**	**24,717.75**
(2)	**Current liabilities**			
	Financial liabilities	10		
	i) Borrowings	10.1	3,607.93	3,677.76
	ii) Trade payables	10.2		
	a) total outstanding dues of creditors other than micro enterprises and small enterprises		81.71	67.61
	iii Other financial liabilities	10.3	-	8,239.25
	Other Current liabilities	11	1.20	1.70
	Total current liabilities		**3,690.84**	**11,986.32**
	Total liabilities		**38,859.63**	**36,704.08**
	TOTAL EQUITY AND LIABILITIES		**1,30,356.70**	**1,22,412.32**
	Summary of significant accounting policies	3		

See accompanying notes to the financial statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

Place: Mumbai
Date : 06/05/2022

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Shilpa Todankar
Chief Financial officer

Place : Mumbai
Date : 06/05/2022

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

IRB Infrastructure Trust

Statement of Profit and Loss for the year ended March 31, 2022

(Rs. in Millions)

	Note No.	For the year ended March 31, 2022	For the year ended March 31, 2021
Income			
Other income	12	4,200.44	4,203.30
TOTAL INCOME		**4,200.44**	**4,203.30**
Expenses			
Investment Manager Fees		42.48	46.25
Other expenses	13	2,182.21	5.83
TOTAL EXPENSES		**2,224.69**	**52.08**
Profit / (Loss) before tax		**1,975.75**	**4,151.21**
Tax expenses			
Current tax		-	-
Profit / (Loss) after tax (A)		**1,975.75**	**4,151.21**
Other comprehensive income / (loss) for the year (net of tax)			
Re-measurement gains/ (losses) on defined benefit plans (net of taxes)		-	-
Other comprehensive income/(loss) for the year (net of tax) (B)		-	-
Total comprehensive income for the year, net of tax : (A+B)		**1,975.75**	**4,151.21**
Earnings per unit			
Basic		**2.34**	**5.29**
Diluted		**2.34**	**5.29**
Summary of significant accounting policies	3		

See accompanying notes to the financial statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

Place: Mumbai
Date : 06/05/2022

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Shilpa Todankar
Chief Financial officer

Place: Mumbai
Date : 06/05/2022

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

IRB Infrastructure Trust
Statement of changes in Equity for the year ended March 31, 2022

(Rs. in Millions)

	As at March 31, 2022	As at March 31, 2021
a. Unit Capital		
At the beginning of the year	81,688.00	76,582.50
Issued during the year	3,816.33	5,105.50
At the end of the year	**85,504.33**	**81,688.00**
b. Other Equity		
Retained earnings		
At the beginning of the year	4,020.25	(27.16)
Profit for the period	1,975.75	4,151.21
Unit issue expenses	(3.26)	(103.81)
At the end of the year	**5,992.74**	**4,020.25**

Summary of Significant accounting policies (refer note no.3)

See accompanying notes to the financial statements.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

Place: Mumbai
Date : 06/05/2022

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Shilpa Todankar
Chief Financial officer

Place : Mumbai
Date : 06/05/2022

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

IRB Infrastructure Trust

Cash Flow statement for the year ended March 31, 2022

(Rs. in Millions)

Particulars	For the year ended March 31, 2022	For year ended March 31, 2021
Cash flow from operating activities		
Profit / (Loss) before tax	1,975.75	4,151.21
Adjustments to reconcile profit before tax to net cash flows:		
Profit on sale of investments	(0.40)	(0.43)
Interest income on		
- Others	(4,200.00)	(4,200.00)
Operating profit/(loss) before working capital changes	**(2,224.69)**	**(49.22)**
Movement in working capital:		
Increase/(decrease) in trade payables	14.10	40.48
Increase/(decrease) in other financial liabilities	2,211.79	(2,616.69)
Increase/(decrease) in other current liabilities	(0.50)	1.68
(Increase)/decrease in Other current assets	0.03	(0.03)
(Increase)/decrease in loans	(1,682.67)	28,019.39
(Increase)/decrease in Other Financial assets	(3,375.89)	(2,234.78)
Cash generated from/(used in) operations	**(5,057.84)**	**23,160.83**
Direct taxes paid (net of refunds)	-	-
Net cash flows from/(used in) operating activities (A)	**(5,057.84)**	**23,160.83**
Cash flows from investing activities		
Investment in subsidiaries	(615.00)	(1,205.00)
Investment in sub debt of subsidiaries	(2,264.49)	(34,724.37)
Loan given to subsidiaries Long term	(48.71)	(48.71)
Interest received from others	4,200.00	4,200.00
Gain on sale of Investment	0.44	0.43
Purchase of Investment	-	(50.00)
Sale of Investment	29.95	-
Net cash flows from/(used in) investing activities (B)	**1,302.20**	**(31,827.64)**
Cash flow from financing activities		
Other Equity		
Proceeds from issuance of unit capital	3,816.33	5,105.50
Proceeds / Repayment of curent borrowings	(69.83)	3,677.76
Unit Issue Expenses	(3.26)	(103.81)
Net cash flows from/(used in) financing activities (C)	**3,743.24**	**8,679.45**
Net increase/(decrease) in cash and cash equivalents (A+B+C)	**(12.40)**	**12.64**
Cash and cash equivalents at the beginning of the period	12.65	0.01
Cash and cash equivalents at the end of the period (refer 5.2)	**0.25**	**12.65**
Components of cash and cash equivalents		
Cash on hand	-	-
Balances with scheduled banks		
- On Current Account	0.25	12.65
Total Cash and cash equivalents (refer note 5.2)	**0.25**	**12.65**

IRB Infrastructure Trust

Cash Flow statement for the year ended March 31, 2022

Notes:

1. All figures in bracket are outflow.
2. Taxes paid are treated as arising from operating activities and are not bifurcated between investing and financing activities.
3. Reconciliation between opening and closing balances for liabilities arising from financing activities
4. The cash flow statement has been prepared under Indirect Method as per Ind AS 7 "Statement of Cash Flows" as notified under section 133 of the Companies Act, 2013.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

Place: Mumbai
Date : 06/05/2022

Place : Mumbai
Date : 06/05/2022

IRB Infrastructure Trust
DISCLOSURES PURSUANT TO SEBI CIRCULARS
(SEBI Circular No. CIR/IMD/DF/114/2016 dated 20-Oct-2016 and No. CIR/IMD/DF/127/2016 dated 29-Nov-2016

A. Statement of Net Asset at Fair Value

-

	As at March 31, 2022		As at March 31, 2021	
Particulars	**Book value**	**Fair value**	**Book value**	**Fair value**
A. Assets	1,30,356.70	1,36,296.70	1,22,412.32	1,48,712.32
B. Liabilities (at book value)	38,859.63	38,859.63	36,704.08	36,704.08
C. Net Assets (A-B)	91,497.07	97,437.07	85,708.25	1,12,008.25
D. Number of units (in millions)	855.04	855.04	816.88	816.88
E. NAV (C/D) (Amount in Rs.)	**107.01**	**113.96**	**104.92**	**137.12**

B. Statement of total returns at Fair Value

-

Particulars	**For the year ended March 31, 2022**	**For the year ended March 31, 2021**
Total Comprehensive Income (As per the Statement of Profit and Loss)	1,975.75	4,151.21
Add/(less): Other Changes in Fair Value	5,940.00	26,300.00
Comprehensive Income -	**7,915.75**	**30,451.21**

Notes :
Fair value of assets as at March 31, 2020 and other changes in fair value for the year then ended as disclosed in the above tables are derived based on the fair valuation reports issued by the independent valuer appointed under the InvIT Regulations.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

Place: Mumbai
Date : 06/05/2022

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

Place: Mumbai
Date : 06/05/2022

IRB Infrastructure Trust

Notes to financial statements for the year ended March 31, 2022

1. Trust Information and Nature of Operations

IRB Infrastructure Trust (the "Fund" / "Trust") is a trust settled pursuant to the indenture of trust dated August 27, 2019 which is registered under Indian Trust Act, 1882 and under the Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time. The Trust is settled by the Sponsor, IRB Infrastructure Developers Limited ("IRB" or the "Sponsor"), an infrastructure development company in India. The Trustee to the Trust is IDBI Trusteeship Services Limited (the "Trustee"). Investment manager for the Trust is MMK Toll Road Private Limited (the "Investment Manager"). The Trust has received registration certificate from SEBI having registration number IN/InviT/19-20/0012

The Fund has been formed to invest in infrastructure assets primarily being in the road sector in India. The Fund's road projects are eligible infrastructure projects under the InvIT Regulations and held through special purpose vehicles ("Project SPVs" together as "Project SPV Group"). The Fund's portfolio comprises of nine road projects are listed below:-

The Fund had acquired the following projects from the Sponsor which are road infrastructure projects developed on DBFOT basis.

Sr. No.	Project SPV Name
1	AE Tollway Limited (AETL)
2	CG Tollway Limited (CGTL)
3	IRB Hapur Moradabad Tollway Limited (IRBHMTL)
4	IRB Westcoast Tollway Limited (IRBWTL)
5	Kishangarh Gulabpura Tollway Limited (KGTL)
6	Kaithal Tollway Limited (KTL)
7	Solapur Yedeshi Tollway Limited (SYTL)
8	Udaipur Tollway Limited (UTL)
9	Yedeshi Aurangabad Tollway Limited (YATL)

The registered office of the Investment Manager is Off No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai Mumbai 400076.

The financial statements were authorised for issue in accordance with resolution passed by the board of directors of the Investment manager on May 06, 2022.

2. Basis of preparation

The financial statements of IRB Infrastructure Trust have been prepared in accordance with Indian Accounting Standards as defined in Rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015, as amended, prescribed under Section 133 of the Companies Act, 2013 ("Ind AS") read with SEBI (Infrastructure Investment Trusts) Regulations, 2014, as amended and the circulars issued thereunder ("InvIT Regulations") and other accounting principles generally accepted in India.

The financial statements have been prepared on an accrual basis and under the historical cost convention except for certain financial assets and liabilities (refer accounting policy regarding financial instruments) which have been measured at fair value.

The financial statements are presented in Indian Rupee ('INR') which is the functional currency of the Fund and all values are rounded to the nearest lakhs, except when otherwise indicated. Wherever the amount represented '0' (zero) construes value less than Rupees five hundred

3. Summary of significant accounting policies

3.1. Use of estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent liabilities at the date of the financial statements and the results of operations during the reporting period end. Although these estimates are based upon management's best knowledge of current events and actions, actual results could differ from these estimates.

3.2. Current versus non-current classification

The Fund presents assets and liabilities in the balance sheet based on current/ non-current classification.
An asset is treated as current when it is:
- Expected to be realised or intended to be sold or consumed in normal operating cycle
- Held primarily for the purpose of trading
- Expected to be realised within twelve months after the reporting period, or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

All other assets are classified as non-current.

A liability is current when:
- It is expected to be settled in normal operating cycle

- It is held primarily for the purpose of trading
- It is due to be settled within twelve months after the reporting period, or
- There is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period.

All other liabilities are classified as non-current.

Deferred tax assets and liabilities are classified as non-current assets and liabilities.

The operating cycle is the time between the acquisition of assets for processing and their realisation in cash and cash equivalents. The Fund has identified twelve months as its operating cycle.

3.3. Revenue recognition

Revenue is recognised to the extent that it is probable that the economic benefits will flow to the Fund and the revenue can be reliably measured, regardless of when the payment is being made. Revenue is measured at the fair value of the consideration received or receivable, taking into account contractually defined terms of payment and excluding taxes or duties collected on behalf of the government.

The specific recognition criteria described below must also be met before revenue is recognised:

Interest income
Revenue is recognised on a time proportion basis taking into account the amount outstanding and the rates applicable. For all debt instruments measured either at amortised cost or at fair value through other comprehensive income, interest income is recorded using the effective interest rate (EIR).

Dividends
Revenue is recognised when the Fund's right to receive the payment is established, which is generally when shareholders approve the dividend.

3.4. Taxes

Current income tax
Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted at the reporting date in the countries where the Fund operates and generates taxable income.

Current income tax relating to items recognised outside the Statement of Profit and Loss is recognised outside the Statement of Profit and Loss (either in other comprehensive income or in equity). Current tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity. Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

Deferred tax
Deferred tax is provided using the liability method on temporary differences between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date.

Deferred tax liabilities are recognised for all taxable temporary differences, except:
- When the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and at the time of the transaction, affects neither the accounting profit nor taxable profit or loss.

- In respect of taxable temporary differences associated with investments in subsidiaries, when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets are recognised for all deductible temporary differences, the carry forward of unused tax credits and any unused tax losses. Deferred tax assets are recognised to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilised, except:

- When the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction affects neither the accounting profit nor taxable profit or loss

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised. Unrecognised deferred tax assets are re-assessed at each reporting date and are recognised to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax relating to items recognised outside statement of profit and loss is recognised outside statement of profit and loss (either in other comprehensive income or in equity).

Deferred tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity. Deferred tax assets and deferred tax liabilities are offset if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

Sales/value added tax and goods and service tax paid on acquisition of assets or on incurring expenses

Expenses and assets are recognised net of the amount of sales/value added taxes and goods and service tax paid, except:

When the tax incurred on a purchase of assets or services is not recoverable from the tax authority, in which case, the tax paid is recognised as part of the cost of acquisition of the asset or as part of the expense item, as applicable.

When receivables and payables are stated with the amount of tax included. The net amount of tax recoverable from, or payable to, the tax authority is included as part of receivables or payables in the balance sheet.

3.5. Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of the asset. All other borrowing costs are expensed in the period in which they occur. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds. Borrowing cost also includes exchange differences to the extent regarded as an adjustment to the borrowing costs.

3.6. Provisions

Provisions are recognised when the Fund has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. When the Fund expects some or all of a provision to be reimbursed, for example, under an insurance contract, the reimbursement is recognised as a separate asset, but only when the reimbursement is virtually certain. The expense relating to a provision is presented in the Statement of Profit and Loss net of any reimbursement.

If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, when appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost.

3.7. Contingent liabilities and contingent assets

A contingent liability is a possible obligation that arises from past events whose existence will be confirmed by the occurrence or non-occurrence of one or more uncertain future events beyond the control of the Fund or a present obligation that is not recognised because it is not probable that an outflow of resources will be required to settle the obligation. A contingent liability also arises in extremely rare cases where there is a liability that cannot be recognised because it cannot be measured reliably. The Fund does not recognise a contingent liability but discloses its existence in the financial statements.
A contingent asset is not recognised unless it becomes virtually certain that an inflow of economic benefits will arise. When an inflow of economic benefits is probable, contingent assets are disclosed in the financial statements.
Contingent liabilities and contingent assets are reviewed at each balance sheet date.

3.8. Financial instrument

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

Financial assets

Initial recognition and measurement
All financial assets are recognised initially at fair value plus, in the case of financial assets not recorded at fair value through Statement of Profit and Loss, directly attributable transaction cost to the acquisition of the financial asset. Purchases or sales of financial assets that require delivery of assets within a time frame established by regulation or convention in the market place (regular way trades) are recognised on the trade date, i.e., the date that the Fund commits to purchase or sell the asset.

Subsequent measurement
For purposes of subsequent measurement, financial assets are classified in following categories;
- at amortised cost
- at fair value through profit or loss (FVTPL)
- at fair value through other comprehensive income (FVTOCI)

Financial Assets at amortised cost
A financial asset is measured at the amortised cost if both the following conditions are met:
a) The asset is held within a business model whose objective is to hold assets for collecting contractual cash flows, and
b) Contractual terms of the asset give rise on specified dates to cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

This category is the most relevant to the Fund. All the Loans and other receivables under financial assets (except Investments) are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market.

After initial measurement such financial assets are subsequently measured at amortised cost using the effective interest rate (EIR) method. Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The losses arising from impairment are recognised in the Statement of Profit and Loss.

Financial Assets at Fair Value through Statement of Profit and Loss/Other comprehensive income

All investments in scope of Ind AS 109 are measured at fair value. The Fund has investment in Debt oriented mutual fund which are held for trading, are classified as at FVTPL. The Fund makes such election on an instrument by instrument basis. The

classification is made on initial recognition and is irrevocable. The gain/ loss on sale of investments are recognised in the Statement of Profit and Loss.
Instruments included within the FVTPL category are measured at fair value with all changes recognized in the Statement of Profit and Loss.

Derecognition

A financial asset (or, where applicable, a part of a financial asset or part of a the Fund of similar financial assets) is primarily derecognised (i.e. removed from the Fund's balance sheet) when:
The rights to receive cash flows from the asset have expired, or
The Fund has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Fund has transferred substantially all the risks and rewards of the asset, or (b) the Fund has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Fund has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if and to what extent it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all of the risks and rewards of the asset, nor transferred control of the asset, the Fund continues to recognise the transferred asset to the extent of the Fund's continuing involvement. In that case, the Fund also recognises an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Fund has retained.

3.9. Impairment of assets

Impairment of financial assets

Expected credit losses are recognized for all financial assets subsequent to initial recognition other than financial assets in FVTPL category.

For financial assets other than trade receivables, as per Ind AS 109, the Fund recognizes 12 month expected credit losses for all originated or acquired financial assets if at the reporting date the credit risk of the financial asset has not increased significantly since its initial recognition. The expected credit losses are measured as lifetime expected credit losses if the credit risk on financial assets increases significantly since its initial recognition.

The impairment losses and reversals are recognized in Statement of Profit and Loss.

Impairment of non-financial assets

The Fund assesses, at each reporting date, whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Fund estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs of disposal and its value in use. Recoverable amount is determined for an individual asset unless the asset does not generate cash inflows that are largely independent of those from

other assets or Fund's assets. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

Financial liabilities

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss, loans and borrowings, or payables, as appropriate.

All financial liabilities are recognised initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.

The Fund’s financial liabilities include trade and other payables, loans and borrowings including bank overdrafts, financial guarantee contracts and derivative financial instruments.

Subsequent measurement

The measurement of financial liabilities depends on their classification, as described below:

Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through profit or loss. Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Fund that are not designated as hedging instruments in hedge relationships as defined by Ind AS 109.

Gains or losses on liabilities held for trading are recognised in the statement of profit and loss.

Loans and borrowings
This is the category most relevant to the Fund. After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortised cost using the EIR method. Gains and losses are recognised in profit or loss when the liabilities are de-recognised as well as through the EIR amortisation process.

Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included as finance costs in the statement of profit and loss.

De-recognition
A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from

the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the de-recognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognised in the statement of profit and loss.

Offsetting of financial instruments
Financial assets and financial liabilities are offset and the net amount is reported in the standalone balance sheet if there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, to realise the assets and settle the liabilities simultaneously.

3.10 Investment in subsidiaries

Investments (equity instruments as well as subordinate debt) in subsidiaries are carried at cost less accumulated impairment losses, if any. Where an indication of impairment exists, the carrying amount of the investment is assessed and written down immediately to its recoverable amount. On disposal of investments in subsidiaries, the difference between net disposal proceeds and carrying amounts are recognised in the Statement of Profit and Loss.

3.11Foreign currencies

The Fund's financial statements are presented in INR, which is also the Fund's functional currency. The Fund does not have any foreign operation and has assessed the functional currency to be INR.

Transactions and balances
Transactions in foreign currencies are initially recorded by the Fund at their respective functional currency spot rates at the date the transaction first qualifies for recognition. Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency spot rates of exchange at the reporting date.

Differences arising on settlement or translation of monetary items are recognised in the statement of profit or loss.

Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates at the dates of the initial transactions.

3.12 Fair value measurement

The Fund measures financial instruments, such as, derivatives at fair value at each balance sheet date.
Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:
► In the principal market for the asset or liability, or
► In the absence of a principal market, in the most advantageous market for the asset or liability.

The principal or the most advantageous market must be accessible by the Fund.
The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.
A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.
The Fund uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.
All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:
► Level 1 — Quoted (unadjusted) market prices in active markets for identical assets or liabilities
► Level 2 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable
► Level 3 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable
For assets and liabilities that are recognised in the financial statements on a recurring basis, the Fund determines whether transfers have occurred between levels in the hierarchy by re-assessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.
The Fund's Management determines the policies and procedures for both recurring fair value measurement, such as derivative instruments and unquoted financial assets measured at fair value, and for non-recurring measurement, such as assets held for distribution in discontinued operations.
At each reporting date, the Management analyses the movements in the values of assets and liabilities which are required to be remeasured or re-assessed as per the Fund's accounting policies. For this analysis, the Management verifies the major inputs applied in the latest valuation by agreeing the information in the valuation computation to contracts and other relevant documents.
The management also compares the change in the fair value of each asset and liability with relevant external sources to determine whether the change is reasonable.
On an annual basis, the Management of Investment Manager presents the valuation results to the Audit Committee and the Fund's independent auditors. This includes a discussion of the major assumptions used in the valuations.
For the purpose of fair value disclosures, the Fund has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy as explained above.
This note summarises accounting policy for fair value. Other fair value related disclosures are given in the relevant notes.
- Disclosures for valuation methods, significant estimates and assumptions (note 28)
- Financial instruments (including those carried at amortised cost) (note 24 and 25)
- Quantitative disclosure of fair value measurement hierarchy (note 24 and 25)

3.13 Contributed Equity

Units are classified as equity. Incremental costs attributable to the issue of units are directly recorded in equity, net of tax.

3.14 Distribution to unit holders

The Fund recognises a liability to make cash distributions to unit holders when the distribution is authorised and a legal obligation has been created. As per the InvIT Regulations, a distribution is authorised when it is approved by the Board of Directors of the Investment Manager. A corresponding amount is recognised directly in equity.

3.15 Cash and cash equivalents

Cash and cash equivalents in the balance sheet comprise cash at banks and on hand and short-term deposits with an original maturity of three months or less, which are subject to an insignificant risk of changes in value.
For the purpose of the statement of cash flows, cash and cash equivalents consist of cash and short-term deposits, as defined above, net of outstanding bank overdrafts as they are considered an integral part of the Fund's cash management.

3.16 Earnings Per Unit (EPU)

Basic earnings per unit are calculated by dividing the net profit for the year attributable to unit holders by the weighted average number of units outstanding during the year.

For the purpose of calculating diluted earnings per unit, the weighted average number of units outstanding during the period are adjusted for the effects of all dilutive potential units.

3.17 Investment

Investments, which are readily realisable and intended to be held for not more than one year from the date on which such investments are made, are classified as current investments. All other investments are classified as long-term investments.

On initial recognition, all investments are measured at cost. The cost comprises purchase price and directly attributable acquisition charges such as brokerage, fees and duties. If an investment is acquired, or partly acquired, by the issue of shares or other securities, the acquisition cost is the fair value of the securities issued.

Current investments are carried in the financial statements at lower of cost and fair value determined on an individual investment basis. Long-term investments are carried at cost. However, provision for diminution in value is made to recognise a decline other than temporary in the value of the investments.

On disposal of an investment, the difference between its carrying amount and net disposal proceeds is charged or credited to the Statement of profit and loss.

3.18 Segment Information

The Fund is engaged in to invest in infrastructure assets primarily being in the road sector in India which in the context of Ind AS 108 - Operating Segments is considered as the only segment. The Fund's activities are restricted within India and hence no separate geographical segment disclosure is considered necessary.

IRB Infrastructure Trust
Notes to financial statement for year ended March 31, 2022

(Rs. in Millions)

	As at March 31, 2022	As at March 31, 2021
Note 4 : Financial assets (Non-current)		
4.1 Investments		
A) Investments at cost		
Investments in equity instruments of subsidiaries (unquoted)		
436,500,000 equity shares of AE Tollway Limited	4,365.00	4,365.00
203,500,000 equity shares of CG Tollway Limited	2,035.00	2,035.00
310,000,000 equity shares of IRB Hapur Moradabad Tollway Limited	3,715.00	3,100.00
174,194,303 equity shares of IRB Westcoast Tollway Limited	1,741.94	1,741.94
155,500,000 equity shares of Kishangarh Gulabpura Tollway Limited	1,555.00	1,555.00
328,000,000 equity shares of Kaithal Tollway Limited	3,280.00	3,280.00
98,250,000 equity shares of Solapur Yedeshi Tollway Limited	982.50	982.50
116,800,000 equity shares of Udaipur Tollway Limited	1,168.00	1,168.00
215,757,001 equity shares of Yedeshi Aurangabad Tollway Limited	2,157.57	2,157.57
Investments in subsidiaries (unquoted)	**21,000.01**	**20,385.01**
Other equity instruments (unquoted) (FVTOCI)		
B) Investments at cost		
Investments in sub debt of subsidiaries (unquoted)		
AE Tollway Limited	10,265.88	10,265.88
CG Tollway Limited	2,727.80	2,487.50
IRB Hapur Moradabad Tollway Limited	9,414.76	7,649.76
IRB Westcoast Tollway Limited	12,203.92	12,203.92
Kishangarh Gulabpura Tollway Limited	1,809.50	1,809.50
Kaithal Tollway Private Limited	4,426.04	4,426.04
Solapur Yedeshi Tollway Limited	4,423.70	4,423.70
Udaipur Tollway Limited	8,338.40	8,079.21
Yedeshi Aurangabad Tollway Limited	16,319.79	16,319.79
Subordinated debt to related parties (interest free)	**69,929.79**	**67,665.30**
Total non-current investments (A + B)	**90,929.80**	**88,050.31**
Aggregate amount of unquoted investments	**90,929.80**	**88,050.31**
4.2 Loans		
(Unsecured, considered good, unless otherwise stated)		
- Interest bearing	-	-
AE Tollway Limited	9,528.41	9,528.41
IRB Westcoast Tollway Limited	4,000.00	4,000.00
Kaithal Tollway Limited	8,774.57	8,725.87
Solapur Yedeshi Tollway Limited	4,000.00	4,000.00
Yedeshi Aurangabad Tollway Limited	4,000.00	4,000.00
Less: Current maturities of loan to related parties	-	-
- Interest bearing	-	-
- Interest free	-	-
Total	**30,302.98**	**30,254.28**

IRB Infrastructure Trust
Notes to financial statement for year ended March 31, 2022

(Rs. in Millions)

	As at March 31, 2022	As at March 31, 2021
Note 5 : Financial assets (current)		
5.1 Investments		
Investments at fair value through Profit & Loss		
Investments in mutual fund (quoted)		
Investments in Mutual Funds (quoted) (FVTPL)	20.04	50.00
(SBI Liquid Fund Direct Growth - March 31,2022 - 3333.09 units)		
	20.04	**50.00**
5.2 Cash and cash equivalent		
Balances with banks:		
- In current accounts	0.25	12.65
	0.25	**12.65**
For the purpose of the statement of cash flows, cash and cash equivalents comprise the following:		
Balances with banks:		
-On current accounts	0.25	12.65
Total	**0.25**	**12.65**
5.3 Loans		
(Secured, considered good, unless otherwise stated)		
(Unsecured, considered good, unless otherwise stated)		
Loans to related parties		
AE Tollway Limited	478.89	247.59
IRB Hapur Moradabad Tollway Limited	37.26	3.50
IRB Westcoast Tollway Limited	1,116.98	958.98
Kaithal Tollway Limited	681.81	179.41
Solapur Yedeshi Tollway Limited	24.00	20.00
Udaipur Tollway Limited	214.41	-
CG Tollway Limited	316.30	2.00
Kishangarh Gulabpura Tollway Limited	106.00	30.00
Yedeshi Aurangabad Tollway Limited	517.30	368.80
	3,492.95	**1,810.28**
5.4 Other financial assets		
(Unsecured, considered good, unless otherwise stated)		
Interest receivable from related parties	5,556.27	2,181.27
Other receivable		
- related parties	54.40	53.51
	5,610.67	**2,234.78**
Note 6 : Other current assets		
Advance given to suppliers		
- others	-	0.03
Total	**-**	**0.03**

IRB Infrastructure Trust
Notes to financial statement for year ended March 31, 2022
Note 7 : Equity

(Rs. in Millions)

	As at March 31 ,2022	As at March 31,2021
I. Unit capital		
a. Issued, subscribed and fully paid up Unit Capital		
Unit capital of Rs. 100 each issued, subscribed and fully paid up		
At the beginning the year	81,688.00	76,582.50
Issued during the year	3,816.33	5,105.50
At the end of the year	**85,504.33**	**81,688.00**

II. Reconciliation of the number of units outstanding and the amount of unit capital:

	As at March 31 ,2022		As at March 31,2021	
	No. of units	Amount in Millions	No. of units	Amount in Millions
At the beginning of the year	81,68,80,000	81,688.00	76,58,25,000	76,582.50
Issued during the year	3,81,63,265	3,816.33	5,10,55,000	5,105.50
At the end of the year	**85,50,43,265**	**85,504.33**	**81,68,80,000**	**81,688.00**

III. Details of Promoter

	As at March 31 ,2022		As at March 31,2021	
	No. of units	Amount Rs. in lakhs	No. of units in lakhs	Amount Rs. in lakhs
IRB Infrastructure Developers Limited	43,60,72,332	51%	41,66,09,067	51%
Anahera Investments Pte Ltd	21,37,60,685	25%	20,42,19,865	25%
Bricklayers Investments Pte Ltd	5,13,02,562	6%	4,90,12,767	6%
Chiswick Investments Pte Ltd	5,13,02,562	6%	4,90,12,767	6%
Stretford End Investments Pte Ltd	5,13,02,562	6%	4,90,12,767	6%
Dangenham Investments Pte Ltd	5,13,02,562	6%	4,90,12,767	6%
Total	**85,50,43,265**	100%	**81,68,80,000**	100%

Note :8 Other Equity

	As at March 31 ,2022	As at March 31,2021
Retained earnings		
At the beginning of the year	4,020.25	(27.16)
Profit/(loss) for the year	1,975.75	4,151.21
Unit issue expenses	(3.26)	(103.81)
Total Other Equity	**5,992.74**	**4,020.25**

(Rs. in Millions)

	As at March 31, 2022	As at March 31, 2021
9 Other financial liabilities		
Other Payable		
- related party	35,168.79	24,717.75
	35,168.79	**24,717.75**
Note 10 : Current financial liabilities		
10.1 Borrowing		
Unsecured loan		
Loan from related parties		
- Interest free	3,607.93	3,677.76
Total	**3,607.93**	**3,677.76**
10.2 Trade Payables		
b) Total outstanding dues of creditors other than micro and small enterprises		
- related parties	80.31	67.43
- others	1.40	0.19
Total	**81.71**	**67.61**
10.3 Other financial liabilities		
Other payables		
- related parties	-	8,239.25
	-	**8,239.25**
Note 11 : Other current liabilities		
Statutory dues payable (including PF, TDS, GST & others)	1.20	1.70
Total	**1.20**	**1.70**

IRB Infrastructure Trust

Notes to financial statement for year ended March 31, 2022

(Rs. in Millions)

	For the year ended March 31, 2022	For the year ended March 31, 2021
Note 12 : Other income		
Interest income on		
Interest income on bank deposits	-	-
Interest income from others	4,200.00	4,200.00
Gain on sale of investment	0.40	0.43
Gain/(loss) on fair value measurement of other payable	-	2.86
Fair value gain on investments	0.04	-
	4,200.44	**4,203.30**
Note 13 : Other expenses		
Rates & taxes	4.73	0.28
Legal and professional fees	15.49	4.96
Payment to auditor (refer note below)	0.64	0.56
Bank charges	0.03	0.02
Miscellaneous expenses	0.00	-
Fair value loss on measurement of other payable	2,161.31	-
	2,182.21	**5.83**
Payment to auditor		
- Statutory audit fees	0.27	0.20
- Limited review fees	0.36	0.35
- Other services (certification fees)	-	0.00
Reimbursement of expenses	0.01	0.00
	0.64	**0.56**

IRB Infrastructure Trust

Notes to financial statement for year ended March 31, 2022

Note 14 : Earnings per unit (EPU)

The following reflects the income and unit data used in the basic and diluted EPU computations:

(Rs. in Millions)

	For the year ended March 31, 2022	For the year ended March 31, 2021
Profit attributable to unit holders of the Fund for basic & diluted earnings	1,975.75	4,151.21
Weighted average number of unit for basic & diluted EPU* (in Millions)	**84,29,14,666**	**78,47,08,356**
Basic earning per unit (Amount in Rs.)	2.34	5.29
Diluted earning per unit (Amount in Rs.)	2.34	5.29

Note 15 : Capital and other commitments

There are no capital and other commitments as at March 31, 2022

Note 16 :Contingent liabilities

There are no contingent liabilities as at March 31, 2022

Note 17 : Details of dues to micro and small enterprises as per MSMED Act, 2006

The following details regarding Micro and small Enterprises has been determined to the extent such parties has been identified on the basis of information available with the Fund.

(Rs. in Millions)

Particulars	As at March 31, 2022	As at March 31, 2021
Principal amount remaining unpaid to any supplier as at the period end	-	-
Interest due thereon	-	-
Amount of interest paid by the Company in terms of section 16 of the MSMED, along with the amount of the payment made to the supplier beyond the appointed day during the accounting period.	-	-
Amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed day during the period) but without adding the interest specified under the MSMED, 2006	-	-
Amount of interest accrued and remaining unpaid at the end of the accounting period	-	-
The amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues as above are actually paid to the small enterprise for the purpose of disallowance as a deductible expenditure under the MSMED Act, 2006	-	-

a) MSME ageing schedule as at

Particulars	As at March 31, 2022	As at March 31, 2021
MSME disputed Dues	-	-
MSME Undisputed Dues	-	-
Less than 1 year	-	-
1-2 Years	-	-
2-3 Years	-	-
More than 3 years	-	-
Total dues to micro and small enterprises as per MSMED Act, 2006	**-**	**-**

b) Ageing of creditors other than micro enterprises and small enterprises as at

Particulars	As at March 31, 2022	As at March 31, 2021
disputed Dues		
Undisputed Dues		
Less than 1 year	35.28	67.61
1-2 Years	46.43	
2-3 Years		
More than 3 years		
Total dues to creditors other than micro enterprises and small enterprises as at	**81.71**	**67.61**
b) out of the above unbilled amount	0.87	0.19

Note 18 : Operating segment

The Fund is engaged in to invest in infrastructure assets primarily being in the road sector in India which in the context of Ind AS 108 - Operating Segments is considered as the only segment. The Fund's activities are restricted within India and hence no separate geographical segment disclosure is considered necessary.

IRB Infrastructure Trust

Notes to financial statement for year ended March 31, 2022

Note 19 : Other Statutory Information

i) The Company have not traded or invested in Crypto currency or Virtual Currency during the financial year.

ii) The Company does not hold benami property and no proceedings under Benami transaction (Prohibition) Act 1988 have been initiated against the company.

iii) The Company does not have any transactions with companies struck off.

iv) The Company does not have any such transaction which is not recorded in the books of accounts that has been surrendered or disclosed as income during the year in the tax assessments under the Income Tax Act, 1961 (such as, search or survey or any other relevant provisions of the Income Tax Act, 1961.

v) The Company has not received any fund from any person(s) or entity(ies), including foreign entities (Funding Party) with the understanding (whether recorded in writing or otherwise) that the Company shall:

(a) directly or indirectly lend or invest in other persons or entities identified in any manner whatsoever by or on behalf of the Funding Party (Ultimate Beneficiaries) or

(b) provide any guarantee, security or the like on behalf of the Ultimate Beneficiaries.

vi) The Company has not advanced or loaned or invested (either from borrowed fund or share premium or any other source or kind of fund) by the company to or in any person(s) or entity(ies), including foreign entities (Funding Party) with the understanding (whether recorded in writing or otherwise) that the Company shall:

(a) directly or indirectly lend or invest in other persons or entities identified in any manner whatsoever by or on behalf of the company (Ultimate Beneficiaries) or

(b) provide any guarantee, security or the like on behalf of the Ultimate Beneficiaries.

vii) The Company did not have any long-term contracts including derivative contract for which there were any material foreseeable losses.

vii) The Company has not declared a wilfull defaulter by any bank / financial institution or any other lender during the year.

Note 20 : Loans or advances to specified persons

Types of borrower	As at March 31, 2022		As at March 31, 2021	
	Amount outstanding*	% of Total ^	Amount outstanding*	% of Total ^
Promoters	-	-	-	-
Directors	-	-	-	-
KMPs	-	-	-	-
Related Parties	33,795.94	100%	32,064.56	100%
Total aggregate loans	**33,795.94**	**100%**	**32,064.56**	**100%**

* represents loan or advance in the nature of loan

^ represents percentage to the total Loans and Advances in the nature of loan

Note 21 : Particulars in respect of loans and advances in the nature of loans given to subsidiaries as required by Regulation 53(f) of the SEBI (Listing Obligation and Disclosure Requirements) Regulation, 2015

	As at March 31, 2022		As at March 31, 2021	
	Balances outstanding	Maximum balance Outstanding during the year	Balances outstanding	Maximum balance Outstanding during year
AE Tollway Limited	10,007.30	10,007.30	9,776.00	9,776.00
Kaithal Tollway Limited	9,456.38	9,456.38	8,905.28	8,905.28
Kishangarh Gulabpura Tollway Limited	106.00	106.00	30.00	30.00
Udaipur Tollway Limited	214.41	214.41	-	-
CG Tollway Limited	316.30	316.30	2.00	2.00
IRB Hapur Muradabad Tollway Limited	37.26	37.26	3.50	3.50
IRB Westcoast Tollway Limited	5,116.98	5,116.98	4,958.98	4,958.98
Solapur Yedeshi Tollway Limited	4,024.00	4,024.00	4,020.00	4,020.00
Yedeshi Aurangabad Tollway Limited	4,517.30	4,517.30	4,368.80	4,368.80

Note 22 : Basis of preparation of financial statements

The Trust has presented these standalone financial information (for all the periods presented there in) in accordance with the requirement of Schedule III - of the Companies Act , 2013 including amendments thereto , effective from April 01,2021.

Note 23 : Related party transaction

I. List of Related Parties

i. Subsidiaries/ SPVs

AE Tollway Limited
CG Tollway Limited
Hapur Muradabad Tollway Limited
IRB Westcoast Tollway Limited
Kishangarh Gulabpura Tollway Limited
Kaithal Tollway Private Limited
Solapur Yedeshi Tollway Limited
Udaipur Tollway Limited
Yedeshi Aurangabad Tollway Limited

ii. Parties to the Fund *

IRB Infrastructure Developers Limited (Sponsor and Project Manager)
MMK Toll Road Private Limited (Investment Manager)
IDBI Trusteeship Services Limited (Trustee of the IRB Infrastructure Trust)

iii. Subsidiaries Company of Sponsor and Project Manager

Mhaiskar Infrastructure Private Limited
Modern Road Makers Private Limited
IRB Goa Tollway private Limited

***As per Invit Regulation**

iii. Promoters/ Directors of the parties to the Fund specified in (ii) above

Particulars	**IRB Infrastructure Developers Limited (Sponsor and Project Manage)**	**MMK Toll Road Private Limited (Investment Manager)**	IDBI Trusteeship Services Limited (Trustee of the IRB Infrastructure Trust)
Promoters	Mr. Virendra D. Mhaiskar Mrs. Deepali V. Mhaiskar Virendra D. Mhaiskar HUF	IRB Infrastructure Developers Limited	IDBI Bank Limited Life Insurance Corporation of India General Insurance Corporation of India
Directors	Mr. Virendra D. Mhaiskar, Chairman and Managing Director Mrs. Deepali V. Mhaiskar, Whole Time Director Mr. Mukeshlal Gupta, Joint Managing Director (utpo 29 December 2021) Mr. Sudhir Rao Hoshing, Joint Managing Director (utpo 29 December 2021) and Chief Executive Officer Mr. Jose Angel Tamariz Martel Goncer, Additional Non-Executive Director (wef 29 Deember 2021) Mr. Carlos Ricardo Ugarte Cruz Coke, Additional Non-Executive Director (wef 29 Deember 2021)	Virendra D Mhaiskar Boon Chin Hau	Mr. J. Samuel Joseph (w.e.f 26.11. 2019) Mr. Ravishankar G. Shinde Ms. Madhuri J. Kulkarni Mr. Swapan Kumar Bagchi Ms Padma Betai Ms. Jayashree Ranade Ms. Sashikala Muralidharan (till 16.01. 2020)
	Independent directors	**Independent directors**	
	Mr. Chandrashekhar S. Kaptan Mr. Sunil H. Talati Mr. Sandeep J. Shah Ms. Priti Savla, Independent Director (wef February 10, 2022) Mrs. Heena Raja, Independent Director (utpo February 10, 2022)	K G Krishnamurthy Ranjana Paranjape	

IRB Infrastructure Trust
Notes to financial statement for year ended March 31, 2022

II) Related party transaction during the year

(Rs. in Millions)

Sr. No.	Particulars	Relation	Year ended March 31, 2022	Year ended March 31, 2021
1	**Equity Investment**		**615.00**	**1,205.00**
	Hapur Muradabad Tollway Limited	Subsidiary	615.00	1,205.00
2	**Subordinated debt**		**2,264.49**	**4,894.70**
	CG Tollway Limited	Subsidiary	240.30	270.00
	Hapur Muradabad Tollway Limited	Subsidiary	1,765.00	4,112.50
	IRB Westcoast Tollway Limited	Subsidiary	-	2.20
	Kishangarh Gulabpura Tollway Limited	Subsidiary	-	510.00
	Udaipur Tollway Limited	Subsidiary	259.19	-
3	**Long term loan**		**48.71**	**48.71**
	Kaithal Tollway Private Limited	Subsidiary	48.71	48.71
4	**Short Term Loan given**		**1,682.67**	**1,810.28**
	AE Tollway Limited	Subsidiary	231.30	247.59
	IRB Hapur Muradabad Tollway Limited	Subsidiary	33.76	3.50
	IRB Westcoast Tollway Limited	Subsidiary	158.00	958.98
	Kaithal Tollway Limited	Subsidiary	502.40	179.41
	Solapur Yedeshi Tollway Limited	Subsidiary	4.00	20.00
	Udaipur Tollway Limited	Subsidiary	214.41	-
	CG Tollway Limited	Subsidiary	314.30	2.00
	Kishangarh Gulabpura Tollway Limited	Subsidiary	76.00	30.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	148.50	368.80
5	**Short Term Loan transferred to Sub debt**		**-**	**29,829.67**
	AE Tollway Limited	Subsidiary	-	5,900.88
	IRB Hapur Muradabad Tollway Limited	Subsidiary	-	29.46
	IRB Westcoast Tollway Limited	Subsidiary	-	6,975.87
	Kaithal Tollway Limited	Subsidiary	-	1,146.04
	Solapur Yedeshi Tollway Limited	Subsidiary	-	1,476.20
	Udaipur Tollway Limited	Subsidiary	-	4,453.87
	Yedeshi Aurangabad Tollway Limited	Subsidiary	-	9,847.36
6	**Unit Capital Issued**		**1,946.33**	**2,603.81**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	1,946.33	2,603.81
7	**Unsecured Loan / other payable repaid**		**-**	**5,106.67**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	-	5,105.50
	Modern Road Makers Private Limited	Subsidiaries Company of Sponsor and Project Manager	-	1.17
8	**Interest income**		**4,200.00**	**4,200.00**
	Solapur Yedeshi Tollway Limited	Subsidiary	560.00	560.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	560.00	560.00
	Kaithal Tollway Limited	Subsidiary	1,186.02	1,186.02
	IRB Westcoast Tollway Limited	Subsidiary	560.00	560.00
	AE Tollway Limited	Subsidiary	1,333.98	1,333.98

IRB Infrastructure Trust
Notes to financial statement for year ended March 31, 2022

II) Related party transaction during the year

(Rs. in Millions)

Sr. No.	Particulars	Relation	Year ended March 31, 2022	Year ended March 31, 2021
9	**Trade payable**		**12.88**	**67.43**
	MMK Toll Road Pvt Limited	Investment Manager	12.88	67.43
10	**Other Receivable**		**0.89**	**53.51**
	Solapur Yedeshi Tollway Limited	Subsidiary	-	29.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	-	10.50
	IRB Westcoast Tollway Limited	Subsidiary	-	13.92
	Udaipur Tollway Limited	Subsidiary	0.89	0.09
11	**Unsecured Loan received**		**4,759.00**	**3,677.76**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	4,759.00	3,677.76
12	**Unsecured Loan paid**		**4,828.83**	-
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	4,828.83	-
13	**Expenses incurred on our behalf of (reimbursement)**		**1.77**	-
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	1.77	-
14	**Other Payable**		**2,210.02**	**2,492.85**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	2,161.31	2,444.14
	Mhaiskar Infrastructure Private Limited	Subsidiaries Company of Sponsor and Project Manager	48.71	48.71
	Modern Road Makers Private Limited	Subsidiaries Company of Sponsor and Project Manager	-	
	IRB Goa Tollway Private Limited	Subsidiaries Company of Sponsor and Project Manager	-	

IRB Infrastructure Trust
Notes to financial statement for year ended March 31, 2022

III) Related party outstanding balances

(Rs. in Millions)

Sr. No.	Particulars	Relation	As on March 31,2022	As on March 31,2021
1	**Equity Investment**		**21,000.01**	**20,385.01**
	AE Tollway Limited	Subsidiary	4,365.00	4,365.00
	CG Tollway Limited	Subsidiary	2,035.00	2,035.00
	Hapur Muradabad Tollway Limited	Subsidiary	3,715.00	3,100.00
	IRB Westcoast Tollway Limited	Subsidiary	1,741.94	1,741.94
	Kishangarh Gulabpura Tollway Limited	Subsidiary	1,555.00	1,555.00
	Kaithal Tollway Private Limited	Subsidiary	3,280.00	3,280.00
	Solapur Yedeshi Tollway Limited	Subsidiary	982.50	982.50
	Udaipur Tollway Limited	Subsidiary	1,168.00	1,168.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	2,157.57	2,157.57
2	**Subordinated debt**		**69,929.79**	**67,665.30**
	AE Tollway Limited	Subsidiary	10,265.88	10,265.88
	CG Tollway Limited	Subsidiary	2,727.80	2,487.50
	Hapur Muradabad Tollway Limited	Subsidiary	9,414.76	7,649.76
	IRB Westcoast Tollway Limited	Subsidiary	12,203.92	12,203.92
	Kishangarh Gulabpura Tollway Limited	Subsidiary	1,809.50	1,809.50
	Kaithal Tollway Private Limited	Subsidiary	4,426.04	4,426.04
	Solapur Yedeshi Tollway Limited	Subsidiary	4,423.70	4,423.70
	Udaipur Tollway Limited	Subsidiary	8,338.40	8,079.21
	Yedeshi Aurangabad Tollway Limited	Subsidiary	16,319.79	16,319.79
3	**Long term loan**		**30,302.98**	**30,254.28**
	AE Tollway Limited	Subsidiary	9,528.41	9,528.41
	IRB Westcoast Tollway Limited	Subsidiary	4,000.00	4,000.00
	Kaithal Tollway Private Limited	Subsidiary	8,774.57	8,725.87
	Solapur Yedeshi Tollway Limited	Subsidiary	4,000.00	4,000.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	4,000.00	4,000.00
4	**Short Term Loan**		**3,492.95**	**1,810.28**
	AE Tollway Limited	Subsidiary	478.89	247.59
	IRB Hapur Muradabad Tollway Limited	Subsidiary	37.26	3.50
	IRB Westcoast Tollway Limited	Subsidiary	1,116.98	958.98
	Kaithal Tollway Limited	Subsidiary	681.81	179.41
	Solapur Yedeshi Tollway Limited	Subsidiary	24.00	20.00
	Udaipur Tollway Limited	Subsidiary	214.41	-
	Yedeshi Aurangabad Tollway Limited	Subsidiary	517.30	368.80
	CG Tollway Limited	Subsidiary	316.30	2.00
	Kishangarh Gulabpura Tollway Limited	Subsidiary	106.00	30.00
5	**Other Payable**		**35,167.02**	**32,957.00**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	31,535.05	29,373.73
	Mhaiskar Infrastructure Private Limited	Subsidiaries Company of Sponsor and Project	302.98	254.28
	Modern Road Makers Private Limited	Subsidiaries Company of Sponsor and Project	1,784.13	1,784.13
	IRB Goa Tollway private Limited	Subsidiaries Company of Sponsor and Project Manager	1,544.86	1,544.86
6	**Other payable (Reimbursement of Expenses incurred on our behalf)**		**1.77**	-
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	1.77	-

IRB Infrastructure Trust
Notes to financial statement for year ended March 31, 2022

III) Related party outstanding balances

(Rs. in Millions)

7	**Other Receivable**		**54.40**	**53.51**
	Solapur Yedeshi Tollway Limited	Subsidiary	29.00	29.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	10.50	10.50
	IRB Westcoast Tollway Limited	Subsidiary	13.92	13.92
	Udaipur Tollway Limited	Subsidiary	0.99	0.09
8	**Interest Receivable**		**5,556.27**	**2,181.27**
	Solapur Yedeshi Tollway Limited	Subsidiary	547.40	352.40
	Yedeshi Aurangabad Tollway Limited	Subsidiary	636.00	151.00
	Kaithal Tollway Limited	Subsidiary	1,693.72	587.69
	IRB Westcoast Tollway Limited	Subsidiary	992.00	432.00
	AE Tollway Limited	Subsidiary	1,687.16	658.18
9	**Trade payable**		**80.31**	**67.43**
	MMK Toll Road Pvt Limited	Investment Manager	80.31	67.43
10	**Unsecured Loan / other payable**		**3,607.93**	**3,677.76**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	3,607.93	3,677.76

Note 24 : Fair Values

Financial assets and liabilities

The carrying values of financials instruments of the Fund are reasonable and approximations of fair values.

The accounting classification of each category of financial instruments, their carrying amounts and the categories of financial assets and liabilities measured at fair value, are set out below:

(Rs. in Millions)

	Carrying amount	Fair Value	Carrying amount	Fair Value
	As at March 31, 2022	As at March 31, 2022	As at March 31, 2021	As at March 31, 2021
Financial assets				
Financial assets measured at amortised cost				
Loans	33,795.94	33,795.94	32,064.56	32,064.56
Other financial assets	5,610.67	5,610.67	2,234.78	2,234.78
Financial assets measured at fair value through statement of Profit & Loss				
Investments in mutual funds	20.04	20.04	50.00	50.00
Financial assets measured at amortised cost				
Cash and cash equivalents	0.25	0.25	12.65	12.65
Other Bank balances	-	-	-	-
Financial liabilities				
Trade payables	81.71	81.71	67.61	67.61
Borrowings	3,607.93	3,607.93	3,677.76	3,677.76
Other financial liabilities	35,168.79	35,168.79	32,957.00	32,957.00

The management assessed that the fair value of cash and cash equivalents, trade receivables, trade payables, bank overdrafts and other current liabilities approximate their carrying amounts largely due to the short-term maturities of these instruments.

The fair value of the financial assets and liabilities is included at the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.

The discount for lack of marketability represents the amounts that the company has determined that market participants would take into account when pricing the investments.

The Fund is required to present the Statement of total assets at fair value and Statement of total returns at fair value as per SEBI Circular No. CIR/IMD/DF/114/2016 dated October 20, 2016 as a part of these financial statements - Refer Statement of Net assets at fair value and Statement of Total Returns at fair value.

Note 25 : Fair Value Hierarchy

All financial instruments for which fair value is recognised or disclosed are categorised within the fair value hierarchy described as follows, based on the lowest level input that is significant to the fair value measurement as a whole.

Level 1: Quoted (unadjusted) price is active market for identical assets or liabilities

Level 2: Valuation technique for which the lowest level input that has a significant effect on the fair value measurement are observed, either directly or indirectly.

Level 3: Valuation technique for which the lowest level input has a significant effect on the fair value measurement is not based on observable market data.

There were no transfers between Level 1 and Level 2 during the year. No financial assets/ liabilities that are measured at fair value were Level 3 fair value measured.

The following table presents fair value hierarchy of assets and liabilities measured at fair value on a recurring basis as of March 31, 2022:

(Rs. in Millions)

	As at March 31, 2022	Fair value measurement at end of the reporting year using		
		Level 1	Level 2	Level 3
Assets				
Loans	33,795.94	-	-	33,795.94
Other Financial assets	5,610.67	-	-	5,610.67
Investments in mutual funds(Quoted)	20.04	20.04	-	-
Liabilities				
Trade payable	81.71	-	-	81.71
Other financial liabilities	35,168.79	-	-	35,168.79

The following table presents fair value hierarchy of assets and liabilities measured at fair value on a recurring basis as of March 31, 2021:

(Rs. in Millions)

	As at March 31, 2021	Fair value measurement at end of the reporting year using		
		Level 1	Level 2	Level 3
Assets				
Loans	32,064.56	-	-	32,064.56
Other Financial assets	2,234.78	-	-	2,234.78
Investments in mutual funds(Quoted)	50.00	50.00	-	-
Liabilities				
Trade payable	67.61	-	-	67.61
Other financial liabilities	32,957.00	-	-	32,957.00

Note 26 : Financial risk management objectives and policies

The fund's risk management policies are established to identify and analyse the risks faced by the fund, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the fund's activities.

The Board of Directors of Investment Manager have overall responsibility for the establishment and oversight of the fund's risk management framework.

In performing its operating, investing and financing activities, the fund is exposed to the Credit risk, Liquidity risk and Market risk.

a. Market Risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: interest rate risk, currency risk and other price risk, such as equity price risk and commodity risk. Financial instruments affected by market risk include loans and borrowings, deposits.

Credit risk

Credit risk is the risk that a counter party will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The Fund is exposed to credit risk from its investing activities including loans to subsidiaries, deposits with banks and other financial instruments. As at March 31, 2022, the credit risk is considered low since substantial transactions of the Fund are with its subsidiaries.

Interest Rate Risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The fund's exposure to the risk of changes in market interest rates relates primarily to the fund's long-term debt obligations with floating interest rates.

c. Liquidity risk

Liquidity risk is the risk that the Fund may not be able to meet its present and future cash and collateral obligations without incurring unacceptable losses. The Fund's objective is to, at all times maintain optimum levels of liquidity to meet its cash and collateral requirements.

The Fund closely monitors its liquidity position and deploys a robust cash management system. It maintains adequate sources of financing including debt and overdraft from banks at an optimised cost.

The liquidity risk is managed on the basis of expected maturity dates of the financial liabilities. The average credit period taken to settle trade payables is about 30 to 90 days. The other payables are with short-term durations. The carrying amounts are assumed to be a reasonable approximation of fair value. The following table analyses financial liabilities by remaining contractual maturities:

(Rs. in Millions)

March 31, 2022	**On demand**	**Less than 3 months**	**Less than 1 year**	**1 to 5 years**	**> 5 years**	**Total**
Borrowings	-		3,607.93		-	**3,607.93**
Other financial liabilities			-	35,168.79		**35,168.79**
Trade payables	-		81.71	-	-	**81.71**
Total	**-**	**-**	**3,689.64**	**35,168.79**	**-**	**38,858.44**

March 31, 2021	**On demand**	**Less than 3 months**	**Less than 1 year**	**1 to 5 years**	**> 5 years**	**Total**
Borrowings	-		3,677.76		-	**3,677.76**
Other financial liabilities			8,239.25	24,717.75		**32,957.00**
Trade payables	-	67.61	-	-	-	**67.61**
Total	**-**	**67.61**	**11,917.01**	**24,717.75**	**-**	**36,702.38**

At present, the fund does expects to repay all liabilities at their contractual maturity. In order to meet such cash commitments, the operating activity is expected to generate sufficient cash inflows.

Note 27 : Capital management

Capital includes equity attributable to the equity holders to ensure that it maintains an efficient capital structure and healthy capital ratios in order to support its business and maximise shareholder value. The company manages its capital structure and makes adjustments to it, in light of changes in economic conditions or its business requirements. To maintain or adjust the capital structure, the company may adjust the dividend payment to shareholders, return capital to shareholders or issue new shares. No changes were made in the objectives, policies or processes during the period ended March 31, 2022
The company monitors capital using a gearing ratio, which is net debt divided by total capital plus net debt. Net debt is calculated as loans and borrowings less cash and cash equivalents.

(Rs. in Millions)

	As at March 31, 2022	As at March 31, 2021
Borrowings	3,607.93	3,677.76
Less: cash and cash equivalents (including unpaid dividend account)	(0.25)	(12.65)
Net debt (A)	**3,607.69**	**3,665.11**
Unit capital	85,504.33	81,688.00
Other equity	5,992.74	4,020.25
Total equity (B)	**91,497.07**	**85,708.25**
Capital and net debt C = A + B	**95,104.76**	**89,373.36**
Gearing ratio (%) (C / A)	**3.79%**	**4.10%**

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In order to achieve this overall objective, the fund's capital management, amongst other things, aims to ensure that it meets financial covenants attached to the interest-bearing loans and borrowings that define capital structure requirements. Breaches in meeting the financial covenants would permit the bank to immediately call loans and borrowings. There have been no breaches in the financial covenants of any interest-bearing borrowings in the current period.

Note 28 : Significant accounting judgement, estimates and assumptions

The preparation of the Fund's financial statements requires management to make judgments, estimates and assumptions that affect the reported amounts of revenue, expenses, assets and liabilities and the accompanying disclosures and the disclosure of contingent liabilities. Uncertainty about these assumptions and estimates could result in out comes that require a material adjustment to the carrying amount of assets or liabilities affected in future periods.

Judgement

In the process of applying the Fund's accounting policies, management has made the following judgements, which have the most significant effect on the amounts recognised in the financial statements.

Classification of unit holders Funds

Under the provisions of the InvIT Regulations, Fund is required to distribute to Unit holders not less than ninety percent of the net distributable cash flows of Fund for each financial year. Accordingly, a portion of the unit holders' Funds contains a contractual obligation of the Fund to pay to its Unit holders cash distributions. The Unit holder's Funds could therefore have been classified as compound financial instrument which contain both equity and liability components in accordance with Ind AS 32-Financial Instruments: Presentation.
However, in accordance with SEBI Circulars(No.CIR/IMD/DF/114/2016 dated 20-Oct-2016 and No.CIR/IMD/DF/127/2016 dated 29-Nov-2016) issued under the InvIT Regulations, the unit holders' Funds have been classified as equity in order to comply with the mandatory requirements of Section H of Annexure A to the SEBI Circular dated 20-Oct-2016 dealing with the minimum disclosures for key financial statements. In line with the above, the income distribution payable to unit holders is recognized as liability when the same is approved by the Investment Manager.

Estimates and assumptions

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities or fair value disclosures within the next financial year, are described below. The Fund based its assumptions and estimates on parameters available when the financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising that are beyond the control of the Fund. Such charges are reflected in the assumptions when they occur.

Impairment of non-financial assets

Non-financial assets of the Fund primarily comprise of investments in subsidiaries, Impairment exists when the carrying value of an asset or cash generating unit exceeds its recoverable amount, which is the higher of its fair value less costs of disposal and its value in use. The recordable amounts for the investments in subsidiaries are based on value in use of the underlying projects. The value in use calculation is based on a DCF model. The cash flows are derived from budgets / forecasts over the life of the projects.

Note 29 : COVID 19

The outbreak of Coronavirus (COVID-19) pandemic globally and in India is causing significant disturbance and slowdown of economic activity. As per the directions of the Ministry of Road Transport & Highways (MoRTH)/ National Highway Authority of India (NHAI), in order to follow MHA guidelines about commercial and private establishment in the wake of COVID-19 epidemic in the country, operations at the toll plaza of the Group were closed down w.e.f. 26th March, 2020. The toll operations were resumed from 20th April, 2020 by ensuring compliance with preventive measures in terms of guidelines/ instructions issue by Govt. of India to contain spread of Covid -19. Due to this, traffic for the toll road has been impacted. Management believes this is temporary and expects traffic will be normalised looking at the recent toll collection. In accordance with the Concession Agreement and NHAI policy no. 8.3.33/2020 and 8.4.20/2020 dated 26th May, 2020, the Group is eligible for extension of concession period with NHAI towards loss of revenue due to COVID-19 pandemic and NHAI is also extending COVID-19 loan to the Concessionaire for shortfall in cashflow. The management has assessed and deretemined that considering the nature of its operations and overall revenue model, COVID-19 does not have any material impact on the Company's financial position as at March 31, 2022 and its financial performance for the period then end.

Note 30 : Events after reporting period

There is no subsequent event after the reporting period which requires adjustments to the financial statements.

Note 31 : Previous period comparatives

Previous period's figures have been regrouped/reclassified, wherever necessary, to confirm to current period's classification.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

Place: Mumbai
Date : 06/05/2022

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

Place: Mumbai
Date : 06/05/2022

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Investors should read the following discussion and analysis of the Trust's financial condition and results of operations together with the sections "Summary Financial Information" and "Financial Statements" on pages 44 and 347, respectively. This discussion contains forward-looking statements and involves numerous risks and uncertainties, including, but not limited to, those described in the section "Risk Factors" on page 16. Actual results could differ materially from those contained in any forward-looking statements and for further details regarding forward-looking statements, refer to "Forward-Looking Statements" on page 14.

This Letter of Offer includes (i) unaudited interim consolidated financial information of the Trust and the Project SPVs as of and for the six-month period ended September 30, 2024; (ii) audited consolidated financial information of the Trust and the Project SPVs as of and for the Financial Years 2024, 2023 and 2022; (iii) unaudited interim standalone financial information of the Trust as of and for the six-month period ended September 30, 2024; and (iv) audited standalone financial information of the Trust as of and for the Financial Years 2024,2023 and 2022.

This Letter of Offer includes summary financial information of MBEL as of and for the six-month period ended September 30, 2024 and the Financial Years 2024, 2023 and 2022. This Letter of Offer also contains Pro Forma Financial Information of the Trust and MBEL as of and for the Financial Year 2024 and the six-month period ended September 30, 2024 prepared in accordance with the requirements of Chapter 9 of the SEBI Master Circular and the InvIT Regulations.

The following discussion includes a discussion and analysis of the financial condition and results of operations of the Trust and the Project SPVs on a consolidated basis as of and for the six-month period ended September 30, 2024, based on the independent auditors' report on the unaudited interim financial information issued by the auditors for such period, and the Financial Years ended March 31, 2024, March 31, 2023 and March 31, 2022, based on the audited consolidated financial statements of the Trust for such periods. Ind AS differs in certain material respects from Indian GAAP, IFRS and U.S. GAAP. Accordingly, the degree to which our financial statements will provide meaningful information to a prospective investor in countries other than India is entirely dependent on the reader's level of familiarity with Ind AS.

The Project SPVs' and the Target SPV's financial year ends on March 31 of each year. Accordingly, all references to a particular financial year are to the 12-month period ended March 31 of such year.

References herein to the "Current Portfolio" are to the pre-MBEL Acquisition portfolio of the Trust and to the "Expanded Portfolio" are to the post-MBEL Acquisition portfolio of the Trust.

Overview

The Trust is a registered infrastructure investment trust under the InvIT Regulations. The Current Portfolio of the Trust comprises 15 toll-road assets in the states of Telangana, West Bengal, Haryana, Uttar Pradesh, Rajasthan, Gujarat, Goa, Maharashtra, Karnataka and Madhya Pradesh in India and consists of 11 Build-Operate-Transfer (BOT) projects and 4 Toll-Operate-Transfer (TOT) projects.

The Trust has acquired the Current Portfolio comprised of the Project SPVs from the Sponsor and in the case of PDTPL, IRB GEPL and STPL, holds the Project SPV together with the Sponsor. IRB LTPL, IRB KTPL and IRB GTPL were incorporated by and are held by the Trust. Each of the Project SPVs is an eligible infrastructure project as defined under the InvIT Regulations. As of September 30, 2024, the Project SPVs owned the following toll road assets comprising approximately 9,789 Lane Kilometers of highway:

- The Agra - Etawah NH-2 Project: A 124.52 km section of NH-2 between Agra and Etawah Bypass in Uttar Pradesh which is held by AETL;

- The Gulabpura - Chittorgarh NH-79 Project: A 124.87 km section of NH-79 between Gulabpura and Chittorgarh Bypass in Rajasthan which is held by CGTL;

- The Hapur - Moradabad NH-9 Project: A 99.867 km section of NH-9 between Hapur and Moradabad in Uttar Pradesh which is held by IRB HMTL;

- The Goa - Kundapur NH-17 Project: A 187.28 km section of NH-17 between Goa/Karnataka border and Kundapur in Karnataka which is held by IRB WTL;

- The Kishangarh - Gulabpura NH-79/79A Project: A 90.00 km section of NH-79/79A between Kishangarh and Gulabpura in Rajasthan which is held by KGTL;

- The Kaithal - Rajasthan Border NH-152/65 Project: A 166.259 km section of NH-152/65 between Kaithal and Rajasthan Border in Haryana which is held by KTL;

- The Solapur - Yedeshi NH-211 Project: A 98.717 km section of NH-211 between Solapur and Yedeshi in Maharashtra which is held by SYTL;

- The Udaipur - Rajasthan Border NH-8 Project: A 113.80 km section of NH-8 between Udaipur and Rajasthan Border in Rajasthan and Gujarat which is held by UTL;

- The Yedeshi - Aurangabad NH-211 Project: A 189.09 km section of NH-211 between Yedeshi and Aurangabad in Maharashtra which is held by YATL;

- The Palsit – Dankuni NH-19 Project: A 63.83 km section of NH-19 between Palsit and Dankuni in West Bengal which is held by PDTPL;

- The Nehru Outer Ring Road Project: A 158.00 km section of the Nehru Outer Ring Road in Telangana which is held by IRB GEPL;

- The Samakhiyali – Santalpur NH-27 Project: A 90.90 km section of NH-27 between Samakhiyali and Santalpur in Gujarat which is held by STPL;

- The Lalitpur – Lakhnadon NH-44 Project: A 316.08 km section of NH-44 between Lalitpur, Sagar and Lakhnadon in Uttar Pradesh and Madhya Pradesh which will be held by IRB LTPL;

- The Kota Bypass and Cable Stay Bridge Project: A section of 27.820 km of NH-76 (new NH-27) in Rajasthan which will be held by IRB KTPL; and

- The Gwalior - Jhansi Project: An 82.455 km section of NH-75 (new NH-44) between Gwalior and Jhansi in the states of Madhya Pradesh and Uttar Pradesh which will be held by IRB GTPL.

The map set out below depicts the location of the Current Portfolio:



The Sponsor of the Trust is IRB Infrastructure Developers Limited, one of the largest infrastructure development and construction companies in India in terms of net worth in the roads and highways sector according to the NHAI's annual prequalification for public private partnerships in national highway projects report for 2016. The Sponsor has been listed on the Stock Exchanges since 2008. As at September 30, 2024, the Sponsor had six road projects of which two were operational and four were under-construction. The Sponsor also acts as the Project Manager. For further details, see "*The Sponsor and Project Manager*" on page 327.

The Investment Manager of the Trust is MMK Toll Road Private Limited. The Investment Manager has experience in operating a road project for a period of 13 years. 51% of the equity share capital in the Investment Manager is held by the Sponsor, approximately 25% of the equity share capital of the Investment Manager is held by Croxley and approximately 24% of the equity share capital of the Investment Manager is held by the Cintra IM Investor. For further details, see "*The Investment Manager*" and "*Corporate Governance*" on pages 331 and 162, respectively.

The Trustee of the Trust is IDBI Trusteeship Services Limited. The Trustee is registered with the SEBI as a debenture trustee under the Debenture Trustees Regulations. For further details, see "*The Trustee*" on page 339.

MBEL is currently a joint venture between the Sponsor and Anahera. 51% of the equity share capital in MBEL is held by the Sponsor and 49% of the equity share capital of MBEL is held by Anahera. MBEL has entered into a concession agreement with the UPEIDA for the development of access controlled six-lane (expandable to eight-lane) greenfield 'Ganga Expressway' from Bijoli, Meerut to Nagla Barah, Budaun from Km 7.900 to Km 137.600 (total design length 129.700 Km) in the state of Uttar Pradesh on design-build-finance-operate-transfer (toll) basis. The Trust proposes to acquire MBEL by purchasing 80.40% of the equity share capital of MBEL from the Sponsor and Anahera, with the Sponsor and Anahera holding 10.00% and 9.60%, respectively, of the equity share capital in MBEL. Further, the Trust proposes to purchase 80.40% of the outstanding non-convertible debentures issued by MBEL under the MBEL Securities Purchase Agreement. For further details, see "*Objects of the Issue*" and "*Background and Structure of the Trust*" on pages 79 and 93, respectively.

Factors affecting Results of Operations

Our business and results of operations have been affected and will continue to be affected in future by a number of important factors, including:

The terms of the concession agreements and traffic volumes

BOT, TOT and DBFOT projects restrict the Project SPVs' operational and financial flexibility. Toll fees are typically pre-determined with the relevant government entity and cannot be modified to reflect prevailing circumstances, other than annual adjustments to account for inflation as specified in the concession agreements. Accordingly, a Project SPV's or the Target SPV's profitability is largely a function of how effectively it manages costs during the concession period. Significant costs during the concession period include construction costs and operating and maintenance expenses such as periodic maintenance, which is required to be performed as specified in the concession agreement. Periodic maintenance involves the repair of wear and tear of the roads and highways, including overlaying the surface of the roads and highways, if required. The Project Manager has agreed to provide the remaining portion of construction works for the Project SPVs. The Project Manager has also agreed to provide for operations and maintenance works for all the Project SPVs for an initial period of 10 years on a fixed-fee basis.

The Project SPVs and the Target SPV are substantially dependent on the accuracy of the traffic volume forecasts for their respective projects. Projects undertaken on a BOT, TOT or DBFOT basis involve concession agreements that are long-term in nature, usually between 15 to 30 years. The agreed consideration for each of the Project SPVs' and the Target SPV's projects was based on forecasts of traffic volumes and expected revenues over the concession period. For projects expanding roads from four-to-six lanes, tolling typically starts from day one of the concession period at a rate of 75% and continues until the completion of construction, upon which tolling is reset to 100%. For other projects, including greenfield construction, tolling generally starts once construction is completed and COD is achieved. Any material shortfall between the actual traffic volume and the forecast traffic volume or revenue for a project could have a material adverse effect on their cash flows, results of operations and financial condition.

The Project SPVs' projects and the Target SPV's involve agreements that are long-term in nature. All long-term projects have inherent risks associated with them and involve variables that may not necessarily be within the Project SPVs' or the Target SPV's control. Accordingly, we may be exposed to a variety of construction, operation and maintenance and other risks, including unanticipated cost increases and overruns, inability to negotiate satisfactory arrangements with service providers and disagreements with service providers. In addition, the long-term nature of the Project SPVs' or the Target SPV's contracts may expose them to increased risk of unforeseen business and industry changes and developments which could have a material adverse effect on their business, financial condition and results of operations.

General economic and political conditions in India and the level of investment and activity in the infrastructure development sector

The Project SPVs and the Target SPV derive their revenue from their toll-road operations. Demand for toll roads is primarily dependent on sustained economic development in the regions that they operate in and government policies relating to infrastructure development. It is also significantly dependent on budgetary allocations made by the Government of India and the State Governments for the roads and highways sector, as well as funding provided by international and multilateral development finance institutions for infrastructure projects. Investment by the private sector in infrastructure projects is dependent on the potential returns from such projects and is, therefore, linked to Government and State Government policies relating to private sector participation and sharing of risks and returns from such projects.

We believe that the Government's and State Governments' focus on, and sustained increases in budgetary allocation for, infrastructure, and the development of comprehensive infrastructure policies that encourage greater private sector participation and funding for infrastructure projects should further result in large infrastructure projects in India. We believe that we are likely to benefit from the Government and State Governments making infrastructure development a policy priority, which may lead to corresponding significant investment in the roads and highways sector. Since the Project SPVs and the Target SPV's focus on the roads and highways sector, macroeconomic factors in India relating to this sector will have a significant impact on their prospects and results of operations. As the roads and highways sector is driven by increases in agriculture and manufacturing, any slowdown or perceived slowdown in the Indian economy, or in specific sectors of the Indian economy, could materially and adversely impact the Project SPVs' and the Target SPV's business and financial performance.

The Project SPVs or the Target SPV may be unable to collect tolls due to political protests or other agitations relating to tolling. For instance, due to a protest against certain agricultural laws in India, tolling for the Kaithal – Rajasthan project operated by KTL was halted from December 25, 2020 and resumed on December 16, 2021. The Project SPV has informed NHAI of this event and expects to receive compensation under the *force majeure* clause of the relevant Concession Agreement, which provides for the receipt of 50% of the O&M and interest costs as reimbursement in cash and an extension in concession period to compensate for revenue loss during the toll suspension period.

Further, in relation to COVID-19, the NHAI has offered an extension of concession period by three to six months to compensate for reduced revenue due to the COVID-19 lockdown. Certain Project SPVs have applied to the NHAI for appropriate relief (including extension of the concession period) and compensation as per the respective concession agreements for the time period during which the relevant projects have been impacted by COVID-19.

Competition

The Trust, the Project SPVs and the Target SPV operate in a competitive environment. The competition for toll road and other infrastructure projects varies depending on the size, nature and complexity of the project and on the geographical region in which the project is to be executed. Some of their competitors may have greater financial resources, economies of scale and operating efficiencies than the Trust or the Project SPVs or the Target SPV do. There can be no assurance that they can effectively compete with their competitors in the future, and this failure to compete effectively may have a material adverse effect on the Trust's financial condition and results of operations.

Financial Information of the Target SPV

This Letter of Offer includes the summary financial information of MBEL as of and for the six-month period ended September 30, 2024 and the Financial Years 2024, 2023 and 2022. This Letter of Offer also contains Pro Forma Financial Information of the Trust and MBEL as of and for the Financial Year 2024 and the six-month period ended September 30, 2024 prepared in accordance with the requirements of Chapter 9 of the SEBI Master Circular and the InvIT Regulations. See "*Financial Statements*" on page 347 and "*Summary Financial Information*" on page 44.

Pro Forma Financial Information

This Letter of Offer includes the Pro Forma Financial Information prepared in accordance with the requirements of the InvIT Regulations and the SEBI Master Circular in "*Financial Statements*" on page 347. The Pro Forma Financial Information consists of the pro forma balance sheet as at September 30, 2024 and March 31, 2024, the pro forma statement of profit and loss for the six-month period ended September 30, 2024 and the Financial Year 2024. The MBEL Acquisition has been considered material for purposes of the SEBI Master Circular.

The Pro Forma Financial Information has been compiled by management to illustrate the impact of the MBEL Acquisition on the Trust's balance sheet as at September 30, 2024 and March 31, 2024 and the Trust's statement of profit and loss for the six-month period ended September 30, 2024. The pro forma balance sheet as at March 31, 2024 and September 30, 2024 has been prepared as if the MBEL Acquisition had taken place on March 31, 2024 and September 30, 2024, respectively. The pro forma statement of profit and loss for the six-month period ended September 30, 2024 and the Financial Year 2024 has been prepared as if the MBEL Acquisition had taken place on April 1, 2023. See "*Risk Factors - The Pro Forma Financial Information included in this Letter of Offer is prepared for illustrative purposes only. Our actual results may be materially different from the outcome of the event or transaction as presented in the Pro Forma Financial Information.*" on page 20 for risks in relation to the Pro Forma Financial Information.

Note that there can be no assurance that the assumptions for the preparation of the Pro Forma Financial Information will be fulfilled, including that MBEL Acquisition will be completed in the manner described in this Letter of Offer or at all. See "Risk *Factors - We are in the process of acquiring the Target SPV (pursuant to definitive acquisition agreements), which if not completed in a timely manner or at all, or any failure to realize the anticipated benefits of the MBEL Acquisition, may adversely affect us.*" on page 23.

Significant Accounting Policies

The preparation of financial statements in conformity with Ind AS, applicable accounting standards and the Companies Act, 2013 requires our management to make judgments, estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent liabilities at the date of the financial statements and the results of operations during the reporting period end. By their nature, these judgments are subject to a degree of uncertainty. Although these estimates are based upon management's best knowledge of current events and actions, actual results could differ from these estimates.

While all aspects of the Project SPVs Consolidated Financial Information should be read and understood in assessing their current and expected financial condition and results, we believe that the following critical accounting policies warrant particular attention:

Intangible assets

As permissible under Ind AS 101, we elected to continue with the carrying value of our toll collection rights (intangible assets), including corresponding obligation, as recognised in the financial statements as at the date of transition April 1, 2016 measured as per the previous GAAP and use that as its deemed cost as at date of transition.

Intangible assets acquired separately are measured on initial recognition at cost. Following initial recognition, intangible assets are carried at cost less any accumulated amortisation and accumulated impairment losses.

Toll Collection Rights

Toll collection rights are stated at cost, net of accumulated amortisation, impairment losses and grant from government. Cost includes toll collection rights awarded by the grantor against construction service rendered by the Project SPV on a DBFOT basis - direct and indirect expenses on construction of roads, bridges, culverts, infrastructure and other assets at the toll plazas.

Toll collection rights are amortised over the period of the concession, using revenue based amortisation as prescribed under Ind AS 36. Under this method, the carrying value of the rights is amortised in the proportion of actual toll revenue for the year to projected revenue for the balance toll period, to reflect the pattern in which the asset's economic benefits will be consumed. At each balance sheet date, the projected revenue for the balance toll period is reviewed by the management. If there is any change in the projected revenue from previous estimates, the amortisation of toll collection rights is changed prospectively to reflect any changes in the estimates.

Non-financial assets are assessed for impairment whenever there is an indication that the intangible asset may be impaired.

Provisions

Provisions are recognised when the group has a present obligation (legal or constructive) as a result of a past event, and it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. When the Group expects some or all of a provision to be reimbursed, for example, under an insurance contract, the reimbursement is recognised as a separate asset, but only when the reimbursement is virtually certain. The expense relating to a provision is presented in the statement of profit and loss net of any reimbursement.

If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, when appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost. Provisions are reviewed at each balance sheet date and adjusted to reflect the current best estimates.

Principal components of Income and Expenses

Income

Our total income comprises (i) revenue from operations and (ii) other income.

Revenue from operations

Revenue from operations comprises (i) contract revenue (road construction); (ii) income arising out of toll collection (net); (iii) adjustments due to revenue share to NHAI on account of Fastag; and (iv) other operating revenue.

During the construction period of a project, the NHAI may ask the Project SPVs to carry out utility shifting work (which is incidental to the construction of the toll road and typically involves the shifting of utilities that are located at the construction site) or may award the Project SPVs additional scope of work, which is separately paid by the NHAI. Revenue from such utility shifting or change in scope contract, among others, also forms part of the Project SPVs' contract revenue. Note that contract revenue is typically incurred during the initial construction period of a project and is not recurring in nature.

The following table provides a breakdown of revenue from operations for the periods indicated:

Revenue from Operations	Six-month period ended September 30, 2024		Six-month period ended September 30, 2023		Financial Year 2024		Financial Year 2023		Financial Year 2022	
	Amount (in ₹ million)	*% of Total Revenue from Operations*	*Amount (in ₹ million)*	*% of Total Revenue from Operations*	*Amount (in ₹ million)*	*% of Total Revenue from Operations*	*Amount (in ₹ million)*	*% of Total Revenue from Operations*	*Amount (in ₹ million)*	*% of Total Revenue from Operations*
Contract revenue (road construction)	9,107.82	38.58	6,828.77	45.13	19,154.21	49.20	11,672.04	43.37	1,054.48	8.50
Income arising out of toll collection (net)	14,579.67	61.76	8,378.15	55.37	19,924.20	51.18	15,425.76	57.32	10,598.07	85.44
Revenue share to NHAI - FASTag	(80.67)	(0.34)	(75.25)	(0.50)	(147.66)	(0.38)	(185.44)	(0.69)	(212.87)	(1.72)
Other operating revenue	-	0.00	-	0.00	-	0.00	0.23	0.00	965.16	7.78
Total	**23,606.82**	**100.00**	**15,131.67**	**100.00**	**38,930.75**	**100.00**	**26,912.59**	**100.00**	**12,404.84**	**100.00**

Note: The information for the six-month period ended September 30, 2024 and September 30, 2023 is based on the unaudited consolidated interim financial information of the Trust and has been presented in this table together with the audited financial information for the Financial Years 2024, 2023 and 2022 for presentation purposes only.

Other income

The key components of other income are interest income on bank deposits, profit on sale of investments, fair value gain on mutual funds and other non-operating income.

The following table provides a breakdown of other income for the periods indicated:

Other income	Six-month period ended September 30, 2024	Six-month period ended September 30, 2023	Financial Year 2024	Financial Year 2023	Financial Year 2022
	Amount (in ₹ million)				
Interest income on					
- Bank deposits	373.03	208.45	563.24	178.88	73.64
- Others	3.15	0.07	3.73	7.17	8.05
Dividend Income on – Other investments (non-trade, current)	-	0.03	0.03	-	-
Profit on sale of investments	85.02	36.32	190.86	62.95	13.93
Fair value gain on mutual funds	(5.34)	3.95	10.42	11.35	0.78
Other non-operating income	20.80	12.64	71.55	2.73	3.73
Total	**476.66**	**261.46**	**839.83**	**263.08**	**100.13**

Note: The information for the six-month period ended September 30, 2024and September 30, 2023 is based on the unaudited consolidated interim financial information of the Trust and has been presented in this table together with the audited financial information for the Financial Years 2024, 2023 and 2022 for presentation purposes only.

Expenses

Our expenses primarily consist of the following:

- valuation expenses, which comprise payments towards valuation to be carried out for trust;
- audit fees, which includes statutory audit fees and limited review fees;
- operating expenses, which are road work and site expenses, comprising contract expenses in relation to utility shifting or change in scope contracts, operation and maintainace expenses, site and other direct expenses, sub-contracting/security expenses and technical consultancy and supervision charges;
- project management fees, which comprises payments for operation and maintenance of road;
- insurance and security expenses, which comprise payment towards insurance coverage for Trust and Project SPVs;
- trustee fees, which comprise payment to Trustee;
- depreciation on property, plant and equipment;
- amortisation of intangible assets;
- finance costs, which primarily comprise interest expenses on loans availed from banks/financial institutions, debentures and other borrowing costs which include amortisation of transaction costs and unwinding of discount on provision of MMR;
- legal and professional fees;
- Investment Manager fees;
- custodian fees;
- loss on sale of assets;
- fair value loss on measurement of other payable; and
- other expenses, which comprise various administration costs such as power and fuel costs, rent, rates and taxes, water charges, repair and maintanance, travel and conveyance expenses, vehicle expenses, printing

and stationery expenses, membership and subscription, advertisement expenses, sitting fees for directors, corporate social responsiblities expenditures, bank charges and other miscellaneous expenses.

Results of Operations

The financial information for the six-month periods ended September 30, 2024 and September 30, 2023 and the Financial Years 2024, 2023 and 2022 has been prepared on a consolidated basis. The Consolidated Financial Information has been prepared in accordance with Ind AS and the provisions of the InvIT Regulations.

Consolidated Financial Information

This section discusses our results of operations for the six-month periods ended September 30, 2024 and September 30, 2023 and the Financial Years 2024, 2023 and 2022 on the basis of our Consolidated Financial Information.

The historical results presented below are not necessarily indicative of the results that may be expected for any future period. For additional information, see "*Financial Statements*" on page 347.

Six-month period ended September 30, 2024 and six-month period ended September 30, 2023

The table below sets forth certain data from the Consolidated Financial Information for the six-month period ended September 30, 2024 and the six-month period ended September 30, 2023.

Particulars	Six months ended September 30, 2024	Six months ended September 30, 2023
	Amount (in ₹ million)	*Amount (in ₹ million)*
Income		
Revenue from operations	23,606.82	15,131.67
Other income	476.66	261.46
Total income	**24,083.48**	**15,393.13**
Expenses		
Valuation Expenses	2.12	0.77
Audit Fees	9.40	2.45
Operating Expenses	10,098.74	7,198.20
Project Management Fees	2,625.90	1,955.49
Insurance and Security Expenses	64.99	29.55
Trustee Fees	0.65	3.97
Depreciation on Property plant and Equipment	0.38	0.48
Amortisation of Intangible Assets	2,505.73	1,658.92
Finance costs (Interest)	10,081.30	5,636.42
Finance costs (Others)	397.62	481.21
Legal & Professional Fees	66.32	72.75
Investment Manager Fees	52.65	87.56
Custodian fees	3.42	0.98
Fair value loss on measurement of other payable	1,227.70	1,178.97
Other expenses	18.83	9.12
Total expenses	**27,155.75**	**18,316.84**
Profit/(loss) before tax	**(3,072.27)**	**(2,923.71)**
Tax expenses		
Current tax	140.36	4.86
Deferred tax	(343.86)	(207.32)
Total tax expenses	**(203.50)**	**(202.46)**
Profit/(loss) after tax	**(2,868.77)**	**(2,721.24)**
Other comprehensive income		

Item that will not be reclassified to profit or loss: (a) re-measurement (loss)/gain on defined benefit plans (net of taxes)	-	-
Other comprehensive (loss) for the period, net of tax	-	-
Total comprehensive income for the period	**(2,868.77)**	**(2,721.24)**

Total income

The total income of the Trust and Project SPVs increased to ₹24,083.48 million during the six-month period ended September 30, 2024 from ₹15,393.13 million in six-month period ended September 30, 2023. This increase in total income was primarily due to ₹8,475.15 million (or 56.01%) increase in revenue from operations.

Revenue from operations

The revenue from operations of the Project SPVs increased to ₹23,606.82 million during the six-month period ended September 30, 2024 from ₹15,131.67 million in six-month period ended September 30, 2023, primarily due to addition of Project SPVs, IRB GEPL, STPL, IRB KTPL, IRB LTPL and IRB GTPL, to the Current Portfolio.

The contract revenue (road construction) increased to ₹9,107.82 million during the six-month period ended September 30, 2024, from ₹6,828.77 million in six-month period ended September 30, 2023 due to commencement of construction activities by STPL and initial upgradation work of IRB KTPL, IRB LTPL and IRB GTPL. The income arising out of toll collection (net) increased to ₹14,579.67 million during the six-month period ended September 30, 2024 from ₹8,378.15 million during the six-month ended September 30, 2023 primarily due to addition of Project SPVs, IRB GEPL, STPL, IRB KTPL, IRB LTPL and IRB GTPL to the Current Portfolio.

Other income

The other income of the Trust and Project SPVs increased to ₹476.66 million during the six-month period ended September 30, 2024 from ₹261.46 million in six-month period ended September 30, 2023. This increase was primarily due to an increase in interest income on bank deposits upon creation of debt service reserve accounts/ major maintenance reserve accounts by KGTL, IRB WTL, KTL, AETL, IRB HMTL and the Trust. The fair value gain on mutual funds also decreased to ₹(5.34) million from ₹3.95 million during six-month ended September 30, 2024 to September 30, 2023.

Total expenses

The total expenses increased to ₹27,155.75 million during the six-month period ended September 30, 2024 from ₹18,316.84 million during six-month period ended September 30, 2023. This increase was primarily due to increase in operating expenses, project management fees, amortisation of intangible assets, finance costs (interest), and fair value loss on measurement of other payable.

Operating expenses

Operating expenses increased to ₹10,098.74 million during the six-month period ended September 30, 2024 from ₹7,198.20 million during the six-month period ended September 30, 2023, primarily due to increase in contract expenses and operation and maintenance expenses. Contract expenses increased from ₹6,632.05 million during six-month period ended September 30, 2023 to ₹8,851.24 million in six-month period ended September 30, 2024. Contract expenses primarily increased due to commencement of construction activities by STPL and initial upgradation work of IRB KTPL, IRB LTPL and IRB GTPL. The operation and maintenance expenses increased from ₹502.27 million during six-month period ended September 30, 2023 to ₹1,155.04 million in six-month period ended September 30, 2024, comprising of provision for resurfacing expenses. The site and other direct expenses increased to ₹63.87 million from ₹39.98 million and technical consultancy and supervision charges increased to ₹28.59 million from ₹23.89 million during six-month period ended September 30, 2024 from six-month period ended September 30, 2023.

Project management fees

Project management fees increased to ₹2,625.90 million during the six-month period ended September 30, 2024, from ₹1,955.49 million during the six-month period ended September 30, 2023, primarily due to the addition of

IRB GEPL, STPL, IRB KTPL, IRB LTPL and IRB GTPL in the portfolio.

Amortisation of Intangible Assets

Amortization expenses are directly proportionate to toll revenue. Amortisation of intangible assets increased to ₹2,505.73 million during the six-month period ended September 30, 2024, from ₹1,658.92 million during the six-month period ended September 30, 2023, primarily attributable to increase in toll collection due to addition of Project SPVs, IRB GEPL, STPL,IRB KTPL, IRB LTPL and IRB GTPL, in the portfolio.

Finance costs (interest)

Finance costs (interest) increased to ₹10,081.30 million during the six-month period ended September 30, 2024 from ₹5,636.42 million during the six-month ended September 30, 2023, primarily due to increase in loans from banks and financial institutions to ₹8,855.33 million from ₹4,188.58 million. These are primarily due to debt drawn pursuant to addition of Project SPVs, IRB GEPL, STPL,IRB KTPL, IRB LTPL and IRB GTPL, to the portfolio

Finance costs (others)

Finance costs (others) were ₹397.62 million in the six-month period ended September 30, 2024 as against ₹481.21 million during the six-month period ended September 30, 2023. This is primarily due to decrease in interest unwinding of trade payable – associates from ₹187.67 million to ₹nil during the six-month period ended September 30, 2024, and increase in amortisation of transaction cost and unwinding of discount on provision of MMR during such period.

Investment Manager Fees

Investment Manager fees decreased to ₹52.65 million from ₹87.56 million during six-month period ended September 30, 2024 from the six-month period ended September 30, 2023.

Fair value loss on measurement of other payable

Fair value loss on measurement of other payable increased to ₹1,227.70 million during the six-month period ended September 30, 2024 from ₹1,178.97 million during the six-month ended September 30, 2023. The said loss is non-cash in nature.

Profit/(loss) before tax

As a result of the factors discussed above, the loss before tax increased to ₹(3,072.27) million during the six-month period ended September 30, 2024 from ₹(2,923.71) million in six-month period ended September 30, 2023.

Tax expenses

The Trust Group recorded current tax of ₹140.36 million during the six-month period ended September 30, 2024 compared to ₹4.85 million during the six-month period ended September 30, 2023. The Trust Group recorded deferred tax of ₹(343.86) million during the six-month period ended September 30, 2024 compared to ₹ (207.32) million during the six-month period ended September 30, 2023. Accordingly, the total tax expenses of the Trust Group decreased to ₹(203.50) million in six-month period ended September 30, 2024 from ₹(202.46) million in six-month period ended September 30, 2023.

Profit/(loss) after tax

As a result of the factors discussed above, the loss after tax of the Trust Group increased to ₹(2,868.77) million in the six-month period ended September 30, 2024 as compared to loss of ₹(2,721.24) million in the six-month ended September 30, 2023.

Total comprehensive income/(loss) for the period

The total comprehensive loss increased to ₹(2,868.77) million in the six-month period ended September 30, 2024 from ₹(2,721.24) million in the six-month period ended September 30, 2023.

Financial Year 2024 compared to Financial Year 2023

The table below sets forth certain data from the Consolidated Financial Information for the Financial Years 2024 and 2023.

Particulars	Financial Year 2024	Financial Year 2023
	Amount (in ₹ million)	*Amount (in ₹ million)*
Income		
Revenue from operations	38,930.75	26,912.59
Other income	839.83	263.08
Total income	**39,770.58**	**27,175.67**
Expenses		
Valuation Expenses	5.41	2.67
Audit Fees	12.48	5.04
Legal and Professional Fees	726.17	163.58
Operating Expenses	19,876.05	12,865.52
Project Management Fees	3,573.20	2,647.70
Insurance and Security Expenses	94.71	14.72
Trustee Fees	14.97	5.95
Depreciation on Property plant and Equipment	0.95	1.25
Amortisation of Intangible Assets	3,648.04	2,809.17
Finance costs (Interest)	13,449.23	9,005.28
Finance costs (Others)	1,007.87	1,249.41
Investment Manager Fees	146.32	56.52
Custodian fees	1.21	0.09
Loss on sale of assets	-	0.01
Fair value loss on measurement of other payable	4,935.37	560.53
Other expenses	116.58	92.71
Total expenses	**47,608.56**	**29,480.14**
Profit before tax	**(7,837.98)**	**(2,304.47)**
Tax expenses		
Current tax	5.25	435.25
Deferred tax	(1,193.08)	(468.13)
Total tax expenses	**(1,187.83)**	**(32.88)**
Profit after tax	**(6,650.15)**	**(2,271.59)**
Other comprehensive income		
Item that will not be reclassified to profit or loss: (a) re-measurement (loss)/gain on defined benefit plans (net of taxes)	-	-
Other comprehensive (loss) for the year, net of tax	**-**	**-**
Total comprehensive income for the year	**(6,650.15)**	**(2,271.59)**

Total income

The total income of the Trust and Project SPVs increased to ₹39,770.58 million in the Financial Year 2024 from ₹27,175.67 million in the Financial Year 2023. This increase in total income was primarily due to an increase in contract revenue from road construction and toll revenue.

Revenue from operations

The revenue from operations of the Project SPVs increased to ₹38,930.75 million in the Financial Year 2024 from ₹26,912.59 million in the Financial Year 2023, primarily due to addition of Project SPVs viz; IRB GEPL and STPL to the Current Portfolio.

The contract revenue (road construction) increased to ₹19,154.21 million in the Financial Year 2024 from ₹11,672.04 million in the Financial Year 2023 due to initial upgradation work of IRB GEPL and commencement of construction activities by STPL. The income arising out of toll collection (net) increased to ₹19,924.20 million in the Financial Year 2024 from ₹15,425.76 million in the Financial Year 2023. Other operating revenue decreased to ₹nil million in the Financial Year 2024 from ₹0.23 million in the Financial Year 2023. The revenue from operations of the Project SPVs were reduced on account of revenue sharing with the NHAI for FASTag by ₹147.66 million in the Financial Year 2024, compared to a reduction of ₹185.44 million in the Financial Year 2023.

Other income

The other income of the Trust and Project SPVs increased to ₹839.83 million in the Financial Year 2024 from ₹263.08 million in the Financial Year 2023. This increase was primarily due to increase in interest income on bank deposits upon creation of debt service reserve accounts/ major maintenance reserve accounts by KGTL, IRB WTL, KTL, AETL, IRB HMTL and the Trust

Total expenses

The total expenses of the Trust and Project SPVs increased to ₹47,608.56 million in the Financial Year 2024 from ₹29,480.14 million in the Financial Year 2023. This increase was primarily due to an increase in operating expenses, project management fees, amortisation of intangible assets, finance costs (interest), investment manager fees and fair value loss on measurement of other payable.

Operating expenses

Operating expenses increased to ₹19,876.05 million in the Financial Year 2024 from ₹12,865.52 million in the Financial Year 2023. This increase was primarily due to an increase in contract expenses. Contract expenses increased to ₹18,037.07 million in the Financial Year 2024 from ₹11,330.91 million in the Financial Year 2023 due to the initial upgradation work of IRB GEPL and commencement of construction activities by STPL. Operation and maintenance expenses increased to ₹1,719.43 million in the Financial Year 2024 from ₹1,471.41 million in the Financial Year 2023, comprising of provision for resurfacing expenses. Technical consultancy and supervision charges amounting to ₹33.65 million were paid during the Financial Year 2024 as against ₹62.84 million paid during the Financial Year 2023. Sub-contracting/security expenses decreased to ₹nil million in the financial year 2024 from ₹0.35 million in the Financial Year 2023.

Project management fees

Project management fees increased to ₹3,573.20 million in the Financial Year 2024 from ₹2,647.70 million in the Financial Year 2023 primarily as a result of addition of IRB GEPL and STPL to the portfolio.

Amortisation of intangible assets

Amortisation of intangible assets increased to ₹3,648.04 million in the Financial Year 2024 from ₹2,809.17 million in the Financial Year 2023, primarily due to the increase in toll collection due to addition of IRB GEPL and STPL to the portfolio.

Finance costs (interest)

Finance costs (interest) increased to ₹13,449.23 million in the Financial Year 2024 from ₹9,005.28 million in the Financial Year 2023. This increase was primarily due to debt drawdown in IRB GEPL and STPL, pursuant to addition to the Current Portfolio, and drawl for under construction project i.e. PDTPL.

Finance costs (others)

Finance cost (others) decreased to ₹1,007.87 million from ₹1,249.41 million in the Financial Year 2024 from the

Financial Year 2023, primarily due to reduction in interest unwinding of trade payables – associates to Rs. 187.67 million in Financial Year 2024 from Rs. 765.06 million in Financial Year 2023.

Investment Manager fees

Investment Manager fees were ₹ 146.32 million in the Financial Year 2024 as against ₹ 56.52 million in Financial Year 2023.

Fair value loss on measurement of other payable

Fair value loss on measurement of other payable increased to ₹4,935.37 million in the Financial Year 2024 from ₹560.53 million in the Financial Year 2023.During the Financial Year 2024, the Trust Group had filed claims in relation to a project with the NHAI. On actualization of claims in fair valuation working, there was a fair value loss of ₹4,935.37 million. The said loss is non-cash in nature.

Profit/(loss) before tax

As a result of the factors discussed above, the loss before tax increased to ₹(7,837.98) million in the Financial Year 2024 from loss of ₹(2,304.47) million in the Financial Year 2023.

Tax expenses

The Trust Group recorded deferred tax of ₹(1,193.08) million in the Financial Year 2024 compared to ₹(468.13) million in the Financial Year 2023 and recorded current tax of ₹5.25 million in the Financial Year 2024 compared to ₹ 435.25 million in the Financial Year 2023. Accordingly, the total tax expenses of the Trust Group increased to ₹(1,187.83) million in the Financial Year 2024 from ₹(32.88) million in the Financial Year 2023.

Profit/(loss) after tax

The loss after tax of the Trust Group increased to ₹(6,650.15) million in the Financial Year 2024 as compared to (loss) of ₹(2,271.59) million in the Financial Year 2023. This increase in loss was primarily due to an increase in the total expenses.

Total comprehensive income/(loss) for the period

The total comprehensive loss decreased to ₹(6,650.15) million in the Financial Year 2024 from ₹(2,271.59) million in the Financial Year 2023.

Financial Year 2023 compared to Financial Year 2022

The table below sets forth certain data from the Consolidated Financial Information for the Financial Years 2023 and 2022.

Particulars	Financial Year 2023	Financial Year 2022
	Amount (in ₹ million)	*Amount (in ₹ million)*
Income		
Revenue from operations	26,912.59	12,404.84
Other income	263.08	100.13
Total income	**27,175.67**	**12,504.97**
Expenses		
Valuation Expenses	2.67	1.46
Audit Fees	5.04	3.13
Operating Expenses	12,865.52	2,029.53
Project Management Fees	2,647.70	1,960.27
Insurance and Security Expenses	14.72	1.12
Trustee Fees	5.95	4.16

Particulars	Financial Year 2023	Financial Year 2022
	Amount (in ₹ million)	*Amount (in ₹ million)*
Depreciation on Property plant and Equipment	1.25	1.74
Amortisation of Intangible Assets	2,809.17	1,673.16
Finance costs (Interest)	9,005.28	8,670.13
Finance costs (Others)	1,249.41	868.58
Investment Manager Fees	56.52	42.48
Custodian fees	0.09	0.18
Loss on sale of assets	0.01	-
Fair value loss on measurement of other payable	560.53	2,161.31
Other expenses	256.29	235.06
Total expenses	**29,480.14**	**17,652.31**
Profit before tax	**(2,304.47)**	**(5,147.34)**
Tax expenses		
Current tax	435.25	8.87
Deferred tax	(468.13)	(720.23)
Total tax expenses	**(32.88)**	**(711.36)**
Profit after tax	**(2,271.59)**	**(4,435.98)**
Other comprehensive income		
Item that will not be reclassified to profit or loss: (a) re-measurement (loss)/gain on defined benefit plans (net of taxes)	-	-
Other comprehensive (loss) for the period/year, net of tax	-	-
Total comprehensive income for the period/year	**(2,271.59)**	**(4,435.98)**

Note: Legal and professional expenses are included in "Other expenses"

Total income

The total income of the Trust and Project SPVs increased to ₹27,175.67 million in the Financial Year 2023 from ₹12,504.97 million in the Financial Year 2022. This increase in total income was primarily due to an increase in contract revenue from road construction and toll revenue.

Revenue from operations

The revenue from operations of the Project SPVs increased to ₹26,912.59 million in the Financial Year 2023 from ₹12,404.84 million in the Financial Year 2022, primarily due to an increase in toll collection upon issuance of completion certificates for IRB HMTL and KGTL on July 1, 2022 and July 20, 2022, respectively, which lead to a hike in tariff for these projects. Further, PDTPL was acquired by the Trust on April 2, 2022 and became a Project SPV from such date onwards.

The contract revenue (road construction) increased to ₹11,672.04 million in the Financial Year 2023 from ₹1,054.48 million in the Financial Year 2022 due to commencement of construction activities by PDTPL. The income arising out of toll collection (net) increased to ₹15,425.76 million in the Financial Year 2023 from ₹10,598.07 million in the Financial Year 2022. Other operating revenue decreased to ₹0.23 million in the Financial Year 2023 from ₹965.16 million in the Financial Year 2022, primarily due to the receipt of claim amounts by KTL and AETL from the NHAI during the Financial Year 2022 as compensation for inability to collect toll because of protests against the farm laws on their project highways, while such amounts were not received during the Financial Year 2023. The revenue from operations of the Project SPVs were reduced on account of revenue sharing with the NHAI for FASTag by ₹ 185.44 million in the Financial Year 2023, compared to a reduction of ₹212.87 million in the Financial Year 2022.

Other income

The other income of the Trust and Project SPVs increased to ₹263.08 million in the Financial Year 2023 from ₹100.13 million in the Financial Year 2022. This increase was primarily due to an increase in interest income on bank deposits upon creation of debt service reserve accounts by KGTL and HMTL.

Total expenses

The total expenses of the Trust and Project SPVs increased to ₹29,480.14 million in the Financial Year 2023 from ₹17,652.31 million in the Financial Year 2022. This increase was primarily due to an increase in operating expenses, project management fees, amortisation of intangible assets, finance costs (interest), finance costs (others) and investment manager fees, partly offset by a decrease in fair value loss on measurement of other payable.

Operating expenses

Operating expenses increased to ₹12,865.52 million in the Financial Year 2023 from ₹2,029.53 million in the Financial Year 2022. This increase was primarily due to an increase in contract expenses. Contract expenses increased to ₹11,330.91 million in the Financial Year 2023 from ₹1,036.47 million in the Financial Year 2022 due to the commencement of construction activities by PDTPL. Operation and maintenance expenses increased to ₹1,471.41 million in the Financial Year 2023 from ₹939.15 million in the Financial Year 2022 due to resurfacing expenses upon receipt of completion certificates of IRB HMTL and KGTL, and maintenance related expenses in IRB WTL. Technical consultancy and supervision charges amounting to ₹62.84 million were paid during the Financial Year 2023 as against ₹53.20 million paid during the Financial Year 2022. Sub-contracting/security expenses decreased to ₹0.35 million in the financial year 2023 from ₹0.72 million in the Financial Year 2022.

Project management fees

Project management fees increased to ₹2,647.70 million in the Financial Year 2023 from ₹1,960.27 million in the Financial Year 2022 primarily as a result of periodic maintenance expenditure due in few projects.

Amortisation of intangible assets

Amortisation of intangible assets increased to ₹2,809.17 million in the Financial Year 2023 from ₹1,673.16 million in the Financial Year 2022, primarily due to the increase in toll collection upon issuance of completion certificates for IRB HMTL and KGTL on July 1, 2022, and July 20, 2022, respectively, which lead to a hike in tariff for these projects. Further, PDTPL was acquired by the Trust on April 2, 2022.

Finance costs (interest)

Finance costs (interest) increased to ₹9,005.28 million in the Financial Year 2023 from ₹8,670.13 million in the Financial Year 2022. This increase was primarily due to increase in interest on debentures to ₹1,617.52 million from nil, primarily due to refinacing of term loans availed from banks and financial institutions in case of YATL, SYTL and UTL of ₹15,150.00 million, ₹5,910 million and ₹7,000 million, respectively. This was partially set of by decrease in interest to banks and financial institutions from ₹8,670.13 million to ₹7,387.76 million from the Financial Year 2022 to the Financial Year 2023.

Finance costs (others)

Finance cost (others) increased from ₹868.58 million to ₹1,249.41 million from the Financial Year 2022 to the Financial Year 2023, primarily due to increase in amortisation of transaction cost, unwinding of discount on provision of MMR and interest unwinding of trade payable- associates.

Investment Manager fees

Investment Manager fees was ₹56.52 million in the Financial Year 2023 as against ₹42.48 million during the Financial Year 2022.

Fair value loss on measurement of other payable

Fair value loss on measurement of other payable decreased to ₹560.53 million in the Financial Year 2023 from ₹2,161.31 million in the Financial Year 2022. During the Financial Year 2022, the Trust Group had filed claims in relation to a project with the NHAI. On actualization of claims in fair valuation working, there was a fair value loss of ₹2,161.31 million. The said loss is non-cash in nature.

Profit/(loss) before tax

As a result of the factors discussed above, the loss before tax decreased to ₹(2,304.47) million in the Financial Year 2023 from loss of ₹(5,147.34) million in the Financial Year 2022.

Tax expenses

The Trust Group recorded deferred tax of ₹(468.13) million in the financial year 2023 compared to ₹(720.23) million in the Financial Year 2022. Accordingly, the total tax expenses of the Trust Group decreased to ₹(32.88) million in the Financial Year 2023 from ₹(711.36) million in the Financial Year 2022.

Profit/(loss) after tax

The loss after tax of the Trust Group decreased to ₹(2,271.59) million in the Financial Year 2023 as compared to (loss) of ₹(4,435.98) million in the Financial Year 2022. This decrease in loss was primarily due to an increase in the income arising out of toll collection (net).

Total comprehensive income/(loss) for the period

The total comprehensive loss decreased to ₹(2,271.59) million in the Financial Year 2023 from ₹(4,435.98) million in the Financial Year 2022.

Liquidity and Capital Resources

The Project SPVs operate in a capital-intensive industry and their principal liquidity requirements have been to finance their capital expenditures. To fund these costs, the Project SPVs have historically relied on equity contributions, short term and long-term borrowings and cash from operating activities.

The Project SPVs' funding and treasury activities are conducted consistent with corporate policies designed to enhance investment returns while maintaining appropriate liquidity for their requirements. Their short-term liquidity requirements relate to servicing debt and funding working capital requirements. Sources of short-term liquidity include cash balances and receipts from operations. Their long-term liquidity requirements include partial funding of investments in new projects, funding equity contributions in Project SPVs and repayment of long-term debt under credit facilities. Sources of funding for long-term liquidity requirements include loans, equity issuances or debt issues. The principal liquidity requirements have been, and are expected to continue to be, construction, development, implementation and maintenance costs of the BOT and TOT projects.

The Investment Manager believes that after taking into account the expected cash to be generated from our business and operations, we have sufficient funds for both our present and anticipated future requirements for working capital for 12 months following the date of Allotment.

Cash Flows

The following table sets forth certain information relating to the Trust and Project SPVs cash flows for the periods indicated:

(₹ in million)

Particulars	Six-month period ended September 30, 2024	Six-month period ended September 30, 2023	Financial Year 2024	Financial Year 2023	Financial Year 2022
Net cash flows generated from operating activities	15,085.84	(5,005.91)	2,393.02	13,513.70	19,882.59

Particulars	Six-month period ended September 30, 2024	Six-month period ended September 30, 2023	Financial Year 2024	Financial Year 2023	Financial Year 2022
Net cash flows (used in) investing activities	(11,946.10)	(82,284.21)	(1,60,333.24)	(13,801.66)	(18,311.44)
Net cash flows generated from financing activities	(4,202.01)	98,911.78	1,58,812.61	731.91	(1,697.41)
Net increase/ (decrease) in cash and cash equivalents	(1,062.26)	11,621.66	872.39	443.95	(126.26)

Cash flows from operating activities

Six-month period ended September 30, 2024

In the six-month period ended September 30, 2024, the Trust and Project SPVs' net cash flow from operating activities was ₹15,085.84 million and the loss before tax was ₹(3,072.27) million, which was adjusted for non-cash and other items amounting to ₹14,903.35 million and change in working capital amounting to ₹3,414.43 million, primarily on account of increase in trade payables amounting to ₹1,169.13 million, decrease in other liabilities and provisions amounting to ₹(1,511.72) million, increase in other assets amounting to ₹(434.21) million and decrease in other financial assets amounting to ₹4,279.94 million. The cash generated from operations was ₹15,245.52 million and net taxes paid were ₹(159.68) million.

Six-month period ended September 30, 2023

In the six-month period ended September 30, 2023, the Trust and Project SPVs' net cash flow from operating activities was ₹(5,005.91) million and the loss before tax was ₹(2,923.71) million, which was adjusted for non-cash and other items amounting to ₹9,591.59 million and change in working capital amounting to ₹(11,610.23) million, primarily on account of decrease in trade payables amounting to ₹(11,479.70) million, decrease in other financial liabilities amounting to ₹(84.99) millions, increase in trade receivables amounting to ₹238.14 millions, increase in other financial assets amounting to ₹(248.38) million and decrease in other liabilities and provisions amounting to ₹(985.80) million. The cash generated used in operations was ₹(4,942.35) million and net taxes paid were ₹(63.56) million.

Financial Year 2024

In the Financial Year 2024, the Trust and Project SPVs' net cash flow from operating activities was ₹ 2,393.02 million and the loss before tax was ₹(7,837.98) million, which was adjusted for non-cash and other items amounting to ₹22,570.61 million and change in working capital amounting to ₹(12,184.75) million, primarily on account of decrease in trade payables amounting to ₹(14,206.31) million, increase in other liabilities and provision amounting to ₹85.39 millions, decrease in trade receivables amounting to ₹16.52 millions, decrease in other financial liabilities amounting to ₹(1,202.70) million and decrease in other assets amounting to ₹4,027.16 million. The cash generated from operations was ₹2,547.88 million and net taxes paid were ₹(154.86) million in the Financial Year 2024.

Financial Year 2023

In the Financial Year 2023, the Trust and Project SPVs' net cash flow from operating activities was ₹13,513.70 million and the loss before tax was ₹2,304.47 million, which was adjusted for non-cash and other items amounting to ₹14,836.70 million and change in working capital amounting to ₹1,327.31 million, primarily on account of increase in trade payables amounting to ₹1,178.92 million, increase in other financial liabilities amounting to ₹435.72 million, decrease in other liabilities and provision amounting to ₹(45.01) millions, increase in trade receivables amounting to ₹(33.12) millions and increase in other assets amounting to ₹(343.36) million. The cash generated from operations was ₹13,859.54 million and net taxes paid were ₹(345.84) million in the Financial Year 2023.

Financial Year 2022

In the Financial Year 2022, the Trust and Project SPVs' net cash flow from operating activities was ₹19,882.59 million and the loss before tax was ₹5,147.34 million, which was adjusted for non-cash and other items amounting to ₹14,271.25 million and change in working capital amounting to ₹10,726.60 million, primarily on account of increase in trade payables amounting to ₹11,498.13 million, increase in other financial liabilities amounting to ₹306.46 millions, increase in other liabilities amounting to ₹30.37 millions, decrease in trade receivables amounting to ₹48.69 millions and increase in other financial assets amounting to ₹ 989.59 million. The cash generated from operations was ₹19,850.51 million and net taxes paid were ₹32.09 million in the year ended March 31, 2022.

Cash used in investing activities

Six-month period ended September 30, 2024

The Trust and Project SPVs' net cash used in investing activities in the six-month period ended September 30, 2024 was ₹(11,946.10) million, primarily attributable to addition towards construction for projects (classified as toll collection rights under intangible assets).

Six-month period ended September 30, 2023

The Trust and Project SPVs' net cash used in investing activities in the six-month month period ended September 30, 2023 was ₹(82,284.21) million, primarily attributable to addition towards construction for projects (classified as toll collection rights under intangible assets).

Financial Year 2024

The Trust and Project SPVs' net cash used in investing activities in the Financial Year 2024 was ₹(1,60,333.24) million, primarily attributable to addition towards construction for projects (classified as toll collection rights under intangible assets).

Financial Year 2023

The Trust and Project SPVs' net cash used in investing activities in the Financial Year 2023 was ₹(13,801.66) million, primarily attributable to addition towards construction for projects (classified as toll collection rights under intangible assets).

Financial Year 2022

The Trust and Project SPVs' net cash used in investing activities in the year ended March 31, 2022 was ₹(18,311.44) million, primarily attributable to addition towards construction for projects (classified as toll collection rights under intangible assets).

Cash flows generated from financing activities

Six-month period ended September 30, 2024

Net cash generated used in financing activities in the six-month ended September 30, 2024 was ₹(4,202.01) million, primarily consisting of borrowings from banks/financial institutions, proceeds from issue of equity share capital, proceeds from issue of Subordinate Debt, offset in part by repayments of borrowings and finance cost paid and return of capital.

Six-month period ended September 30, 2023

Net cash generated from financing activities in the six-month period ended September 30, 2023 was ₹98,911.78 million, primarily consisting of borrowings from banks/financial institutions, partly offset by repayments of borrowings and finance cost paid.

Financial Year 2024

Net cash generated from financing activities in the Financial Year was ₹ 158,812.61 million, primarily consisting of borrowings from banks/financial institutions and proceeds from issue of equity share capital.

Financial Year 2023

Net cash generated from financing activities in the Financial Year was ₹731.91 million, primarily consisting of borrowings from banks/financial institutions and proceeds from issue of equity share capital.

Financial Year 2022

Net cash generated from financing activities in the Financial Year 2022 was ₹(1,697.41) million, primarily consisting of finance cost.

Indebtedness

The table below provides the types and amounts of our outstanding indebtedness as at September 30, 2024.

(₹ in million)

	As at September 30, 2024
Non-current Borrowings	
Secured	
Term loans	
Indian rupee loan from banks (secured)	1,50,315.60
Less : current maturities expected to be settled within 12 month from balance sheet date	(1,352.53)
Total (a)	**1,48,963.07**
Indian rupee loan from financial institutions	48,154.63
Less : current maturities expected to be settled within 12 month from balance sheet date	(455.00)
Total (b)	**47,699.63**
Non-convertible debentures (secured)	28,003.81
Less : current maturities expected to be settled within 12 month from balance sheet date	(119.58)
Total (c)	**27,884.23**
Less: Unamortised transaction cost **(d)**	(4,113.00)
Total non-current borrowings (e = a + b + c + d)	**220,433.93**
Current Borrowing	
Current maturity of long term loans	
Indian rupee loan from banks	1,352.53
Indian rupee loan from financial institutions	455.00
Non convertible debentures (secured)	119.58
(Unsecured, repayable on demand and interest free)	
Interest accrued but not due on borrowings	13.12
Total current borrowings (f)	**1,940.23**
Total borrowings (e + f)	**222,374.16**
Aggregate secured loans	222,361.04
Aggregate unsecured loans	-

As at September 30, 2024, the Trust and Project SPVs had total borrowings aggregating to ₹222,374.16 million on a consolidated basis, of which ₹222,361.04 million was secured. The Project SPVs' secured financing arrangements are secured by their movable and immovable assets, including a charge on equipment as well as on their intangible assets relating to toll collection rights under the various projects. Also see "*Financial Indebtedness*" on page 800.

Contractual Obligations and Commitments

The following table sets forth certain information relating to future payments due under contractual commitments as of September 30, 2024, aggregated by type of contractual obligation:

(₹ in million)

Particulars	Total	On Demand	Less than 1 year	1 to 5 years	> 5 years
Borrowings (Gross of unamortised transaction cost)	226,487.16	-	1,940.23	44,557.83	179,989.10
Other financial liabilities	43,867.13	-	1,850.20	42,016.93	-
Trade payables	6,783.25	-	6,783.25	-	-
Total	277,137.54	-	10,573.68	86,574.76	179,989.10

Contingent Liabilities and other Off-Balance Sheet Arrangements

Contingent liabilities not provided for

As of September 30, 2024, there are no contingent liabilities which are not provided for in the Consolidated Financial Statements for the Trust and the Project SPVs.

There are no off-balance sheet arrangements that have or are reasonably likely to have an adverse effect on our financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that the Investment Manager believe are material to investors.

Transactions with Related Parties

The Project SPVs have in the course of their business entered into various transactions with related parties. These transactions include operation and maintenance charges paid for operation and maintenance activities sub-contracted, loans and advances, certain road work expenses for work road work contracted to various Sponsor entities in similar businesses. Further, the Trust has also provided Shareholder Loans to the Project SPVs. The proposed MBEL Acquisition, will also be a related party transaction.

For further information, see "*Related Party Transactions"* on page 306 and "*Financial Statements*" on page 347.

Material developments since the date of the last balance sheet

- Pursuant to a resolution dated November 14, 2024, the board of directors of the Investment Manager has approved a preliminary and non-binding offer to the IRB InvIT Fund in relation to the transfer of IRB HMTL, IRB WTL, KTL, AETL and KGTL. The non-binding offer is preliminary, non-binding, and subject to various risks and uncertainties, including entry into definitive agreements and obtaining approvals, including from third parties, regulatory authorities, shareholders and unitholders, as applicable. There can be no assurance that any transaction will be entered pursuant to the non-binding offer.
- The Trust has announced its second distribution for the Financial Year 2025 of ₹0.57 per Unit as return of captial which comprises ₹0.04 per Unit as interest to the eligible Unitholders holding Units as of October 31, 2024.

Except as disclosed above and in this Letter of Offer, the Investment Manager is not aware of any circumstances that have arisen since September 30, 2024, that materially and adversely affect, or are likely to affect, the Trust's or the Project SPVs' operations or profitability, the value of the Trust's or the Project SPVs' respective assets, or the Trust's or the Project SPVs' ability to pay their respective material liabilities within the next 12 months.

Quantitative and Qualitative Disclosure about Market Risk

Interest rate risk

As the infrastructure development and construction business is capital intensive, the Project SPVs are exposed to interest rate risk. Interest rates for borrowings have been volatile in India in recent periods. The Project SPVs infrastructure development and construction projects were funded to a large extent by debt and increases in interest

expense could have an adverse effect on their results of operations and financial condition. The Trust and Project SPVs current debt facilities carry interest at variable rates as well as fixed rates with the provision for periodic reset of interest rates. As of September 30, 2024, the majority of the Trust and Project SPVs' total indebtedness was subject to variable rates. Although from time to time we may engage in interest rate hedging transactions or exercise any rights available to us under these financing arrangements to terminate the existing debt financing arrangement on the respective reset dates and enter into new financing arrangements, there can be no assurance that we will be able to do so on commercially reasonable terms, that our counterparties will perform their obligations, or that these agreements, if entered into, will protect us adequately against interest rate risks.

Inflation Risk

In recent years, India has experienced relatively high rates of inflation. While we believe inflation has not had any material impact on our business and results of our operations, inflation generally impacts the overall economy and business environment and could affect us.

Quality of income

The majority of our income on a consolidated basis is from the collection of toll. This is based on actual receipts by each of the Project SPVs. There are no management estimates or judgement involved in the recognition of our revenues. For further information see "*– Factors affecting Results of Operations*", "*– Significant Accounting Policies*" and "*– Components of Income and Expenses*".

Unusual or Infrequent Events or Transactions

Except as described in this Letter of Offer, there have been no events or transactions to our knowledge which may be described as "unusual" or "infrequent".

Known Trends or Uncertainties

Except as described in "*Risk Factors*" on page 16 and elsewhere in this Letter of Offer, to our knowledge, there are no known trends or uncertainties that have had or are expected to have a material adverse impact on our revenues.

Future Relationships between Costs and Income

Except as discussed in "*Risk Factors*" and elsewhere in this Letter of Offer, there are no known factors that will have a material adverse impact on our operations or finances.

Competitive Conditions

Please see "*Risk Factors*" and "*- Factors affecting Results of Operations*" on pages 16 and 780, respectively.

Significant Economic Changes that Materially Affected or are Likely to Affect Income from Continuing Operations

Our business has been subject, and we expect it to continue to be subject, to significant economic changes that materially affect or are likely to affect our income from continuing operations identified above in "*– Factors affecting Results of Operations*" and the uncertainties described in "*Risk Factors*" on pages 780 and 16, respectively.

FINANCIAL INDEBTEDNESS

The following is a summary of the indebtedness of the Project SPVs and the Target SPV, together with a brief description of certain material covenants of the relevant financing agreements. Applicants should also refer to "Background and Structure of the Trust" and "Financial Statements" on pages 93 and 347, respectively.

The Project SPVs and the Target SPV have primarily availed loans, for financing, in part, the project costs in relation to the construction and development of their respective underlying road infrastructure asset. Certain Project SPVs have availed further financing, as necessary, for refinancing existing loans or with respect to the repayment obligations under previously availed loans.

Set forth below is a brief summary of the aggregate borrowings of the Trust, the Project SPVs and the Target SPV as at September 30, 2024.

Category of Borrowing	Aggregate Amount (₹ in Millions)	Outstanding amount as at September 30, 2024 (₹ in Millions)
AETL		
Term Loans		
Secured	6,767.90	6,730.34
Unsecured	-	21,214.10
Total		**27,944.44**
CGTL		
Term Loans		
Secured	14,000.00	13,798.67
Unsecured	-	1,571.17
Total		**15,369.84**
IRB HMTL		
Term Loans		
Secured	15,043.10	14,655.44
Unsecured	-	9,801.57
Total		**24,457.01**
IRB WTL		
Term Loans		
Secured	9,605.30	9,261.91
Unsecured	-	15,002.50
Total		**24,264.41**
KGTL		
Term Loans		
Secured	9,996.00	9,636.64
Unsecured	-	2,961.57
Total		**12,598.21**
KTL		
Term Loans		
Secured	4,827.40	4,686.68
Unsecured	-	14,970.06
Debentures	-	-
Total		**19,656.74**
SYTL		
Term Loans		
Secured	-	-
Unsecured	-	7,973.40
Debentures	5,910.00	5,910.00
Total		**13,883.40**
UTL		
Term Loans		
Secured	7,609.00	8,254.94
Unsecured	-	2,533.41
Debentures	7,000.00	6,943.81
Total		**17,732.16**
YATL		
Term Loans		

Category of Borrowing	Aggregate Amount (₹ in Millions)	Outstanding amount as at September 30, 2024 (₹ in Millions)
Secured	-	-
Unsecured	-	20,299.46
Debentures	15,150.00	15,150.00
Total		**35,449.46**
PDTPL		
Term Loans		
Secured	16,500.00	12,382.53
Unsecured	-	-
Total		**12,382.53**
IRB GEPL		
Term Loans		
Secured	55,000.00	54,944.66
Unsecured	-	21,496.98
Total		**76,441.63**
STPL		
Term Loans		
Secured	14,460	1,244.35
Unsecured	-	-
Total		**1,244.35**
IRB LTPL		
Term Loans		
Secured^	35,000.00	32,423.36
Unsecured	-	12,617.40
Total		**45,040.76**
IRB GTPL		
Term Loans		
Secured	8,770.00	8,450.75
Unsecured	-	3,098.55
Total		**11,549.30**
IRB KTPL		
Term Loans		
Secured	4,540.00	4,257.76
Unsecured	-	1,180.43
Total		**5,438.19**
IRB Infrastructure Trust		
Term Loans		
Secured	63,900.00	62,713.22
Unsecured	-	1,000.00
Debentures	-	-
Total		**63,713.22**
MBEL		
Term Loans		
Secured	26,590.00	16,962.97
Unsecured	-	604.93
Debentures*	15,997.50	15,997.50
Total		**33,565.40**

As on September 30, 2024 excludes EIR impact of Rs.2,079.96 million.

Principal Terms of the Borrowings availed by the Trust

The Trust represented by the Investment Manager has entered into a loan agreement dated September 18, 2023 (the "**Rupee Loan Agreement**"), to avail secured loans to be utilized towards, *inter alia*, repayment of existing external debt to senior lenders of certain Project SPVs, creation of debt service reserve and major maintenance reserve by certain Project SPVs and meeting transaction expenses as specified in the Rupee Loan Agreement. Such loans availed by the Trust are secured by the first ranking *pari passu* charge on, *inter-alia*, (i) security interest on all present and future movable assets and the receivables of the Trust; (ii) all bank accounts of the Trust; (iii) on the debt service reserve account and all funds deposited therein time to time, (iv) charge by way of assignment on (a) all right, title, interest, claims, benefits and demands whatsoever of the Trust in, to and under all the loans and advances extended by the Trust to certain Project SPVs.

Pursuant to the Rupee Loan Agreement, the Trust has, *inter-alia*, undertaken, that it shall (i) directly control, including have management control, of certain Project SPVS, (ii) hold and retain 100% of shareholding in certain Project SPVs, (iii) upon occurrence of an event of default, not exercise its rights under the financing documents with specified Project SPVs without the prior consent of the security trustee; (iv) create and fund and maintain the debt service reserve on and from the date of first disbursement until the final settlement date, subject to certain conditions; (v) create and maintain an additional cash reserve; and (vi) ensure that certain Project SPVs create and maintain a major maintenance reserve, as set out in the Rupee Loan Agreement.

Events of Default: The Rupee Loan Agreement contains, amongst others, the following events of default:

(i) Failure to make payments when due under the financing documents, at the place and in the currency in which it is expressed to be payable;
(ii) Breach of covenant, undertaking, condition or any other obligation under the financing documents;
(iii) Any representation or warranty or statement made or repeated by the borrowers in any transaction document, is materially false, incorrect, incomplete, inaccurate or misleading;
(iv) The units of the Trust cease to be listed on the stock exchange or cease to exist;
(v) Any fraud or forgery committed by the Trust.

Consequences of Default: The Rupee Loan Agreement sets out, *inter-alia*, the following consequences of default:

(i) Acceleration/part acceleration of the maturity of the loan and declaration that all the outstanding amount be payable on demand;
(ii) Suspension or cancelation of the commitments;
(iii) Sue for creditors process or declare that the security created in favor of the rupee lenders or the common security trustee is enforceable; and
(iv) Exercise any other right that the parties may have under the transaction documents or under applicable law.

This is an indicative list of the terms of the Rupee Loan Agreement and there may be additional terms, conditions and requirements under the Rupee Loan Agreement entered into by us.

Principal Terms of the Borrowings availed by the Project SPVs and the Target SPV

1. **Interest and commissions:** In terms of the loans availed by the Project SPVs and the Target SPV, the interest rate is a base rate specified by the lender plus applicable spread, if any, per annum. The applicable spread varies among different loans. The rate of interest upon non-convertible debentures is at a fixed rate per annum for the next two to seven years.

2. **Maturity and Repayment:** The final maturity period of the loans availed by the Project SPVs and the Target SPV ranges from October 2028 to September 2046. These loans and non-convertible debentures are repayable in accordance with the repayment/redemption schedule specified in the relevant financing agreements, which typically prescribe monthly instalments for rupee loans (except for PDTPL, which prescribes quarterly instalments) and monthly instalments/bullet payment with respect to the non-convertible debentures.

3. **Security:** In terms of borrowings where security needs to be created, the Project SPVs are typically required to create:

    a. A first charge by way of hypothecation of all the Project SPV's or the Target SPV movables, including moveable plant and machinery, machinery spares, tools and accessories, furniture, fixtures, vehicles and all other movable assets, present and future, excluding the project assets;

    b. A first ranking charge over all accounts of the Project SPV or the Target SPV, including, *inter alia*, the escrow account, trust and retention account, DSR account and the sub-accounts that may be opened in accordance with the facility agreement/debenture trust deed and the supplementary escrow agreement, or any of the other project agreements and all funds from time to time deposited therein,

the receivables and authorised investments or other securities for the purpose of being applied to the extent of the waterfall of priority specified in the concession agreement;

c. A first charge on the Project SPV's or the Target SPV intangibles, including but not limited to goodwill and uncalled capital, present and future, excluding the project assets;

d. A first ranking *pari passu* charge over all of the Project SPV's or the Target SPV immovable assets, both present and future, if any;

e. A substitution agreement, as may be executed between the NHAI or other concessioning authorities, the Project SPV and its respective lenders, whereby the NHAI or other concessioning authorities may substitute the Project SPV by a selectee of its respective lenders, for the purpose of securing the payment of lender dues;

f. A pledge of a certain specified percentage of the equity shares of the Project SPVs or the Target SPV that are held by the Sponsor (directly or indirectly);

g. An irrevocable and unconditional corporate guarantee/undertaking from the Sponsor/Trust and/or certain other members of the Sponsor group to meet shortfall between outstanding amount of obligations and termination payments received from NHAI or other concessioning authorities in case of termination of the concession agreements;

h. Assignment on *pari passu* basis by way of hypothecation of all toll receivables, cash flows and revenue and other project documents;

i. The right, title and interest of the Project SPV by way of first charge in, to and under all the applicable permits, insurance policies and uncalled capital of the Project SPV; and

j. The right, title and interest of the Project SPV by way of first charge in, to and under (a) the project documents/project agreements and (b) the guarantees, other performance warranties, indemnities and security that may be furnished in favor of the Project SPV by various contractors.

4. **Covenants:** Borrowing arrangements entered into by the Project SPVs and the Target SPV contain certain restrictive conditions and covenants restricting certain corporate actions and the respective Project SPV/Tagert SPV is required to take the prior approval of the lender/trustee before carrying out such activities. Each of the Project SPVs/Target SPV are also required to adhere to certain financial covenants, which include but are not limited to, maintaining a prescribed debt to equity ratio during the currency of the loan and maintaining a minimum debt service coverage ratio during certain periods.

A Project SPV/Target SPV is required to intimate and/or obtain prior written permission of its lenders, *inter alia*, in the following instances:

a. Effecting any change in the nature or scope of the project or any change in the financing plan;

b. Effecting any change in capital structure (including shareholding pattern) (other than the transfer of shares of the Target SPV to the Trust, where the Sponsor continues to hold at least 51% of the unit capital of the Trust);

c. Raising any equity or preference share capital;

d. Making any capital expenditure other than permitted investments;

e. Making any dividend payments to the Trust or making any other restricted payments (including redemption of any shares of any class, prepayment in relation to any indebtedness, payment of interest on unsecured loans, investment in any entity) except as permitted under the financing agreements;

f. Creation of any security interest in any of the secured property (except the transfer of shares of the Target SPV to the Trust, where the Sponsor continues to hold 51% of the unit capital of the Trust);

g. Incurrence of any other indebtedness, including the issue of debentures other than permitted indebtedness;

h. Entering into any partnership, profit-sharing or royalty agreement;

i. Removal of any person exercising substantial powers of management over the affairs of the Project SPVs or Target SPV in case of an event of default;

j. Amending the constitutional documents of the Project SPVs or Target SPV;

k. Undertaking of any new project or making of any investment or taking any assets on lease;

l. Providing guarantees, indemnities or similar assurances in respect of indebtedness of any other person, (other than in the ordinary course of business);

m. Repay or prepay any subordinated loan or loans brought in as equity taken by the Project SPVs or Target SPV from the Sponsor;

n. Create any subsidiary or permit the Project SPV or Target SPV to become a subsidiary;

o. Undertake or permit any scheme of arrangement or compromise with its creditors or shareholders; and

p. Change in the composition of the board of directors of the Project SPV or Target SPV.

Certain lenders have the ability to opt for a put/call option after a minimum period of five years from the scheduled commercial operation date or ten years from the appointed date (in relation to the Target SPV) or a refinance option after a block of five years as per their internal guidelines.

Additionally, if a Project SPV receives funds in respect of the following then the monies received to be utilized to prepay the loans, upon request from the lenders, on a *pro rata* basis to all the lenders without any prepayment premium: (a) any liquidated damages/ penalties received; (b) any proceeds arising in connection with a breach of warranty or guarantee; (c) any insurance proceeds; (d) any proceeds arising in relation to the expropriation or other taking by any government entity of the project assets; (e) any proceeds arising from any termination payments/ buy-out payments received; and (f) any proceeds resulting from an arbitral or judicial award received. The lenders of certain Project SPVs have the right to accelerate the repayment of the unamortized portion of the loans at any time, in the event the cash flows of such Project SPV are adequate for such acceleration.

In relation to outstanding debentures, the relevant Project SPV is required to undertake mandatory redemption on a *pro-rata* basis to all the debenture holders from the proceeds of any amount received by and on behalf of the issuer from any such event if the event involves receipt of, *inter-alia*: (a) insurance proceeds; (b) proceeds from a breach of warranty or guarantee; (c) payments received on account of buy-out events; (d) liquidated damages or penalties paid under project agreement; or (e) proceeds from expropriation or takeover event.

5. **Events of Default:** Borrowing arrangements entered into by the Project SPVs and Target SPV contain standard events of default, including:

a. Non-payment of principal amount by the Project SPV or the Target SPV;

b. Non-payment of interest, additional interest, liquidated damages, free or other amount by the Project SPV or the Target SPV;

c. Default by the borrower in creation of security interest to the satisfaction of the lenders within the period stipulated;

d. Default or breach in the performance of any covenants and/or covenants under the agreement by the Project SPV or the Target SPV;

e. Misrepresentation made by the Project SPV under the agreement or any financing document provided in connection with the loan;

f. Sale, disposal or creation of any charge or encumbrance on any of the land, building, structures or plant and machinery of the Project SPVs or the Target SPV in breach of any of the provisions of the relevant project agreements, without prior written approval of the relevant lenders;

g. Undertaking any action for reorganization of the Project SPV or the Target SPV without the approval of the relevant lenders;

h. Default in performance or observance of any covenant, condition, warranty or provision contained in any other financing agreement entered into by the Project SPV or the Target SPV;

i. Failure on the part of the Project SPV or the Target SPV to maintain adequate insurances in accordance with the terms of the transaction documents;

j. The Project SPV or the Target SPV ceasing or threatening to cease to carry on its business or giving notice of its intention to do so;

k. The Project SPV or the Target SPV abandoning its project;

l. Violation or breach of any environmental, health and safety standards requirement; and

m. The Project SPV or the Target SPV ceasing or threatening to cease to carry on its business or giving notice of its intention to do so or it becoming unlawful for the borrower to carry on its business.

Additionally, in relation to the Target SPV, the transfer of shareholding of the Sponsor in the borrower directly or indirectly against the stipulation of the loan agreement trigger an event of default except in the case of transfer of the shares of the borrower to the Trust such that the Sponsor continues to hold at least 51% of the unit capital of the Trust.

The descriptions above are indicative, and there may be additional terms and conditions with respect to security, financial or other covenants and events of default under the various borrowing arrangements entered into by the Project SPVs. The Project SPVs are required to ensure that the aforementioned events of default and other events of default, as specified under the various documents and agreements entered into by such Project SPV for the purpose of availing of loans, are not triggered.

Principal Terms of the Borrowings availed by the Target SPV

The Target SPV has, on a private placement basis, issued 159,975 unrated, unlisted, unsecured and redeemable non-convertible debentures of face value of ₹100,000 each aggregating to ₹15,997.5 million to the Sponsor and Anahera ("**MBEL Debentures**"). For the key terms and conditions of the MBEL Debentures, see "*Objects of the Issue*" on page 85.

SECTION VIII – LEGAL AND OTHER INFORMATION

MATERIAL LITIGATION AND REGULATORY ACTION

Except as stated below, there is no outstanding material litigation or regulatory action (i) involving the Project SPVs and Target SPV; (ii) against the Trust or its Associates; (iii) against the Investment Manager or its Associates; (iv) against the Sponsor/Project Manager or its Associates or the Sponsor Group; and (v) against the Trustee.

*For purposes of this section, details of all regulatory actions and criminal matters that are currently outstanding involving the Project SPVs and Target SPV or against the Trust, the Investment Manager, the Sponsor/Project Manager and their respective Associates and the members of the Sponsor Group have been disclosed. Notices received by any of the above entities (collectively, the "**Relevant Parties**") from third parties (excluding notices from statutory, regulatory or tax authorities or notices threatening criminal action) shall not be evaluated for materiality until the Relevant Parties are impleaded as defendants in proceedings before any judicial forum.*

Outstanding litigation against any of the Project SPVs and Target SPV before any judicial forum involving a claim amount exceeding ₹198.85 million, being 0.5% of the income of the Trust and the Project SPVs for the last completed Financial Year (i.e., the Financial Year 2024), in accordance with the Consolidated Financial Statements shall be considered material. In relation to outstanding litigation where the monetary liability is not quantifiable, such litigation shall be considered material in the event that the outcome of such litigation would have a material adverse effect on the position of the Project SPVs and Target SPV.

Outstanding litigation against the Sponsor/Project Manager, the Investment Manager and their respective Associates (excluding the Project SPVs and Target SPV) and the members of the Sponsor Group before any judicial forum involving a claim amount exceeding ₹410.09 million, being 0.5% of the income of the Sponsor for the last completed Financial Year (i.e., the Financial Year 2024), in accordance with its audited consolidated financial statements for the Financial Year 2024 shall be considered material. In relation to outstanding litigation where the monetary liability is not quantifiable, such litigation shall be considered material in the event that the outcome of such litigation would have a material adverse effect on the position of the Sponsor or the Investment Manager, as applicable, or the Trust.

Further, due to the nature and extent of their operations, the Sponsor/Project Manager and the Project Entities (including the Project SPVs and Target SPV) are and may be routinely required to file complaints and/or register first information reports against various persons, on account of such persons, inter-alia, refusing to pay toll, causing injury to the employees or contract labour of such entities and damage to the properties of such entities, which have been not been disclosed. Additionally, there have been various criminal complaints, compensation claims and first information reports filed against the employees and contract labour of the Sponsor/Project Manager and the Project Entities (including the Project SPVs and Target SPV), in which such entities are not impleaded, which have not been disclosed.

With respect to the Trustee, details of all regulatory actions and criminal matters that are currently outstanding against the Trustee have been disclosed. Outstanding litigation against the Trustee that the Trustee has determined to be material has been disclosed.

Taxation proceedings against the Relevant Parties (and, in case of the Project SPVs and Target SPV and involving the Project SPVs and Target SPV) have been disclosed in a consolidated manner.

It is clarified that the above policy on materiality is solely for preparing disclosures for purposes of the Issue, in accordance with the requirements prescribed under the InvIT Regulations.

I. Material Litigation and Regulatory Action against the Trust and its Associates

Material Litigation and Regulatory Action against the Trust

1. IRB WTL, the Trust and the Sponsor have filed Section 17 application before the arbitral tribunal against the NHAI's show cause notice (SCN) dated September 11, 2024. After the unfortunate collapse of the old Kali Bridge on August 7, 2024, the NHAI issued a SCN on September 11, 2024 to IRB WTL, the Trust and the Sponsor. For details, see " – *Material Litigation and Regulatory Action involving the*

Project SPVs and Target SPV – IRB WTL" on page 817.

For details in relation to outstanding material litigation and regulatory action against the Associates of the Trust, please see below.

II. Material Litigation and Regulatory Action against the Sponsor/Project Manager, Associates of the Sponsor/Project Manager and the Sponsor Group

Material Litigation and Regulatory Action against the Sponsor/Project Manager

As at the date of this Letter of Offer, there is no outstanding criminal litigation against the Sponsor/Project Manager. Other than as disclosed below, there is no outstanding material civil litigation, regulatory action or other material litigation against the Sponsor/Project Manager.

Outstanding Material Civil Litigation

1. Hakim Singh Yadav and others (the "**Petitioners**") have filed a writ petition before the High Court of Allahabad against the Sponsor and others (the "**Respondents**") in relation to the road asset operated by AETL, seeking to quash the contract order for the construction of the drainage system and directing the relevant authority concern to revaluate the technical measures adopted in drainage work. The Petitioners have alleged, *inter-alia*, that faulty construction and design of the drainage system have resulted in the flooding of a nearby area. The matter is currently pending.

2. Mr. Shaikh Rafiq and others have filed a writ petition against the Sponsor, Modern Road Makers Private Limited (an Associate of the Sponsor), YATL and others before the High Court of Bombay, Aurangabad (the "**BHC Aurangabad**") bench in relation to acquisition of land for the four laning of Yedshi – Aurangabad road that forms a part of the Solapur – Aurangabad highway, i.e., NH 211. For details, see " *– Material Litigation and Regulatory Action involving the Project SPVs and Target SPV – YATL*" on page 819.

3. Mr. Panditrao Digambarrao Shete Chausalkar and another have filed a writ petition against the Sponsor, YATL and others before the BHC Aurangabad in relation to acquisition of land for the four laning of Yedshi – Aurangabad road that forms a part of the Solapur – Aurangabad highway, i.e., NH 211. For details, see " *– Material Litigation and Regulatory Action involving the Project SPVs and Target SPV – YATL*" on page 819.

4. Mr. Pruthviraj Shahane (the "**Petitioner**") has filed a civil suit against the Sponsor, YATL and others before the Civil Judge (Senior Division), Beed. For details, see " *– Material Litigation and Regulatory Action involving the Project SPVs and Target SPV – YATL*" on page 819.

5. Kishore Mukherjee has filed a writ petition in the High Court of Calcutta against the Sponsor and others praying that the tender for the Palsit to Dankuni project should be halted, an environment impact assessment should be obtained and pending the disposal of the matter, the respondents (including the Sponsor) should be directed not to uproot any trees from Panagarh to Dankuni on NH 19. The matter is currently pending.

6. Kanugula Mahesh Kumar ("**Petitioner**") has filed a public interest litigation before the High Court of Telangana (the "**High Court**") against the State of Hyderabad, the HMDA, the HGCL, the Sponsor and IRB GEPL. For details, see " *– Material Litigation and Regulatory Action involving the Project SPVs and Target SPV – IRB GEPL*" on page 820.

7. Sanat Ghosh and others have filed a petition before the High Court of Calcutta against the Sponsor and PDTPL. For details, see "*—Material Litigation and Regulatory Action involving the Project SPVs and Target SPV –PDTPL*" on page 820.

Outstanding Regulatory Action

NHAI issued a notice to the Sponsor asking to pay damages of ₹30,485 in relation to the toll plaza Krishnavaram. The Sponsor has replied in its letter. As on date, no legal proceedings have been initiated in relation to the aforesaid notice and no further communication has been received.

Other Material Litigation

1. The Sponsor had initiated arbitration proceedings against Hyderabad Growth Corridor Limited (the "**Respondent**") in connection with a road project in Hyderabad. The Sponsor has claimed an amount of ₹982.69 million for losses suffered by the Sponsor due to a failure by the respondent to provide a toll management system. The Respondent has denied the allegations of the Sponsor and stated that it was not required to provide a toll management system under the terms of the contract between the parties. The Sponsor has received an arbitral award partially in its favor, but as of the date of this Letter of Offer, the Respondent has not made the payments as directed in the award. Further, the Sponsor has filed an appeal before the XXIV Additional Chief Judge cum Commercial Court, City Civil Court, Hyderabad against the arbitral award stating the arbitral tribunal has without any reason and in complete disregard of settled principles of law, disallowed part of the compensation claimed by the Sponsor against the Respondent despite finding that the Respondent had failed to fulfil its contractual obligations resulting into drastic reduction in the toll revenue. Further, the Respondent had filed a petition before the Commercial Courts cum Hon'ble XIII District Judge, Ranga Reddy District ("**Court**"), praying to set aside the award for part of the claim under the arbitration award and award the cost of arbitration including the fees paid by the Respondent. The Sponsor had filed its reply in the matter. The Court disposed off the petition with leave to the petitioner to file the petition before the appropriate court. Hyderabad Growth Corridor Limited has filed such petition before the District Judge, Commercial Disputes, Hyderabad. The matter is currently pending.

2. IRB WTL, the Trust and the Sponsor have filed Section 17 application before the arbitral tribunal against the NHAI's Show Cause Notice (SCN) dated September 11, 2024. After the unfortunate collapse of the old Kali Bridge on August 7, 2024, the NHAI issued a SCN on September 11, 2024 to IRB WTL, the Trust and the Sponsor. For details, see " *– Material Litigation and Regulatory Action involving the Project SPVs and Target SPV – IRB WTL*" on page 817.

Material Litigation and Regulatory Action against the Associates of the Sponsor/Project Manager

For details in relation to outstanding material litigation and regulatory action against the Project SPVs and the Target SPV, see "*– Litigation and Regulatory Action involving the Project SPVs and Target SPV*" on page 816. For details in relation to outstanding material litigation and regulatory action against the members of the Sponsor Group, see "*– Litigation and Regulatory Action against the Sponsor Group*" on page 815. Details of outstanding material litigation and regulatory action against the other Associates of the Sponsor/Project Manager are set out below.

I. *Aryan Hospitality Private Limited ("AHPL")*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action against AHPL. Other than as disclosed below, there is no outstanding material civil litigation against AHPL.

Jaykumar Govindrao Nikam and others (the "**Petitioners**") have filed a suit before the Civil Judge, Junior Division at Kolhapur alleging that AHPL has encroached the land owned by the Petitioners. The suit pertains to the plot leased for the IRDP Kolhapur project. The concession agreement in relation to the project was entered into between the Maharashtra State Road Development Corporation (the "**MSRDC**"), IRB Kolhapur Integrated Road Company Private Limited ("**IRB Kolhapur**"), and the Kolhapur Municipal Corporation (the "**KMC**"). Under the concession agreement, land owned by the KMC was leased to IRB Kolhapur for the project pursuant to a lease deed between KMC, MSRDC and IRB Kolhapur. The land was then sub-leased by IRB Kolhapur to AHPL. The IRDP Kolhapur project has been bought back by the government. AHPL has cancelled the sub-lease deed and the possession of the land as well as the structure thereon has been given back to IRB Kolhapur on an "*as is where is*" basis, free from encumbrances. AHPL no longer has any interest in the property. The court has passed an order dated November 15, 2024 and added KMC as a party to the suit. The matter is currently pending.

II. *Aryan Toll Road Private Limited ("ATRPL")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against ATRPL.

III. *Aryan Infrastructure Investments Private Limited ("AIIPL")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against AIIPL.

IV. *ATR Infrastructure Private Limited ("ATRIPL")*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action against ATRIPL. Other than as disclosed below, there is no outstanding material civil litigation against ATRIPL.

Outstanding Material Civil Litigation

Kishore Dyanoba Shevkari (the "**Petitioner**") has filed a writ petition before the High Court of Bombay against the State of Maharashtra and ATRIPL, among others. The petition relates to the choking of the Hume Pipe Culvert because of garbage dumping. The Petitioner has alleged that the choking of the Hume Pipe Culvert has resulted in waterlogging and that has affected his land. The project has been completed and handed back to the government. The matter is currently pending.

V. *IRB Ahmedabad Vadodara Super Express Tollway Private Limited ("IRB AVSETPL")*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action against IRB AVSETPL. Other than as disclosed below, there is no outstanding material civil litigation or other material litigation against IRB AVSETPL.

Outstanding Material Civil Litigation

1. Shabbirbhai Noormohmmadbhai, the owner of Pragati Hotel, Bareja, Ahmedabad (the "**Petitioner**") has filed a suit before the Additional Civil Court Judge, Ahmedabad against the Director, IRB, Jetalpur, Ahmedabad, the Deputy Engineer, R&B, Ahmedabad, the District Collector, Ahmedabad, and the State Public Works Department, Gandhinagar seeking a permanent stay order on closing his access to the main carriage way. The suit relates to compensation for land acquisition. The matter is currently pending.

2. Jitendra Chandulal Amin, the owner of Rishi Petrol Pump, Nadiad has filed a suit before the Additional Civil Court Judge, Nadiad agaisnt IRB AVSETPL and others seeking a permanent stay order on closing his access to the main carriage way. The suit relates to compensation for land acquisition. The matter is currently pending.

Other Material Litigation

IRB AVSETPL invoked arbitration in relation to a competing road. The NHAI suggested that the matter be brought before the Conciliation Committee of Industrial Experts (the "**CCIE**"). IRB AVSETPL filed a writ petition in the High Court of Bombay, which directed the parties to immediately refer the matter to arbitration. IRB AVSETPL was also granted a waiver with respect to the payment of premium for three months subject to the submission of an undertaking. The CCIE, pursuant to order dated May 29, 2019 concluded that the conciliation had failed. IRB AVSETPL then invoked arbitration in relation to the competing road along with the matter of premium deferment and appointed an arbitrator. The NHAI did not appoint an arbitrator. IRB AVSETPL then filed a writ petition in the High Court of Delhi, pursuant to which the NHAI was directed to form a tribunal. The interim relief granted by the High Court of Bombay was also extended. The NHAI had challenged the order of the High Court of Bombay in a special leave petition before the Supreme Court of India, but the petition was dismissed.

Subsequently, the High Court of Delhi nominated a presiding arbitrator. However, the NHAI filed a special leave petition before the Supreme Court of India challenging such nomination. The Supreme Court of India passed an order appointing a different presiding arbitrator and the arbitral tribunal was constituted. IRB AVSETPL has filed an application for interim relief and a statement of claims on March 1, 2021 requesting the arbitral tribunal to, *inter-alia*, (a) declare that the NHAI is in breach of its obligations and representations under the concession agreement; (b) direct the NHAI to pay compensation of ₹12.64 billion for the period between December 4, 2015 until December 31, 2020 with an interest at 15% per annum until payment or realization from January 1, 2021 until the subsistence of the breach; and (c) pass an order of mandatory injunction directing the NHAI to cure the breach with respect to the competing road. The NHAI has responded to the application for interim relief filed by IRB AVSETPL. The respondent has filed a counter-claim for an amount of (i) ₹562.2 million (until June 30, 2021)

towards premium deferment; (ii) ₹5,026.1 million (until May 2021) and unpaid premium during the pendency of the proceedings as well as future premium; and (iii) ₹312.1 million towards interest (as on June 30, 2021) as per the provisions of the supplementary agreement. The parties filed written submissions and the arbitral tribunal framed preliminary issues and conducted hearings. In this regard, the arbitral tribunal passed an interim award dated October 14, 2021 in favour of the claimant. The arbitral tribunal subsequently formulated further issues to be settled pursuant to hearings. The NHAI also filed an application seeking to implead the Government of Gujarat as a party in the proceedings. The NHAI challenged the interim award dated October 14, 2021 before the High Court of Delhi, which was dismissed pursuant to an order dated July 4, 2022. Thereafter, the NHAI filed an appeal against such dismissal. The arbitral tribunal also dismissed the NHAI's application to implead the Government of Gujarat, which was further challenged by NHAI. IRB AVSETPL has filed an affidavit of evidence before the arbitral tribunal and updated the previously claimed amount to ₹21,232.70 million, including interest until September 30, 2022 of ₹91.90 million on margin money and commission paid towards procurement of bank guarantees for ₹210.00 million.

The matter of competing road was adjudicated by the arbitral tribunal, and in its award dated April 7, 2024 ("**Award**"), the arbitral tribunal has declared that the competing road came into existence in January 2019 (when 75% of the length of competing road was completed) and not in the year 2015-16. However, due to technical reasons, no compensation was awarded to IRB AVSETPL on account of this competing road. This decision of the arbitral tribunal is challenged by IRB AVSETPL under Section 34 of the Arbitration and Conciliation Act, 1996 ("**A&C Act**") before the High Court of Delhi. The matter is heard, and the judgment is reserved.

The Award has also directed IRB AVSETPL to make the payment of premium to NHAI as per the Premium Deferment Scheme (counter claim No.2). Under the said scheme, the escrow waterfall mechanism prevails wherein the premium payment comes after O&M and debt servicing. IRB AVSETPL is already following this waterfall mechanism. Balance premium, if any, along with accrued interest @ bank rate + 2% shall be paid once the debt servicing is completed and essentially one year before the completion of the concession period including extension thereof. Whereas the counter claim No.1 of NHAI for advancement of premium amounting to ₹ 297.3 million has been rejected by the arbitral tribunal. Additionally, an amount of ₹ 19 million plus interest has been awarded to IRB AVSETPL on account of losses due to unwarranted retention of bank guarantee by NHAI. NHAI has also been directed to return the said bank guarantee to IRB AVSETPL.

Subsequently, NHAI also challenged the Award under Section 34 of the A&C Act to the extent of non-award of interest at the contractual rate against the counter claim No.2 along with the rejection of counter claim No.1. The matter is pending before the High Court of Delhi.

NHAI also filed Section 36 petition under the A&C Act for enforcement of the Award before the High Court of Delhi. The matter is pending. It was followed by a special leave petitions ("**SLP**") filed by NHAI before the Supreme Court of India. The Sponsor was impleaded in the SLP. The matter is pending.

In the meantime, both the parties filed Section 9 applications under the A&C Act. IRB AVSETPL's Section 9 application was disposed of by the High Court of Delhi, granting liberty to IRB AVSETPL to treat the Section 9 application as Section 17 application before the existing arbitral tribunal.

While, NHAI filed Section 9 petition before the High Court of Delhi seeking interim relief to secure the amount awarded under Award. The said application was dismissed by the High Court of Delhi on October 18, 2024 concluding that there is no direction in the Award to make forthwith/ upfront payment to NHAI and that the Award entitles IRB AVSETPL to pay differential revised annual premium later, only subject to payment of interest for the interregnum. The High Court of Delhi further directed that the Rule 7 of the NH Fee Rules, read with Clause 3(c) of the sanction letter dated June 6, 2014 and Clause 31.3.1 of the concession agreement permits withdrawal, towards payment of premium, as per waterfall mechanism envisaged therein. Any direction from NHAI to IRB AVSETPL to pay the claimed amount upfront to NHAI would be violative of Clause 31.3.1 of the concession agreement. NHAI filed SLP before the Supreme Court of India to set aside the order of the High Court of Delhi dated October 18, 2024. The matter is pending.

IRB AVSETPL had initiated arbitration with regard to the disputes concerning (i) execution of supplementary agreement for extension of concession period by 137.48 days under Clause 34.6.2 (force majeure events such as demonetisation, transporter's strike and Covid 19). IRB AVSETPL had prayed for (ii) execution of supplementary agreement for extension of concession period by five years under Article 29 of the concession agreement, (iii) adjustment of INR 1,107.7 million under Clause 34.7.2 (c) of the concession agreement on account of force majeure events such as demonetisation, transporter's strike and Covid 19 from the premium obligations, (iv)

adjustment of ₹1,215 million under Clause 34.7.2 (c) read with NHAI circulars towards exemption of premium payment for the period February 22, 2020 to March 31, 2022 (on account of imposition of restriction on movement due to Covid 19), (v) adjustment of ₹ 237.3 million (upto Aug 2024) paid under Article 27 of the concession agreement under protest towards double user fee against the premium obligations with a direction to restrain NHAI from demanding such amount and (vi) declaring that IRB AVSETPL is eligible for revenue shortfall loan in terms of Article 28 of the concession agreement with a direction to restrain NHAI from demanding premium in any manner except in terms of Article 31 read with Articles 25 and 28 of the concession agreement and the NH Fee Rules. The arbitration proceedings are in progress and the matter is pending.

VI. *IRB Goa Tollway Private Limited ("IGTPL")*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action against IGTPL. Other than as disclosed below, there is no outstanding material litigation involving IGTPL.

IGTPL had initiated arbitration proceedings against the NHAI for wrongful termination of contract by the NHAI with respect to the Goa/Karnataka to Panaji-Goa section of NH-4A in the State of Goa. The arbitral tribunal had passed an award in favor of IGTPL which allowed the following claims: (i) approximately ₹1,963.80 million towards 50% of the adjusted equity of ₹1,309.20 million arising out of the termination of contract by the NHAI; (ii) an amount of ₹47.10 million for damages on account of a delay in the fulfilment of the conditions of the contract; and (iii) interest on the amounts mentioned above. The aggregate amount involved is ₹3,039.80 million. The NHAI had filed a petition before the High Court of Delhi ("**Court**") for setting aside the award passed by the arbitral tribunal and a stay on the operations of the award. The stay on the Award was not allowed by the Court. IGTPL availed 75% of the arbitral award amount from the NHAI against bank guarantees amounting to ₹2,279.80 million with the NHAI. Further, the Court also directed NHAI to deposit the balance amount with the Court, pending disposal of the case. Accordingly, NHAI has deposited an amount of ₹103.50 million with the Court. Pursuant to an order dated February 21, 2022, the Court upheld the arbitral award in relation to (i) above and corresponding interest, but set aside the claim in relation to (ii) above. Subsequently, both the parties appealed under Section 37 of the Arbitration and Conciliation Act, 1996 against the order of the Delhi High Court, which were both dismissed. Thereafter, NHAI challenged this order before the Supreme Court of India, which was dismissed. IGTPL has filed an application for withdrawal as well as an application for execution of the arbitral award under Section 36 of the Arbitration and Conciliation Act, 1996. The matter is currently pending.

VII. *IRB Infrastructure Private Limited ("IRBIPL")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against IRBIPL.

VIII. *Ideal Road Builders Private Limited ("Ideal Road Builders")*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action against Ideal Road Builders. Other than as disclosed below, there is no outstanding material civil litigation against Ideal Road Builders.

Outstanding Material Civil Litigation

1. Shamsuddin Miyalal Mushrif has filed a pulic interest litigation before the High Court of Bombay against the Union of India, Ideal Road Builders and others, to declare that the National Highways Act, 1956 and Rule 3 of National Highways (Collection of Fees by any Person for the Use of Section of National Highways/Permanent Bridge/Temporary/Bridge on National Highway) Rules, 1997 are contrary to and violate of the provisions of the Constitution of India, 1950. The petition also seeks the declaration of Section 7 of the National Highways Act, 1956 and Rules 7 and 11 of the National Highways (Fees for the use of National Highway Section and Permanent Bridge-Public Funded Projects) Rules, 1997 and the MoRTH Notifications dated March 4, 2005 and May 5, 2015 illegal, *ultra vires* and invalid, and to stop collection of toll. This is relation to the Ideal Road Builders Khambatki Ghat project. The project has been completed and handed back to the government. The matter is currently pending.

2. Nitin Sardesai and others have filed a public interest litigation before the High Court of Bombay against the State of Maharashtra, Ideal Road Builders and others, seeking the following: (i) to comply with the provisions of the manual of specifications; (ii) to take traffic census on NH 4 and expressway by electronic census system; (iii) to appoint independent agency to monitor traffic; (iv) to remove

advertisements and hoardings; (v) to deposit the toll amount with government; and (vi) discount to local public. The matter relates to the Ideal Road Builders Mumbai-Pune project. The project has been completed and handed back to the government. The matter is currently pending.

3. Nitin Sardesai and others have filed a public interest litigation before the High Court of Bombay against the State of Maharashtra, Ideal Road Builders and others, seeking to quash and set aside a notification dated August 9, 2004 (no. PSP 2000/CR-106(1I) Road-8) and a notification dated September 5, 2006. The following prayers have also been made: (i) to comply with the manual of specifications; (ii) to take traffic census by electronic traffic census system; (iii) to deposit toll amount in separate account of government; (iv) to appoint an independent agency to monitor traffic; and (v) to install advance traffic mentoring system. The matter relates to the Ideal Road Builders Mumbai-Pune project. The project has been completed and handed back to the government. The matter is currently pending.

4. Shrinivas Anant Ghanekar (the "**Petitioner**") has filed a public interest litigation before the High Court of Bombay against the State of Maharashtra, Ideal Road Builders and others, seeking to quash the toll notification and declare the concession agreement illegal and *ultra vires*. The matter relates to the Ideal Road Builders Thane-Ghodbunder project. The suit has been filed based on erronous information provided to the Petitioner's Right to Information Application by the Maharashtra State Road Transport Corporation, as has been admitted in the reply to the petition. The project has been completed and handed back to the government.The matter is currently pending.

Other Material Litigation

Ideal Road Builders Private Limited and others (the "**Petitioners**") have filed a writ petition before the High Court of Bombay against the State of Maharshtra to set aside a notification issued by the Government of Maharashtra exempting LMVs and buses of the Maharashtra State Road Transport Corporation from payment of toll taxes at the Thane Ghodbunder project. Compensation is being paid by the Government of Maharashtra to the entity which operates the Thane Ghodbunder project. The matter is currently pending.

IX. *IRB Kolhapur Integrated Road Development Company Private Limited ("IRB Kolhapur")*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action against IRB Kolhapur. Other than as disclosed below, there is no outstanding material civil litigation against IRB Kolhapur.

Outstanding Material Civil Litigation

1. Jairaj Velyan (the "**Petitioner**") has filed a suit before the Civil Judge, Senior Division, Kolhapur, against the State of Maharashtra and others alleging that road construction has resulted in encroachment . The Petitioner has prayed that the encroachment should be removed and the road should be made available for use of the members of the society. IRB Kolhapur has constructed the project as per the concession agreement on land made available by the Kolhapur Municipal Corporation and the project has been bought back by the government. The company has filed an application before the Civil Judge, Junior Division, Kolhapur, for deletion of its name the suit. The matter is currently pending.

X. *IRB MP Expressway Private Limited ("IRB MP") (earlier known as NKT Road and Toll Private Limited)*

Other than as disclosed below, there is no outstanding criminal litigation, material civil litigation or regulatory action against IRB MP.

Outstanding Material Civil Litigation

1. Pravin Wategaonkar and others (the "**Petitioners**") have filed a public interest litigation ("**PIL**") before the High Court of Bombay against Maharashtra State Road Development Corporation ("**MSRDC**"), Comptroller and Auditor General of India ("**CAG**"), Mumbai Pune Expressway Limited ("**MPEL**"), State of Maharashtra and IRB MP seeking an order from the High Court of Bombay, *inter-alia*, to (i) exempt the light motor vehicles from payment of toll on the Mumbai Pune Expressway ("**Expressway**"); (ii) stay the tender process which is underway for the toll collection rights for next ten (10) years on the Expressway; and (iii) declare the toll collection as illegal and restrain MPEL / MSRDC from collecting such toll on the Expressway. The Petitioners have filed civil application in the PIL and prayed that the

Honorable High Court to examine the legality and validity of the documents of MSRDC, to register case against the officers of MSRDC involving in preparing the document and direct the toll contractor to deposit in the court entire toll revenue collected on Mumbai Pune Expressway. The matter is currently pending.

2. Milind Ashok Achyut and others have filed a public interest litigation before the High Court of Bombay against the Ministry of Road Transport and Highways, IRB MP and others seeking an order from the High Court of Bombay, *inter-alia*, to (i) declare the establishment of the Somatane toll plaza (the "**Toll Plaza**") on NH-48 belonging to IRB MP as *ultra vires* the National Highways Fee (Determination of Rates and Collection) Rules, 2008 and arbitrary and illegal; (ii) restrain IRB MP from collecting toll on the Toll Plaza on NH-48 until applicable discounts are displayed and changes made in the FASTag mechanism; (iii) direct IRB MP to deposit the toll fees in an escrow account; and (iv) shift the Toll Plaza in the direction of Pune City. The matter is currently pending.

3. Anil Bhangare and others have filed a public interest litigation before the High Court of Bombay against IRB MP and others seeking an order from the High Court of Bombay to, *inter-alia*, (i) set up a special investigation team to conduct an enquiry into the circumstances under which the Somatane toll plaza (the "**Toll Plaza**") was set up; (ii) remove the Toll Plaza and relocate it; (iii) to make separate lanes for locals and exempt them from toll fees; and (iv) grant a temporary injunction restraining IRB MP from the recovery of toll fees at the Toll Plaza. The matter is currently pending.

Outstanding Criminal Litigation

Anil Bhangare and others (the "**Petitioners**") have filed an original petition against IRB MP and others before the Judicial Magistrate First Class, Vadgaon Maval ("**JMFC**"), stating that the toll receipts at the Somatane toll plaza specify the place of tolling as Dehu Road, which is located at a different location from the Somatane toll plaza. It has been submitted that the toll collected by IRB MP is illegal. The proceedings were stayed by the JMFC due to the pendency of a separate public interest litigation before the High Court of Bombay. The Petitioners have filed an appeal before the Sessions Court, Vadgaon Maval praying, *inter-alia*, that the order passed by the JMFC be set aside and to direct the JMFC to try the matter in accordance with the Code of Criminal Procedure, 1973. The matter is currently pending.

Outstanding Regulatory Action

The Collector of Stamps, Solapur has raised a demand for a deficit in stamp duty of ₹323,000 and a penalty, on the agreement dated November 28, 2001. In its letter dated July 3, 2015, IRB MP informed the Collector of Stamps that such stamp duty is not applicable to the agreement as the section referred to by the Collector of Stamps was not in existence at the time of execution of the agreement. There has been no further response from the Collector of Stamps.

XI. *IRB Sindhudurg Airport Private Limited ("IRB Sindhudurg")*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action involving IRB Sindhudurg. Other than as disclosed below, there is no outstanding material civil litigation against IRB Sindhudurg.

Vijay Krishnaji Rane (the "**Petitioner**") has filed a suit before the Civil Court, Oras, Sindhudurg against IRB Sindhudurg and others (the "**Respondents**") praying for the following reliefs: (i) that the Respondents be prevented from creating obstacles on the suit property; and (ii) that the Respondents be prevented from cutting trees and fruits in the suit property. The Petitioner has also prayed that in the event that it is found that the Respondents are encroaching on the suit property, then the possession of the suit property should be given to him. The plaintiff has filed an application to change the description of the suit property. The matter is currently pending.

XII. *Mhaiskar Infrastructure Private Limited ("MIPL")*

As at the date of this Letter of Offer, there is no outstanding criminal litigation against MIPL. Other than as disclosed below, there is no outstanding material civil litigation or regulatory action against MIPL.

Outstanding Material Civil Litigation

1. Nitin Sardesai and others have filed a public interest litigation before the High Court of Bombay against the State of Maharashtra, MIPL, Ideal Road Builders, and others, seeking compliance with certain specifications. For details, see " *– Material Litigation and Regulatory Action against the Sponsor/Project Manager and Associates of the Sponsor/Project Manager – Material Litigation and Regulatory Action against the Associates of the Sponsor/Project – Ideal Road Builders Private Limited*" on page 811.

2. Nitin Sardesai and others have filed a public interest litigation before the High Court of Bombay against the State of Maharashtra, MIPL, Ideal Road Builders Private Limited, and others seeking to quash certain notifications. For details, see " *– Material Litigation and Regulatory Action against the Sponsor/Project Manager and Associates of the Sponsor/Project Manager – Material Litigation and Regulatory Action against the Associates of the Sponsor/Project Manager – Ideal Road Builders Private Limited*" on page 811.

3. Pravin Wategaonkar and others have filed a public interest litigation before the High Court of Bombay against the Maharashtra State Road Development Corporation and others allegeing that MIPL is collecting excess toll on the Mumbai-Pune Expressway. The 15 year concession period in relation to the project has been completed and the project has been handed back to the government. The matter is currently pending.

4. The Depurty Inspector General of Registration and Deputy Controller of Stamps and Collector of Stamps, Mumbai Division, Mumbai ("**Authority**"), passed an order dated March 12, 2008 (the "**Order**") against MIPL demanding a payment of ₹275.40 million as deficit stamp duty and a penalty of ₹49.57 million in relation to an the agreement dated August 4, 2004 executed among MSRDC, Ideal Road Builders and MIPL for construction on the Mumbai-Pune Expressway. MIPL filed a writ petition before the High Court of Bombay challenging the Order. Pursuant to an order dated April 28, 2008, the High Court of Bombay provided interim relief to MIPL and directed it to deposit 50% of the claimed amount. MIPL subsequently deposited ₹137.70 million with the Authority. The matter is currently pending.

Outstanding Regulatory Action

The Collector of Stamps, Andheri, Maharashtra sent a notice to MIPL demanding that stamp duty of ₹1,500,000 a penalty of ₹5,340,000 be paid on the agreement dated August 4, 2004 for the Mumbai Pune project. MIPL has replied to the notice, and has not received any response from the Collector of Stamps.

XIII. *MRM Mining Private Limited ("MRMMPL")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action involving MRMMPL.

XIV. *Modern Road Makers Private Limited ("MRM")*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action against MRM. Other than as disclosed below, there is no outstanding material civil litigation against MRM.

1. Arjun Rama Ghatal has filed complaint before the office of the Tahasildar and the Executive Magistrate, Palghar against MRM and others regarding the payment of land cess and seeking compensation for possession of land and damage to crops caused by the installation of a tar plant machine. The matter is currently pending.

XV. *Thane Ghodbunder Toll Road Private Limited ("TGRPL")*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action against TGRPL. Other than as disclosed below, there is no material civil litigation against or other material litigation involving TGRPL.

Outstanding Material Civil Litigation

Shrinivas Anant Ghanekar has filed a public interest litigation before the High Court of Bombay against the State of Maharashtra, Ideal Road Builders Private Limited, TGRPL, and others. For details, see " *– Material Litigation and Regulatory Action against the Sponsor/Project Manager and Associates of the Sponsor/Project Manager – Material Litigation and Regulatory Action against the Associates of the Sponsor/Project Manager – Ideal Road Builders*" on page 811.

Other Material Litigation

Ideal Road Builders Private Limited, TGRPL and others have filed a writ petition before the High Court of Bombay against the State of Maharashtra. For details, see " *– Material Litigation and Regulatory Action against the Sponsor/Project Manager and Associates of the Sponsor/Project Manager – Material Litigation and Regulatory Action against the Associates of the Sponsor/Project Manager – Ideal Road Builders – Other Material Litigation*" on page 811.

XVI. *VCR Toll Services Private Limited ("VCR")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against VCR

XVII. *Pathankot Mandi Highway Private Limited ("PMHPL")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against PMHPL.

XVIII. *VM7 Expressway Limited ("VM7")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against VM7.

XIX. *GE1 Expressway Private Limited ("GE1")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against GE1.

XX. *Chittoor Thachur Highway Private Limited ("CTHPL")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against CTHPL.

XXI. *IRB PS Highway Private Limited ("IPHPL")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against IPHPL.

XXII. *VDM Ventures Private Limited ("VVPL")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against VVPL.

XXIII. *Deux Farming Films Private Limited ("DFFPL")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against DFFPL.

XXIV. *IRB Charitable Foundation ("IRBCF")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against IRBCF.

Material Litigation and Regulatory Action against the Sponsor Group

As at the date of this Letter of Offer, there is no outstanding material civil litigation, criminal litigation, regulatory action or other material litigation against the members of the Sponsor Group. For details in relation to outstanding material litigation and regulatory action against the Sponsor, see "*– Litigation and Regulatory Action involving the Sponsor/Project Manager*" on page 807.

Material Litigation and Regulatory Action involving the Project SPVs and Target SPV

A. *AETL*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory litigation involving AETL. Other than as disclosed below, there is no outstanding material civil litigation involving AETL.

Outstanding Material Civil Litigation

1. Hakim Singh Yadav and others (the "**Petitioners**") have filed a writ petition before the High Court of Allahabad against the Sponsor and others (the "**Respondents**") in relation to the drainage system for the road asset operated by AETL. For details, see "*– Material Litigation and Regulatory Action against the Sponsor/Project Manager and Associates of the Sponsor/Project Manager - Material Litigation and Regulatory Action against the Sponsor/Project Manager - Outstanding Material Civil Litigation*" on page 807.

2. AETL has filed for settlement through conciliation with the NHAI in relation to a dispute with respect to the payment of premium with proportionate reduction of revenue losses on account of COVID-19 and delay in completion of construction. AETL and the NHAI did not reach any settlement, and accordingly, AETL invoked arbitration proceedings against the NHAI under the terms of its concession agreement and submitted claims for amounts aggregating to ₹13,179.8 million towards, *inter alia*, compensation for delay in completion of construction due to the reasons attributable to NHAI, proportionate reduction in payment of premium, compensation on account of various force majeure costs, etc. along with aggregated extension of the concession period by 351.41 days. Upon successful completion of arbitration, the award amount, if any, would be payable to the sub-contractor in terms of their sub-contract agreement. The matter is currently pending.

B. *CGTL*

As at the date of this Letter of Offer, there is no outstanding regulatory action involving CGTL. Other than as disclosed below, there is no outstanding material civil litigation or criminal litigation involving CGTL.

Outstanding Material Civil Litigation

CGTL, KGTL and UTL have filed a writ petition before the High Court of Rajasthan, Jaipur Bench against Union of India and NHAI challenging certain notifications and seeking interim relief from the High Court of Rajasthan, Jaipur Bench. For details, see "*– Material Litigation and Regulatory Action involving the Project SPVs and Target SPV – UTL – Outstanding Material Civil Litigation*" on page 818.

Outstanding Criminal Litigation

1. Mr. Waman Rathod, deputy general toll manager at a toll plaza located on the road asset operated by CGTL, has filed two first information reports at the Police Station, Gangrar, Chittorgarh, Rajasthan in relation to (i) the misbehaviour of certain individuals when asked to pay toll; and (ii) the theft of ₹0.62 million from the cash room at the toll plaza. The matters are currently pending.

2. Mr. Rohit Sharma, a supervisor at a toll plaza located on the road asset operated by CGTL, has filed a first information report at the Raila Police Station, Bhilwara, Rajasthan against the driver of a truck-trailer in relation to a collision with the toll booth and injuries caused to the supervisor. The matter is currently pending.

C. *IRB HMTL*

As at the date of this Letter of Offer, there is no outstanding material civil litigation, criminal litigation, regulatory

action or other material litigation involving IRB HMTL.

D. *IRB WTL*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action involving IRB WTL. Other than as disclosed below, there is no outstanding material civil litigation involving IRB WTL.

1. Mr. Laxman Neelakantha Desai (the "**Petitioner**") has filed a petition against IRB WTL (the "**Respondent**") before the court of Civil Judge Karwar alleging that the blasting of rocks done by the Respondent has caused damage to the property of the Petitioner. The Petitioner has requested a permanent injunction restraining the Respondent from undertaking such activity. The court had passed an order granting a temporary injunction against the Respondent. Subsequently, the parties entered into a mediation agreement, pursuant to which the court passed an order dated April 28, 2017, vacating the earlier injunction. The matter is currently pending.

2. Mr. Vithobha Ganesh Naik (the "**Petitioner**") has filed a suit against IRB WTL before the Principal Judge at Karwar, alleging that IRB WTL is encroaching upon the Petitioner's land to construct the highway. IRB WTL has received summons from the court. The matter is currently pending.

3. IRB WTL filed an interim claim for compensation of under Clause 35.2 and 35.3 of the concession agreement along with claim on account of pending change of scope, change in law, additional works, etc. The interim claim for compensation including interest stands at Rs 3,107.07 crore and extension of concession period by 1316.37 days (upto March 2023, to be updated further). Subsequently the dispute was crystallized, and the arbitration was invoked. The arbitral tribunal is constituted, and matter is under adjudication.

   Further notice of arbitration was issued to NHAI for disputes and claims arising, inter-alia, with respect to a show cause notice ("**SCN**") issued by NHAI on September 11, 2024 to IRB WTL, the Trust and the Sponsor, after the unfortunate collapse of the old Kali bridge on August 7, 2024. The SCN was issued to the Trust being the current promoter and to the Sponsor being the erstwhile promoter of the IRB WTL. Since IRB WTL was already before the arbitral tribunal for other disputes, IRB WTL, the Trust and the Sponsor filed a joint Section 9 petition before the High Court of Delhi requesting that the issue of SCN emanating from alleged O&M failure be referred to arbitral tribunal. The High Court of Delhi agreed with the contention of IRB WTL, the Trust & the Sponsor and referred the matter to the arbitral tribunal for passing necessary orders under Section 17 of the Arbitration & Conciliation Act. The hearing before the arbitral tribunal is concluded and the Section 17 order is awaited.

4. On account of incessant rainfall on July 16, 2024, a landslide occurred beyond the right of way of the project at Shirur causing loss of lives. The local police has filed an FIR against IRB WTL on July 16, 2024 and investigations are ongoing. Meanwhile, National Green Tribunal, Chennai has taken suo moto cognizance of the matter against the NHAI and NHAI has filed a reply on September 23, 2024 based on expert report alleging that the land slide did not occur due to any faulty construction and that it was a force majeure event and happened due to incessant heavy rains witnessed. The matter is currently pending.

E. *KGTL*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action involving KGTL. Other than as disclosed below, there is no outstanding material civil litigation involving KGTL.

CGTL, KGTL and UTL have filed a writ petition before the High Court of Rajasthan, Jaipur Bench against Union of India and NHAI challenging certain notifications and seeking interim relief from the High Court of Rajasthan, Jaipur Bench. For details, see " *– Material Litigation and Regulatory Action involving the Project SPVs – UTL – Outstanding Material Civil Litigation*" on page 818.

F. *KTL*

As at the date of this Letter of Offer, there is no outstanding criminal litigation involving KTL. Other than as disclosed below, there is no outstanding material civil litigation or regulatory action involving KTL.

Outstanding Material Civil Litigation

1. KTL has invoked arbitration against the NHAI under the terms of its concession agreement in relation to an aggregate amount of approximately INR 2,880.7 million and extension of concession period by 582.77 days on grounds of, *inter alia,* compensation for delay in completion of construction for the reasons attributable to the NHAI, balance amount in connection with the indirect political force majeure, *i.e.* toll stoppage due to the farmer protests in 2020-2021 and political force majeure costs on account of restrictions imposed due to the COVID-19 pandemic. The arbitration proceedings are in progress and the matter is currently pending.

Outstanding Regulatory Action

The District Town Planner, Jind (exercising the power of Director, Town and Country Planning, Haryana) (the "**District Town Planner**") issued a notice under the Punjab Scheduled Roads and Controlled Area Restriction of Unregulated Development Act, 1963 ("**Punjab Act**") to the general manager of the toll plaza located at village Badowal, Tehsil Narwama, District Jind, stating that the construction of the toll plaza and other commercial and official building on NH-52 Narwana to Uklana was unauthorized since the construction was on land which has been notified as a controlled area under the Punjab Act. The notice also, *inter-alia*, directed the stoppage of any further construction on the land. KTL responded to the notice requesting the District Town Planner to withdraw the notice, stating that the collection of toll and the construction of the toll plaza were in accordance with the concession agreement, toll notifications and specifications approved by an independent engineer on land acquired by the NHAI. The matter is currently pending.

G. *SYTL*

As at the date of this Letter of Offer, there is no outstanding material civil litigation or criminal litigation involving SYTL. Other than as disclosed below, there is no outstanding regulatory action involving SYTL.

Outstanding Regulatory Action

SYTL approached the NHAI for amicable settlement of claims in relation to delays attributable to the NHAI during the construction of the project. The claims were for an amount of approximately ₹7,905.3 million and an extension of the concession period by 647.43 days. Since the parties were unable to reach a settlement, SYTL has invoked arbitration under its concession agreement. The arbitration proceedings are in progress and the matter is currently pending.

H. *UTL*

As at the date of this Letter of Offer, there is no regulatory action involving UTL. Other than as disclosed below, there is no outstanding material civil litigation and outstanding criminal litigation involving UTL.

Outstanding Material Civil Litigation

CGTL, KGTL and UTL (the "**Petitioners**") have filed a writ petition before the High Court of Rajasthan, Jaipur Bench against Union of India and NHAI (the "**Respondents**") stating that on account of COVID-19 and the subsequent national lockdown, the Petitioners submitted claim for reimbursement of losses and consequent extension of the concession period which shall be computed every month until the toll collection stabilizes to more than 90% of the average daily fee as defined under the concession agreements. Further, under the terms of the concession agreements, the Petitioners are obligated to start premium payment to the NHAI upon the third anniversary of appointed date whereas the schedule completion date was contracted as two and a half year after the appointed date. Hence, once the construction is completed in two and a half year, toll rates would have been revised and only after six months of such revision of toll rates would the Petitioners have to start the premium payment. The Petitioners have stated the scheduled completion date was revised by the NHAI, primarily due to reasons attributable to them and the revised date of completion was revised to November 30, 2020, January 31, 2021 and September 9, 2021 applicable to the Petitioners. However, NHAI addressed a letter to UTL instructing them to commence the premium payment as per the scheduled stipulated under the concession agreements.

Hence, the Petitioners have challenged, *inter-alia*, (i) sub-rule (9) of rule 4, *i.e.*, "Base rate of fee" of the National Highways Fee (Determination of Rates and Collection) Rules, 2008 as it limits the rate of fee applicable for a section of a four lane highway under upgradation to six laning during the construction period; and (ii) office memorandum dated May 18, 2020 issued by the Central Government and consequent policy guidelines / BOT

(Toll) / 2020 dated May 26, 2020 issued by the NHAI and sought an interim relief to maintain the same time gap of six months between the date of revised completion date / toll tariff revision and date of commencement of payment of premium, under the respective concession agreements and issue an appropriate writ directing the NHAI (i) to not take coercive action against the Petitioners; (ii) to grant compensation to the Petitioners due to losses on account of COVID-19; and (iii) to grant an extension to the concession period. Pursuant to an interim order dated September 18, 2020, the High Court of Rajasthan, Jaipur bench, ordered a stay on the operation of Clause 26.2.1 of the model concession agreement.

The judgment along with the rectification order was pronounced by the High Court of Rajasthan on August 25, 2021 and August 26, 2021 respectively. As per direction of the said judgment, CGTL, KGTL and UTL filed undertakings on August 31, 2021. As interim relief, the High Court of Rajasthan gave interim protection to the Petitioners against payment of premium for a period of three months and directed the parties to go for arbitration. Subsequently, CGTL, KGTL and UTL filed petitions before the Delhi High Court praying for extension of relief granted by the High Court of Rajasthan. The order in relation to appointment of the arbitrator passed on November 28, 2021 by the Delhi High Court was challenged by CGTL, KGTL and UTL through a Special Leave Petition filed in the Supreme Court. The Supreme Court has appointed a presiding arbitrator pursuant to an order dated February 7, 2022.

The Delhi High Court passed an order dated November 9, 2021 in relation to interim relief and CGTL, KGTL and UTL filed an appeal against this order before the division bench of the Delhi High Court. The division bench disposed of the appeal in favour of CGTL, KGTL and UTL with the direction that the Delhi High Court holds the sole jurisdiction to hear the petition on interim relief and accordingly, hearings may be commenced before the Delhi High Court. The Delhi High Court has directed that the orders dated August 25, 2021 and August 26, 2021 passed by the Rajasthan High Court, will remain in operation. Pursuant to a judgement dated March 16, 2022, the Delhi High Court has held that the interim order will continue until an application under Section 17 of the Arbitration and Conciliation Act, 1996 is filed by the parties before the arbitral tribunal and taken up for hearing. The arbitral tribunal has been constituted. CGTL, KGTL and UTL filed claims for an amount of approximately ₹5,021.2 million, ₹8,689.6 million and ₹9,060.8 million, respectively and an extension of the concession period by 241.37 days, 387.18 days and 214.99 days, respectively. The Arbitral Tribunal had pronounced Section 17 order on September 10, 2023 in favour of the claimants by further extending the interim relief granted by the Delhi High Court, pending adjudication of the main dispute. Thereafter, NHAI filed Section 16 application challenging the jurisdiction of the arbitral tribunal to adjudicate veracity of the settlement agreements and consequent claims thereto. The arbitral tribunal decided that the said application of the respondent would be heard along with the main case. The arbitral proceedings are in progress and the matter is currently pending.

Outstanding Criminal Action

Hiteshkumar Ramanlal Gandhi, a shift in-charge working at the Kherwara-Khandi Obri toll plaza, filed a first information report at the Kherwara police station, Udaipur against Bhairulal Salvi, a bus driver who refused the pay toll at the toll plaza. When the people working at the toll plaza tried to stop him, the bus driver along with others misbehaved with the workers and destroyed equipment at the toll plaza resulting in the loss of about ₹0.80 million to ₹1.00 million. The matter is currently pending.

I. *YATL*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action involving YATL. Other than as disclosed below, there is no outstanding material civil litigation or regulatory action involving YATL.

Outstanding Material Civil Litigation

1. Mr. Shaikh Rafiq and others (the "**Petitioners**") filed a writ petition against the Sponsor, Modern Road Makers Private Limited and others (the "**Respondents**") before the BHC Aurangaba**d** in relation to acquisition of land for the four laning of Yedshi – Aurangabad road that forms a part of the Solapur – Aurangabad highway, *i.e.*, NH 211. The Petitioners alleged that certain of the Respondents tried to change the alignment of the land already acquired for the project to include additional land in order to protect interest of one of the Respondent which is illegal. The Sponsor filed its response to the petition filed by the Petitioners and *inter-alia* stated that (i) the correct party to be impleaded in the petition is YATL and not itself as YATL is responsible for the operations under the concession agreement and therefore the petition should be dismissed on account of misjoinder and non joinder of necessary parties;

and (ii) acquisition of land is the responsibility of the NHAI and hence, no cause of action lies against itself. The matter is currently pending.

2. Mr. Panditrao Digambarrao Shete Chausalkar and another (the "**Petitioners**") filed a writ petition against the Sponsor and others (the "**Respondents**") before the BHC Aurangabad in relation to acquisition of land for the four laning of Yedshi – Aurangabad road that forms a part of the Solapur – Aurangabad highway, i.e., NH 211. The Petitioners have alleged that an award was passed acquiring land of the Petitioners without following the due procedure of law and the acquisition of the land of the Petitioners is illegal. The Petitioners requested the BHC Aurangabad to set aside the award for acquisition of the lands of the Petitioner and that the Respondents should be restrained from acquiring such land. The matter is currently pending.

3. Mr. Pruthviraj Shahane (the "**Petitioner**") filed a civil suit against the Sponsor and others (the "**Respondents**") before the Civil Judge (Senior Division), Beed, alleging that the Respondents encroached upon its land by erecting electric polls over them instead of erecting them over land which has been acquired for the project. The Petitioner has, *inter-alia*, requested the court to grant a decree of perpetual and mandatory injunction against the Respondents. The matter is currently pending.

4. YATL approached NHAI for an amicable settlement of claims in relation to delays attributable to the NHAI during the construction of the project including the claim towards force majeure event such as Covid-19. Since the parties were unable to reach a settlement, YATL invoked arbitration under its concession agreement. YATL filed claims for compensation of costs on account of delay in completion of construction for the reasons attributable to NHAI and political force majeure costs on account of restrictions imposed due to Covid 19 The claims were for an amount of approximately ₹17,508.0 million and an extension of the concession period by 869.41 days. Since the parties were unable to reach a settlement, YATL has invoked arbitration under its concession agreement. The arbitral tribunal pronounced the award on January 27, 2024 ("**Award**") in favour of YATL and directed NHAI to pay cash compensation of INR 17,195 million inclusive of interest till the date of award plus applicable interest till realization of payment and have granted extension of the concession period by 689 days. NHAI has preferred Section 34 petition challenging the Award and YATL has filed application under Section 36 for enforcement of Award before the High Court of Delhi. The matters are pending.

J. *PDTPL*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action involving PDTPL. Other than as disclosed below, there is no outstanding material civil litigation involving PDTPL.

Material civil litigation

Sanat Ghosh & others (the "**Petitioners**") have filed a public interest litigation petition against the Sponsor and PDTPL before the High Court of Calcutta alleging water logging in certain villages due to the project operated by PDTPL. The Petitioners have prayed, *inter-alia*, that the hume pipes located in and around the lands owned by the Petitioners be changed into culverts. The matter is currently pending.

K. *IRB GEPL*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action involving IRB GEPL. Other than as disclosed below, there is no outstanding material civil litigation involving IRB GEPL.

Material civil litigation

1. Kanugula Mahesh Kumar ("**Petitioner**") has filed a petition for a public interest litigation before the High Court of Telangana (the "**High Court**") against the State of Hyderabad, the HMDA, the HGCL, the Sponsor and IRB GEPL, seeking to aside the award of the Toll, Operate and Transfer ("**TOT**") tender for the Nehru Outer Ring Road project (the "**IRB GEPL Project**") to the Sponsor and IRB GEPL, alleging, *inter-alia*, failure to disclose the initial estimated concession value for the project and diversion of funds from the concessioning authority. The Petitioner has also sought quashing or setting aside of the concession agreement and all other agreements entered into by the State of Telangana, the HMDA and the HGCL with the Sponsor and IRB GEPL in relation to the IRB GEPL Project. The Petitioner has also sought an order directing the Sponsor and IRB GEPL not to transfer the bid concession fee of ₹7,380

crore to the HMDA or alternatively, not to transfer any funds from the bid concession fee of ₹7,380 crore to the State of Telangana. The matter is currently pending.

L. *STPL*

As at the date of this Letter of Offer, there is no outstanding material civil litigation, criminal litigation or regulatory action involving STPL.

M. *IRB LTPL*

As at the date of this Letter of Offer, there is no outstanding material civil litigation, criminal litigation or regulatory action involving IRB LTPL.

N. *IRB KTPL*

As at the date of this Letter of Offer, there is no outstanding material civil litigation, criminal litigation or regulatory action involving IRB KTPL.

O. *IRB GTPL*

As at the date of this Letter of Offer, there is no outstanding material civil litigation, criminal litigation or regulatory action involving IRB GTPL.

P. *Target SPV*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against the Target SPV.

III. Material Litigation and Regulatory Action against the Investment Manager and Associates of the Investment Manager

Material Litigation and Regulatory Action against the Investment Manager

As at the date of this Letter of Offer, there is no outstanding material civil litigation or criminal litigation against the Investment Manager. Other than as disclosed below, there is no outstanding regulatory action against or other material litigation involving the Investment Manager.

Outstanding Regulatory Action

The Collector of Stamps, Solapur sent a demand notice dated April 24, 2015 to the Investment Manager demanding a sum of ₹152,000 as deficit stamp duty and a penalty of ₹3,040 on the agreement dated May 29, 2002 executed between the Maharashtra State Road Development Corporation, Ideal Road Builders and the Investment Manager. The Investment Manager filed a reply denying the payment of deficit stamp duty on the grounds that (a) the demand of deficit amount of stamp duty was made payable by citing the provisions included in Section 63 of the Bombay Stamp Act, 1958 inserted vide amendment 12 of 2006 (effective from May 1, 2006) whereas the agreement was already executed prior to the amendment; and (b) Section 63 of the Bombay Stamp Act, 1958 does not have a retrospective effect. In its letter dated July 7, 2015, the Collector of Stamps issued a direction that the Investment Manager and Ideal Road Builders must pay the deficit stamp duty and the penalty within seven days, failing which recovery action for the said amount would be initiated as per the Maharashtra Land Revenue Code, 1966 and the toll would be sealed. No further communication has been received from the Collector of Stamps Solapur in this regard.

Material Litigation and Regulatory Action against the Associates of the Investment Manager

For details of material litigation and regulatory action against the associates of the Investment Manager, see " – *Material Litigation and Regulatory Action against the Sponsor/Project Manager and Associates of the Sponsor/Project Manager*" on page 807.

***IV.* Material Litigation and Regulatory Action against the Trustee**

Outstanding Material Litigation

1. **SBICAP Trustee & Ors Vs. ITSL & Ors.- O.S.No. 25877/2013**

Brief Background

SBI Cap Trustee (the "**Plaintiff**") had filed a suit before the City Civil Court, Bangalore against the Trustee and others (the "**Defendants**") requiring sale of pledged shares for a particular price by SREI Fund/Investors, for whom the Trustee was acting as the share pledge trustee. India Competitive Global Fund (ICGC) acting through the SREI Investment Manager had a First & Exclusive Charge over the Pledged shares. At the instructions of the ICGC & SREI Investment Manager had transferred the Pledged shares to their demat account as they have First & Exclusive right over the shares. ITSL as share pledge trustee has acted on the instructions of the lenders/investors. ICGC/SREI sold the shares and appropriated the amounts towards their dues and transferred the surplus amount to the Plaintiff. The Plaintiff is acting for a consortium of lenders and has residual interest. The Plaintiff's case is that the ICGC/SREI has appropriated more amount than their dues. The aggregate claim amount is Rs. 1,550.3 million. The branch manager of SBI along with their counsel submitted to the court that they are willing to explore settlement. The court referred the matter for pre-conciliation efforts. In the afternoon session, our advocate appeared before the conciliator. Advocate briefly explained the dispute to the conciliator. The Plaintiff informed the conciliator that if Trinity provides the details of the loan transaction and a statement of accounts in relation to the same, this information would help them resolve the dispute quickly. The case was listed on 30.09.2021 for further conciliation. As no representative was present on behalf of the company, the court has recorded that there is no settlement between the parties. The case was adjourned to October 27, 2021 for the parties to proceed with the litigation. The case is now revolving around the proving of the dues by ICGC/SREI and appropriation of amounts. ITSL had no role in sale of shares, maintenance of books of accounts and appropriation of amounts and transfer of surplus amount. The matter was adjourned to 16.11.2021 for framing of Issues, 23.11.2021 for filing of list of witnesses ICGC, SREI & ITSL, for filing of affidavit of evidence by SBI, 07.12.2021 for cross examination of witnesses of SBI, 14.12.2021 for filing of affidavit of evidence by ICGC/SREI /Trinity/ITSL and 21.12.2021 for cross examination of witnesses of Trinity and ITSL and 07.01.2022 for further orders. ITSL has filed an application under Order 1 Rule 10(2) read with Section 151 of the Code of Civil Procedure, 1908 for unsuiting ITSL from the suit and for deleting the name of ITSL from the array of the parties. The matter is now listed on 30.06.2022 for arguments on the application of ITSL for deleting the name of ITSL from the array of the parties. ITSL has no role in sale of shares & appropriation of sale proceeds. The Plaintiff appeared and filed the amended plaint and copies of the documents in two volumes (volume I consisting of 410 pages and volume II consisting of 598 pages). The learned judge upon examining the volumes observed that the Plaintiff had not filed the statement of truth. Therefore, the Learned Judge adjourned the matter for filing the statement of truth and additional written statement, if any. ITSL has filed its additional written statement on 12th August, 2022. The matter adjourned to 25th January, 2023 for the reply arguments by the Defendants 2 & 3. The main contention taken by the Plaintiff's advocate while arguing on interim application (IAs) is that they are entitled for complete residual dues which Defendant No 2 & 3 have received while selling the pledged shares. Plaintiff's IAs dismissed as not survived for consideration. Now the matter is posted on 08th December, 2023.

Current Status –

a) The matter has been Stayed by the order of the Hon'ble High Court of Karnataka and the stay is extended.

b) on 15/02/2024, the case was called out in open Court. Advocate for defendant no.1 present and filed memo stating that, 6 months has expired from the date of interim order on 14.02.2024. Advocate for plaintiff present and filed memo along with case status of W.P.no.17774/2023. The matter has now been fixed on 10.01.2025.

2. **Muthoot Finance Ltd. Vs. Trustees Association of India (TAI), ITSL, Axis Trustee & SBICAP Trustee) – (Case No.29 of 2021) before the Competition Commission of India (CCI)**

Brief Background

On 10.09.2021, the Competition Commission of India (CCI) received an information from Muthoot Finance Limited (Informant) against Trustees Association of India (TAI) and three of its members, i.e., IDBI Trusteeship Services Limited, Axis Trustee Services Limited, and SBI CAP Trustee Company Limited (collectively referred to as 'OPs') for alleged contravention of Sections 3(3) and 4 of the Competition Act, 2002 (Competition Act) (hereinafter referred to as the 'Information'). i.e. for entering into anti-competitive agreement and formation of Cartel. CCI.

The CCI has passed an order dated 23.12.2021 under Section 26(1) of the Competition Act, 2002 (Competition Act) directing the Director General to investigate the conduct of Trustees' Association of India's (TAI), IDBI Trusteeship Services Limited (IDBI), Axis Trustee Services Limited and SBICAP Trustee Company (together referred to as the 'OPs') and its office bearers for *prima facie* violating Section 3(1) read with Section 3(3) of the Competition Act (Prima Facie Order) dealing with anti-competitive horizontal agreement (including cartel).

TAI, ITSL, Axis Trustee & SBICAP Trustee filed Civil Writ Petition Nos. 3781 of 2022, 3791 of 2022, 3842 of 2022 and 3847 of 2022 respectively before Bombay High Court challenging the jurisdiction of CCI as the SEBI as Sectoral Regulator has Jurisdiction to decide the matter. The matter has been adjourned to 15th February, 2023 for hearing on Application by CCI for vacation of Stay.

At the hearing held on 21st February, 2023, the Bombay High Court directed CCI to first decide the jurisdictional issue, leaving all other contentions open. Matter to go before CCI.

Current Status:-

CCI pursuant to its order dated March14 , 2024 rejected the application dated 21.03.2023 and held that the DG may continue its investigation. Additional Director General, CCI pursuant to the letter dated the March 15, 2024 addressed to ITSL, directed to provide the requisite information/documents as sought by CCI through the notice dated 18.02.2022 latest by 26.03.2024. The Trustee has submitted the required information on April 11, 2024 and April 15, 2024 and the DG, CCI had summoned Trustee's officer (Anjalee Athalye) on 11th June, 2024 for deposition/taking statement in the matter. Ex--MD & CEO (Mr.Sanjay Sinha) of Axis Trustee and ITSL was also called for deposition on 22nd July,2024. Ex--MD & CEO(Ms. Padma Betai) of ITSL was also called for deposition on 23rd July,2024. Present MD & CEO (Mr.P.K. Malhotra) of ITSL was called for deposition on 2nd August, 2024. On August 2, 2024, during the deposition, the DG directed MD & CEO to provide details regarding reasons for less fees charged in 3 cases and the turnover generated by TAI in the last 5 financial years which were submitted to SEBI on August 8, 2024 and August 9,2024 respectively

3. R.K. Mohata Family Trust Vs. ITSL & Ors.

Brief Background

One Mr .R.K.Mohata Family Trust has filed Commercial Suit (lodging) No. 27568 of 2021 before Bombay High Court against ITSL & RHFL praying for holding of meeting of debenture holders of RHFL as also damages of Rs.1,05,50,902 against ITSL towards his investment. Hon'ble Bombay High Court vide their orders dated the 31.03.2022 read with the order dated the 06.04.2022 and the order dated the 10.05.2022 directed ITSL to hold the meeting of debenture holders. ITSL convened a meeting of the debenture holders on 13.05.2022 and as directed by Hon'ble Bombay High Court and the results of the voting of meeting have been placed before the Hon'ble Bombay High Court in sealed cover. The matter is *sub-judice* before the Hon'ble Bombay High Court. Authum (AIIL) filed an appeal before the Hon'ble Supreme Court against the order of BHC. The matter was listed for hearing on 31st January, 2023. The matter was part heard and thereafter adjourned.

Current Status

Arising out of SLP(c) No. 411 of 2023 filed by Authum Investments & Infrastructure Ltd. (AIIL) vs. R.K. Mohtta Family Trust & Ors, Supreme Court vide their Order dated the 3rd March,2023 allowed the Resolution Plan filed by AIIL and directed AIIL to make the payments prior to 31st March, 2023. AIIL has made the payment.

4. **SCR 109885 – 1/394/14 - J Patel & 68 Others (All investors of Dynamic India Fund III) vs. Dynamic India Fund III, International Financial Services, ICICI Venture Funds Management Company Limited, ICICI Bank and ITSL , before Supreme Court of Mauritius**

Brief Background

Suit is filed by investors seeking compensation and damages of Rs. USD 103,699,976 for the loss of their investments in Dynamic India Fund III from Dynamic India Fund III, International Financial Services, ICICI Venture Funds Management Company Limited, ICICI Bank and ITSL.

All the defendants including ICICI Venture have raised preliminary objections to the suit.

DIF III has raised five preliminary objections to the suit viz. (i) plaintiffs have been wrongly styled; (ii) suit is a disguised derivative action and the appropriate court to hear it is the commercial court and not the civil court; (iii) there is a connected stay application filed before the commercial court by DIF III that the suit has to be stayed as the suit is a class action suit and hence the commercial court and not the civil court has the jurisdiction to hear the suit; (iv) the Plaintiffs should have put the other shareholders of DIF III into cause; and (v) the plaintiffs have to provide security for costs to all the defendants.

The other defendants have raised preliminary objections with respect to privity of contract and jurisdiction of Mauritius courts.

Nearly 6 years after the Suit was filed in 2014 in Mauritius, on January 28, 2020, the court heard arguments on only two of the preliminary objections raised by ICICI Bank and ICICI Venture viz. (a) Mauritius court lacks jurisdiction to hear disputes between non-Mauritians (both the plaintiffs and the defendants No. 3 and 4 i.e. ICICI Bank and ICICI Venture are not Mauritius residents); and (b) Mauritius court is not the convenient forum to hear the disputes raised.

The arguments relied, amongst others, related to the facts that (a) alleged conduct of ICICI Bank and ICICI Venture did not admittedly happen in Mauritius and offences, if any, happened in India; (b) investments were in real estate projects in India; (c) investments were in a real estate fund in India; and (d) Indian law governs the contractual relationship between the parties.

By an order dated June 9, 2020 the Supreme Court of Mauritius stayed the proceedings as against ICICI Bank and ICICI Venture on the grounds that none of the allegations made against ICICI Bank and ICICI Venture occurred in Mauritius and hence the courts in Mauritius lack jurisdiction to adjudicate such allegations. In the subsequent hearing on July 1, 2020, the Plaintiffs informed the court of their decision not to appeal against the order staying the proceedings as against ICICI Venture and ICICI Bank. The proceedings would continue against the other Defendants viz. DIF III, IFS and the Trustee.

The Supreme Court of Mauritius vide its order dated the 3rd June, 2022 have deleted ICICI Bank and ICICI Venture Fund Management Company Ltd. from the array of the parties allowed to continue the case against Dynamic India Fund III, SANE Mauritius and the WITECO now ITSL.

The Plaintiffs have filed an appeal against the said Judgement dated the 3rd June,2022 passed by The Supreme Court of Mauritius.

ICICI Venture Fund Management Company Ltd. is taking care of the matter on behalf of ITSL as a Trustee and also appointed Counsels to defend ITSL. We have taken up the matter with the ICICI Venture stating that WITECO now ITSL is also not a Mauritius resident and Mauritius court is not the convenient forum to hear the disputes raised and hence lacks the jurisdiction. Further, ITSL is acting only as a trustee and there cannot be any claim against ITSL at all as ICICI Venture Fund Management Company Ltd. was Investment Manager of the Fund who has managed all affairs of the Fund.

Current Status

Hearing for the appeal filed by the plaintiffs, against the order dated June 03, 2022 was scheduled on May 18, 2023. The matter has now been fixed for Merits on May 13, 2024 before the Supreme Court. May 13, 2024 hearing has been postponed to November 25, 2024. Order Reserved, next date not yet notified.

5. Pawan Kapoor & Anr. Vs. SEBI & Ors.(Karvy Data Management Services Ltd)

Brief Background

In the case of Karvy Data Management Services Ltd ; one Pawan Kapoor & Amri Resorts Pvt. Ltd. the debenture holders have filed writ petition before Delhi High Court, inter alia against ITSL alleging various non compliances by ITSL and for not initiating action against Karvy Data Management Services Ltd. for defaults in payment of interest & Principal. The matter was listed before Hon'ble Delhi High Court on 19.12.2022. The Hon'ble Delhi High Court has directed Ministry of Corporate affairs to investigate in the complaint and provide report. The Current Status is an indicated above.

Current Status

The matter was listed on 05/02/2024 for early hearing. The petitioner had filled an application being CM. Appl. 62768/2023 for early hearing which was listed for hearing on 05.12.2023 before HMJ Subramonium Prasad, as Item No. 48 (Supplementary List), in Court No. 7, Delhi High Court. The Hon'ble Court after hearing the parties was not of the opinion to entertain the application filed by the applicant/petitioner, since, no case of urgent hearing was made out. Accordingly, the said application for early hearing was dismissed and the court directed the matter to be listed on the date already fixed i.e. 05.02.2024.

Pursuant to the order dated 19/12/2023 passed by Delhi High Court, MCA has launched inspection of ITSL vide letter dated the 19th December,2023. We have provided the data to Regional Director (RD), MCA, Western Region, Mumbai on 1st January, 2024. RD had called us for personal hearing on 04/01/2024. RD has issued a letter dated 8th January,2024 calling information. ITSL vide its letter dated the 24th January,2024 provided all documents together with supporting documents duly signed by Director of ITSL to Regional Director, MCA, Western Zone.

The matter before Delhi High Court is now fixed on 15th January, 2025.

6. Mr. Kamlakar Babu Alias Baburao Patil & Others and ITSL & Others

Brief Background

One Kamalakar B. P has filed declaratory civil suit bearing No 226/2023 of which we have received notice from court of civil judge (senior division), Thane on 28/07/2023. The suit is basically for declaration of deed of mortgage dated 15/06/2021 executed by defendant no. 2 to no.7 in favour of ITSL as defendant No 1 as void, illegal, invalid, non-est, not binding on the plaintiffs together with relief for permanent injunction from entering into the suit property, selling in auction and/or agreeing to sale in auction the suit property under the garb or colour whatsoever. The plaintiff has also prayed for temporary injunction from selling of the suit property.

Current Status: Now, the Issuer Company has mortgaged different property and disputed property has been released. We have filed an application for deletion of our name from array of the parties. The matter was last listed on 7/12/2024 for orders on ITSL application for deletion of name from array of the parties and the next date is yet to be notified.

7. Contempt Petition (Civil) No.953 of 2023 in Civil Appeal No. 1581 of 2023- Praduman Tondon & Ors. vs. Sanjay Soumitra Dangi & Ors. (Authum/RHFL case) before Supreme Court of India.

Brief Facts

This contempt petition has been filed against Order dated the 3rd March, 2023 passed by Hon'ble Supreme Court of India. The case of the petitioners is that the cut-off date of 15th April 2022 for voting on the resolution plan and the distribution mechanism was not known. The matter was listed on 22/09/2023.

The matter was listed on 9th October,2023 before the bench comprising of Hon'ble Mr. Justice B.R. Gavai, Hon'ble Mr. Justice P S Narasimha and Hon'ble Mr. Justice Prashant Kumar Mishra before the Hon'ble Supreme Court of India.

When the matter was called, the counsel for the petitioners submitted that counter-affidavits have been filed in the matter and they seek time to file rejoinders to the same. Pursuant to the same, the counsel for the petitioners prayed that the matter be next listed on a non-miscellaneous day for hearing. Mr. Sankaranarayanan thereafter apprised the Hon'ble Court that there are three similar contempt petitions that have been filed before the Hon'ble Court, however Respondent No. 20 is only a party to the captioned contempt petition. He further contented that no case has been made out against Respondent no. 20 and therefore they should be deleted from the array of parties in the captioned matter. Such request was however objected to by the Appellant. In reference to the same, the Hon'ble Court passed an oral remark that Respondent no.20 should file an application for deletion from the array of parties, if they wish to be deleted.

Current Status – On 24/09/2024 The Counsel for the Petitioner sought time in the matter. Accordingly, the matter was adjourned by 4 weeks. The matter is now fixed on 17.12.2024

8. **DSP Asset Managers Pvt. Ltd. vs. Grant Thornton (Bharat) LLP & Ors.- Company Application No. 19 of 2024 before NCLT, Mumbai.**

Brief Background:

Aggrieved by the NCLT order dated the 13th May, 2024, DSP Asset Manager has filed an appeal before, NCLAT, New Delhi. We have prepared our Reply to the Appeal on 22/07/2024 for filing with NCLAT, Delhi.

The Allegation against ITSL is that the ITSL has delayed in filing their claim with GT for admission.

Current Status:

When the subject matter was taken up for hearing, the counsel for the appellant apprised the Ld. Registrar about the reasons for delay in refiling of the appeal.

Our advocate requested the Ld. Registrar to permit us to file our response on the said application and take objections, if permitted.

However, the Ld. Registrar apprised us that the respondents do not have any say in case of delay in refiling of the appeal. Accordingly, the Ld. Registrar allowed the said application and directed to list the main appeal before the Court. The date of listed on 11.12.2024.

9. **Spenta Suncity Private Ltd – Moniveda Consultants LLP & Anr. Vs. ITSL & Pradeep Kumar Malhotra - Contempt petition 616 of 2023 And Civil Appeal 9052-9053 of 2022 Before Hon'ble Supreme Court of India- Pradeep Kumar Malhotra and ITSL**

Brief Background

In the case of Spenta Suncity Private Ltd., one Monivedda Consultant LLP, one of the stakeholder has filed Civil Appeal and Contempt Petition against ITSL & MD P.K. Malhotra for violations of order dated 16.12.2022 passed by the Supreme Court of India. The matter was driven by IIFL the Debenture Holder. The order was not to make further allotment of debentures and create further liabilities on the assets.

At the hearing held on 11/03/2024, we have filed Counter Replies in both Civil Appeal and Contempt Petition before Supreme Court of India. The Appellants have been directed to file their rejoinder within three weeks. The Matter now is listed on 13/05/2024 for hearing. At the hearing held on 13/05/2024, ITSL the Respondent 10 has been directed to file Affidavit/Undertaking confirming that it is not carrying out any constructions nor it has authorised anyone to carry out constructions including Spents Suncity Private Ltd. The required Affidavit/Undertaking was filed in stipulated time. At the hearing held 15/07/2024 it was informed that on 10th July,2024 a petition under Section 7 of IBC,2016 has been

admitted against Spenta Suncity Pvt. Ltd. and IRP has been appointed. Moratorium has been imposed. IA seeking Impleadment of Spenta as a Party respondent was allowed as Respondent No.11 through Gajesh Labhchand Jain, IRP. Amended cause title to be filed within 3 days. Issue Notice to added Respondent No.11. Added respondent not to carry on constructions on the property. Application seeking vacation/modification of orders dt.16.12.2022 & 13.09.2024 was listed for hearing on 13.09.2024 and now listed on 14.10.2024 for adding specific prayers

Current Status:

We have engaged our own advocate and filed suitable replies. The matter is listed for hearing on 21.11.2024 and the next date of hearing is not yet notified.

10. **Arbitration no. 186 of 2024 (Arb186/24/BRP) in the matter of an arbitration under the Arbitration Rules of the Singapore International Arbitration Centre (6th Edition, 1 August 2016) between:- Credit Opportunities III Pte. Limited ("Claimant") and (1) IIFL Management Services Limited; (2) IIFL Finance Limited; (3) IDBI Trusteeship Services Limited; (4) 360 One Investment Advisors and Trustee Services Limited ("Respondents")**

Brief Background:

CREDIT OPPORTUNITIES III PTE. LIMITED ("CLAIMANT")
AND
(1) IIFL MANAGEMENT SERVICES LIMITED;
(2) IIFL FINANCE LIMITED;
(3) IDBI TRUSTEESHIP SERVICES LIMITED;
(4) 360 ONE INVESTMENT ADVISORS AND TRUSTEE SERVICES LIMITED ("RESPONDENTS").

Notice of Arbitration dated 21st May,2024 was received by us on 22nd May,2024.

ITSL became the Trustee only on 07/11/2023. The following are the allegations levelled against the Respondents:-

1. *Failure to provide timely information & updates*
2. Attempts to blatantly and unilaterally disregard the contractually agreed Distribution Waterfall
3. *Unauthorized Return of Capital Contribution to Second Respondent*
4. *Disbursement of additional funds to certain Portfolio Companies*
5. *Unauthorised Change of Trustee w.e.f. November 7, 2023*
6. *Transfer of Class B units held by Second Respondent*
7. *Purported In-specie Distribution*

Claimant's Emergency application for interim relief has been rejected vide order dated 5th June, 2024 and the claimant has been directed to bear the cost of R3 and R4 subject to the final apportionment of liability and quantification by the arbitral tribunal. The matter has now been listed on 20/06/2024 for filing reply to main Arbitration. Emergency Application filed by the Claimant for urgent reliefs has been dismissed vide order dated 3rd June,2024. There was a meeting on 18th June,2024 for consultation.

ITSL has filed its reply to the Notice of Arbitration on 22nd July, 2024. Under SIAC Rules and one Mr. Mr. Timothy Cooke has been appointed as Arbitrator.

Current Status:
Under SIAC Rules one Mr. Timothy Cooke has been appointed as an Arbitrator. Case Management conference was held on 8.11.2024 and Arbitrator has given procedural steps commencing from 9.12.2024 onwards.

11. **Summary Suit No.806 of 2024 before City Civil Court at Dindoshi (Borivali Division), Goregaon, Mumbai - Francis Cassian Mendis Vs. Heida Aloysious Gomes & 9 others including ITSL as Defendant No.6.**

Brief Background:

Challenging the Conveyance Deed dated 18.05.1981 including all other Conveyances executed thereafter and Mortgage dated 09.09.2021 created in favour of ITSL by Spenta Suncity Private Ltd. and permanent order and injunction restraining the defendants from carrying out any constructions/development activity on the Suit property i.e. Land bearing CTS No.336,Survey No.23,Hissa No.13/7 admeasuring 1622.8 sq. mtrs., village Mogra, Taluka Andheri, Mumbai. The matter has now been listed on *25th July, 2024* for filing Reply to Notice of Motion and WS.

Current Status: The matter has been adjourned to 20/12/2024.

12. **Balaji Enterprises Vs. Essel Lucknow Raibareli Toll Road Ltd & Ors , before the Court of District & Sessions Judge, Rohini Commercial Court, North West Delhi**

Brief Background:

We have received Summons from the Court of District & Sessions Judge, Rohini Commercial Court, North West Delhi on 11th July 2024 for the alleged unpaid amount of Rs. 80,35,732/- towards construction contracts executed by them. We have prepared our Reply to the said Commercial Suit on 29/07/2024 along with application for deletion of our name from array of the parties for filing with the Court of District & Sessions Judge, Rohini Commercial Court, North West Delhi and to appear and represent us before the said court.

Current status: The case has been listed on 12/03/2025 for arguments on maintainability.

V. Taxation Proceedings

Details of all outstanding direct tax and indirect tax proceedings (i) against the Trust, the Sponsor/Project Manager, the Investment Manager, their respective Associates, the Sponsor Group and the Trustee and (ii) involving the Project SPVs and Target SPV, as at the date of this Letter of Offer are disclosed below:

Nature of Proceedings	Number of Proceedings	Amount involved (in ₹ million)
Direct Tax*		
Trust	Nil	Nil
Sponsor/Project Manager	Nil	Nil
Associates of the Sponsor/Project Manager	7	55.91
Project SPVs	5	160.33
Investment Manager	Nil	Nil
*Associates of the Investment Manager***	Nil	Nil
Trustee	Nil	Nil
Target SPV	Nil	Nil
Indirect Tax*		
Trust	Nil	Nil
Sponsor/Project Manager	Nil	Nil
Associates of the Sponsor/Project Manager	4	245.77
Project SPVs	4	1,890.08
Investment Manager	Nil	Nil
*Associates of the Investment Manager***	Nil	Nil
Trustee	Nil	Nil
Target SPV	Nil	Nil
Such amount excludes any interest or penalty in relation to such direct and indirect tax proceedings.* * Excludes Associates of the Sponsor/Project Manager.*		

VI. Certain other matters

1. Ravindra Dhariwal, a non-executive director on the board of directors of the Sponsor, resigned from the position of independent director of Future Retail Limited (FRL) with effect from July 23, 2022, due to FRL being referred to insolvency / initiation of corporate insolvency resolution process and his power/role as Independent Director of FRL being suspended as per the provisions of the Insolvency and Bankruptcy Code,

2016. Further, SEBI has initiated an investigation into the affairs of FRL to determine if there was any violation under the provisions of SEBI Regulations/ Rules/ Directives and has issued a show cause notice to the promoter directors and independent directors, who were part of the audit committee during the review period. Accordingly, the above show cause notice has been received by Ravindra Dhariwal since he was member of the audit committee member of FRL during the review period. He has responded to the show cause notice giving justification, as to why no action or penalty should be levied against him for the alleged non-compliances. These matters are currently pending.

GOVERNMENT AND OTHER APPROVALS

On the basis of the list of material approvals, consents, licenses and permissions provided below, the Trust can undertake the Issue and the Trust, the Project SPVs and the Target SPV can undertake each of their respective current business activities and other than as stated below, no further material approval, consent, license or permission from any regulatory authority is required to undertake the Issue or continue such business activities. Unless otherwise stated, these approvals are valid as of the date of this Letter of Offer. For details in connection with the regulatory and legal framework within which we operate, see "Regulations and Policies" on page 286.

Certain licenses and/or approvals may expire/elapse periodically, in the ordinary course of business, and applications to the appropriate authorities for the renewal of such licenses and/or approvals are/will be submitted in accordance with applicable requirements and procedures.

A. Approvals in Relation to the Issue and the MBEL Acquisition

1. Resolutions dated December 9, 2024 of the board of directors of the Investment Manager in relation to the Issue and other related matters.

2. In-principle approval of the NSE dated December 13, 2024 for the listing of the Units to be issued pursuant to the Issue.

3. Letter dated December 6, 2024 issued by the SEBI granting certain exemptions to the Trust in relation to undertaking a fast-track rights issue (read with the letter dated December 11, 2024 from the Investment Manager).

4. Approval dated October 12, 2022 issued by the UPEIDA, approving the transfer of the project to the Trust subject to certain conditions, including, that the Sponsor and GIC Financial Investors shall continue to hold 10% and 9.60% of the Target SPV's equity, respectively, until two years from the commercial operation date for the project (or such other earlier timeline as prescribed under the concession agreement or applicable regulations).

5. Order dated June 4, 2024, pursuant to which the CCI has approved the proposed combination involving the MBEL Acqusition.

B. Registration of the Trust

1. The SEBI has issued a certificate dated November 25, 2019 for registration of the Trust as an infrastructure investment trust (registration number IN/InvIT/19-20/0012).

   The registration certificate has been granted subject to the following conditions, *inter-alia*, as specified in Regulation 7 of the InvIT Regulations:

   (i) the Trust shall abide by the provisions of the SEBI Act and the InvIT Regulations;
   (ii) the Trust shall forthwith inform the SEBI in writing, if any information or particulars previously submitted to the SEBI are found to be false or misleading in any material particular or if there is any material change in the information already submitted;
   (iii) the Trust and the parties to the Trust shall satisfy with the conditions specified in Regulation 4 of the InvIT Regulations at all times;
   (iv) the Trust and the parties to the Trust shall comply, at all times, with the code of conduct as specified in Schedule VI of the InvIT Regulations, wherever applicable.

   The certificate also states:

   (i) that the investment conditions and other restrictions will apply to all investments, distributions etc. made;
   (ii) that for issuance and listing of Units issued in terms of Chapter VIA of the InvIT Regulations, the Trust shall fulfill the conditions as may be prescribed by the SEBI from time to time;
   (iii) that the transaction for transfer of the underlying assets/shares or interest in SPVs to the Trust and the corresponding issue of the Trust's Units to the transferor entity shall happen only after the closure of the initial offer;

(iv) the minimum investment and lot size for an InvIT for a public issue or a private placement;
(v) that the Trust shall keep and maintain the books of accounts, records and such other documents as may be required by the SEBI under the InvIT Regulations from time to time;
(vi) that the Trust shall ensure compliance with the guidelines/directives/instructions/circulars etc. as may be issued from time to time by the SEBI or the Government of India relating to the activities carried on by the Trust;
(vii) that the Trust shall not make use of its status as a SEBI registered InvIT in furtherance of unrelated activities or any other purpose which is not permitted under the InvIT Regulations;
(viii) that the Trust's actions shall be governed by the SEBI Act and the InvIT Regulations in respect of activities carried on as an InvIT;
(ix) that any material change in the information on the basis of which registration is granted must be communicated to SEBI immediately; and
(x) that the registration has been granted on the basis of information available with the SEBI at the relevant point of time and does not preclude the SEBI from cancelling the registration later if anything adverse is found against the Trust or in case of a conviction.

Pursuant to a letter dated January 30, 2020, the SEBI has, *inter-alia*, taken on record the rights and provided to the investors in the Trust.

2. Approval dated January 3, 2020 issued by the NHAI for establishing the Trust and the transfer of the Project SPVs subject to, *inter-alia*, the following conditions:

(i) submission of no-objection certificates from the lenders of all the Project SPVs;
(ii) the concessionaire/developer is required to comply with all the provisions of the concession agreements including 51% holding in the Trust until two years after completion / provisional COD of the projects;
(iii) the incoming investor will comply to all relevant contractual obligations of the concession agreements;
(iv) the proposal submitted pursuant to the letter dated September 16, 2019 for establishing the Trust, transfer of the Project SPVs to the Trust and the transfer of 49% in the Trust shall not have the effect of jeopardizing the interests of the NHAI in any manner; and
(v) an undertaking that all statutory compliances as required by the SEBI guidelines shall be adhered to.

C. Approvals in Relation to the Project SPVs and Target SPV

Project SPVs:

Completion Certificates

1. Completion certificate dated March 29, 2019, with respect to 167.04 km stretch of KTL's Kaithal-Rajasthan border section of NH 152/65 project.

2. Completion certificate dated November 25, 2019, effective from October 15, 2019, with respect to the four-laning of the Solapur to Yedeshi section km. 0.000 to km. 100.000 (design length 98.717 km) of NH 211 project.

3. Provisional completion certificate dated January 31, 2020 with respect to 141.00 km stretch of IRB WTL's Goa-Karnataka Border – Kundapur section of NH-17 (now NH-66). The aforesaid provisional completion certificate was issued along with a punch list containing certain items to be completed within 90 days from the date of issuance thereof, including, *inter alia*, (a) laying of earthwork, GSB, WMM, DBM, SDBC, RCC drain, and footpath in the service road; (b) laying of earthwork, GSB, DLC, PQC, toll plaza tunnel on RHS and kerb in the toll plaza on RHS at km 182+850; (c) slope dressing; (d) chute drain stetches; (e) slope protection which includes pithcing on structures and slope protection on high embankment slope; (f) avenue plantation; (g) structural numbering and construction of appron; (h) static weigh bridge construction; (i) construction of truck bay, bus shelter, and boundary stones; (j) cleaaning of waterway of structure and providing cut drain as per standards; and (k) surveying with network survey vehicle from Ch 93.70 to Ch 280.94.

4. (i) Provisional completion certificate dated February 28, 2022 with respect to 20.050 km stretch of

IRB WTL's Goa-Karnataka Border – Kundapur section of NH-17 (now NH-66), in addition to earlier accorded 141.00 km i.e. total of 161.05 km; and (ii) provisional completion certificate dated March 24, 2023 with respect to 170.98 km stretch of IRB WTL's Goa-Karnataka Border – Kundapur section of NH-17 (now NH-66).

5. Completion certificate dated September 24, 2020 with respect to 189.02 km stretch of YATL's Yedeshi-Aurangabad section of NH 211 project.

6. Completion certificate dated November 24, 2020 with respect to the six-laning of AETL's Agra-Etawah bypass section of NH-2 (km 199.660 to km 232.525).

7. Completion certificate dated May 31, 2021 with respect to the six-laning of UTL's section of NH-8 (now NH-48), effective from June 1, 2021.

8. Completion certificate dated August 14, 2021 with respect to the six-laning of CGTL effective from August 14, 2021.

9. Completion certificate dated July 1, 2022 with respect to 78.532 km stretch of the six-laning of IRB HMTL effective from July 1, 2022. Completion Certificate (COD-II) dated April 7, 2023 with respect to additional length of 9.75 km of the six-laning of IRB HMTL.

10. Completion certificate dated July 20, 2022 with respect to the six-laning of KGTL effective from July 20, 2022.

Approvals for Continuing Commercial Operations

The Project SPVs and the Target SPV are required to obtain and maintain certain permits, registrations, approvals and licenses during the commercial operations phase of their respective projects, as disclosed below:

1. Certificate of registration of establishment under the Maharashtra Shops and Establishment (Regulation of Employment and Condition of Service) Act, 2017.

2. Registrations under various tax laws, including but not limited to, permanent account number, professional tax and goods and services tax.

3. Registration under the Legal Metrology Act, 2009 and respective state government rules for weigh-in-motion and road weigh bridge.

4. Registrations under applicable labour laws including, but not limited to, registrations under the Employees' Provident Funds and Miscellaneous Act, 1952, the Employees' State Insurance Act, 1948 and the Contract Labour (Regulation and Abolition) Act, 1970.

5. No-objection certificates and authorizations from the relevant state pollution control board for consent to operate under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981 and Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008.

The Project SPVs and the Target SPV have obtained the necessary permits, registrations, approvals and licenses from the appropriate regulatory and governing authorities that are required to operate their respective businesses. Certain approvals may have lapsed in their normal course and the respective Project SPVs or the Target SPV have either made applications to the appropriate authorities for renewal of such licenses and/or approvals or are in the process of making such applications.

D. Approvals applied for, but not yet received

As at the date of this Letter of Offer, except as disclosed below, there are no approvals required to be obtained by the Trust or the Project SPVs or the Target SPV for which applications have been made, but approvals have not been received:

- Clearance from State Pollution Control Board for setting up of batching plant by STPL.

E. Approvals for which applications are yet to be made

As at the date of this Letter of Offer, except as disclosed below, there are no material approvals required to be obtained by the Trust or the Project SPVs or the Target SPV for which applications are yet to be made:

- Factory license from the Director of Industrial Safety and Health for setting up of batching plant by STPL.

F. Intellectual Property

The Project SPVs, the Target SPV, the Investment Manager and the Trustee have entered into a name licensing agreement with the Sponsor. For details, see "*Related Party Transactions*" on page 306.

G. Other Approvals

The Investment Manager has received a notice dated December 14, 2024 ("**Notice**") from Chiswick Investment Pte. Ltd., one of the GIC Financial Investors, requesting to convene a unitholder meeting under Regulation 22(5C) of the InvIT Regulations, pursuant to the background set out in the Notice.

The Board of the Investment Manager has taken on record the Notice at their meeting held on December 14, 2024 and issued a notice convening a unitholder meeting at shorter notice, to be held on December 17, 2024.

H. Other Regulatory Disclosures

Eligibility for this Issue

A resolution dated December 9, 2024 has been passed by the Board of the Investment Manager approving the Issue. Resolutions dated December 9, 2024 have been passed by the Board of the Investment Manager approving the Record Date, the Issue Price, certain other terms of the Issue and this Letter of Offer.

Units of the same class which are proposed to be allotted are already listed on the NSE.

The NSE, through its letter dated December 13, 2024 has granted in-principle approval for the listing of the Units proposed to be issued pursuant to the Issue.

The Trust is in compliance with the continuous listing and disclosure requirements under the InvIT Regulations and circulars issued thereunder.

The Trust holds not less than 80% of its assets in eligible infrastructure projects.

The Issue is a fast-track rights issue and the conditions prescribed under paragraph 9.11 of Chapter 9 of the Master Circular are complied with, or where applicable, exemptions have been obtained from the SEBI pursuant to its letter dated December 6, 2024 with respect to the Issue (read with the letter dated December 11, 2024 from the Investment Manager). Also see "*Material Litigation and Regulatory Action – Certain other matters*" on page 828.

Prohibition by SEBI or RBI

None of the Trust, the Sponsor, the Investment Manager, the Project Manager and the Trustee, or the respective promoters or directors of any of the Sponsor, the Investment Manager, the Project Manager or the Trustee (i) is debarred from accessing the securities market by SEBI; (ii) is a promoter, director or person in control of any other company or a sponsor, investment manager or trustee of any other infrastructure investment trust which is debarred from accessing the capital market under any order or direction made by SEBI; or (iii) is in the list of wilful defaulters published by the RBI.

None of the respective promoters or directors of the Sponsor or Investment Manager or the Trustee (i) has been declared a fugitive economic offender under Section 12 of the Fugitive Economic Offenders Act, 2018; (ii) have direct or indirect relations with any infrastructure investment trusts or companies, their

sponsors, promoters, trustees, investment managers and whole-time directors, which are compulsorily delisted by any recognized stock exchange; or (iii) has been a promoter or whole-time director of any company which has been compulsorily delisted in terms of the Securities and Exchange Board of India (Delisting of Equity Shares) Regulations, 2009 or the Securities and Exchange Board of India (Delisting of Equity Shares) Regulations, 2021, as applicable, during the last 10 years.

Filing

The Investment Manager, through the Lead Manager, has filed this Letter of Offer dated December 16, 2024 with the SEBI. The Lead Manager has also submitted a due diligence certificate (in the form prescribed under the Master Circular) dated December 16, 2024 to the SEBI along with this Letter of Offer.

Disclaimer clause of NSE

"As required, a copy of this letter of offer has been submitted to National Stock Exchange of India Limited (hereinafter referred to as NSE). NSE has given vide its letter Ref. No. NSE/LIST/C/2024/1437 dated December 13, 2024, permission to the Issuer to use the Exchange's name in this letter of offer as one of the stock exchanges on which this Issuer's securities are proposed to be listed. The Exchange has scrutinized this letter of offer for its limited internal purpose of deciding on the matter of granting the aforesaid permission to this Issuer.

It is to be distinctly understood that the aforesaid permission given by NSE should not in any way be deemed or construed that the letter of offer has been cleared or approved by NSE; nor does it in any manner warrant, certify or endorse the correctness or completeness of any of the contents of this letter of offer; nor does it warrant that this Issuer's securities will be listed or will continue to be listed on the Exchange; nor does it take any responsibility for the financial or other soundness of this Issuer, its promoters, its management or any scheme or project of this Issuer.

Every person who desires to apply for or otherwise acquire any securities of this Issuer may do so pursuant to independent inquiry, investigation and analysis and shall not have any claim against the Exchange whatsoever by reason of any loss which may be suffered by such person consequent to or in connection with such subscription /acquisition whether by reason of anything stated or omitted to be stated herein or any other reason whatsoever."

Listing

The Units issued through this Letter of Offer are proposed to be listed on the NSE. Applications will be made to the NSE for obtaining permission for listing and trading of the Units.

Minimum Allotment

The minimum allotment and trading lot of Units issued pursuant to the Issue to any investor shall be equivalent to the minimum allotment and trading lot applicable to the Units of the same class. For details, see "*The Issue*" on page 74.

Minimum Subscription

The minimum subscription for purposes of the Issue shall be 90% of the total Issue size through this Letter of Offer (the "**Minimum Subscription**"). If the Minimum Subscription for the Issue is not received, the Application Amounts shall be refunded to the Applicants forthwith and not later than 15 days from the Issue Closing Date. Also see "*Issue Procedure*" on page 837.

Disclaimer clauses from the Investment Manager, the Trustee, the Sponsor/Project Manager and the Lead Manager

The Investment Manager, the Trustee, the Sponsor/Project Manager and the Lead Manager accept no responsibility for statements made otherwise than in this Letter of Offer or in any advertisement or other material issued by the Investment Manager, the Trustee or the Sponsor/Project Manager or by any other persons at the instance of the Investment Manager, the Trustee or the Sponsor/Project Manager and anyone placing reliance on any other source of information would be doing so at his own risk.

Eligible Unitholders who invest in the Issue will be deemed to have represented to the Investment Manager, the Trustee, the Sponsor/Project Manager and the Lead Manager and their respective directors, officers, agents, affiliates and representatives that they are eligible under all applicable laws, rules, regulations, guidelines and approvals to acquire Units in the Issue, and are relying on independent advice / evaluation as to their ability and quantum of investment in the Issue.

The Lead Manager and their respective affiliates may engage in transactions with and perform services for the Trust, the Project SPVs, the Target SPV, the Investment Manager, the Trustee, the Sponsor/Project Manager, the Sponsor Group or their respective affiliates in the ordinary course of business and have engaged, or may in the future engage, in transactions with such parties, for which they have received and may in the future receive, compensation.

Disclaimer with respect to jurisdiction

This Letter of Offer has been prepared under the provisions of Indian laws and the applicable rules and regulations thereunder. Any disputes arising out of the Issue will be subject to the jurisdiction of the appropriate courts in Mumbai, India only.

Prohibition on Offer of Incentives

No person connected with this Issue, including any person connected with the distribution of this Issue, shall offer any incentive, whether direct or indirect, in any manner, whether in cash or kind or services or otherwise to any person for making an application for Allotment of the Units.

Restriction on Further Capital Issues

The Trust shall not make any further issue of Units in any manner during the period between the date of filing this Letter of Offer with the SEBI and the date of listing of the Units to be issued pursuant to the Issue on the NSE or the refund of Application Amounts, as applicable.

Participation by the Sponsor

The Sponsor has undertaken to mandatorily subscribe to its rights entitlement and not renounce such rights, except for purposes of compliance with minimum public unitholding norms as prescribed under the InvIT Regulations, to the extent applicable.

Undertakings by the Investment Manager

The Investment Manager (on behalf of the Trust) undertakes the following:

- at any given time, there shall be only one denomination for the Units;
- the Units to be issued pursuant to this Issue shall rank *pari passu* with the existing Units of the Trust in all respects;
- the Rights Entitlements shall be credited to the demat account of the Unitholders before the date of opening of this Issue for renunciation;
- the Trust shall not withdraw this Issue after announcement of the Record Date; and
- it shall comply with such disclosure and accounting norms specified by SEBI from time to time.

The Units have not been and will not be registered, listed or otherwise qualified in any other jurisdiction outside India and may not be offered or sold, and Applications may not be made by persons in any such jurisdiction, except in compliance with the applicable laws of such jurisdiction.

THE RIGHTS ENTITLEMENTS AND THE UNITS HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER THE U.S. SECURITIES ACT, OR ANY U.S. STATE SECURITIES LAWS AND MAY NOT BE OFFERED, SOLD, RESOLD OR OTHERWISE TRANSFERRED WITHIN THE UNITED STATES, EXCEPT IN A TRANSACTION EXEMPT FROM THE REGISTRATION REQUIREMENTS OF THE U.S. SECURITIES ACT. THE UNITS AND RIGHTS ENTITLEMENTS REFERRED TO IN THIS LETTER OF OFFER ARE BEING OFFERED AND SOLD IN OFFSHORE TRANSACTIONS OUTSIDE THE UNITED STATES IN COMPLIANCE WITH REGULATION S TO

UNITHOLDERS LOCATED IN JURISDICTIONS WHERE SUCH OFFER AND SALE OF THE UNITS ARE PERMITTED UNDER THE LAWS OF SUCH JURISDICTIONS. THE OFFERING TO WHICH THIS LETTER OF OFFER RELATES IS NOT, AND UNDER NO CIRCUMSTANCES IS TO BE CONSTRUED AS, AN OFFERING OF ANY UNITS OR RIGHTS ENTITLEMENTS FOR SALE IN THE UNITED STATES OR AS A SOLICITATION THEREIN OF AN OFFER TO BUY ANY OF THE SAID SECURITIES.

SECTION IX – ISSUE PROCEDURE

This section is for the information of the Applicants proposing to apply in the Issue. Investors should carefully read the provisions contained in this Letter of Offer, the Rights Entitlement Letter and the Application Form, before submitting the Application Form. The Trustee, the Sponsor, the Investment Manager and the Lead Manager are not liable for any amendments or modifications or changes in applicable laws or regulations, which may occur after the date of this Letter of Offer. Applicants are advised to make their independent investigation (for which the Investment Manager, the Sponsor, the Trust and the Lead Manager take no responsibility or liability) and ensure that the Application Form is correctly filled up.

I. Overview

The Issue and the Units issued pursuant to the Issue, are subject to the terms and conditions contained in this Letter of Offer, the Rights Entitlements Letter, the Application Form, the InvIT Regulations, and the circulars, clarifications, guidelines and notifications issued by the SEBI, the Government of India and other governmental, statutory and regulatory authorities from time to time, including approvals, from RBI or other regulatory authorities, and the terms and conditions as stipulated in the Allotment Advice. The Issue shall be undertaken in accordance with the InvIT Regulations, the SEBI Master Circular and other applicable law.

II. Dipatch and Availability of Issue Material

The Investment Manager and the Lead Manager will dispatch this Letter of Offer, Application Form, the Rights Entitlement Letter and other Issue materials only to Eligible Unitholders holding Units as of the Record Date (i) who have provided an address in India or through electronically on their email ID(s) registered with the depository participants (ii) who are foreign corporate or institutional Unitholders in jurisdictions where it is not illegal to make an offer or invitation to Offer or such an invitation or offer or would subject the Trust, the Parties to the Trust, the Lead Manager and their respective affiliates to any filing or registration requirement (other than in India) (such jurisdictions, the "**Identified Jurisdictions**").

No action has been or will be taken to permit the Issue in any jurisdiction where action would be required for that purpose, except that this Letter of Offer has been filed with the SEBI and the Stock Exchange. Accordingly, the Rights Entitlements or Units may not be offered or sold, directly or indirectly, and this Letter of Offer or any offering materials or advertisements in connection with the Issue may not be distributed, in whole or in part, in any jurisdiction other than India and to foreign corporate or institutional Unitholders in Identified Jurisdictions, except in accordance with legal requirements applicable in such jurisdiction. Receipt of this any Issue material will not constitute an invitation or offer in those jurisdictions in which it would be illegal to make such an invitation or offer or would subject the Trust, the Parties to the Trust, the Lead Manager and their respective affiliates to any filing or registration requirement (other than in India) and, in those circumstances, this Letter of Offer and other Issue material must be treated as sent for information only and should not be acted upon for subscription to the Units and should not be copied or redistributed. Accordingly, persons receiving a copy of this Letter of Offer, the Application Form and any other Issue material should not, in connection with the issue of the Units or the Rights Entitlements, distribute or send such material in or into any jurisdiction where to do so, would or might contravene local securities laws or regulations or would subject the Trust, the Parties to the Trust, the Lead Manager and their respective affiliates to any filing or registration requirement (other than in India). If this Letter of Offer, the Application Form or other Issue material is received by any person in any such jurisdiction, or by their agent or nominee, they must not seek to subscribe to the Units or the Rights Entitlements.

This Letter of Offer and the Application Form will be sent only to the e-mail addresses of Eligible Unitholders who have provided their e-mail addresses to the Investment Manager.

The Investment Manager, the Registrar and the Lead Manager shall make arrangements for distribution of the Application Form along with this Letter of Offer to all Eligible Unitholders prior to the Issue Opening Date.

NO OFFER IN THE UNITED STATES

THE RIGHTS ENTITLEMENTS AND THE UNITS HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER THE U.S. SECURITIES ACT, OR ANY U.S. STATE SECURITIES LAWS AND MAY NOT BE OFFERED, SOLD, RESOLD OR OTHERWISE TRANSFERRED WITHIN THE UNITED STATES, EXCEPT IN A TRANSACTION EXEMPT FROM THE REGISTRATION REQUIREMENTS OF THE U.S.

SECURITIES ACT. THE UNITS AND RIGHTS ENTITLEMENTS REFERRED TO IN THIS LETTER OF OFFER ARE BEING OFFERED AND SOLD IN OFFSHORE TRANSACTIONS OUTSIDE THE UNITED STATES IN COMPLIANCE WITH REGULATION S TO UNITHOLDERS LOCATED IN JURISDICTIONS WHERE SUCH OFFER AND SALE OF THE UNITS ARE PERMITTED UNDER LAWS OF SUCH JURISDICTIONS. THE OFFERING TO WHICH THIS LETTER OF OFFER RELATES IS NOT, AND UNDER NO CIRCUMSTANCES IS TO BE CONSTRUED AS, AN OFFERING OF ANY UNITS OR RIGHTS ENTITLEMENTS FOR SALE IN THE UNITED STATES OR AS A SOLICITATION THEREIN OF AN OFFER TO BUY ANY OF THE SAID SECURITIES.

Neither the Trust, nor any person acting on behalf of the Trust, will accept a subscription or renunciation from any person, or the agent of any person, who appears to be, or who the Trust, or any person acting on behalf of the Trust, has reason to believe is, in the United States when the buy order is made. No Application Form should be postmarked in the United States, electronically transmitted from the United States or otherwise dispatched from the United States or from any other jurisdiction where it would be illegal to make an offer of securities under this Letter of Offer.

Please note that none of the Investment Manager, the Sponsor, the Lead Manager or the Registrar will be liable for non-dispatch of physical copies of the Issue materials, including this Letter of Offer, the Rights Entitlement Letter and the Application Form, or delay in the receipt of this Letter of Offer, the Rights Entitlement Letter or the Application Form attributable to non-availability of the e-mail addresses of Eligible Unitholders or electronic transmission delays or failures (including corruption of the document being transmitted electronically), or if the Application Forms or the Rights Entitlement Letters are delayed or misplaced in transit. To update the respective email addresses or mobile numbers in the records maintained by the Registrar or Investment Manager, Eligible Unitholders should visit https://rights.kfintech.com or www.irbinfratrust.co.in.

The distribution of the Issue Materials and the issue of Units on a rights basis to persons in certain jurisdictions outside India is restricted by legal requirements prevailing in those jurisdictions.

Receipt of the Issue materials (including by way of electronic means) will not constitute an offer, invitation to or solicitation by anyone in any jurisdiction or in any circumstances in which such an offer, invitation or solicitation is unlawful or not authorized or to any person to whom it is unlawful to make such an offer, invitation or solicitation. In those circumstances, the Issue materials must be treated as sent for information only and should not be acted upon for making an Application and should not be copied or re-distributed.

Any person who makes an application to acquire Rights Entitlements and the Units offered in the Issue will be deemed to have declared, represented and warranted that such person is authorized to acquire the Rights Entitlements and the Units in compliance with all applicable laws and regulations prevailing in such person's jurisdiction and India, without requirement for the Trust, Parties to the Trust, the Lead Manager or their respective affiliates to make any filing or registration (other than in India).

III. Credit of Rights Entitlements in Demat Accounts of Eligible Unitholders

In accordance with InvIT Regulations read with the SEBI Master Circular, the credit of Rights Entitlements and Allotment of Units shall be made in the dematerialized form only. Prior to the Issue Opening Date, the Investment Manager and the Lead Manager shall ensure credit of the Rights Entitlements to (i) the demat accounts of the Eligible Unitholders holding the Units in dematerialised form (other than fractional entitlement); and (ii) a demat suspense escrow account opened by the Investment Manager, for the Eligible Unitholders which would comprise Rights Entitlements relating to (a) the Units held in a demat suspense account; or (b) the demat accounts of the Eligible Unitholder which are frozen or details of which are unavailable with the Investment Manager or with the Registrar on the Record Date; or (d) credit of the Rights Entitlements returned/reversed/failed; or (f) the ownership of the Units under dispute, including any court proceedings, as applicable.

Renouncees

All rights and obligations of the Eligible Unitholders in relation to Applications and refunds pertaining to the Issue shall apply to the Renouncees as well.

Basis for the Issue

The Units will be offered for subscription for cash to the Eligible Unitholders whose names appear as unitholders as per the list to be furnished by the Depositories in respect of the Units held in dematerialized form on the Record Date.

Rights Entitlements

As your name appears as a unitholder in respect of the Units held in dematerialized form as on the Record Date, you may be entitled to subscribe to the number of Units as set out in the Rights Entitlement Letter.

Eligible Unitholders can also obtain the details of their respective Rights Entitlements from the website of the Registrar (https://rights.kfintech.com) by entering their DP ID and Client ID. The link for details of Rights Entitlements will also be available on the website of the Trust (www.irbinfratrust.co.in).

Rights Entitlements shall be credited to the respective demat accounts of Eligible Unitholders before the Issue Opening Date only in dematerialized form.

IV. Terms of the Issue

Issue Price

Each Unit is being offered at a price of ₹293.65 per Unit* in the Issue. The Issue Price for the Units has been arrived at by the Investment Manager in consultation with the Lead Manager.

**The Issue Price is ₹293.6511986. For presentation purposes only, the Issue Price has been presented as rounded-off to two decimal places.*

Rights Entitlements Ratio

The Units are being offered on a rights basis to the Eligible Unitholders in the ratio of one Unit for every 19.07 Units* held by the Eligible Unitholders as on the Record Date.

** The Rights Entitlement Ratio is one Unit for every 19.0700901541096 Units held by Eligible Unitholders on the Record Date. For presentation purposes only, the Rights Entitlement Ratio has been presented as rounded-off to two decimal places.*

Renunciation of Rights Entitlements

The Issue includes a right exercisable by Eligible Unitholders to renounce the Rights Entitlements credited to their respective demat account either in full or in part. The renunciation from non-resident Eligible Unitholders to resident Eligible Unitholders and vice versa shall be subject to provisions of the FEMA Rules and other circulars, directions, or guidelines issued by RBI or the Ministry of Finance from time to time. However, the facility of renunciation shall not be available to or operate in favor of an Eligible Unitholder being an erstwhile OCB except is in compliance with the FEMA Rules and other circulars, directions, or guidelines issued by RBI or the Ministry of Finance.

The renunciation of Rights Entitlements credited in your demat account can be made either by sale of such Rights Entitlements using the secondary market platform of the Stock Exchange or through an off-market transfer. For details, see " – *Procedure for Renunciation of Rights Entitlements*" on page 843.

In this regard, the Investment Manager will make necessary arrangements with NSDL and CDSL for the crediting of the Rights Entitlements to the demat accounts of the Eligible Unitholders in a dematerialized form. A separate ISIN for the Rights Entitlements has also been generated which is INE0C8K20067. Such ISIN shall remain frozen (for debit) until the Issue Opening Date.

The said ISIN shall be suspended for transfer by the Depositories post the Issue Closing Date.

Eligible Unitholders are requested to provide relevant details (such as copies of self-attested PAN and details confirming the legal and beneficial ownership of their respective Units) to the Investment Manager or the Registrar not later than two Working Days prior to the Issue Closing Date, to enable the credit of their Rights Entitlements by way of transfer from the demat suspense escrow account to their demat account at least one day before the Issue Closing Date, to enable such Eligible Unitholders to make an application in the Issue, and such communication shall serve as an intimation to such Eligible Unitholders in this regard. Such Eligible Unitholders are also requested to ensure that their demat account, details of which have been provided to Investment Manager or the Registrar, is active to facilitate such transfer.

Additionally, the Investment Manager will submit the details of the total Rights Entitlements credited to the demat accounts of the Eligible Unitholders and the demat suspense escrow account to the Stock Exchange after completing the corporate action. The details of the Rights Entitlements with respect to each Eligible Unitholders can be accessed by such respective Eligible Unitholders on the website of the Registrar after keying in their respective details along with other security control measures implemented thereat.

Trading of the Rights Entitlements

Prior to the Issue Opening Date, the Investment Manager will obtain the approval from the Stock Exchange for trading of Rights Entitlements. Applicants shall be able to trade their Rights Entitlements either through on-market renunciation or through off-market renunciation. The trades through on-market renunciation and off-market renunciation will be settled by transferring the Rights Entitlements through the depository mechanism.

On-market renunciation shall take place electronically on the secondary market platform of the Stock Exchange in accordance with the settlement rules of the Stock Exchange. The transactions will be settled on trade-for-trade basis. The Rights Entitlements shall be tradable in dematerialized form only.

On-market renunciation shall take place only on December 18, 2024 (the renunciation period for on-market renunciation). No assurance can be given regarding the active or sustained on-market renunciation or the price at which the Rights Entitlements will trade. Eligible Unitholders are requested to ensure that renunciation through off-market transfer is completed in such a manner that the Rights Entitlements are credited to the demat account of the Renouncees on or prior to the Issue Closing Date. For details, see "*—Procedure for Renunciation of Rights Entitlements–On Market Renunciation*" and "*—Procedure for Renunciation of Rights Entitlements–Off Market Renunciation*" on page 844. Once the Rights Entitlements are credited to the demat account of the Renouncees, application in the Issue can be made until the Issue Closing Date. For details, please see the section entitled "*—Procedure for Application*" on page 844.

Please note that the Rights Entitlements which are neither renounced nor subscribed by the Applicants on or before the Issue Closing Date shall lapse and shall be extinguished after the Issue Closing Date.

No Units for such lapsed Rights Entitlements will be credited, even if such Rights Entitlements were purchased from market. Persons who are credited the Rights Entitlements are required to make an application to apply for Units offered under the Issue for subscribing to the Units offered pursuant to the Issue.

Terms of Payment

Full amount of ₹293.65 per Unit* shall be payable on Application.
**The Issue Price is ₹293.6511986. For presentation purposes only, the Issue Price has been presented as rounded-off to two decimal places.*

Fractional Entitlements

The trading lot for Units is 200,000 Units. Unitholders are entitled to Rights Entitlements in the Rights Entitlement Ratio. Rights Entitlement shall be credited in multiples of 200,000 (i.e., the existing trading lot). Rights Entitlements of any Eligible Unitholders, to the extent such Rights Entitlements are not in the multiples of 200,000, shall be considered fractional entitlements ("**Fractional Entitlements**").

Fractional Entitlements will not be credited to the Eligible Unitholders' demat accounts. However, such Unitholders would be given preference for the allotment of one additional lot if they apply for it, as per the procedure mentioned in the section entitled "*—Basis of Allotment*" on page 846.

The Units are being offered on a rights basis to existing Eligible Unitholders in the ratio of one Unit for every 19.0700901541096 Units held as on the Record Date. Fractional Entitlements of the Rights Entitlement will be credited to a suspense account. Accordingly, if the Unitholding of any of the Eligible Unitholders is less than 19.0700901541096 Units or is not in the multiple of 19.0700901541096 Units, the fractional Entitlements of such Eligible Unitholders shall be ignored. However, the Eligible Unitholders whose Fractional Entitlements are being ignored, will be given preferential consideration for the Allotment of one additional lot if they apply for additional Units in the Issue over and above their Rights Entitlements, if any, subject to availability of lots in the Issue post allocation towards Rights Entitlements applied for.

Illustration in relation to Fractional Entitlements

For example, if an Eligible Unitholder holds 19.0700901541096 Units, such Unitholder will be entitled to one Unit and will also be given a preferential consideration for the Allotment of one lot if such Eligible Unitholder has applied for additional Units in the Issue, over and above his/her/its Rights Entitlements, subject to availability of lots in the Issue post allocation towards Rights Entitlements applied for. Further, Eligible Unitholders holding less than 19.0700901541096 Units shall have 'zero' entitlement. Such Eligible Unitholders are entitled to apply for additional Units in the Issue and will be given preference in the Allotment of one lot, if such Eligible Unitholders apply for additional lots in the Issue, subject to availability of lots in the Issue post-allocation.

Ranking

The Units to be issued and allotted pursuant to the Issue shall be subject to the provisions of this Letter of Offer, the Rights Entitlement Letter, the Application Form, the InvIT Regulations, and the guidelines, notifications and regulations issued by SEBI, the Government of India and other governmental, statutory and regulatory authorities from time to time, including approvals, from RBI or other regulatory authorities, and the terms and conditions as stipulated in the Allotment advice. The Units to be issued and Allotted under the Issue shall rank *pari passu* with the existing Units, in all respects including distributions.

Listing and trading of the Units to be issued pursuant to the Issue

Subject to receipt of the listing and trading approvals, the Units proposed to be issued on a rights basis shall be listed and admitted for trading on the Stock Exchange. Unless otherwise permitted by the InvIT Regulations, the Units Allotted pursuant to the Issue will be listed as soon as practicable and all steps for completion of necessary formalities for listing and commencement of trading in the Units will be taken within such period prescribed under the InvIT Regulations. The Investment Manager has received in-principle approval from NSE pursuant to a letter dated December 13, 2024. The Investment Manager will apply to NSE for final approvals for the listing and trading of the Units subsequent to their Allotment. No assurance can be given regarding the active or sustained trading in the Units or the price at which the Units offered under the Issue will trade after the listing thereof.

The existing Units are listed and traded on NSE (Scrip Symbol: IRBIT) under the ISIN: INE0C8K23012 (the main ISIN). The Units shall be credited to a temporary ISIN which will be frozen until the receipt of the final listing and trading approvals from the Stock Exchange. Upon receipt of such listing and trading approvals from the Stock Exchange, the Units shall be debited from the temporary ISIN and credited to the new main ISIN for the Units issued pursuant to the Issue and shall be available for trading. Accordingly, the temporary ISIN shall be permanently deactivated in the depository system of CDSL and NSDL.

The listing and trading of the Units issued pursuant to the Issue shall be based on the current regulatory framework then applicable. Accordingly, any change in the regulatory regime would affect the listing and trading schedule.

In case the Investment Manager fails to obtain listing or trading permission from the Stock Exchange, we shall refund through verifiable means, the entire monies received within the timelines prescribed under applicable law.

Market Lot

The Units of the Trust shall be tradable only in dematerialized form. The trading lot for Units in dematerialized mode is 200,000 Units.

Arrangements for Disposal of Odd Lots

The Units issued pursuant to the Issue shall be traded in dematerialised form only and shall be issued in the applicable trading lot. Accordingly, no arrangement for disposal of odd lots are required for the Units issued pursuant to the Issue.

Notices

The Investment Manager and the Lead Manager will dispatch this Letter of Offer, Application Form, the Rights Entitlement Letter and other Issue materials only to Eligible Unitholders holding Units as of the Record Date (i) who have provided an address in India or through electronically on their email ID(s) registered with the depository participants or (ii) who are foreign corporate or institutional Unitholders in Identified Jurisdictions. The Issue materials will be provided, only through e-mail, by the Registrar on behalf of the Investment Manager or the Lead

Manager to Eligible Unitholders.

This Letter of Offer and the Application Form shall also be submitted with the Stock Exchange for making the same available on its website.

V. Procedure for Application

Application Form

The Application Form can be used by the Applicants, Eligible Unitholders as well as the Renouncees, to make Applications in the Issue basis the Rights Entitlements credited in their respective demat accounts or demat suspense escrow account, as applicable. Please note that one single Application Form shall be used by the Applicants to make Applications for all Rights Entitlements available in a particular demat account and applying in the Issue. In case of multiple demat accounts, the Applicants are required to submit a separate Application Form for each demat account.

Applicants will be required, *inter-alia*, to indicate the following in the Application Form:

- name of the Applicant to whom the Units are to be Allotted;
- number of Units held as on the Record Date;
- number of Units entitled to;
- number of Units applied for within the Rights Entitlements;
- number of additional Units applied for, if any;
- total number of Units applied for;
- the details of the Application Amount deposited by the Applicant into the Designated Account;
- details of the demat account to which the Units should be credited;
- the details of the Applicant's bank account along with fund transfer details, in case of any refund;
- that it is permitted to acquire the Units under the laws of any applicable jurisdiction and that it has necessary capacity and authority, and has obtained all necessary consents and authorizations to enable it to commit to this participation in the Issue and to perform its obligations in relation thereto (including, without limitation, on behalf of any person) and honor such obligations;
- it is eligible to invest in India and in the Units under applicable law, including the SEBI Master Circular and the FEMA Rules, and has not been prohibited by the SEBI or any regulatory authority from buying, selling or dealing in units or securities; and
- any other information which may be relevant to the Application.

Please note that Applications without depository account details shall be treated as incomplete and shall be rejected.

Each Applicant shall be required to make payment of the entire Application Amount for the Units at the Issue Price, only through electronic transfer to the Designated Account during the Issue Period, along with the Application Form.

Options available to the Eligible Unitholders

The Rights Entitlement Letter will clearly indicate the number of Units that the Eligible Unitholder is entitled to.

If an Eligible Unitholder applies in the Issue, then such Eligible Unitholder can:

(i) apply for its Units to the full extent of its Rights Entitlements; or
(ii) apply for its Units to the extent of part of its Rights Entitlements (without renouncing the other part); or
(iii) apply for Units to the extent of part of its Rights Entitlements and renounce the other part of its Rights Entitlements; or
(iv) apply for its Units to the full extent of its Rights Entitlements and apply for additional Units in the Issue; or
(v) renounce its Rights Entitlements in full.

Procedure for Application

Applicants may note that forms not filled completely or correctly as per instructions provided in this Letter of Offer and the Application Form are liable to be rejected. The Applications should adhere to the following:

(i) Applications must be made only in the prescribed Application Form;

(ii) Application Form must be completed in full, in BLOCK LETTERS in ENGLISH and in accordance with the instructions contained herein and in the Application Form. Incomplete Application Forms are liable to be rejected. Applicants must provide details of valid and active DP ID, Client ID and PAN clearly and without error. Invalid accounts, suspended accounts or where such account is classified as invalid or suspended shall not be considered for Allotment. Applicants should note that the Registrar, the Lead Manager and the Investment Manager will not be liable for errors in data entry due to incomplete or illegible Application Forms; and

(iii) Applicants are required to sign the Application Form. Applicants should ensure that the thumb impressions and signatures other than in the languages specified in the Eighth Schedule to the Constitution of India, are attested by a Magistrate or a Notary Public or a Special Executive Magistrate under official seal.

Submission of Application Form and Mode of Payment

All Application Forms are required to be duly completed with information including the name of the Applicant, the number of the Units applied for and the Application Amount deposited in the Designated Account, and include details of the bank account from which payment of amount was made as well as a confirmation of funds transfer.

The Application Form is required to be submitted to the Investment Manager and the Registrar electronically at the following addresses:

MMK Toll Road Private Limited
Attention: Mr. Kaustubh Shevade
Email: kaustubh.shevade@irb.co.in

KFin Technologies Limited
Attention: Mr. Williams R/Mr. M Murali Krishna
Email: williams.r@kfintech.com/murali.m@kfintech.com

The Investment Manager and the Registrar are not required to provide any written acknowledgement of the Application Form.

Additional Units

Applicants are eligible to apply for additional Units in the Issue, over and above their Rights Entitlements, provided that they are eligible to apply for Units under applicable law and they have applied for all the Units forming part of their Rights Entitlements without renouncing them in whole or in part. Where the number of additional Units applied for exceeds the number available for Allotment, the Allotment would be made as per the Basis of Allotment finalized in consultation with the Designated Stock Exchange. Applications for additional Units in the Issue, shall be considered and Allotment shall be made in accordance with the InvIT Regulations and in the manner prescribed under the section "*— Basis of Allotment*" on page 846.

Eligible Unitholders who renounce their Rights Entitlements cannot apply for additional Units in the Issue. Non-resident Renouncees, who are not Eligible Unitholders, cannot apply for additional Units in the Issue.

Also see "*Other Regulatory and Statutory Disclosures – Participation by the Sponsor*" on page 836.

Procedure for Renunciation of Rights Entitlements

The Applicants may renounce the Rights Entitlements, credited to their respective demat accounts, either in full or in part, (a) by using the secondary market platform of the Stock Exchange; or (b) through an off-market transfer, during the Renunciation Period. The Applicants should have the demat Rights Entitlements credited/lying in his/her own demat account prior to the renunciation.

Applicants may be subject to adverse foreign, state or local tax or legal consequences as a result of trading in the Rights Entitlements. Applicants who intend to trade in the Rights Entitlements should consult their tax advisors

or stock brokers regarding any cost, applicable taxes, charges and expenses (including brokerage) that may be levied for trading in Rights Entitlements.

The Trust, the Parties to the Trust, the Lead Manager and their respective affiliates accept no responsibility to bear or pay any cost, applicable taxes, charges and expenses (including brokerage), and such costs will be incurred solely by the Applicants.

On Market Renunciation

The Applicants may renounce the Rights Entitlements, credited to their respective demat accounts by trading/selling them on the secondary market platform of the Stock Exchange through a registered stock broker in the same manner as the existing Units of the Trust.

In this regard, the Rights Entitlements credited to the respective demat accounts of the Eligible Unitholders shall be admitted for trading on the Stock Exchange under ISIN INE0C8K20067 subject to requisite approvals. The details for trading in Rights Entitlements will be as specified by the Stock Exchange from time to time.

The Rights Entitlements are tradable in dematerialized form only.

The On Market Renunciation shall take place only during the Renunciation Period for On Market Renunciation, i.e., on December 18, 2024.

The Applicants holding the Rights Entitlements who desire to sell their Rights Entitlements will have to do so through their registered stock brokers by quoting the ISIN and indicating the details of the Rights Entitlements they intend to sell. The Applicants can place order for sale of Rights Entitlements only to the extent of Rights Entitlements available in their demat account.

The On Market Renunciation shall take place electronically on secondary market platform of NSE under automatic order matching mechanism in accordance with the settlement rules of the Stock Exchange. The transactions will be settled on trade-for-trade basis. Upon execution of the order, the stock broker will issue a contract note in accordance with the requirements of the Stock Exchange and SEBI.

Off Market Renunciation

The Eligible Unitholders may renounce the Rights Entitlements credited to their respective demat accounts by way of an offmarket transfer through a depository participant. The Rights Entitlements can be transferred in dematerialised form only.

Eligible Unitholders are requested to ensure that renunciation through off-market transfer is completed in such a manner that the Rights Entitlements are credited to the demat account of the Renouncees on or prior to the Issue Closing Date.

The Applicants holding the Rights Entitlements who desire to transfer their Rights Entitlements will have to do so through their depository participant by issuing a delivery instruction slip, the details of the buyer and the details of the Rights Entitlements they intend to transfer. The buyer of the Rights Entitlements (unless already having given a standing receipt instruction) has to issue a receipt instruction slip to their depository participant. The Applicants can transfer Rights Entitlements only to the extent of Rights Entitlements available in their demat account.

The instructions for transfer of Rights Entitlements can be issued during the working hours of the depository participants and only during the Renunciation Period. The detailed rules for transfer of Rights Entitlements through off-market transfer shall be as specified by the NSDL and CDSL from time to time.

In cases where multiple Application Forms are submitted for Applications pertaining to Rights Entitlements credited to the same demat account, such Applications shall be liable to be rejected.

Applicants are requested to strictly adhere to these instructions. Failure to do so could result in an Application being rejected, with the Trust, the Sponsor, the Investment Manager, the Trustee, the Lead Manager and the Registrar not having any liability to the Applicant.

Allotment of the Units in Dematerialized Form

Please note that the Units applied for in the Issue can be allotted only in dematerialized form and to the same depository account in which the Units are held by such investor on the Record Date.

Grounds for Technical Rejection

Applications made in the Issue are liable to be rejected on the following grounds:

(a) DP ID and Client ID mentioned in Application not matching with the DP ID and Client ID records available with the Registrar.
(b) Account holder not signing the Application or declaration mentioned therein.
(c) Submission of more than one application for Rights Entitlements available in a particular demat account.
(d) Submitting the GIR number instead of the PAN (except for Applications on behalf of the Central or State Government, the residents of Sikkim, the officials appointed by the courts and persons exempt from holding a PAN under applicable law).
(e) Applications by persons not competent to contract under the Indian Contract Act, 1872, except Applications by minors having valid demat accounts as per the demographic details provided by the Depositories.
(f) Application Forms which are not submitted by the Applicants within the time periods prescribed in the Application Form and this Letter of Offer.
(g) Physical Application Forms not duly signed by the sole or joint Applicants.
(h) Application Forms accompanied by stock invest, outstation cheques, post-dated cheques, money order, postal order or outstation demand drafts.
(i) If an Applicant is debarred by SEBI.
(j) Applications which: (i) appears to the Investment Manager or its agents to have been executed in, electronically transmitted from or dispatched from the United States or other jurisdictions where the offer and sale of the Units is not permitted under laws of such jurisdictions; (ii) does not include the relevant certifications set out in the Application Form, including to the effect that the person submitting and/or renouncing the Application Form is not in the United States and eligible to subscribe for the Units under applicable securities laws or; or (iii) where the Investment Manager believes acceptance of such Application Form may infringe applicable legal or regulatory requirements; and the Investment Manager shall not be bound to issue or allot any Units in respect of any such Application Form.
(k) Multiple application forms.

Depository account and bank details for Applicants holding Units in demat accounts and applying in the Issue

INVESTORS MUST ENSURE THAT THE NAME GIVEN IN THE APPLICATION FORM IS EXACTLY THE SAME AS THE NAME IN WHICH THE DEPOSITORY ACCOUNT IS HELD. IN CASE THE APPLICATION FORM IS SUBMITTED IN JOINT NAMES, IT SHOULD BE ENSURED THAT THE DEPOSITORY ACCOUNT IS ALSO HELD IN THE SAME JOINT NAMES AND ARE IN THE SAME SEQUENCE IN WHICH THEY APPEAR IN THE APPLICATION FORM.

Applicants applying under the Issue should note that on the basis of name of the Applicants, Depository Participant's name and identification number and beneficiary account number provided by them in the Application Form, the Registrar will obtain Demographic Details from the Depository. Hence, Applicants applying under the Issue should carefully fill in their Depository Account details in the Application.

These Demographic Details would be used for all correspondence with such Applicants including mailing of the letters intimating unblocking of bank account of the respective Applicant and/or refund. The Demographic Details given by the Applicants in the Application Form would not be used for any other purposes by the Registrar. Hence, Applicants are advised to update their Demographic Details as provided to their Depository Participants.

By signing the Application Forms, the Applicants would be deemed to have authorised the Depositories to provide, upon request, to the Registrar, the required Demographic Details as available on its records.

In case no corresponding record is available with the Depositories that match three parameters, (a) names of the Applicants, (b) the DP ID, and (c) the beneficiary account number, then such Application Forms are liable to be rejected.

Last date for Application

The last date for submission of the duly filled in the Application Form is 3 p.m. IST on December 20, 2024, being the Issue Closing Date. The Investment Manager will have the right to extend the Issue Period as it may determine from time to time, provided that the Issue will not remain open for a period longer than 15 Working Days.

Please ensure that the Application Form and necessary details are filled in. In place of Application number, Applicants can mention the reference number of the e-mail received from Registrar informing about their Rights Entitlement or last eight digits of the demat account.

Withdrawal of Application

No Applicant shall withdraw their Application post the Issue Closing Date.

Issue Schedule

Last date for credit of Rights Entitlements	December 17, 2024
Issue Opening Date	December 18, 2024
Last date for On-Market Renunciation of Rights Entitlements*	December 18, 2024
Issue Closing Date#@	December 20, 2024
Finalization of Basis of Allotment	On or about December 20, 2024
Date of Allotment	On or about December 20, 2024
Date of Credit of Units	On or about December 23, 2024
Date of Listing	On or about December 24, 2024

** Eligible Unitholders are requested to ensure that any renunciation is completed in such a manner that Rights Entitlements are credited to the demat accounts of the Renouncees on or prior to the Issue Closing Date.*
The Investment Manager will have the right to modify the Issue Period as it may determine from time to time, provided that the Issue will open for a period of at least three Working Days and will not remain open for a period longer than 15 Working Days.
@ On the Issue Closing Date, Application Forms and Application Amount shall be accepted until 3 p.m. IST.

VI. Basis of Allotment

Subject to the provisions contained in this Letter of Offer, the Rights Entitlement Letter, the Application Form, the Indenture of Trust and the approval of the Designated Stock Exchange, the Investment Manager will proceed to Allot the Units in the following order of priority:

(a) Full allotment to those Eligible Unitholders who have applied for their Rights Entitlement either in full or in part and also to the renouncee(s), who has/have applied for the Units renounced in their favour, in full or in part, as adjusted for fractional entitlement.;

(b) Allotment to Eligible Unitholders who having applied for the Units in full to the extent of their Rights Entitlement and have also applied for additional Units shall be made as far as possible on an equitable basis, having due regard to the number of Units held by them on the record date, provided there is an undersubscribed portion after making allotment in (a) above;

(c) Allotment to the Renouncees, who having applied for the Units renounced in their favour and also applied for additional Units, provided there is an undersubscribed portion after making full allotment specified in (a) and (b) above. The allotment of such additional Units may be made on a proportionate basis;

(d) Allotment to the Sponsor and its associates who are Eligible Unitholders and who have disclosed their intent to subscribe to additional Units, if there is an unsubscribed portion after making full allotment specified in (a), (b) and (c) above; and

(e) Allotment to the underwriter appointed for the Issue, if any, at the discretion of the board of directors of the Investment Manager, subject to disclosure in this Letter of Offer.

The Units allotted in the manner specified above shall be listed within six Working Days from the Issue Closing Date, or such other timeline as may be prescribed under Applicable Law.

VII. Allotment Advice or Refund

The Investment Manager will email Allotment Advice, refund intimations or demat credit of securities and/or letters of regret, along with crediting the Allotted Units to the respective beneficiary accounts (only in dematerialised mode), if any, within a period of seven business days from the Issue Closing Date. It is clarified that the foregoing shall apply to any additional Units subscribed by and allotted to any Eligible Unitholder, over and above their Rights Entitlements, in accordance with the Basis of Allotment. In case of failure to do so, within the maximum time prescribed under applicable law (currently 15 days from the Issue Closing Date), the Investment Manager and the Trustee shall pay interest at such rate as specified under applicable law.

The Rights Entitlements will be credited in the dematerialized form using electronic credit under the depository system and the Allotment Advice shall be sent, through email, to the email address provided to the Investment Manager or at the address recorded with the Depository.

In the case of non-resident Applicants who remit their Application Amount from funds held in the NRE or the FCNR Accounts, refunds and/or payment of interest or dividend and other disbursements, if any, shall be credited to such accounts.

Payment of Refund

The payment of refund, if any, including in the event of oversubscription or failure to list or otherwise would be done through electronic mode or such other modes as may be permitted under applicable law.

Dematerialized Credit of Units

The demat credit of Units to the respective beneficiary accounts will be credited within the timelines required under applicable laws.

Applicants shall be Allotted the Units in dematerialized (electronic) form. The Investment Manager and the Registrar have entered into:

- Agreement dated January 14, 2020 with NSDL; and
- Agreement dated January 16, 2020 with CDSL.

The Investment Manager shall file an allotment report with the SEBI providing details of the Allottees and the Allotment made within 15 days of the Issue Closing Date.

INVESTORS MAY PLEASE NOTE THAT THE UNITS CAN BE TRADED ON THE STOCK EXCHANGE ONLY IN DEMATERIALIZED FORM.

IMPORTANT

1. Please read this Letter of Offer carefully before taking any action. The instructions contained in the Application Form and the Rights Entitlement Letter are an integral part of the conditions of this Letter of Offer and must be carefully followed; otherwise the Application is liable to be rejected.

2. All enquiries in connection with this Letter of Offer, the Rights Entitlement Letter or Application Form must be addressed (quoting the Registered Folio Number or the DP ID and Client ID number, the Application Form number and the name of the first Eligible Unitholder as mentioned on the Application Form and postmarked in India or in the e-mail) to the Registrar at the following address:

   KFin Technologies Limited
   B, Plot No. 31 &32 Gachibowli Financial District, Nanakramguda
   Hyderabad 500 032, Telangana
   Attention: M. Murali Krishna
   E-mail: einward.ris@kfintech.com

The Investment Manager will have the right to modify the Issue Period as it may determine from time to time, provided that the Issue will remain open for at least three Working Days and will not remain open for a period longer than 15 Working Days.

SECTION X – OTHER INFORMATION

MATERIAL CONTRACTS AND DOCUMENTS FOR INSPECTION

The following contracts, which are or may be deemed material have been entered into among the relevant parties. These contracts and also the documents for inspection referred to hereunder, may be inspected by Eligible Unitholders at the office of the Trust at New Delhi, from 10:00 A.M. to 5:00 P.M., from the date of this Letter of Offer until the Issue Closing Date, on Working Days.

A. Material Contracts

1. Issue agreement dated December 12, 2024 among the Trustee (on behalf of the Trust), the Investment Manager and the Lead Manager;

2. Registrar agreement dated December 12, 2024 among the Trustee (on behalf of the Trust), the Investment Manager and the Registrar to the Issue;

3. Cash escrow agreement dated December 12, 2024 among the Trustee (on behalf of the Trust), the Investment Manager, the Lead Manager and the Escrow Collection Bank;

4. The Framework Agreement, among the Sponsor, the Investment Manager, Bricklayers Investment Pte. Ltd, Chiswick Investments Pte. Ltd, Dangenham Investment Pte. Ltd, Anahera Investment Pte. Ltd and Stretford End Investment Pte. Ltd., and Cintra dated August 6, 2019, as amended;

5. The Indenture of Trust, between the Sponsor and the Trustee, dated August 27, 2019, as amended;

6. The Investment Management Agreement, among the Trustee and the Investment Manager, dated August 27, 2019, as amended;

7. The name licensing agreement among the Sponsor, the Trustee (on behalf of the Trust), the Investment Manager and each of the Project SPVs dated February 13, 2020, as amended.

8. Shareholders' agreement dated August 6, 2019, as amended, among the Sponsor, Croxley and the Investment Manager, as amended;

9. The concession agreement between AETL and NHAI dated September 1, 2015, together with any amendments or supplements thereto;

10. The concession agreement between CGTL and NHAI dated December 9, 2016, together with any amendments or supplements thereto;

11. The concession agreement between IRB HMTL and NHAI dated May 29, 2018, together with any amendments or supplements thereto;

12. The concession agreement between IRB WTL and NHAI dated March 25, 2013, together with any amendments or supplements thereto;

13. The concession agreement between KGTL and NHAI dated February 22, 2018, together with any amendments or supplements thereto;

14. The concession agreement between KTL and NHAI dated June 23, 2014, together with any amendments or supplements thereto;

15. The concession agreement between SYTL and NHAI dated March 3, 2014, together with any amendments or supplements thereto;

16. The concession agreement between UTL and NHAI dated December 9, 2016, together with any amendments or supplements thereto;

17. The concession agreement between YATL and NHAI dated May 30, 2014, together with any

amendments or supplements thereto;

18. The concession agreement between PDTPL and NHAI dated June 14, 2021, together with any amendments or supplements thereto;

19. The concession agreement among IRB GEPL, HMDA, HGCL and the Sponsor dated May 26, 2023, together with any amendments or supplements thereto;

20. The concession agreement between STPL and the NHAI dated May 12, 2023, together with any amendments or supplements thereto;

21. The concession agreement between IRB LTPL and the NHAI dated November 24, 2023, together with any amendments or supplements thereto;

22. The concession agreement between IRB GTPL and the NHAI dated January 12, 2024, together with any amendments or supplements thereto;

23. The concession agreement between IRB KTPL and the NHAI dated January 12, 2024, together with any amendments or supplements thereto;

24. The Project Implementation Agreements, each dated February 3, 2020, among the Trustee (on behalf of the Trust), the Investment Manager, the Project Manager and each of the Project SPVs (except PDTPL, IRB GEPL, STPL, IRB LTPL, IRB KTPL and IRB GTPL), as amended; the project implementation agreement dated May 19, 2022 among the Trustee (on behalf of the Trust), the Investment Manager, the Project Manager and PDTPL; the project implementation agreement dated August 2, 2023 among the Trustee (on behalf of the Trust), the Investment Manager, the Project Manager and IRB GEPL; the project implementation agreement dated October 12, 2023 among the Trustee (on behalf of the Trust), the Investment Manager, the Project Manager and STPL; and the project implementation agreements dated March 13, 2024 among the Trustee (on behalf of the Trust), the Investment Manager, the Project Manager and each of IRB LTPL, IRB KTPL and IRB GTPL;

25. The Debt Novation Agreements dated February 19, 2020, as amended;

26. The Project SPV Shareholder Loan Agreements dated February 19, 2020 (for all Project SPVs except PDTPL, IRB GEPL, STPL, IRB LTPL, IRB KTPL and IRB GTPL), April 7, 2022 (for PDTPL), July 29, 2023 (for IRB GEPL); October 12, 2023 (for STPL) and March 13, 2024 (for each of IRB LTPL, IRB GTPL and IRB KTPL);

27. The concession agreement between MBEL and the UPEIDA dated January 6, 2022, together with any amendments or supplements thereto;

28. The MBEL Securities Purchase Agreement; and

29. The MBEL Project Implementation Agreement.

B. Material Documents

1. Certificate of registration of the Trust as an infrastructure investment trust dated November 25, 2019 issued by the SEBI and letter dated January 30, 2020 issued by the SEBI;

2. The resolutions of the board of directors of the Investment Manager dated December 9, 2024 in connection with the Issue;

3. Consent of the Auditors in relation to the statement of tax benefits dated December 14, 2024, the reports on the Consolidated Financial Information and the reports on the Standalone Financial Information and the report on the Pro Forma Financial Information of MBEL as of and for the Financial Years 2024, 2023 and 2022 and the six-month period ended September 30, 2024 included in this Letter of Offer;

4. Consent of the Lead Manager, Registrar, Traffic Consultant, Target Traffic Consultant, Escrow Collection Bank, legal counsel and the Compliance Officer;

5. Consent of the Valuer in relation to the Target Valuation Report included in this Letter of Offer;

6. The letter from the NHAI dated January 3, 2020 in connection with the transfer of the Project SPVs to the Trust and other matters;

7. Tripartite Agreement dated January 14, 2020, among the Investment Manager (on behalf of the Trust), NSDL and the Registrar and Unit Transfer Agent;

8. Tripartite Agreement dated January 16, 2020, among the Investment Manager (on behalf of the Trust), CDSL and the Registrar and the Unit Transfer Agent;

9. Letter dated December 6, 2024 issued by the SEBI (read with the letter dated December 11, 2024 from the Investment Manager); and

10. In-principle listing approval dated December 13, 2024 issued by the NSE.

Any of the contracts or documents mentioned in this Letter of Offer may be amended or modified at any time if so required in the interest of the Trust or if required by the other parties, without reference to the Unitholders, subject to compliance with applicable law.

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Investment Manager further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **MMK Toll Road Private Limited**

Mr. Virendra D. Mhaiskar
Non-independent Director
Date: December 16, 2024
Place: Mumbai

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Investment Manager further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **MMK Toll Road Private Limited**

Mr. Victor Carretero Arbona
Non-independent Director
Date: December 16, 2024
Place: Madrid Spain

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Investment Manager further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **MMK Toll Road Private Limited**

Mr. Boon Chin Hau
Non-independent Director
Date: December 16, 2024
Place: Singapore

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Investment Manager further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **MMK Toll Road Private Limited**

Mr. Aryan Mhaiskar
Non-independent Director
Date: December 16, 2024
Place: Powai, Mumbai, Maharashtra

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Investment Manager further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **MMK Toll Road Private Limited**

Mr. K G Krishnamurthy
Independent Director
Date: December 16, 2024
Place: Mumbai

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Investment Manager further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **MMK Toll Road Private Limited**

Mrs. Ranjana Paranjape
Independent Director
Date: December 16, 2024
Place: U.S.A

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Investment Manager further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **MMK Toll Road Private Limited**

Ms. Rajni Sekhri Sibal
Independent Director
Date: December 16, 2024
Place: New Delhi

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Investment Manager further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **MMK Toll Road Private Limited**

Mr. Nagendraa Parakh
Independent Director
Date: December 16, 2024
Place: Mumbai

DECLARATION

The Trustee (on behalf of the Trust) hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Trustee (on behalf of the Trust) further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

SIGNED BY THE TRUSTEE (ON BEHALF OF THE TRUST)

For **IDBI Trusteeship Services Limited**
Authorized Signatory
Date: December 16, 2024
Place: Mumbai

DECLARATION

The Sponsor hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Sponsor further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **IRB Infrastructure Developers Limited**

Mr. Virendra D. Mhaiskar
Chairman and Managing Director
Date: December 16, 2024
Place: Mumbai

DECLARATION

The Sponsor hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Sponsor further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **IRB Infrastructure Developers Limited**

Mrs. Deepali V. Mhaiskar
Whole-time Director
Date: December 16, 2024
Place: Mumbai

DECLARATION

The Sponsor hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Sponsor further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **IRB Infrastructure Developers Limited**

Mr. Ravindra Dhariwal
Non-Executive Director
Date: December 16, 2024
Place: New Delhi

DECLARATION

The Sponsor hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Sponsor further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **IRB Infrastructure Developers Limited**

Mr. Bajrang Lal Gupta
Independent Director
Date: December 16, 2024
Place: New Delhi

DECLARATION

The Sponsor hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Sponsor further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **IRB Infrastructure Developers Limited**

Mr. Vijay Nautamlal Bhatt
Independent Director
Date: December 16, 2024
Place: Mumbai

DECLARATION

The Sponsor hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Sponsor further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **IRB Infrastructure Developers Limited**

Mr. Sandeep J. Shah
Independent Director
Date: December 16, 2024
Place: Mumbai

DECLARATION

The Sponsor hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Sponsor further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **IRB Infrastructure Developers Limited**

Ms. Priti Savla
Independent Director
Date: December 16, 2024
Place: Mumbai

ANNEXURE A

TRAFFIC REPORTS

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IRB INFRASTRUCTURE TRUST

GULABPURA TO CHITTORGARH SECTION OF NH 79 (KM 90.000 TO KM 214.870) IN THE STATE OF RAJASTHAN







TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

OCTOBER 2024

GMD CONSULTANTS ★ NAVI MUMBAI ★

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GMD Consultants
Adding Value

GULABPURA TO CHITTORGARH SECTION OF NH-79

(KM 90.000 TO KM 214.870)

IN THE STATE OF RAJASTHAN

TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

OCTOBER 2024

GMD CONSULTANTS ★ NAVI MUMBAI ★

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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic	**NHAI**	-	National Highway Authority of India
BOT	-	Build Operate Transfer	**NHDP**	-	National Highways Development Project
CAGR	-	Compound Annual Growth Rate	**NSDP**	-	Net State Domestic Product
CTV	-	Classified traffic volume	**O&M**	-	Operation & Maintenance
DBFOT	-	Design, Build, Finance, Operate & Transfer	**PCDP**	-	Per Capita Domestic Product
EME	-	Earth Moving Equipment	**PCI**	-	Per Capita Income
GDP	-	Gross Domestic Product	**PCU**	-	Passenger Car Unit
GSDP	-	Gross State Domestic Product	**PSC**	-	Pre-stressed Concrete
HCM	-	Heavy Construction Machinery	**RCC**	-	Reinforced cement concrete
HCV	-	Heavy Commercial Vehicle	**RHS**	-	Right Hand Side
HTMS	-	Highway Traffic Management System	**SH**	-	State Highway
IRC	-	Indian Road Congress	**TP**	-	Toll Plaza
IRR	-	Internal Rate of Return	**WPI**	-	Wholesale Price Index
LCV	-	Light Commercial Vehicle	**SIR**	-	Special Investment Region
LHS	-	Left Hand Side	**c.**	-	Circa
LGV	-	Light Goods Vehicle	**ROB**	-	Railway Over Bridge
MAV	-	Multi Axle Vehicle	**MDR**	-	Major District Road
MORTH	-	Ministry of Road Transport and Highways	**ODR**	-	Other District Road
NH	-	National Highway	**CA**	-	Concession Agreement
PCC	-	Plain Cement Concrete	**RMT**	-	Running Meter
CR	-	Coarse Rubble			

CHAPTER 1

INTRODUCTION

1.1 Background

The Government of India through National Highway Authority of India (NHAI) embarked upon a program to enhance the traffic capacity and safety for efficient transportation of goods as well as passenger traffic on National Highway Sections under NHDP Phase V. Under Phase V NHAI has planned to convert 6,500 km of existing 4-lane National Highways into 6-lane National Highway. Sections envisaged under 6-laning comprise the Golden Quadrilateral section (5,700 km) and some other sections which are 800 km in length.

The project under consideration, Six Laning of Gulabpura to Chittorgarh section of NH-79 from km 90.000 to km 214.870is one such road project NHAI intended to implement on a BOT basis in the DBFOT format. M/s CG Tollway Ltd. (Concessionaire) has been awarded the Project for a concession period of 20 years starting from 4th November 2017. The Project has been commissioned and is currently in the operation / maintenance phase for four laning. Six laning of project has also been completed in August 2021.

Length ofprojectroadis124.870Kms. The project road is section of NH-79, which connects Ajmer to Ghat Bilod. Project section of NH-79 passes through district of Bhiwara and Chittorgarh. Project road connects to Udaipur via NH-76.

Project road alignment passes through the towns/ built-up areas Fakirabad, Bhilwara, Gulabpura, & Chittorgarh. Following figure shows alignment of project road section from Gulabpura to Chittorgarh

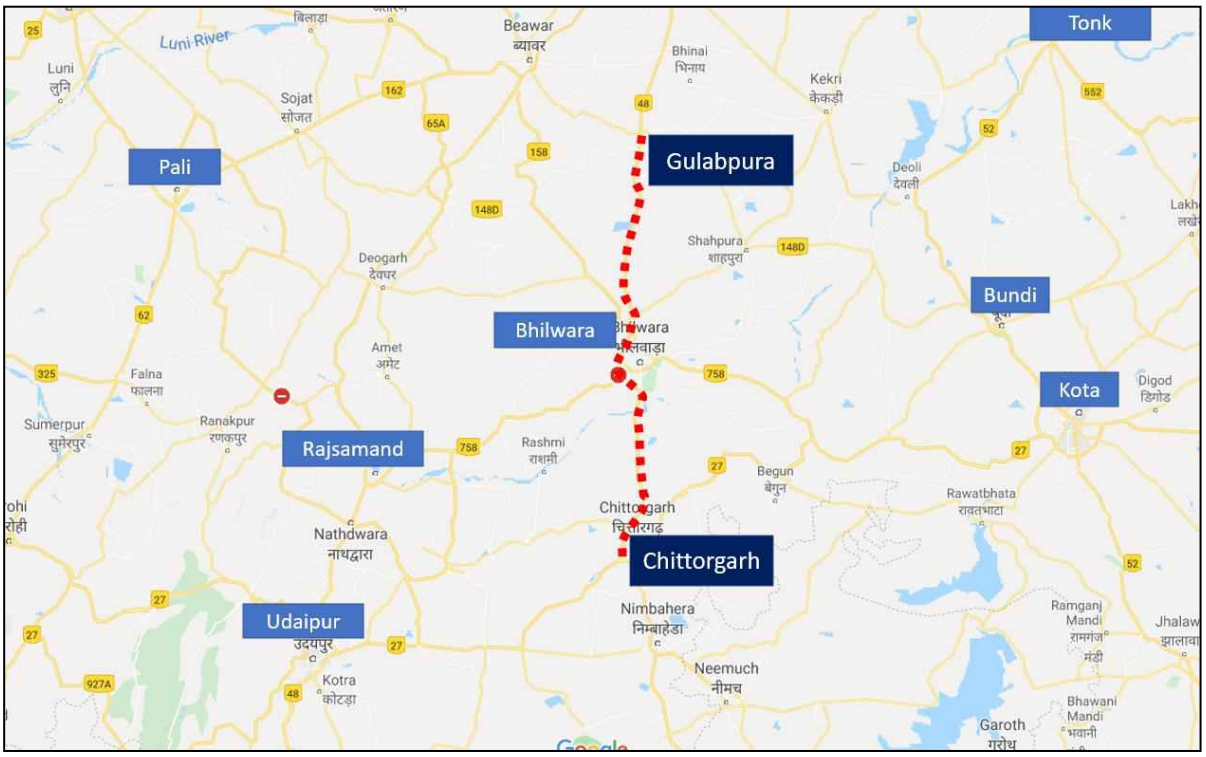


Figure 1-1: Alignment of Project Stretch

1.2 Objective of the Study

M/s IRB INFRASTRUCTURE TRUST has engaged GMD Consultants to assess the future traffic and toll potential of project along with related operation & maintenance expenditure involved.

This report named as "Traffic Study &Toll Revenue Projection Report" mainly focuses on traffic and revenue aspects of the project. Other parameters like competing road, area developments etc. have been considered from a traffic development point of view.

1.2.1 Scope of Services

The broad scope of work covered in the assignment is as follows.

a) Analysis of Traffic Growth
b) Toll Rate Growth
c) Revenue Forecasting

The Concessionaire has provided basic traffic data and other project details on the basis of which the above analysis has been carried out.

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

National Highway 79 (NH-79) is an important link for traffic connecting Delhi, Jaipur to Udaipur, Chittorgarh and down south.

It is one of the major north-south road connectivity for the traffic from northern states of Haryana, Punjab and Delhi to Industrial and tourist areas of Rajasthan like Jaipur, Chittorgarh, Udaipur and then to Dahod, Ratlam and other parts of Madhya Pradesh.

2.2 Project Stretch Description

Section of NH-79 from Gulabpura to Chittorgarh is part of major transportation link in the area connecting industrial / tourist cities of Jaipur, Bhilwara, Chitttorgar and Udaipur. Important cities of Firozabad, Shikohabad, and Jaswant Nagar fall on project alignment. Major mining industries of marble, Zink, felspar, quarts of Udaipur and textile industry of Bhiwara provide are major contributor of commercial traffic on project corridor. Additionally, Udaipur, Chittorgarh and Bhilwara major tourist centers of India. This adds substantial value for passenger traffic on the project corridor section.

Like other parts of India rapid ribbon development is happening around these cities on project highway. This also contributes to sustainable traffic growth.

There are two operative toll plazas at project stretch. First is at Lambia Kalan at Km 121.020 and second at Jojro ka Khera at Km 184.020. The following figure show project alignment and toll plaza locations.



Figure 2-1: Project Alignment with Toll Plaza

2.3 Project Corridor Illustration

Six laning of project stretch is in progress and soon will be completed. The following photographs illustrate the project section along the corridor.



Figure 2-2: Photographs showing Project Corridor

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from a client for a project.

- Classified traffic volume counts at toll plaza locations on Gulabpura- Chittorgarh section of NH-79 for years 2018-19, 2019-20, 2020-21, 2021-22, 2022-23, April 2023 to November 2023 and traffic data from April 2024 to July 2024.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project.
- Establish base year traffic.
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	**Km 121.020 Toll Plaza at Lambia Kalan**	AADT for Year 2018-19, 2019-20, 2020-21, 2021-22, 2022-2023, Eight month from April 2023 to	For Year 2018-19, 2019-20, 2020-21, 2021-22, 2022-2023, Eight month from April 2023	For Year 2018-19, 2019-20, 2020-21, 2021-22, 2022-2023, Eight month from April	For Year 2018-19, 2019-20, 2020-21, 2021-22, 2022-2023, Eight month from April	For Year 2018-19, 2019-20, 2020-21, 2021-22, 2022-2023, Eight month from April 2023

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
		November 2023 & Four month from April 2024 to July 2024	to November 2023 & Four month from April 2024 to July 2024	2023 to November 2023 & Four month from April 2024 to July 2024	2023 to November 2023 & Four month from April 2024 to July 2024	to November 2023 & Four month from April 2024 to July 2024
2	**Km 184.020 Toll Plaza at Jojro ka Khera**	AADT for Year 2018-19, 2019-20, 2020-21, 2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Year 2018-19, 2019-20, 2020-21, 2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Year 2018-19, 2019-20, 2020-21, 2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Year 2018-19, 2019-20, 2020-21, 2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Year 2018-19, 2019-20, 2020-21, 2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024

3.2 Classified Traffic Volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations based on monthly data shared with NHAI.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in the table below.

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since the project highway is currently under toll operation, the data collected corresponds to the category of tollable vehicles. The following are the types of vehicles as per concession agreement.

- Car / Jeep / van
- Min Bus /LCV
- Bus
- Truck
- 3-Axle
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of the report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data for the years 2019-20 ,2020-21, 2021-22, 2022-23, April 2023 to November 2023 and traffic data from April 2024 to July 2024.

Since the traffic data available for this update is for only four months, from April 2024 to July 2024, it may not represent the whole year traffic. Hence a seasonality factor for balance part of year has been applied to average traffic of current four months to arrive at Annual Average Daily Traffic of base year 2024-25. Same corrected traffic is used for future projections and revenue calculations. The following table shows historical traffic on project stretch and derived Annual Average Daily Traffic (AADT) for year 2024-25.

Table 3-3 : Traffic Data at Lambial Kalan Toll Plaza at Km 121.020

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)-2019-20	Annual Average Daily Traffic (Nos.)-2020-21	Annual Average Daily Traffic (Nos.)-2021-22	Annual Average Daily Traffic (Nos.)-2022-23	Annual Average Daily Traffic (Nos.)-2023-24	Annual Average Daily Traffic (Nos.)-2024-25
1	Car	3563	3366	4812	6301	6851	6867
2	Minibus /LCV	1266	933	585	768	754	808
3	Bus	428	270	376	446	455	414
4	Truck	1587	1321	1788	2455	2520	2478
5	3-Axle Commercial vehicle	2139	1591	1771	2006	1869	1699
6	Multi axle	4606	4011	4587	5086	5130	5136
7	Oversized Vehicle	23	19	30	11	12	9
Total		**13612**	**11511**	**13949**	**17072**	**17590**	**17411**

Table 3-4 : Traffic Data at Jojro ka Khera Toll Plaza at Km 184.0200

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)-2019-20	Annual Average Daily Traffic (Nos.)-2020-21	Annual Average Daily Traffic (Nos.)-2021-22	Annual Average Daily Traffic (Nos.)-2022-23	Annual Average Daily Traffic (Nos.)-2023-24	Annual Average Daily Traffic (Nos.)-2024-25
1	Car	3042	3077	4440	5603	6077	6908
2	Minibus /LCV	1081	824	549	716	777	871

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24	Annual Average Daily Traffic (Nos.)- 2024-25
3	Bus	423	265	347	408	435	410
4	Truck	1285	1164	1634	2306	2613	2811
5	3-Axle Commercial vehicle	1568	1344	1666	1950	2042	2053
6	Multi axle	4360	4201	4934	5536	5971	6344
7	Oversized Vehicle	21	21	21	14	12	8
Total		**11781**	**10896**	**13592**	**16532**	**17926**	**19404**

3.4 Data Analysis

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in "IRC-64-1990: Guidelines for Capacity of Roads in Rural areas". The adopted passenger car unit values (PCU) are presented in Table 3-5.

Table 3-5 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5

Vehicle Type	PCUs
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under.

Table 3-6 : Traffic in PCU at Project Stretch Base Year 2023-24

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
2019-2020	Lambia Kalan Km 121.020	13612	38754	2.85
	Jojro ka Khera Km 184.020	11781	34208	2.90
2020-2021	Lambia Kalan Km 121.020	11511	32446	2.82
	Jojro ka Khera Km 184.020	10896	31630	2.90
2021-2022	Lambia Kalan Km 121.020	13949	38721	2.74
	Jojro ka Khera Km 184.020	13592	38503	2.83
2022-23	Lambia Kalan Km 121.020	17072	45107	2.64
	Jojro ka Khera Km 184.020	16532	45642	2.76
2023-24	Lambia Kalan Km 121.020	17590	45650	2.60
	Jojro ka Khera Km 184.020	17926	49431	2.76
2024-25	Lambia Kalan Km 121.020	17411	45002	2.58

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
	Jojro ka Khera Km 184.020	19404	52617	2.71

It can be observed from above that project traffic has PCU index close to 3 which is an indicator of high proportion of commercial traffic in traffic mix in project corridor. The following figure illustrates variation of PCU index at four toll plaza locations.

It can be observed that PCU index is consistent at both toll plaza locations.

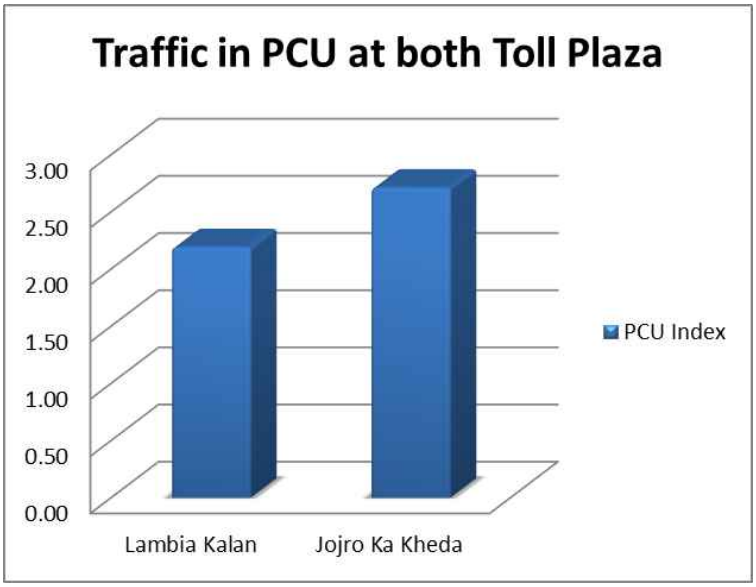


Figure 3-1: Comparison of PCU Index

3.4.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.

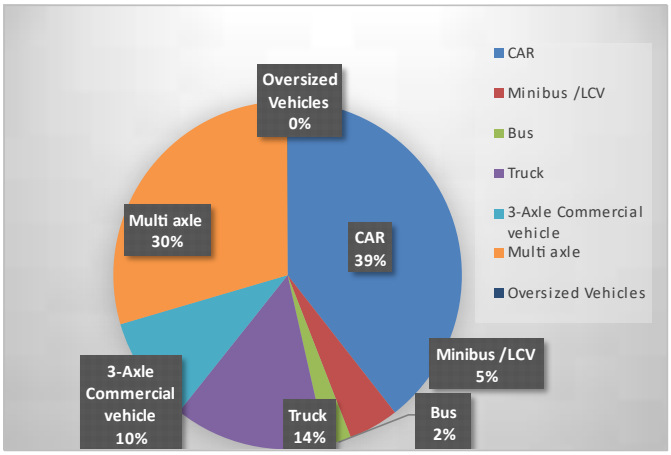


Figure 3-2 :Model Split of Tollable Vehicle-Km 121.020

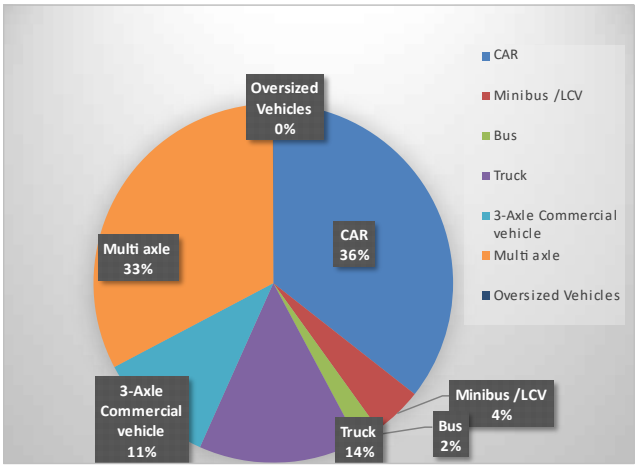


Figure 3-3 :Model Split of Tollable Vehicle- Km 184.020

It is observed that car traffic forms about 39% & 36% of total traffic at toll plaza locations while multi axle commercial vehicles are about 40% & 44% of total traffic. Truck / Bus and LCV share about 21% and 20% of traffic volume respectively.

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

The following table provides numbers of vehicles falling in each of above category for year 2024-25

Table 3-7 : Journey Type Bifurcation of Traffic at Lambia Kalan TP KM 121.020

Sr. No	Type	Traffic Volume (Nos.)
		2024-25
1	Single Journey	12501
2	Return Journey	4632
3	Local Commercial Single Journey	236
4	Monthly Pass Local	33
5	Monthly Pass	10

Most dominant part of the above is the single journey type followed by return journey at project stretch. Monthly pass commuters are a very low fraction of the total traffic on the project corridor.

The single journey component in total traffic numbers is as high as 72%. Return journey component is 27%. The number of monthly pass Local is 0% and Local commercial Single Journey 1% at Lambia Kalan toll plaza.

The following tables give the details of journey distribution at Jojro ka Khera toll plaza at Km 184.020.

Table 3-8 : Journey Type Bifurcation of Traffic at Jojro ka KheraTPKm 184.020

Sr. No	Type	Traffic Volume (Nos.)
		2024-25
1	Single Journey	13651
2	Return Journey	5446
3	Local Commercial Single Journey	282
4	Monthly Pass Local	13
5	Monthly Pass	12

It is observed that the project corridor demonstrates a similar pattern of single journey dominated mix of traffic across the entire stretch which is typical of major national highways.

3.5 Secondary Data Collection

There are several other factors which have a substantial impact on traffic patterns and growth on any project corridor. The following are some of such important factors.

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on the project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data
   a) GDP
   b) NSDP
   c) Population Growth

d) Per Capita Income growth
e) Industrial Growth
f) Special Industry Potential
g) Regional and National development vision / plan
h) Any other relevant data

3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

Highway corridors behave like integrated circuit networks and more often than not every road is connected to various networks having different origins and destinations. Traffic running on these networks behaves like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network.

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc.
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Competing / Alternate route

Project stretch has toll application history from last few years, and it can be assumed that project traffic is settled. However, from an analysis point of view there can be two alternate routes at local level. One uses Ajmer Road to go from Kishangarh to Chittorgarh and the other on east side via Shapur.

At regional level, there can be two alternates for Udaipur traffic after Kishangarh. One via project road (Kishangarh – Bhiwara- Chittorgarh- Udaipur)

The following maps show these routes in relation to project stretches at both local and regional level.

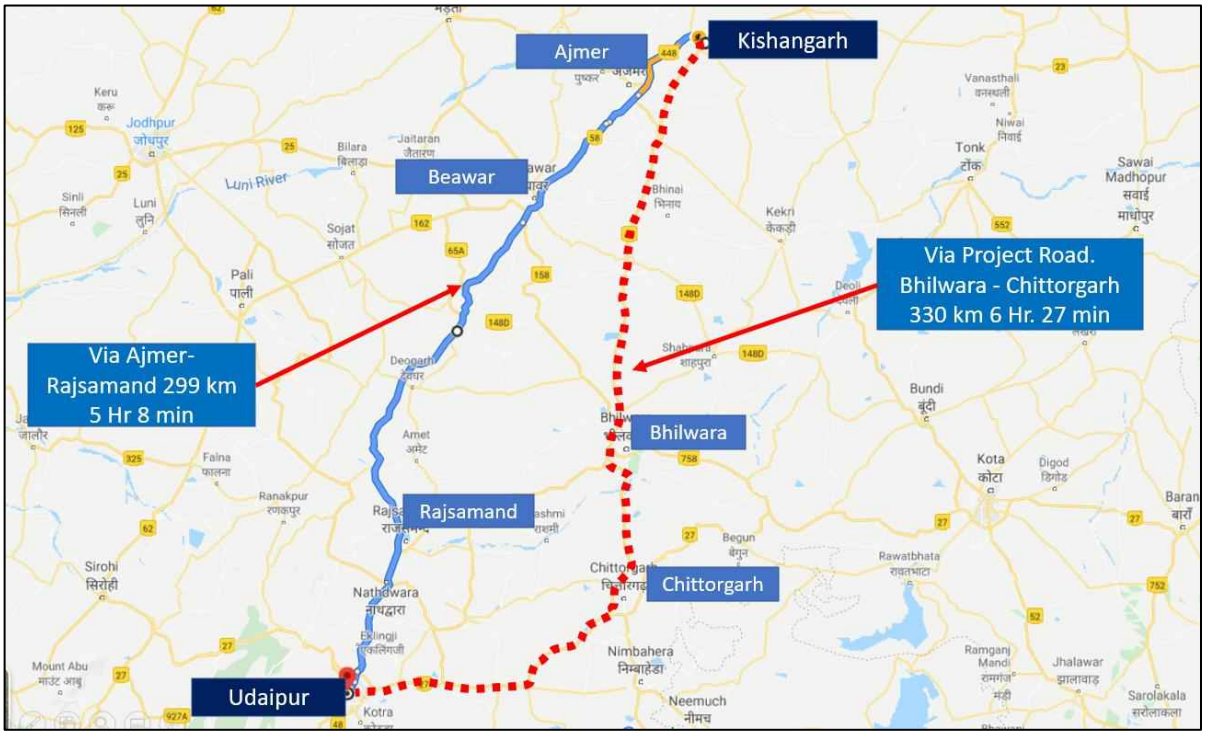


Figure 4-1: Alternate route at regional level.



Figure 4-2: Alternate route at local level.

It can be observed that the project highway forms one of the main spines of the corridor between Kishangarh / Jaipurand Chittorgarh. Traffic on project road is now settled and it can be assumed as dedicated traffic on project road for logistic obligations.

At regional level for Udaipur traffic alternate route is faster and traffic is already using this alternate.

With six laning now nearing completion, the project stretch would become slightly more attractive due to the improved level of service. In such a case further diversion of traffic from the project road is not envisaged.

The following table provides summary of analysis of alternate route/ roads discussed above.

Table 4-1 : Competing Roads Details

Sr. No	Route Details	Designation	Length (Km)	Avg. Speed (KMPH)	Time Taken (Min)	Observations
Regional Level						
1	Kishangarh – Ajmer-Udaipur	Alternate Route	299	58	5 Hr 8 Min	Alternate route has clear advantage for this pair of destination. Traffic Settled. No further diversion expected
	Kishangarh- Chittorgarh-Udaipur	Project Road	330	51	6 Hr 127 Min	
Local Level						
2	Kishangarh – Ajmer-Chittorgarh (West)	Alternate Route	278	50	5 Hr. 28 Min	Project Road has advantage. Alternate route running for years after toll on project road. Traffic Settled. No further diversion expected
	Kishangarh – Shahpur-Chittorgarh (East)	Alternate Route	283	51	5 Hr. 28 Min	
	Kishangarh – Bhilwara-Chittorgarh	Project Road	220	50	4 Hr. 29 Min	

Under these circumstances it is not envisaged that commercial or passenger traffic would switch to alternate roads from the project road. Further, it may be noted that since the project highway has already been commissioned and has a tolling history, the current traffic traversing the project corridor already factors in traffic diversion (if any) that may have taken place.

CHAPTER 5

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future patterns of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor Gulabpur- Chittorgarh section of NH-79has been done taking the above factors into consideration. **"IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways"** is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable for projects of short durations say 5-10 years, however for long term projections it would be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways.**

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different types of vehicles. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway typically depends on a number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a

similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, in order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

$Log (P) = k \times Log (EI) + A$

Where,

P = *Number of Vehicles (Mode wise)*
EI = *Economic Indicator*
A = *Regression constant*
k = *Elasticity coefficient (Regression coefficient)*

The elasticity for cars and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

The project corridor spreads across the state of Rajasthan. Toll plazas at Lambia Kalan and Jojro ka Khera are in the state of Rajasthan. For elasticity calculations, working data from Rajasthan has been analyzed. Additionally, data of Gujarat is also analyzed as project corridor has close transportation link with Gujarat also.

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Rajasthan State.

Table 5-1 : Per Capita Income Vs Car Rajasthan

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	57192	591069	4.76	5.77		
2013	58441	659542	4.77	5.82	2%	
2014	61053	733916	4.79	5.87	4%	
2015	64496	814079	4.81	5.91	6%	
2016	68565	899307	4.84	5.95	6%	
2017	71394	988391	4.85	5.99	4%	4.55%

Regression analysis of same is given in figure below.

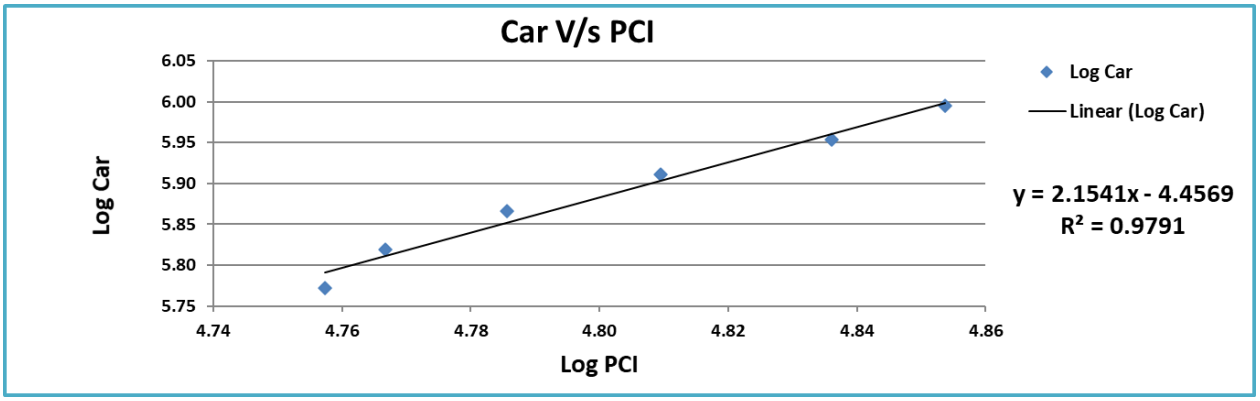


Figure 5-1: Regression and Elasticity PCI vs. Car – Extrapolation Rajasthan

Table 5-2 : Population Vs Bus Rajasthan

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	68548437	83345	7.84	4.92		
2013	69783885	88616	7.84	4.95	2%	
2014	71016445	93892	7.85	4.97	2%	
2015	72245688	97650	7.86	4.99	2%	
2016	73471198	102818	7.87	5.01	2%	
2017	74692571	108680	7.87	5.04	2%	1.73%

Regression analysis of same is given in figure below.

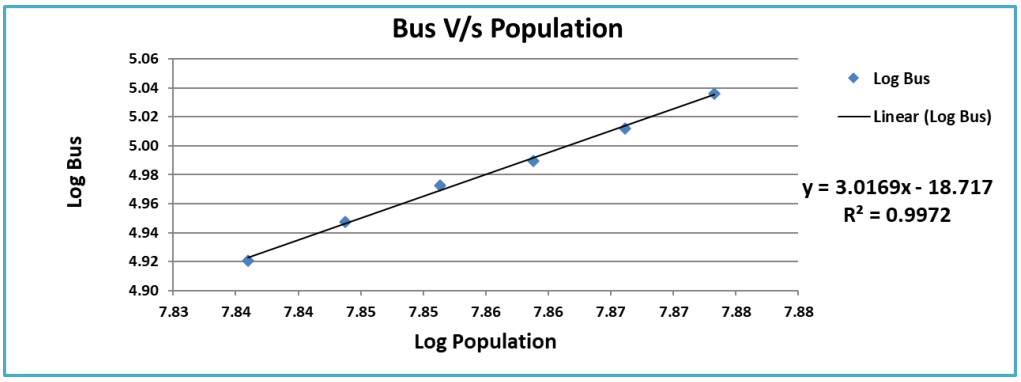


Figure 5-2: Regression and Elasticity Population vs. Bus – Extrapolation Rajasthan

The elasticity of goods traffic has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-3 : LCV Traffic Vs NSDP Rajasthan

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth
2012	395331	69509	5.60	4.84		
2013	409802	76396	5.61	4.88	4%	
2014	434292	33379	5.64	4.52	6%	
2015	465408	91787	5.67	4.96	7%	
2016	501922	99763	5.70	5.00	8%	6.16%

The following figure depicts regression analysis and extrapolation.

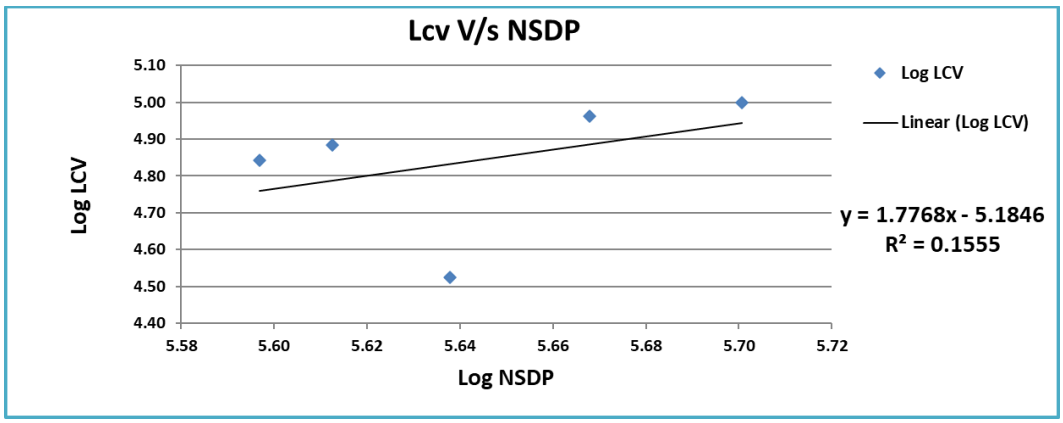


Figure 5-3: Regression and Elasticity NSDP vs. LCV Traffic - extrapolation Rajasthan.

The following figure depicts regression analysis and extrapolation.

Table 5-4 : Truck Traffic Vs NSDP Rajasthan

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth
2012	395331	362028	5.60	5.56		
2013	409802	401983	5.61	5.60	4%	
2014	434292	434379	5.64	5.64	6%	
2015	465408	472365	5.67	5.67	7%	
2016	501922	517604	5.70	5.71	8%	
2017	530172	561158	5.72	5.75	6%	6.06%

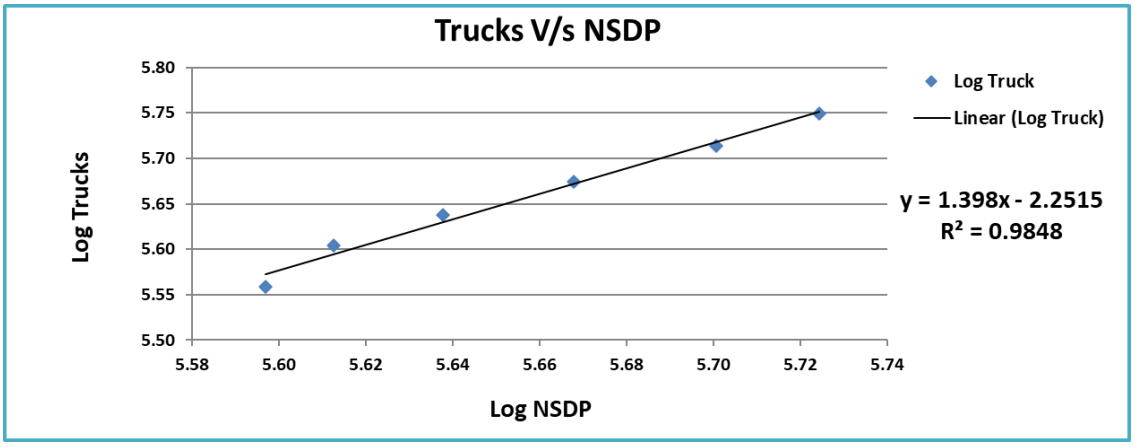


Figure 5-4: Regression and Elasticity NSDP vs. Truck Traffic - extrapolation Rajasthan.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for the good fit regression as reflected by R2 values are presented in the Table below.

Table 5-5 : Summary Regression Analysis Rajasthan

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Rajasthan	Car/Jeep	PCI	y = 2.1541x + -4.4569	R^2 = 0.9791	2.1541	4.55%	9.79%	Good Regression
	Bus	Population	y = 3.0169x - -18.7174	R^2 = 0.9972	3.0169	1.73%	5.22%	Good Regression
	LCV	NSDP	y = 1.7768x - -5.1846	R^2 = 0.1555	1.7768	6.16%	10.95%	Poor Regression
	Truck	NSDP	y = 1.398x - -2.2515	R^2 = 0.9848	1.3980	6.06%	8.46%	Good Regression

Table 5-6 : Per Capita Income Vs Car Gujarat

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	87481	1411898	4.94	6.15		
2013	96683	1602129	4.99	6.20	11%	
2014	102589	1771298	5.01	6.25	6%	
2015	111370	2008748	5.05	6.30	9%	

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2016	120683	2260084	5.08	6.35	8%	
2017	129738	2527537	5.11	6.40	8%	8.21%

Regression analysis of same is given in figure below.

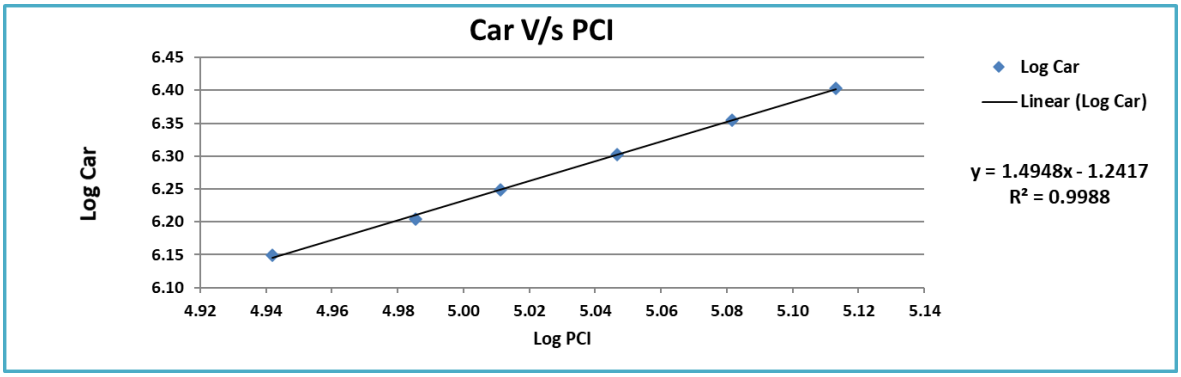


Figure 5-5: Regression and Elasticity PCI vs. Car – Extrapolation Gujarat

Table 5-7 : Population Vs Bus Gujarat

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	60439692	67546	7.78	4.83		
2013	61563037	70615	7.79	4.85	2%	
2014	62684375	72998	7.80	4.86	2%	
2015	63803304	76435	7.80	4.88	2%	
2016	64919427	82734	7.81	4.92	2%	
2017	66032362	74855	7.82	4.87	2%	1.79%

Regression analysis of same is given in figure below.

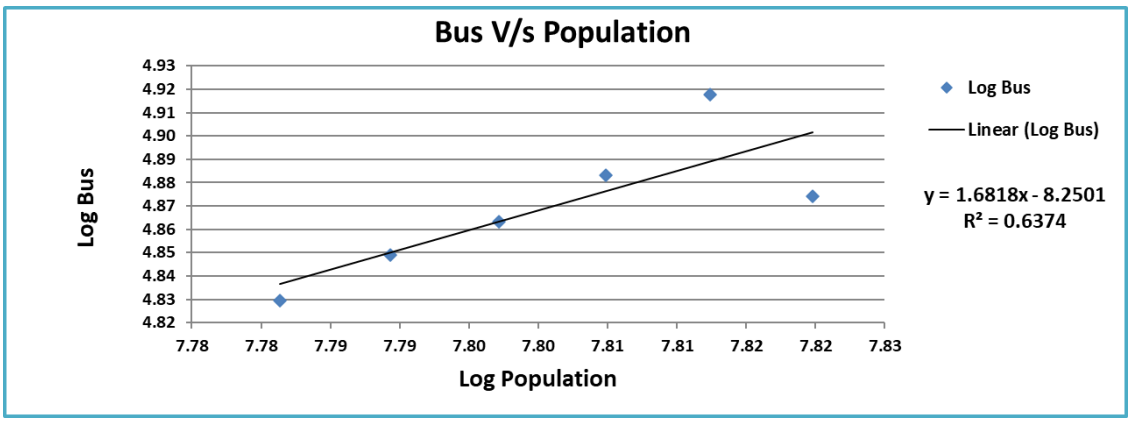


Figure 5-6: Regression and Elasticity Population vs. Bus – Extrapolation Gujarat

The elasticity of goods traffic has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-8 : LCV Traffic Vs NSDP Gujarat

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth
2012	532809	448958	5.73	5.65		
2013	596659	499277	5.78	5.70	12%	
2014	641489	542918	5.81	5.73	8%	
2015	705629	589984	5.85	5.77	10%	
2016	774775	633599	5.89	5.80	10%	9.82%

The following figure depicts regression analysis and extrapolation.

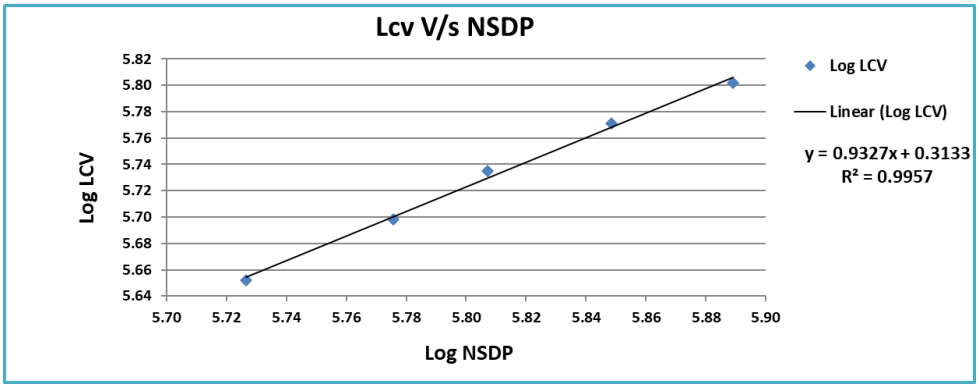


Figure 5-7: Regression and Elasticity NSDP vs. LCV Traffic - extrapolation Gujarat.

The following figure depicts regression analysis and extrapolation.

Table 5-9 : Truck Traffic Vs NSDP Gujarat

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth
2012	532809	301533	5.73	5.48		
2013	596659	319207	5.78	5.50	12%	
2014	641489	332185	5.81	5.52	8%	
2015	705629	352225	5.85	5.55	10%	
2016	774775	375265	5.89	5.57	10%	
2017	843930	396061	5.93	5.60	9%	9.64%

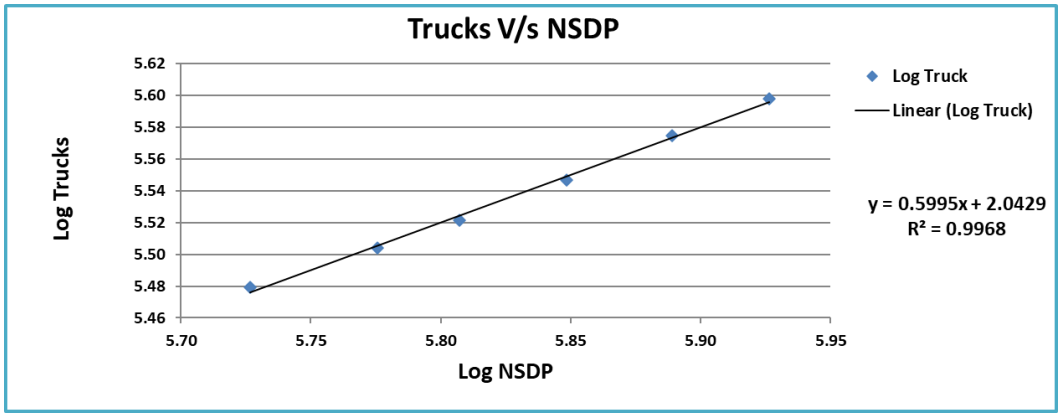


Figure 5-8: Regression and Elasticity NSDP vs. Truck Traffic - extrapolation Gujarat.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-10 : Summary Regression Analysis Gujarat

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Gujarat	Car/Jeep	PCI	y = 1.4948x + -1.2417	R² = 0.9988	1.4948	8.21%	12.27%	Good Regression
	Bus	Population	y = 1.6818x - -8.2501	R² = 0.6374	1.6818	1.79%	3.00%	Fair Regression
	LCV	NSDP	y = 0.9327x - 0.3133	R² = 0.9957	0.9327	9.82%	9.16%	Good Regression
	Truck	NSDP	y = 0.5995x - 2.0429	R² = 0.9968	0.5995	9.64%	5.78%	Good Regression

The economic model for predicting growth is a good tool, however other local, regional, and national factors should also be considered before finalizing growth factors. Considering factors such as proposed developments and other influencing economic factors, moderated growth should be considered. These factors are discussed in subsequent sections.

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trends of growth. Project stretch of Gulabpura to Chittorgarh is under tolling operation with current concessionaire and has two years of tolling history from 2018-19. As traffic data available with the project concessionaire is of year two years and that too affected by COVI-19, we do not have sufficient data points to be

able to establish a reliable past trend of traffic growth. A minimum of about 5 -6 years' consistent traffic data is required for establishing a reliable past trend.

5.5 Other Factors Influencing Growth

There are many factors which have an impact on traffic growth. As discussed previously these factors can be economic, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

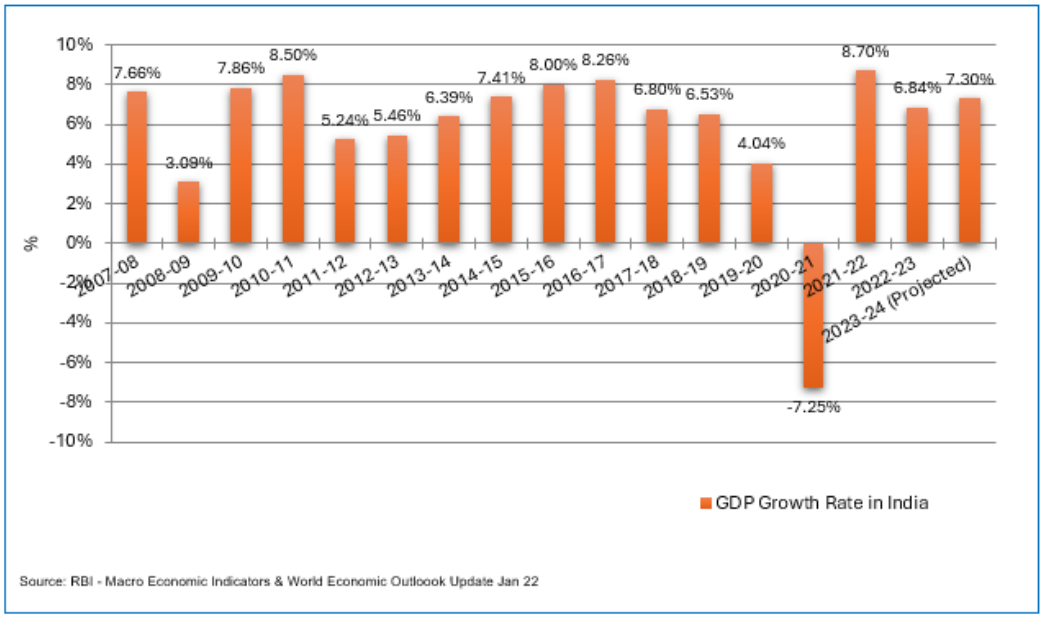


Figure 5-9 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had a slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. The government took major policy decisions including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honorable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into an opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on Make -In- India it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. The World Economic Outlook update also has predicted a growth rate of about 7.5 % in the year 2022-23.

5.6 Developments along and around the Project Corridor & State

This Asset primarily serves traffic travelling between Delhi, Rajasthan, Gujarat and Maharashtra. It is observed that the vehicle distribution to be dominated by heavy vehicles. We further noticed several textile industries and marble/granite industries bordering the Asset. Udaipur serves as a big tourism hub as well as a consumption center which also results in traffic feeding into the demand being generated.

In addition, Chittorgarh has 4 major cement plants located in Chanderiya and Nimbahera villages. There is a regular movement of Cement bulkers to and from these locations along asset. Chanderiya Lead-Zinc Smelter, is the one of the largest zinc-lead smelting complexes in the world, is also located in Chittorgarh. Bhilwara is home to the textile industry and the only center in the country producing insulation bricks. Mining is another major sector for large scale mining of sandstone, soapstone feldspar, quartz, mica China clay and granite. Also, Iron Ore, Led, and Zinc are mined and processed in Bhilwara.

Rajasthan is rich in natural resources and benefits from its strategic geographic location in India. The state is pre-eminent in quarrying, mining in India and has been a leader in crude oil extraction over the past few years. Moreover, Rajasthan is also major tourism attractor in India. Considering the scenario, it may be assumed that the traffic growth on the project highway would remain high and there are minimal risks in terms of growth.

5.6.1 Industrial Units along Project Corridor

Bhilwara district occupies an important place in the mineral map of Rajasthan. The main minerals are lead Zinc, Soap Stone, China Clay, Feldspar, Quartz, Mica, Asbestos and Garnet.

Besides being a major tourist attraction in India Chittorgarh has a very rich profile in industrial mineral extraction. Limestone (Cement Grade), Red Occur, Silica sand, China Clay and Quartz are major minerals which are in abundance. There are a large number of cement plants in the area. Chanderiya Lead-Zinc Smelter is one of the largest zinc-lead smelting complexes in the world.

5.7 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as below. The rate of growth is moderate in light of overall regional trends. Growth of multi-Axle is kept slightly higher as trend of technological advances in logistic industry favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, the rate of growth diminishes. The same growth rate is not sustainable for long. Traffic growth is suitably stepped down from future years.

Growth rates are recommended for three scenarios for sensitivity analysis namely Optimistic, **Pessimistic and Most Likely** with a positive and negative variation 0.5% from Most Likely case for corridor in both states.

5.7.1 Recommended Growth Rates of Traffic for Project Stretch

Table 5-11 : Recommended Growth Rates Optimistic

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	8.61%	8.31%	7.01%	6.58%	6.33%	6.09%
Bus	4.93%	4.73%	3.77%	3.56%	3.41%	3.26%
LCV	5.19%	4.89%	3.83%	3.34%	3.08%	2.83%
2- Axle	5.68%	5.38%	4.55%	4.05%	3.78%	3.53%
3 – Axle	6.02%	5.71%	4.55%	4.05%	3.78%	3.53%
4 to 6 Axle	6.37%	6.03%	4.55%	4.05%	3.78%	3.53%
7 and Above Axle	6.02%	5.71%	4.55%	4.05%	3.78%	3.53%

Table 5-12 : Recommended Growth Rates Pessimistic

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	8.11%	7.81%	6.51%	6.08%	5.83%	5.59%
Bus	4.43%	4.23%	3.27%	3.06%	2.91%	2.76%
LCV	4.69%	4.39%	3.33%	2.84%	2.58%	2.33%
2- Axle	5.18%	4.88%	4.05%	3.55%	3.28%	3.03%
3 – Axle	5.52%	5.21%	4.05%	3.55%	3.28%	3.03%
4 to 6 Axle	5.87%	5.53%	4.05%	3.55%	3.28%	3.03%
7 and Above Axle	5.52%	5.21%	4.05%	3.55%	3.28%	3.03%

Table 5-13 : Recommended Growth Rates Most Likely

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	8.36%	8.06%	6.76%	6.33%	6.08%	5.84%
Bus	4.68%	4.48%	3.52%	3.31%	3.16%	3.01%
LCV	4.94%	4.64%	3.58%	3.09%	2.83%	2.58%
2- Axle	5.43%	5.13%	4.30%	3.80%	3.53%	3.28%
3 - Axle	5.77%	5.46%	4.30%	3.80%	3.53%	3.28%
4 to 6 Axle	6.12%	5.78%	4.30%	3.80%	3.53%	3.28%
7 and Above Axle	5.77%	5.46%	4.30%	3.80%	3.53%	3.28%

Traffic and revenue have been worked out on the basis of the above growths and some is presented in subsequent chapter of report.

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in the previous section of the report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for the following three cases of growth up to concession period.

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza 1- Lambia Kalan121.020 KM

(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2024-25	6867	808	414	2478	1699	5136	9	17411	45002
2025-26	7496	847	455	2619	1823	5498	9	18747	48239
2026-27	8017	888	450	2752	1896	5768	9	19780	50640
2027-28	8745	930	493	2910	2031	6171	9	21289	54252
2028-29	9362	975	489	3057	2116	6479	9	22487	57007
2029-30	10209	1020	534	3231	2267	6929	9	24199	61056
2030-31	10807	1059	526	3367	2337	7176	9	25281	63418
2031-32	11643	1098	570	3531	2474	7565	9	26890	67098
2032-33	12332	1140	562	3680	2553	7839	9	28115	69743
2033-34	13282	1182	608	3859	2702	8259	9	29901	73768
2034-35	14077	1228	601	4022	2790	8562	9	31289	76728
2035-36	15094	1266	648	4197	2937	8975	9	33126	80767
2036-37	15945	1309	641	4353	3020	9265	9	34542	83684
2037-38	17092	1350	689	4543	3176	9708	9	36567	88068
2038-39	18066	1395	683	4711	3268	10026	9	38158	91302
2039-40	19358	1439	733	4916	3435	10502	9	40392	96068
2040-41	20424	1484	727	5086	3527	10822	9	42079	99410
2041-42	21831	1527	778	5293	3697	11303	9	44438	104330

Table 6-2 : Total Tollable Traffic @ Toll Plaza 2- Jojro ka Khera184.020 KM

(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2024-25	6908	871	410	2811	2053	6344	8	19404	52617
2025-26	7482	914	429	2962	2170	6726	8	20691	55839
2026-27	8104	958	449	3120	2293	7132	8	22064	59257
2027-28	8777	1004	470	3287	2425	7562	8	23533	62894
2028-29	9505	1052	492	3463	2564	8019	8	25103	66762
2029-30	10295	1103	514	3649	2710	8502	8	26781	70864
2030-31	11015	1145	533	3814	2833	8888	8	28236	74305
2031-32	11787	1188	553	3987	2963	9293	8	29779	77933
2032-33	12612	1233	574	4167	3098	9715	8	31407	81732
2033-34	13496	1280	595	4356	3239	10156	8	33130	85724
2034-35	14441	1328	617	4554	3386	10619	8	34953	89926
2035-36	15391	1372	639	4737	3523	11048	8	36718	93898
2036-37	16402	1417	661	4928	3665	11494	8	38575	98049
2037-38	17480	1464	685	5127	3812	11959	8	40535	102400
2038-39	18630	1512	709	5333	3966	12442	8	42600	106947
2039-40	19856	1561	734	5548	4126	12945	8	44778	111710
2040-41	21112	1609	759	5758	4282	13434	8	46962	116412
2041-42	22449	1658	784	5975	4443	13942	8	49259	121317

Table 6-3 : Total Tollable Traffic @ Toll Plaza 1- Lambia Kalan121.020 KM (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2024-25	6867	808	414	2478	1699	5136	9	17411	38143
2025-26	7462	844	452	2606	1815	5473	9	18661	48016
2026-27	7945	881	444	2724	1879	5714	9	19596	50161
2027-28	8627	918	484	2864	2005	6086	9	20993	53491
2028-29	9194	958	477	2995	2078	6358	9	22069	55933
2029-30	9979	999	520	3149	2214	6768	9	23638	59623
2030-31	10515	1032	509	3267	2271	6976	9	24579	61637
2031-32	11278	1065	550	3407	2394	7320	9	26023	64909
2032-33	11891	1101	538	3535	2455	7548	9	27077	67133
2033-34	12749	1137	581	3685	2588	7918	9	28667	70688
2034-35	13448	1175	569	3825	2656	8166	9	29848	73148
2035-36	14355	1207	613	3968	2784	8522	9	31458	76650
2036-37	15092	1241	600	4100	2845	8751	9	32638	79009
2037-38	16106	1276	646	4252	2982	9130	9	34401	82786
2038-39	16941	1312	633	4394	3047	9377	9	35713	85368
2039-40	18074	1348	680	4557	3193	9781	9	37642	89441
2040-41	18975	1382	666	4698	3256	10024	9	39010	92057
2041-42	20192	1417	714	4859	3403	10427	9	41021	96208

Table 6-4 : Total Tollable Traffic @Toll Plaza 2- Jojro ka Khera184.020 KM (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2024-25	6908	871	410	2811	2053	6344	8	19404	52617
2025-26	7446	909	427	2947	2159	6696	8	20592	55577
2026-27	8027	948	445	3090	2271	7066	8	21855	58700
2027-28	8654	990	463	3241	2389	7456	8	23201	62006
2028-29	9329	1033	482	3398	2513	7868	8	24631	65500
2029-30	10057	1077	502	3563	2645	8303	8	26155	69202
2030-31	10711	1113	519	3707	2751	8638	8	27447	72219
2031-32	11408	1149	536	3857	2862	8989	8	28809	75383
2032-33	12149	1186	553	4012	2977	9353	8	30238	78679
2033-34	12940	1225	571	4174	3097	9731	8	31746	82129
2034-35	13782	1265	589	4342	3222	10124	8	33332	85733
2035-36	14620	1301	607	4495	3336	10483	8	34850	89095
2036-37	15509	1337	625	4653	3454	10854	8	36440	92590
2037-38	16450	1374	644	4818	3576	11239	8	38109	96237
2038-39	17449	1413	663	4988	3702	11637	8	39860	100030
2039-40	18509	1453	683	5164	3834	12050	8	41701	103993
2040-41	19588	1490	703	5333	3959	12444	8	43525	107842
2041-42	20731	1528	723	5508	4089	12854	8	45441	111862

Traffic projections for Most Likely scenario is given as under

Table 6-5 : Total Tollable Traffic @ Toll Plaza 1- Lambia Kalan121.020 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2024-25	6867	808	414	2478	1699	5136	9	17411	45002
2025-26	7481	845	453	2612	1818	5486	9	18704	48125
2026-27	7983	885	446	2737	1887	5741	9	19688	50396
2027-28	8689	924	488	2886	2018	6129	9	21143	53872
2028-29	9281	967	483	3024	2096	6418	9	22278	56462
2029-30	10098	1010	527	3189	2240	6848	9	23921	60338
2030-31	10664	1046	517	3315	2304	7074	9	24929	62515
2031-32	11463	1082	559	3469	2433	7441	9	26456	65994
2032-33	12115	1120	549	3607	2504	7689	9	27593	68416
2033-34	13018	1158	594	3774	2642	8087	9	29282	72217
2034-35	13765	1199	584	3924	2721	8361	9	30563	74916
2035-36	14726	1235	630	4086	2856	8746	9	32288	78692
2036-37	15521	1273	620	4227	2929	9004	9	33583	81317
2037-38	16599	1311	668	4401	3073	9416	9	35477	85404
2038-39	17503	1351	658	4554	3153	9695	9	36923	88293
2039-40	18711	1392	708	4741	3306	10136	9	39003	92717
2040-41	19694	1431	697	4893	3386	10413	9	40523	95668

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2041-42	21003	1470	748	5081	3540	10858	9	42709	100217

Table 6-6 : Total Tollable Traffic @ Toll Plaza 2- Jojro ka Khera184.020 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2024-25	6908	871	410	2811	2053	6344	8	19404	52617
2025-26	7465	912	428	2954	2165	6710	8	20642	55705
2026-27	8066	954	446	3105	2283	7097	8	21959	58972
2027-28	8716	998	466	3263	2407	7508	8	23366	62443
2028-29	9418	1043	487	3430	2539	7942	8	24867	66126
2029-30	10178	1091	508	3606	2678	8402	8	26471	70036
2030-31	10865	1130	526	3760	2793	8763	8	27845	73267
2031-32	11598	1170	544	3920	2913	9139	8	29292	76646
2032-33	12381	1212	563	4088	3038	9531	8	30821	80192
2033-34	13217	1255	582	4263	3169	9941	8	32435	83912
2034-35	14110	1299	602	4445	3306	10368	8	34138	87810
2035-36	15003	1339	622	4613	3431	10760	8	35776	91466
2036-37	15952	1381	643	4788	3562	11169	8	37503	95299
2037-38	16960	1424	664	4969	3698	11593	8	39316	99294
2038-39	18032	1468	686	5157	3838	12032	8	41221	103457
2039-40	19173	1513	708	5352	3983	12489	8	43226	107808
2040-41	20340	1556	730	5541	4124	12929	8	45228	112076
2041-42	21577	1600	752	5736	4269	13387	8	47329	116526

6.2 Modification in Concession Period

As per Article 29 of the concession agreement, if actual traffic on the project falls short or exceeds Target Traffic on project highway on defined date, concession period shall be modified subject to calculation stipulated therein. For Gulabpura-Chittorgarh project, the Target Date and Target Traffic are defined as under:

Target Date - 1stJune 2026

Target Traffic - 76316 in PCU

It was observed that as per traffic projections, average traffic volume falls short of target traffic in all scenarios. Probable extension of concession period is estimated according to article 29 of concession agreement which comes to about 3-4 years Traffic forecast and revenue projections are done for probable extended period accordingly.

Most Likely

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2026	76316	54919	-28%	42%	20%	20	4

Optimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2026	76316	55187	-28%	42%	20%	20	4

Pessimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2026	76316	54658	-28%	43%	20%	20	4

CHAPTER 7

FORECAST OF TOLL REVENUE

7.1 General

This chapter presents the tolling rate calculations, categories and toll revenue of the project.

7.2 Discount Categories

The fee schedule in the CA of Gulabpura-Chittorgarh section of NH-19 is based on the old toll policy. As per the Toll Notification (Schedule -G) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent user's monthly pass would be issued for 50 trips in month at 2/3d rate. Additionally, concessionaire has announced special monthly passes for local commercial cars at Rs. 670.
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travelers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: There are several categories of local discounts.
    a) Local Car Jeep Van I - Rs. 275 per
    b) Local LCV - Rs. 1200 per trip
    c) Local Commercial Vehicles at 50% rate for single journey

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.

The formula for determining the applicable rate of fee shall be as follows:-

$$\text{Applicable rate of fee} = \text{base rate} + \text{base rate} \times \left\{ \frac{\text{WPI A-WPI B}}{\text{WPI B}} \right\} \times 0.4$$

Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2018-19. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. The following graph provides historical rate of inflation (WPI) in India. Data has been sourced from the Office of Economic Advisor web site (www.eaindustry.nic.in) WPI for year 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series.

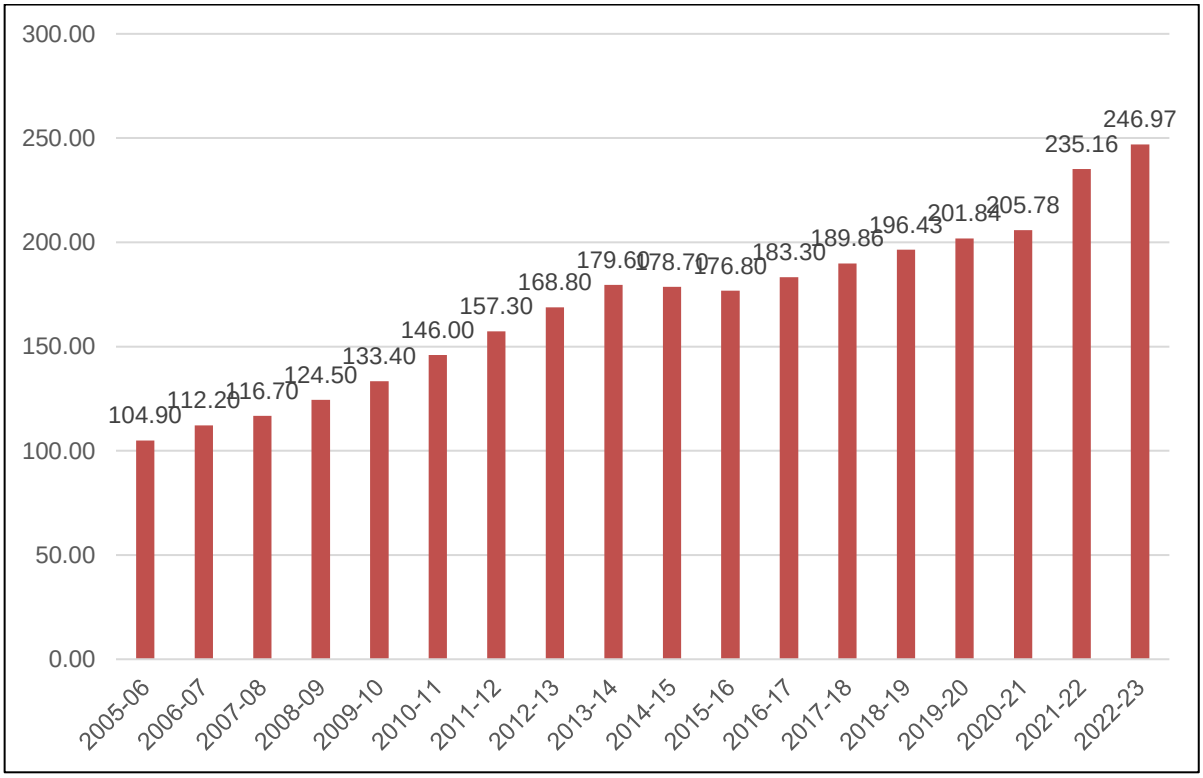


Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in the last few years is steadily growing. It grew by the range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

7.3 Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45
Oversized Vehicles (7 or more Axles)	4.20

There is no bypass or structure to be factored in for rates calculations.

Toll rates are calculated as per guidelines provided in schedule R (rounded to nearest Rs.) for the concession period and are given below.

Thus, worked out rates for various categories of vehicle and discounts are given as under.

Table 7-2 : Toll Rates for Single Journey@ Km 121.020

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2024-25	100	160	335	335	365	520	635
2025-26	105	165	350	350	380	550	670
2026-27	110	175	370	370	400	575	700
2027-28	115	185	385	385	420	605	735
2028-29	120	195	405	405	445	635	775
2029-30	125	205	425	425	465	670	815
2030-31	135	215	450	450	490	705	855
2031-32	140	225	470	470	515	740	900
2032-33	145	235	495	495	540	780	950
2033-34	155	250	520	520	570	820	995
2034-35	160	260	550	550	600	860	1050
2035-36	170	275	580	580	630	905	1105
2036-37	180	290	610	610	665	955	1165
2037-38	190	305	640	640	700	1005	1225
2038-39	200	320	675	675	735	1060	1290
2039-40	210	340	710	710	775	1115	1360
2040-41	220	360	750	750	820	1175	1430
2041-42	235	375	790	790	860	1240	1510

Table 7-3 : Toll Rates for Single Journey @ Km 184.020

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2024-25	100	165	345	345	375	540	660
2025-26	105	175	365	365	395	570	695
2026-27	115	180	380	380	415	600	730
2027-28	120	190	400	400	435	630	765
2028-29	125	200	420	420	460	660	805
2029-30	130	210	445	445	485	695	845
2030-31	135	220	465	465	510	730	890
2031-32	145	235	490	490	535	765	935
2032-33	150	245	515	515	560	805	985
2033-34	160	260	540	540	590	850	1035
2034-35	170	270	570	570	620	895	1090
2035-36	175	285	600	600	655	940	1145
2036-37	185	300	630	630	690	990	1205
2037-38	195	315	665	665	725	1045	1270
2038-39	205	335	700	700	765	1100	1335
2039-40	220	350	740	740	805	1155	1410
2040-41	230	370	775	775	850	1220	1485
2041-42	240	390	820	820	895	1285	1565

Table 7-4 : Toll Rates for Return Journey @ Km 121.02

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2024-25	150	240	500	500	545	785	955
2025-26	155	250	525	525	575	825	1000
2026-27	165	265	550	550	600	865	1055
2027-28	170	275	580	580	630	910	1105
2028-29	180	290	610	610	665	955	1165
2029-30	190	305	640	640	700	1005	1220
2030-31	200	320	675	675	735	1055	1285
2031-32	210	340	710	710	770	1110	1350
2032-33	220	355	745	745	810	1170	1420
2033-34	230	375	785	785	855	1230	1495
2034-35	245	395	825	825	900	1295	1575
2035-36	255	415	870	870	945	1360	1655
2036-37	270	435	915	915	995	1430	1745
2037-38	285	460	960	960	1050	1510	1835
2038-39	300	485	1015	1015	1105	1590	1935
2039-40	315	510	1065	1065	1165	1675	2035
2040-41	330	535	1125	1125	1225	1765	2145
2041-42	350	565	1185	1185	1295	1860	2260

Table 7-5 : Toll Rates for Return Journey @ Km 184.020

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2024-25	155	245	520	520	565	815	990
2025-26	160	260	545	545	595	855	1040
2026-27	170	275	570	570	625	895	1090
2027-28	180	285	600	600	655	940	1145
2028-29	185	300	630	630	690	990	1205
2029-30	195	315	665	665	725	1040	1265
2030-31	205	335	700	700	760	1095	1330
2031-32	215	350	735	735	800	1150	1400
2032-33	230	370	770	770	840	1210	1475
2033-34	240	390	810	810	885	1275	1550
2034-35	255	410	855	855	935	1340	1630
2035-36	265	430	900	900	980	1410	1720
2036-37	280	450	945	945	1035	1485	1810
2037-38	295	475	995	995	1090	1565	1905
2038-39	310	500	1050	1050	1145	1645	2005
2039-40	325	530	1105	1105	1205	1735	2115
2040-41	345	555	1165	1165	1270	1830	2225
2041-42	365	585	1230	1230	1340	1925	2345

Table 7-6 : Toll Rates for Monthly Pass Local @ Km 121.020

Year	Car	Minibus /LCV
2024-25	340	1485
2025-26	355	1560
2026-27	375	1640
2027-28	390	1720
2028-29	410	1805
2029-30	435	1895
2030-31	455	1990
2031-32	480	2090
2032-33	505	2195
2033-34	530	2305
2034-35	560	2420
2035-36	585	2540
2036-37	620	2665
2037-38	650	2800
2038-39	685	2940
2039-40	720	3085
2040-41	760	3240
2041-42	800	3400

Table 7-7 : Toll Rates for Monthly Pass Local @ Km 184.020

Year	Car	Minibus /LCV
2024-25	340	1175
2025-26	355	1235
2026-27	375	1295
2027-28	390	1360
2028-29	410	1430
2029-30	435	1500
2030-31	455	1575
2031-32	480	1655
2032-33	505	1740
2033-34	530	1825
2034-35	560	1915
2035-36	585	2010
2036-37	620	2110
2037-38	650	2215
2038-39	685	2325
2039-40	720	2440
2040-41	760	2560
2041-42	800	2690

Table 7-8 : Toll Rates for Monthly Pass @ Km 121.020

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2024-25	3280	5300	11105	11105	12115	17415	21200
2025-26	3445	5565	11665	11665	12725	18290	22265
2026-27	3620	5850	12255	12255	13365	19215	23395
2027-28	3805	6145	12875	12875	14045	20190	24580
2028-29	4000	6460	13530	13530	14760	21220	25835
2029-30	4205	6790	14225	14225	15520	22305	27155
2030-31	4420	7140	14955	14955	16315	23455	28555
2031-32	4645	7505	15730	15730	17160	24665	30025
2032-33	4890	7895	16545	16545	18050	25945	31585
2033-34	5145	8310	17405	17405	18990	27295	33230
2034-35	5410	8740	18320	18320	19985	28725	34970
2035-36	5695	9200	19280	19280	21035	30235	36810
2036-37	5995	9690	20300	20300	22145	31830	38750
2037-38	6315	10200	21375	21375	23315	33520	40805
2038-39	6650	10745	22510	22510	24560	35305	42980
2039-40	7005	11320	23715	23715	25870	37190	45275
2040-41	7385	11925	24990	24990	27260	39185	47705
2041-42	7780	12570	26335	26335	28730	41300	50275

Table 7-9 : Toll Rates for Monthly Pass @ Km 184.02

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2024-25	3400	5495	11515	11515	12560	18060	21985
2025-26	3575	5775	12095	12095	13195	18970	23090
2026-27	3755	6065	12705	12705	13860	19925	24260
2027-28	3945	6375	13350	13350	14565	20940	25490
2028-29	4145	6700	14035	14035	15310	22005	26790
2029-30	4360	7040	14750	14750	16095	23135	28160
2030-31	4585	7405	15510	15510	16920	24325	29610
2031-32	4820	7785	16310	16310	17795	25580	31140
2032-33	5070	8190	17155	17155	18715	26905	32755
2033-34	5335	8615	18050	18050	19690	28305	34460
2034-35	5610	9065	18995	18995	20725	29790	36265
2035-36	5905	9545	19995	19995	21810	31355	38170
2036-37	6220	10045	21050	21050	22965	33010	40185
2037-38	6550	10580	22165	22165	24180	34760	42315
2038-39	6900	11140	23345	23345	25470	36610	44570
2039-40	7265	11740	24595	24595	26830	38565	46950
2040-41	7655	12370	25915	25915	28270	40635	49470
2041-42	8070	13035	27310	27310	29795	42825	52135

7.4 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under ***Optimistic***, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

7.5 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under most likely scenario at each of the toll plaza up to 2041- 42 starting from the year 2024-25 are shown in tables below.

Table 7-10 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Year	TP-1	TP2	Total
2024-25	179.82	218.37	**398.19**
2025-26	200.42	243.96	**444.38**
2026-27	223.30	272.25	**495.55**
2027-28	249.21	304.18	**553.39**
2028-29	277.22	337.52	**614.74**
2029-30	309.38	377.03	**686.41**
2030-31	342.30	414.62	**756.92**
2031-32	377.44	458.09	**835.53**
2032-33	414.90	503.24	**918.15**
2033-34	458.18	556.06	**1014.24**
2034-35	504.66	614.16	**1118.83**
2035-36	556.06	674.80	**1230.85**
2036-37	610.73	739.57	**1350.30**
2037-38	671.22	813.78	**1485.00**
2038-39	738.65	894.19	**1632.83**
2039-40	813.82	985.62	**1799.44**
2040-41	891.10	1079.09	**1970.19**
2041-42	979.78	1183.73	**2163.51**

Table 7-11 : Toll Revenue Pessimistic Scenario

(Rs. Crores)

Year	TP-1	TP2	Total
2024-25	179.82	218.37	**398.19**
2025-26	199.53	242.86	**442.39**
2026-27	221.24	269.70	**490.94**
2027-28	245.74	299.85	**545.59**
2028-29	272.09	331.11	**603.20**
2029-30	302.17	368.14	**670.31**
2030-31	332.74	403.00	**735.74**
2031-32	365.08	443.14	**808.22**
2032-33	399.33	484.50	**883.84**
2033-34	438.87	532.72	**971.60**
2034-35	481.04	585.55	**1066.59**
2035-36	527.49	640.25	**1167.74**

Year	TP-1	TP2	Total
2036-37	576.64	698.39	**1275.03**
2037-38	630.73	764.74	**1395.48**
2038-39	690.61	836.18	**1526.79**
2039-40	757.35	917.38	**1674.72**
2040-41	825.21	999.50	**1824.71**
2041-42	903.10	1091.33	**1994.43**

Table 7-12 : Toll Revenue Most Likely Scenario

(Rs. Crores)

Year	TP-1	TP2	Total
2024-25	179.82	218.37	**398.19**
2025-26	199.98	243.37	**443.35**
2026-27	222.25	270.87	**493.12**
2027-28	247.49	301.94	**549.43**
2028-29	274.66	334.24	**608.90**
2029-30	305.76	372.53	**678.29**
2030-31	337.50	408.75	**746.25**
2031-32	371.18	450.49	**821.67**
2032-33	406.98	493.67	**900.65**
2033-34	448.45	544.14	**992.59**
2034-35	492.76	599.57	**1092.33**
2035-36	541.60	657.08	**1198.68**
2036-37	593.55	718.52	**1312.07**
2037-38	650.86	788.78	**1439.64**
2038-39	714.47	864.59	**1579.06**
2039-40	785.24	950.83	**1736.06**
2040-41	857.78	1038.49	**1896.27**
2041-42	940.92	1136.67	**2077.59**

CHAPTER 8

CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Gulabpura to Chittrorgarh section of NH-79 in state of Rajasthan from km 90.000 to km 214.870 nearing completion of six laning. The road is in sound condition and serves healthy traffic volumes. Project corridor is a part of the busy and prominent national highway NH-79 which connects Kishangarh to Udaipur via Bhiwala and Chittorgarh. There are large number of townships, industrial corridors and other business establishments coming up along the project corridor. As discussed, the dominant portion of traffic is long route traffic, which is more sensitive towards the growth of national economy. As Indian economy is poised to grow at 7%+, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give a positive impact to traffic flow on the project. The following can be considered as major outcomes of the study.

a) There is a good amount of tollable traffic running on the project.

b) Project corridor has potential to witness traffic growth @ 6-8% annually in near future post COVID-19 due to various developments in area and overall development of economy.

c) The Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road.

Based on the above it can be considered a stable healthy project from the traffic and revenue point of view.

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IRB INFRASTRUCTURE TRUST

GOA/KARNATAKA BORDER TO KUNDARPUR (KM 93.300 TO KM 283.300) SECTION OF NH-17 IN THE STATE OF GOA & KARNATAKA





TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

OCTOBER 2024

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GOA/KARNATAKA BORDER TO KUNDARPUR

(KM 93.300 TO KM 283.300)

SECTION OF NH-17 IN THE STATE OF

GOA & KARNATAKA

TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

OCTOBER 2024

GMD CONSULTANTS ★ NAVI MUMBAI ★

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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic	**NHAI**	-	National Highway Authority of India
BOT	-	Build Operate Transfer	**NHDP**	-	National Highways Development Project
CAGR	-	Compound Annual Growth Rate	**NSDP**	-	Net State Domestic Product
CTV	-	Classified traffic volume	**O&M**	-	Operation & Maintenance
DBFOT	-	Design, Build, Finance, Operate & Transfer	**PCDP**	-	Per Capita Domestic Product
EME	-	Earth Moving Equipment	**PCI**	-	Per Capita Income
GDP	-	Gross Domestic Product	**PCU**	-	Passenger Car Unit
GSDP	-	Gross State Domestic Product	**PSC**	-	Pre-stressed Concrete
HCM	-	Heavy Construction Machinery	**RCC**	-	Reinforced cement concrete
HCV	-	Heavy Commercial Vehicle	**RHS**	-	Right Hand Side
HTMS	-	Highway Traffic Management System	**SH**	-	State Highway
IRC	-	Indian Road Congress	**TP**	-	Toll Plaza
IRR	-	Internal Rate of Return	**WPI**	-	Wholesale Price Index
LCV	-	Light Commercial Vehicle	**SIR**	-	Special Investment Region
LHS	-	Left Hand Side	**c.**	-	Circa
LGV	-	Light Goods Vehicle	**ROB**	-	Railway Over Bridge
MAV	-	Multi Axle Vehicle	**MDR**	-	Major District Road
MORTH	-	Ministry of Road Transport and Highways	**ODR**	-	Other District Road
NH	-	National Highway	**CA**	-	Concession Agreement
PCC	-	Plain Cement Concrete	**RMT**	-	Running Meter
CR	-	Coarse Rubble			

CHAPTER 1

INTRODUCTION

1.1 Background

The Government of India through National Highway Authority of India (NHAI) embarked upon a program to enhance the traffic capacity and safety for efficient transportation of goods as well as passenger traffic on National Highway Sections under various phases of NHDP. Under Phase IV NHAI has planned to convert existing 2-lane National Highways into 4-lane National Highway.

The project under consideration, Four Laning of Goa / Karnataka Border to Kundapur section of NH-17 from km 93.300 to km 283.300 is one such road project NHAI intended to implement on a BOT basis in the DBFOT format. M/s IRB Westcoast Tollway Ltd. (Concessionaire) has been awarded the Project for a concession period of 28 years starting from the appointed date of 3rd March 2014. The Project is under capacity augmentation to six lanes. Tolling operation under current concession has commenced in February 2020 after partial COD on 31st January 2020.Further to it additional length of 161.050 Km has been completed and put to commercial operation in February 2022. PCOD-3 has been received in March 2023 & the rest of length is expected to complete by Financial Year 2024.

Project road from Goa/ Karnataka Border (Near Karwar) to Kundapur is about 190 km section of Mumbai - Goa highway (NH-17) from Km 93.700 to Km 283.300. NH-17 is most important transportation corridor along west cost of India. It starts at Panvel, at the junction of National Highway 4 (NH 4), and ends at Kanyakumari. NH-17 mainly traverses through the west coast of India, sometimes touching the shores of the Arabian Sea. The NH 17 touches the Arabian Sea at Maravanthe in Karnataka, Thalassery, Alappuzha and Kollam in Kerala. It passes through the Indian states of Maharashtra, Goa, Karnataka, Kerala and Tamil Nadu

The following figure shows the project road alignment.

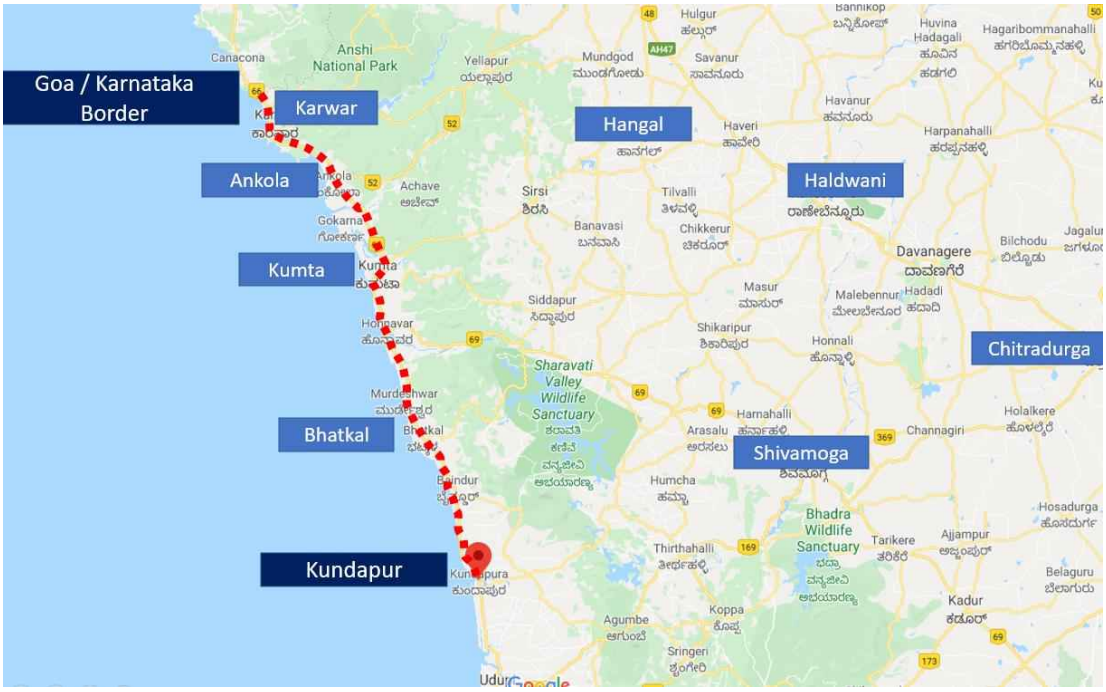


Figure 1-1 : Alignment of Project Stretch

1.2 Objective of the Study

M/s IRB INFRASTRUCTURE TRUST has engaged GMD Consultants to assess the future traffic and toll potential of project along with related operation & maintenance expenditure involved.

This report named as "Traffic Study & Toll Revenue Projection Report" mainly focuses on traffic and revenue aspects of the project. Other parameters like competing road, area developments etc. have been considered from a traffic development point of view.

1.2.1 Scope of Services

The broad scope of work covered in the assignment is as follows.

a) Analysis of Traffic Growth

b) Toll Rate Growth

c) Revenue Forecasting

The Concessionaire has provided basic traffic data and other project details on the basis of which the above analysis has been carried out.

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

Project of Four Laning of Goa / Karnataka Border – Kundapur section of NH-17 from Km 93.700 to Km 283.300 is Phase-IV project of NHAI on PPP basis under DBFOT pattern. Ankola, Bhatkal, Kumta and Karwar are the main urban centers on project Corridor. For most of the length of the project road runs parallel to the western coast.
It can be observed that project road forms a main connectivity between Mumbai and southern parts on west coast like Goa, Kanoor, Kocchi, Thiruanantpuram and finally Kanyakumai. Thus, transportation requirements in terms of passenger and goods are largely dependent on this spinal road.

2.2 Project Stretch Description

Project road section of NH-17 (now NH-66) passes through the important places like Karwar, Bhatkal, Ankola. This is the main connectivity between Mumbai and- Goa and Kerala. The Project Road passes through the districts of Karnataka and Goa.

National Highway 66, commonly referred to as NH 66 (Erstwhile NH-17 and a part of NH-47),is a busy National Highway that runs roughly north–south along the western coast of India, parallel to the Western Ghats. It connects Panvel (a city south of Mumbai) to Kanyakumari, passing through the states of Maharashtra, Goa, Karnataka, Kerala and Tamil Nadu
The following are the major centers of areas which have impact on project road in terms of traffic.

Goa: Is a state in India within the coastal region known as the Konkan, in Western India. It is bounded by Maharashtra to the north and Karnataka to the east and south, with the Arabian Sea forming its Western coast. It is India's smallest state by area and the fourth smallest by population. Goa has the highest GDP per capita among all Indian states,[3] that is two and a half times that of the country. It was ranked the 'best placed State' by the "Eleventh Finance Commission" for its infrastructure and ranked on top for the 'best quality of life' in India by the National Commission on Population based on the 12 Indicators.

Kumta: Is a town and a taluk in the Uttara Kannada district of Karnataka, India. Kumta is about 142 km south of Margao and 58 km north of Bhatkal. It is situated 72.7 km from Karwar, the district headquarters. It is one of the important stations along the Konkan Railway line running between Mumbai and Mangalore.

Bhatkal: Is a port town in the Uttara Kannada District of the South Indian state of Karnataka. The town of Bhatkal lies on National Highway 66, which runs between Mumbai and Kochi, and has one of the major railway stations along the Konkan Railway line, which runs between Mumbai and Mangaluru

As the project highway runs along the west coast for most parts of its alignment, there are only radial roads connecting to the project highway which work as feeder network to project road.

Four laning of project highway is higher priority of both central & concerned state governments. Currently highways have bottlenecks at many places which are being improved as a priority. Due to the poor condition of NH-17 and higher number of accidents some part of traffic uses Mumbai -Pune Expressway and then take Bangalore Highway (NH-48) to go to Goa and parts of Karnataka and Kerala. This traffic is expected to come back on the project highway.

There are three operative toll plazas at project stretch. at km 119.00, km 184.00 and km 243.00 respectively. The following figure shows project alignment and toll plaza locations.

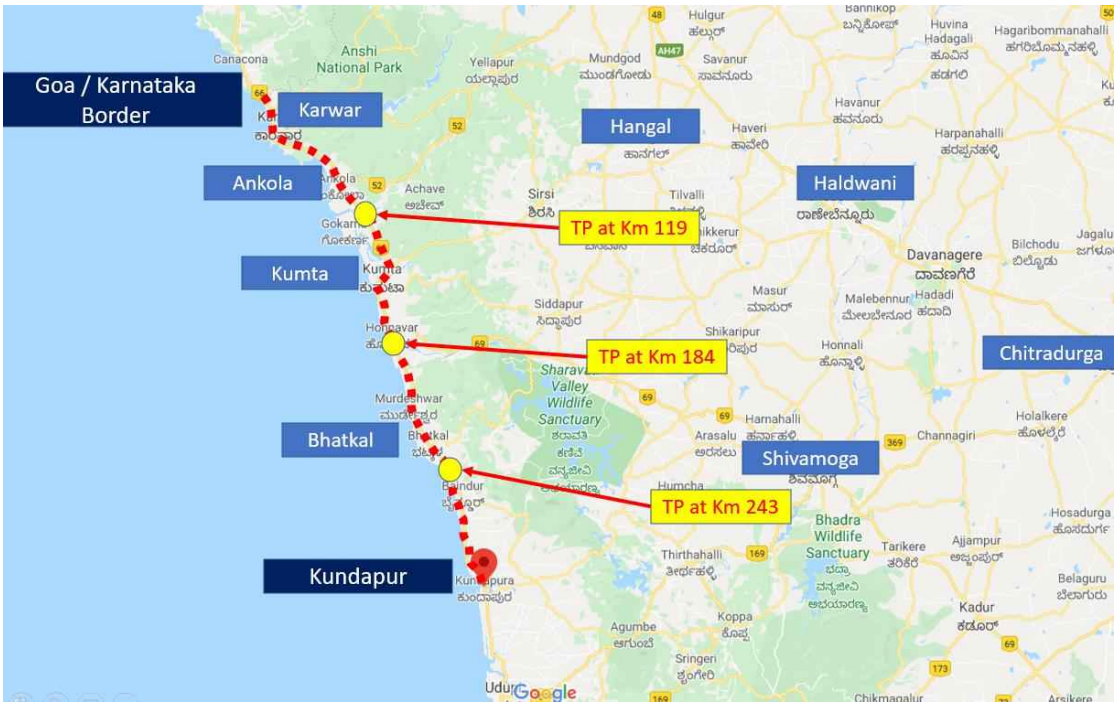


Figure 2-1 : Project Alignment with Toll Plaza

2.3 Project Corridor Illustration

Six laning of project stretch is complete. The following photographs illustrate the project section along the corridor.



Figure 2-2 : Photographs showing Project Corridor

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from a client for a project.

- Classified traffic volume counts at toll plaza locations on Goa Karnataka Border to Kundapur section of NH17 for years 2017-18, 2018-19, 2019-20, 2020-21 ,2021-22,2022-23, April 2023 to November 2023 and traffic data from April 2024 to July 2024.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project
- Establish base year traffic
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1 below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	Km 119 Toll Plaza	AADT for Period from February 2020 to March 2020, 2020-21, 2021-2022, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Period from February 2020 to March 2020, 2020-21, 2021-2022, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Period from February 2020 to March 2020, 2020-21, 2021-2022, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Period from February 2020 to March 2020, 2020-21, 2021-2022, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Period from February 2020 to March 2020, 2020-21, 2021-2022, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024
2	Km 184 Toll Plaza	AADT for Period from February 2020 to March 2020, 2020-21, 2021-2022, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Period from February 2020 to March 2020, 2020-21, 2021-2022, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Period from February 2020 to March 2020, 2020-21, 2021-2022, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Period from February 2020 to March 2020, 2020-21, 2021-2022, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Period from February 2020 to March 2020, 2020-21, 2021-2022, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024
3	Km 243 Toll Plaza	AADT for Period from February 2020	For Period from February 2020 to March	For Period from February 2020 to March	For Period from February 2020 to March	For Period from February 2020 to March

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
		to March 2020, 2020-21, 2021-2022, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	2020, 2020-21, 2021-2022, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	2020, 2020-21, 2021-2022, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	2020, 2020-21, 2021-2022, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	2020, 2020-21, 2021-2022, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024

3.2 Classified Traffic Volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations based on monthly data shared with NHAI.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in table below.

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)

Vehicle Type	
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since the project highway is currently under toll operation, the data collected corresponds to the category of tollable vehicles. The following are the types of vehicles as per concession agreement.

- Car / Jeep / van
- Minibus /LCV
- Bus
- Truck
- 3 Axle commercial vehicle
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data for the years 2019-20 ,2020-21, 2021-22, 2022-23, April 2023 to November 2023 and traffic data from April 2024 to July 2024.
Since the traffic data available for this update is for only four months, from April 2024 to July 2024, it may not represent the whole year traffic. Hence a seasonality factor for balance part of year has been applied to average traffic of current four months to arrive at Annual Average Daily Traffic of base year 2024-25. Same corrected traffic is used for future projections and revenue calculations. The following table shows historical traffic on project stretch and derived Annual Average Daily Traffic (AADT) for year 2024-25.

Table 3-3 : Traffic Data at Belekeri Toll Plaza at Km 119.00

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- February 20 to March 20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24	Annual Average Daily Traffic (Nos.)- 2024-25
1	Car	1485	1639	1974	3061	3058	3012

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- February 20 to March 20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24	Annual Average Daily Traffic (Nos.)- 2024-25
2	Minibus/LCV	380	360	150	130	129	152
3	Bus	308	101	159	234	256	277
4	Truck	177	256	240	259	253	256
5	3 Axle	162	130	155	182	132	126
6	Multi Axle	339	329	519	627	462	347
7	Oversized Vehicles	8	7	5	6	5	2
Total		**2859**	**2821**	**3202**	**4497**	**4295**	**4172**

Table 3-4 : Traffic Data at Holegadde Toll Plaza at Km 184.00

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- February 20 to March 20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24	Annual Average Daily Traffic (Nos.)- 2024-25
1	Car	2587	2759	3240	5084	5297	5253
2	Minibus/LCV	830	582	266	292	306	323
3	Bus	455	293	343	532	614	664
4	Truck	662	676	693	844	853	886
5	3 Axle	312	272	277	303	313	296
6	Multi Axle	888	815	869	1139	1186	1163

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- February 20 to March 20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24	Annual Average Daily Traffic (Nos.)- 2024-25
7	Oversized Vehicles	2	5	6	6	5	4
Total		**5736**	**5401**	**5693**	**8198**	**8573**	**8589**

Table 3-5 : Traffic Data at Shirur Toll Plaza at Km 243.00

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- February 20 to March 20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24	Annual Average Daily Traffic (Nos.)- 2024-25
1	Car	2600	2953	3644	5778	6137	6109
2	Minibus/LCV	756	602	318	394	397	424
3	Bus	463	295	334	523	582	628
4	Truck	700	684	814	950	941	896
5	3 Axle	305	273	315	319	325	307
6	Multi Axle	853	805	873	1123	1168	1159
7	Oversized Vehicles	2	7	6	6	5	4
Total		**5679**	**5619**	**6304**	**9092**	**9554**	**9526**

3.4 Data Analysis

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various

vehicles are adopted based on recommendations of Indian Road Congress prescribed in "IRC-64-1990: Guidelines for Capacity of Roads in Rural areas". The adopted passenger car unit values (PCU) are presented in ***Table 3-6.***

Table 3-6 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-7 : Traffic in PCU at Project Stretch Base Year 2023-24

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
2019-20	Belekeri at Km 119.00	2859	5557	1.94
	Holegadde at Km 184.00	5736	12124	2.11
	Shirur at Km 243.00	5679	11986	2.11
	Belekeri at Km 119.00	2821	5150	1.83

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
2020-21	Holegadde at Km 184.00	5401	11043	2.04
	Shirur at Km 243.00	5619	11266	2.00
2021-22	Belekeri at Km 119.00	3202	6219	1.94
	Holegadde at Km 184.00	5693	11512	2.02
	Shirur at Km 243.00	6304	12465	1.98
2022-23	Belekeri at Km 119.00	4497	8125	1.81
	Holegadde at Km 184.00	8198	15705	1.92
	Shirur at Km 243.00	9092	16823	1.85
2023-24	Belekeri at Km 119.00	4295	7276	1.69
	Holegadde at Km 184.00	8573	16452	1.92
	Shirur at Km 243.00	9554	17551	1.84
2024-25	Belekeri at Km 119.00	4172	6786	1.63
	Holegadde at Km 184.00	8589	16527	1.92
	Shirur at Km 243.00	9526	17470	1.83

It can be observed from above that project traffic has PCU index from 1.8 to 2.0 which is an indicator of good proportion of commercial traffic in traffic mix in project corridor. The following figure illustrates variation of PCU index at three toll plaza locations.

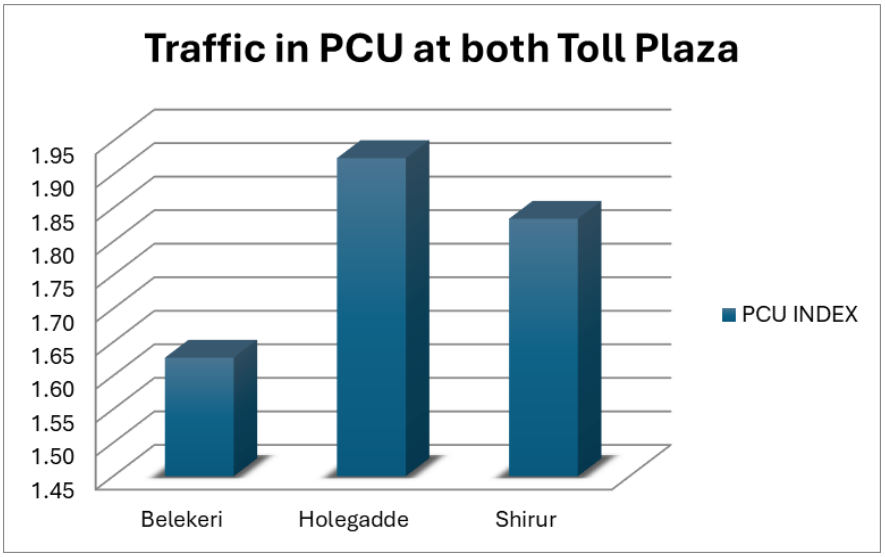
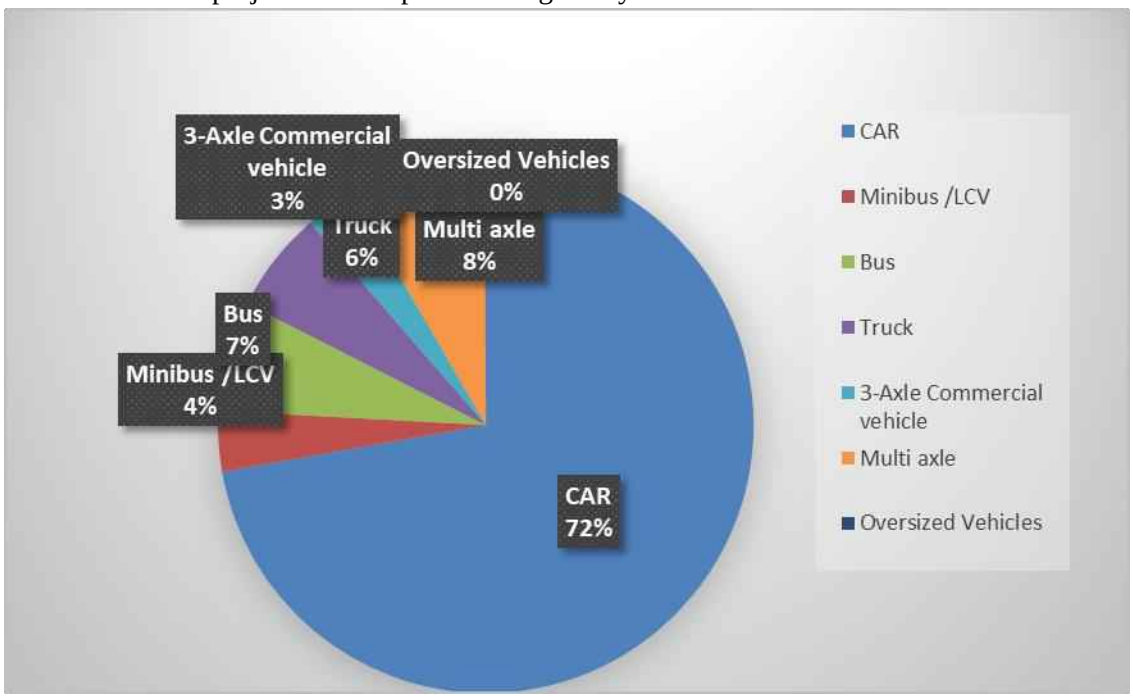


Figure 3-1 : Comparison of PCU Index

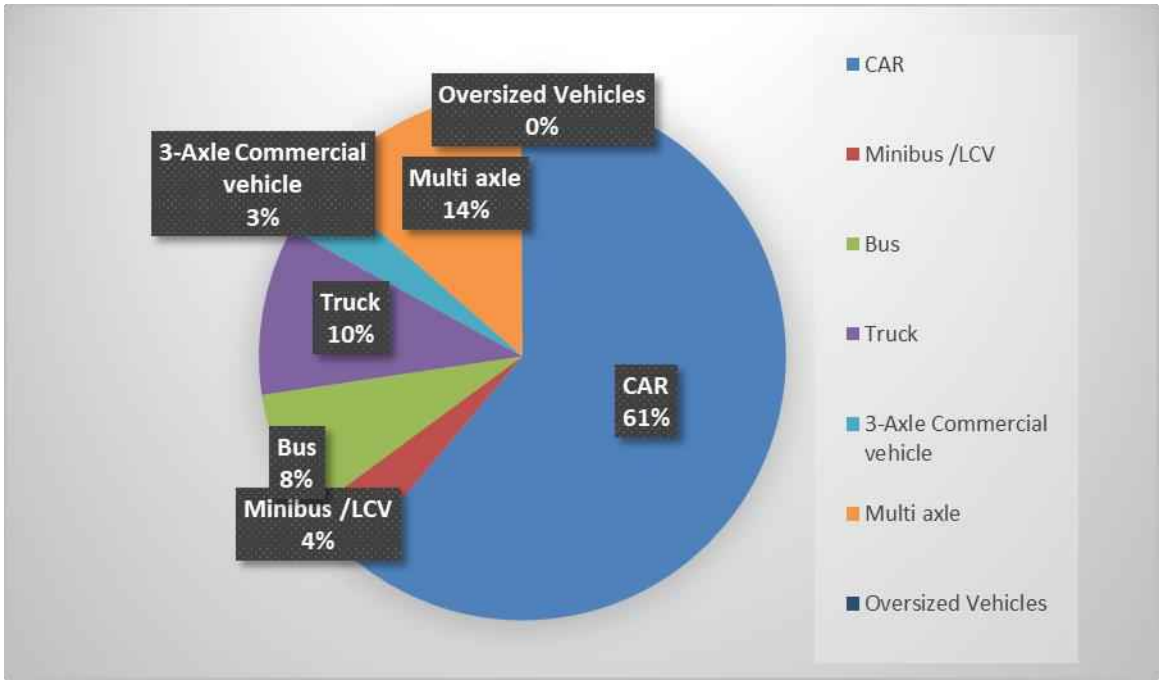
It can be observed that PCU index is consistent at all three plaza locations.

3.4.2 Components of Traffic

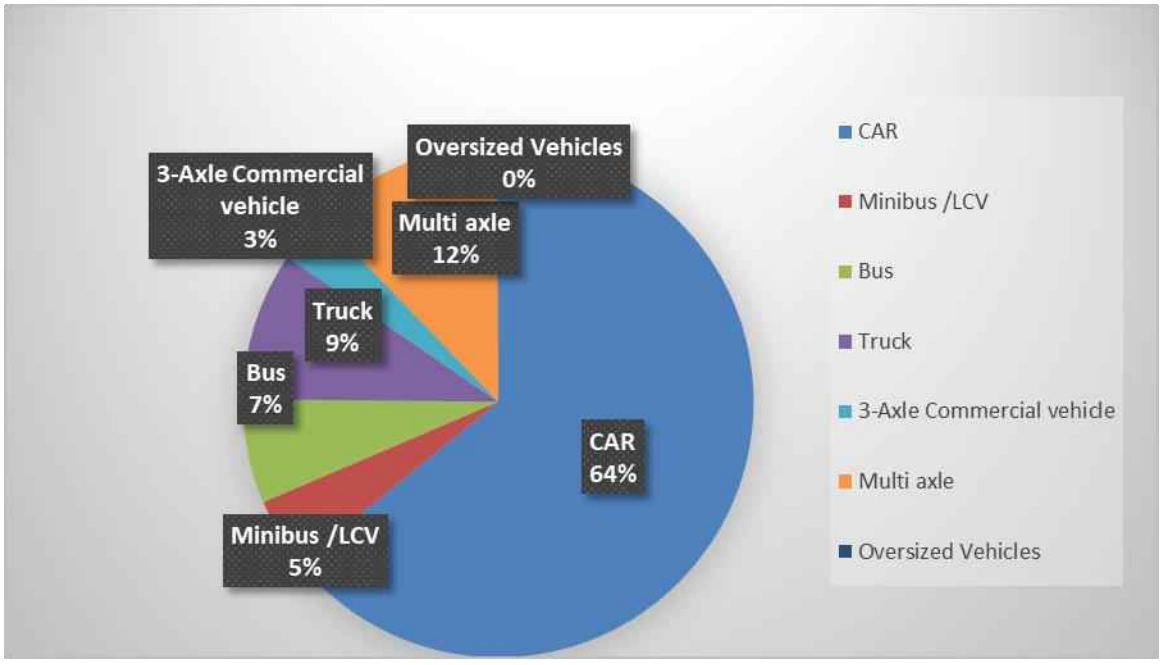
As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.



Model Split of Tollable Vehicle @ KM 119.000



Model Split of Tollable Vehicle @ KM 184.000



Model Split of Tollable Vehicle @ KM 243.000

It is observed that car traffic forms about 72% of total traffic at toll plaza location 1 while multi axle along with 3 axle commercial vehicles are about 11% of total traffic. Truck / Bus and LCV share about 13% and 4% of traffic volume respectively at toll plaza on 119.000 km.

It is observed that car traffic forms about 61% of total traffic at toll plaza location 2 while multi axle along with 3 axle commercial vehicles are about 17% of total traffic. Truck /

Bus and LCV share about 18% and 4% of traffic volume respectively at toll plaza on 184.000 km.

It is observed that car traffic forms about 64% of total traffic at toll plaza location 3 while multi axle along with 3 axle commercial vehicles are about 15% of total traffic. Truck / Bus and LCV share about 16% and 5% of traffic volume respectively at toll plaza on 243.000 km.

Thus, the project corridor has a good mix of about 60% -70% passenger and 30-40% commercial traffic.

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

The following table provides numbers of vehicles falling in each of above category on base years 2019-20, 2020-21, 2021-22, 2022-2023, April 2023 to November 2023 & April 2024 to July 2024

Table 3-8 : Journey Type Bifurcation of Traffic at TP-1 KM 119.00

Sr. No	Type	Traffic Volume (Nos.) 2024-25
1	Single Journey	2238
2	Return Journey	1748
3	Local Commercial Single Journey	179
4	Monthly Pass Local	2
5	Monthly Pass	5

Table 3-9 : Journey Type Bifurcation of Traffic at TP KM 184.00

Sr. No	Type	Traffic Volume (Nos.) 2024-25
1	Single Journey	4940
2	Return Journey	3214
3	Local Commercial Single Journey	423
4	Monthly Pass Local	3

Sr. No	Type	Traffic Volume (Nos.) 2024-25
5	Monthly Pass	8

Table 3-10 : Journey Type Bifurcation of Traffic at TP KM 243.00

Sr. No	Type	Traffic Volume (Nos.) 2024-25
1	Single Journey	4957
2	Return Journey	4288
3	Local Commercial Single Journey	263
4	Monthly Pass Local	13
5	Monthly Pass	5

Most dominant part of the above is the single journey type followed by return journey at project stretch. Monthly pass commuters are a very low fraction of the total traffic on the project corridor.

The single journey component in total traffic numbers is as high as 54%. Return journey component is 42% and Local Commercial Single Journey is 4% at toll plaza at Km 119.00

The single journey component in total traffic numbers is as high as 58%. Return journey component is 37% and Local Commercial single journey 5% at toll plaza at Km 184.00

The single journey component in total traffic numbers is as high as 52%. Return journey component is 45% and Local Commercial Single Journey is 3% at toll plaza at Km 243.00

It is observed that the project corridor demonstrates a similar pattern of single journey dominated mix of traffic across the entire stretch which is typical of major national highways.

3.5 Secondary Data Collection

There are several other factors which have a substantial impact on traffic patterns and growth on any project corridor. The following are some of such important factors.

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential

- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on the project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data
   a) GDP
   b) NSDP
   c) Population Growth
   d) Per Capita Income growth
   e) Industrial Growth
   f) Special Industry Potential
   g) Regional and National development vision / plan
   h) Any other relevant data
3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

Highway corridors behave like integrated circuit networks and more often than not every road is connected to various networks having different origins and destinations. Traffic running on these networks behaves like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network.

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc.,
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Competing / Alternate route

Project stretch runs on west coast of India. Most of the roads other than NH-17 run radial to NH-17 as a complimentary network. There are large number of stream and rivers falling into Arabian sea on west coast. Hence any parallel road would require many major bridges. This has prevented any parallel road to NH-17. The following figure shows bird's eye view of project corridor.



Figure 4-1 : Project corridor and radial roads.

Still geographically there can be alternate routes to project road between certain pairs of origin and destinations. The following figure shows such routes which are much longer than project road practically cannot be considered as alternate routes.



Figure 4-2 : Alternate route at regional level.

Thus, practically there is no alternate route to the project road between Goa/ Karnataka border and Kundapur. Under these circumstances it is not envisaged that commercial or passenger traffic would switch to alternate roads from the project road. Further with completion of Mumbai Kanyakumari section of road traffic on project road would get a boost in period 2024-2026 when it would be completed.

CHAPTER 5

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future patterns of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor Goa/ Karnataka Border – Kundapur section of NH-17 has been done taking the above factors into consideration. "**IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**" is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable for projects of short durations say 5-10 years, however for long term projections it would be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**.

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different types of vehicles. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway typically depends on a number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population

- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, In order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

$Log (P) = k \times Log (EI) + A$

Where,

P = *Number of Vehicles (Mode wise)*

EI = *Economic Indicator*

A = *Regression constant*

k = *Elasticity coefficient (Regression coefficient)*

The elasticity for car and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

The project corridor spreads across state of Karnataka. Toll plazas at Km 119.00. Km 184.00 and 243.00 are in the state of Karnataka. Contribution of Goa / Maharashtra is also substantial at stretch. For elasticity calculations, working data from Karnataka and Maharashtra / Goa has been analysed.

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Karnataka State.

Table 5-1 : Per Capita Income Vs Car Karnataka

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	90269	1269430	4.96	6.10		
2013	94382	1420767	4.97	6.15	5%	
2014	101864	1572521	5.01	6.20	8%	
2015	105703	1741831	5.02	6.24	4%	
2016	116819	1916373	5.07	6.28	11%	
2017	131260	2110493	5.12	6.32	12%	7.83%

Regression analysis of same is given in figure below

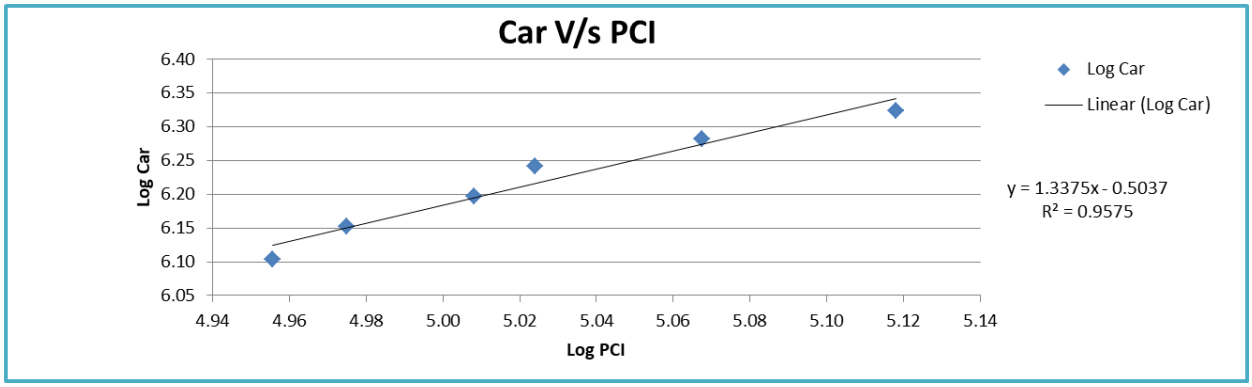


Figure 5-1 : Regression and Elasticity PCI vs. Car – Extrapolation Karnataka

Table 5-2 : Population Vs Bus Karnataka

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	1458545	9513	6.16	3.98		
2013	1466020	9956	6.17	4.00	1%	
2014	1473384	10925	6.17	4.04	1%	
2015	1480636	11224	6.17	4.05	0%	
2016	1487779	11503	6.17	4.06	0%	
2017	1494812	11888	6.17	4.08	0%	0.49%

Regression analysis of same is given in figure below

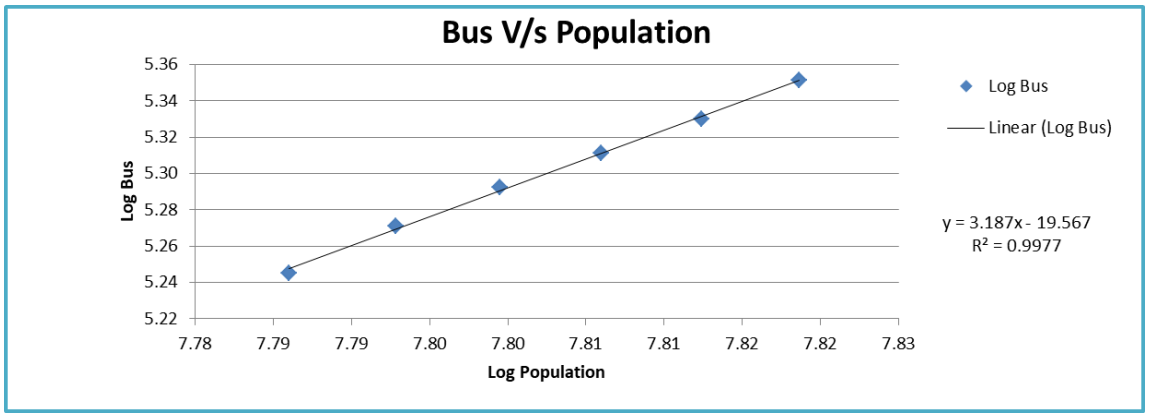


Figure 5-2 : Regression and Elasticity Population vs. Bus – Extrapolation Karnataka

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details

Table 5-3 : Goods Traffic Vs NSDP Karnataka

Year	NSDP	LCV	Log NSDP	Log LCV	NSDP Growth	Average Growth
2012	554990	221160	5.74	5.34		
2013	586592	258701	5.77	5.41	6%	
2014	639981	294266	5.81	5.47	9%	
2015	671322	331381	5.83	5.52	5%	
2016	749990	367572	5.88	5.57	12%	7.85%

Following figure depict regression analysis and extrapolation.

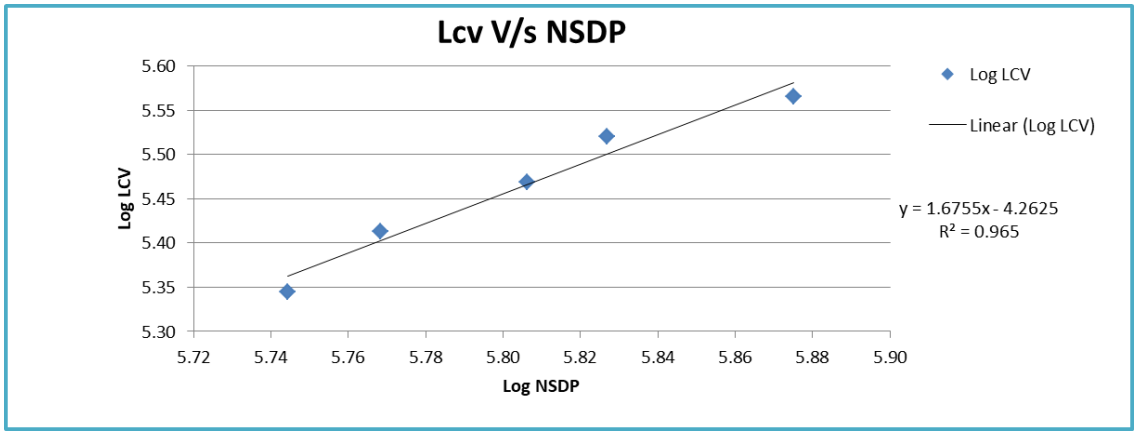


Figure 5-3 : Regression and Elasticity NSDP vs. LCV Traffic - extrapolation Karnataka.

Table 5-4 : Traffic Truck Vs NSDP Karnataka

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	554990	233422	5.74	5.37		
2013	586592	247639	5.77	5.39	6%	
2014	639981	260989	5.81	5.42	9%	
2015	671322	274971	5.83	5.44	5%	
2016	749990	290415	5.88	5.46	12%	
2017	851880	306290	5.93	5.49	14%	9.00%

Following figure depict regression analysis and extrapolation.

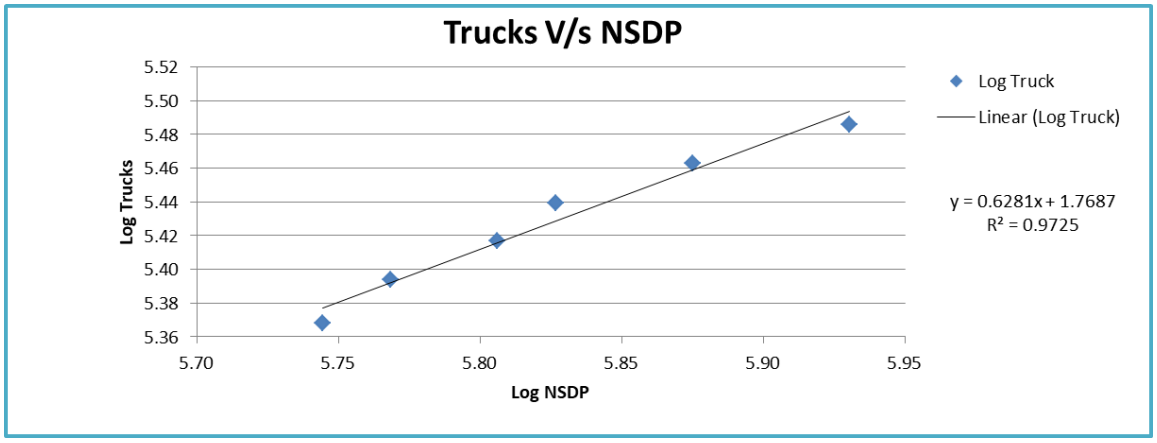


Figure 5-4 : Regression and Elasticity NSDP vs. Truck Traffic - extrapolation Karnataka.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below

Table 5-5 : Summary Regression Analysis Karnataka

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth	Growth Elastic Model
Karnataka	Car/Jeep	PCI	y = 1.3375x + -0.5037	R² = 0.9575	1.3375	7.83%	10.47%
	Bus	Population	y = 3.187x - -19.567	R² = 0.9977	3.1870	1.52%	4.83%
	LCV	NSDP	y = 1.6755x - -4.2625	R² = 0.965	1.6755	7.85%	13.16%
	Truck	NSDP	y = 0.6281x - 1.7687	R² = 0.9725	0.6281	9.00%	5.65%

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Maharashtra State.

Table 5-6 : Per Capita Income Vs Car Maharashtra

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	99564	2307841	5.00	6.36		
2013	103904	2592565	5.02	6.41	4%	
2014	109399	2834847	5.04	6.45	5%	
2015	114746	3113773	5.06	6.49	5%	
2016	122422	3406872	5.09	6.53	7%	
2017	132899	3715744	5.12	6.57	9%	5.96%

Regression analysis of same is given in figure below

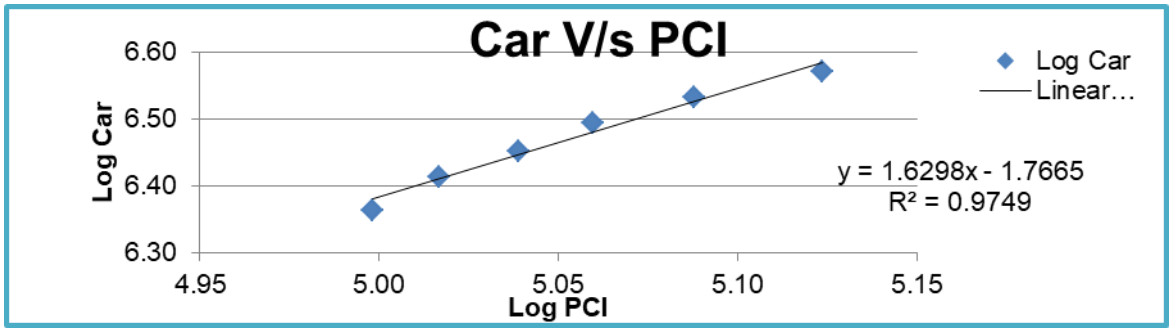


Figure 5-5 : Regression and Elasticity PCI vs. Car – Extrapolation Maharashtra

Table 5-7 : Population Vs Bus Maharashtra

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	112374333	119298	8.05	5.08		
2013	113807248	129535	8.06	5.11	1%	
2014	115229410	140087	8.06	5.15	1%	
2015	116640546	140102	8.07	5.15	1%	
2016	118040394	150427	8.07	5.18	1%	
2017	119428710	160042	8.08	5.20	1%	1.23%

Regression analysis of same is given in figure below

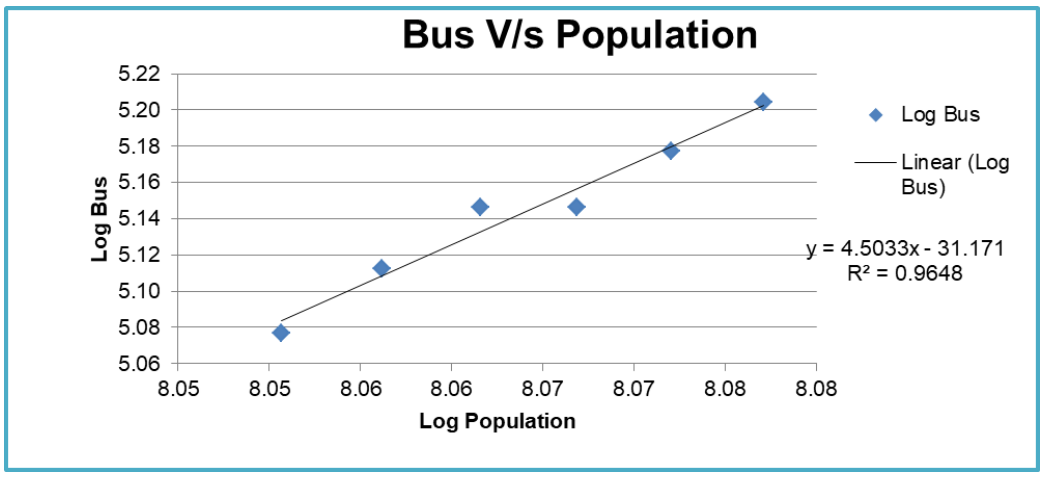


Figure 5-6 : Regression and Elasticity Population vs. Bus – Extrapolation Maharashtra

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-8 : LCV Traffic Vs NSDP Maharashtra

Year	NSDP	LCV	Log NSDP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	1126595	656407	6.05	5.82		
2013	1189711	739725	6.08	5.87	6%	
2014	1267551	803128	6.10	5.90	7%	
2015	1345341	868632	6.13	5.94	6%	
2016	1452439	927903	6.16	5.97	8%	6.56%

Following figure depict regression analysis and extrapolation.

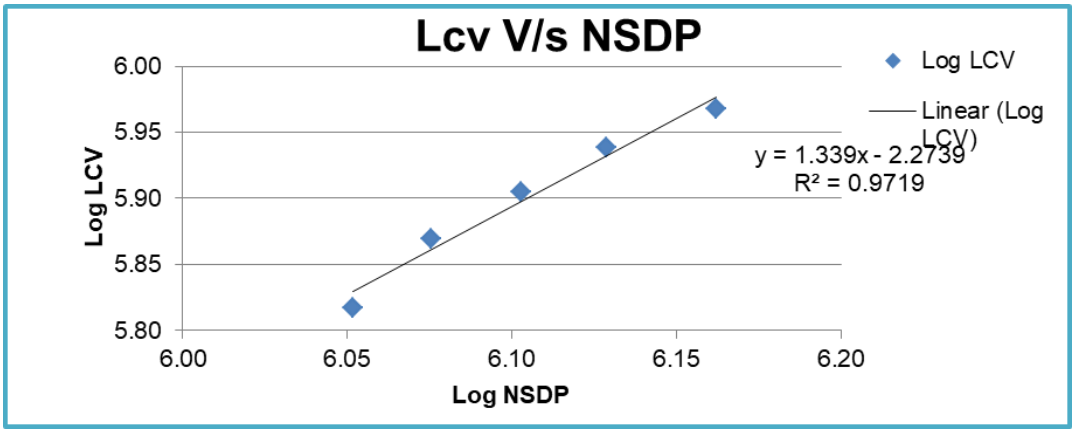


Figure 5-7 : Regression and Elasticity NSDP vs. Goods Traffic - extrapolation Maharashtra.

Table 5-9 : Trucks Traffic Vs NSDP Maharashtra

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	1126595	411418	6.05	5.61		
2013	1189711	402366	6.08	5.60	6%	
2014	1267551	470128	6.10	5.67	7%	
2015	1345341	491582	6.13	5.69	6%	
2016	1452439	468810	6.16	5.67	8%	
2017	1595514	496439	6.20	5.70	10%	7.22%

Following figure depict regression analysis and extrapolation.

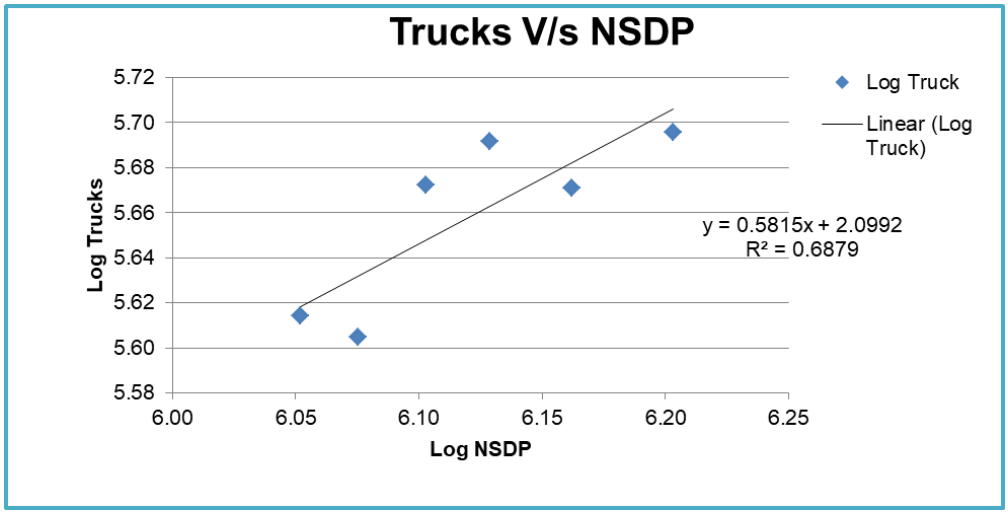


Figure 5-8 : Regression and Elasticity NSDP vs. Goods Traffic - extrapolation Maharashtra.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below

Table 5-10 : Summary Regression Analysis Maharashtra.

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth	Growth Elastic Model
Maharashtra	Car/Jeep	PCI	y = 1.6298x + -1.7665	R^2 = 0.9749	1.6298	5.96%	9.71%
	Bus	Population	y = 4.5033x - -31.1713	R^2 = 0.9648	4.5033	1.23%	5.52%
	LCV	NSDP	y = 1.339x - -2.2739	R^2 = 0.9719	1.3390	6.56%	8.78%
	Truck	NSDP	y = 0.5815x - 2.0992	R^2 = 0.6879	0.5815	7.22%	4.20%

Economical model for predicting growth is good tool, however other local, regional, national factors should also be considered before finalizing growth factors. Considering factors such as proposed developments and other influencing economic factors, moderated growth should be considered. These factors are discussed in subsequent sections.

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trend of growth. Project stretch of Goa/ Karnataka Border to Kundapur is under tolling operation with current concessionaire and has only two month of tolling history from February 2020. Further for last two years traffic is impacted by COVID-19 pandemic. Hence sufficient data points to be able to establish a reliable past trend of traffic growth are not available. A minimum of about 5 - 6 years' consistent traffic data is required for establishing a reliable past trend.

5.5 Other Factors Influencing Growth

There are many factors which have impact on traffic growth. As discussed previously these factors can be economical, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

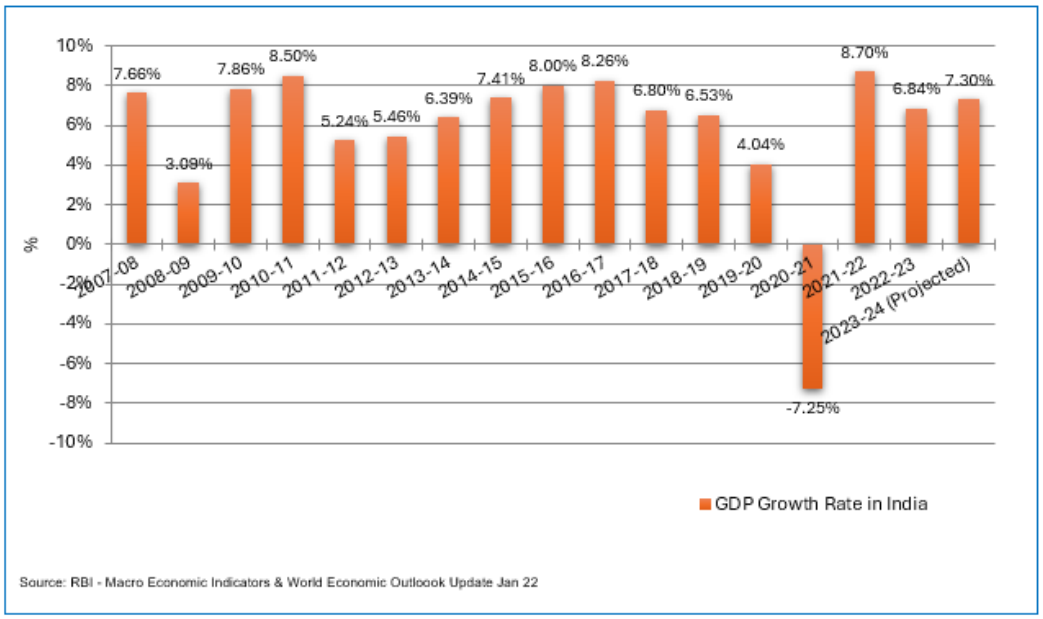


Figure 5-9 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. Government took major policy decision including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honourable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on Make -In- India it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. World Economic Outlook update also has predicted a growth rate of about 7.5 % in year 2022-23.

5.6 Developments along and around the Project Corridor & State

West Coast Ports - West coast is coast of submergence (except Malabar Coast) while east coast is an emergent coast. These imply that sea is deeper in west coast than sea on east coast. So, west coast has favourable conditions for natural harbours. This is the reason that ports on west coast of India contribute more in terms of commercial cargo traffic. Expansion of JNPT port may further boost cargo traffic from Kerala, Karnataka and Parts of Tamilnaduon project corridor.

Mangalore - The coastal city of Mangalore is one of the upcoming and fastest developing metropolises of Karnataka. While Mangalore embeds itself in the conventional city affairs, what sets it apart from others is the amalgamation of its heritage, history, culture, food and scenic coastal lines.

Known for its architectural marvels, temples, churches and pristine beaches, the city attracts tourists throughout the year. Some of the popular tourist spots include Mangaladevi temple, St. Aloysius church, Pilikula Nisarga Dhama (a biological park and a picnic spot), Panambur beach and Surathkal beach. Its proximity to Agumbe, Coorg, Kaup beach and temple town Udupi also makes for a quick getaway for city folks.

Mangalore is the largest exporter of coffee in India. One of the flourishing industries in the city is the automobile leaf spring business. Petrochemicals, iron-ore, fertilizers and agricultural processing are some other thriving industries.

In addition, three special economic zones (SEZs) are being set up in the city with IT companies such as TCS, Wipro and Lotus estimated to invest up to Rs.30 billion, creating 67,000 jobs over the next three years. Mangalore is also one of the top five emerging cities of India for outsourcing, according to Alsbridge.

The city is witnessing aggressive industrial development, aiding in its economic growth. Growth of Mangalore as tourism and Industrial hub would have positive impact on growth of traffic on project road

5.7 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as under. Rate of growth is moderated in light of overall regional trend. Growth of Multi-Axle is kept slightly higher as trend of technological advances in logistic industry favours multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, rate of growth diminishes. Same growth rate is not sustainable for long. Traffic growth is suitably stepped down for future years.
Growth rates are recommended for three scenarios for sensitivity analysis namely Optimistic, Pessimistic and Most Likely with a positive and negative variation 0.5% from Most Likely case for corridor in both states.

5.7.1 Recommended Growth Rates of Traffic for Project Stretch

Table 5-11 : Recommended Growth Rates Optimistic

Category / Year	2024-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050
Car/Jeep/Van	10.02%	9.29%	8.50%	8.14%	8.03%	7.57%
Bus	5.59%	5.28%	4.97%	4.90%	4.75%	4.52%
LCV	5.80%	4.95%	4.12%	3.72%	3.70%	3.28%
2- Axle	5.71%	5.04%	4.36%	4.04%	4.02%	3.68%
3 - Axle	6.04%	5.32%	4.60%	4.26%	4.24%	3.88%
4 to 6 Axle	7.02%	6.17%	5.33%	4.93%	4.90%	4.47%
7 and Above Axle	7.02%	6.17%	5.33%	4.93%	4.90%	4.47%

Table 5-12 : Recommended Growth Rates Pessimistic

Category / Year	2024-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050
Car/Jeep/Van	9.52%	8.79%	8.00%	7.64%	7.53%	7.07%
Bus	5.09%	4.78%	4.47%	4.40%	4.25%	4.02%
LCV	5.30%	4.45%	3.62%	3.22%	3.20%	2.78%
2- Axle	5.21%	4.54%	3.86%	3.54%	3.52%	3.18%
3 - Axle	5.54%	4.82%	4.10%	3.76%	3.74%	3.38%
4 to6 Axle	6.52%	5.67%	4.83%	4.43%	4.40%	3.97%
7 and Above Axle	6.52%	5.67%	4.83%	4.43%	4.40%	3.97%

Table 5-13 : Recommended Growth Rates Most Likely

Category / Year	2024-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050
Car/Jeep/Van	9.77%	9.04%	8.25%	7.89%	7.78%	7.32%
Bus	5.34%	5.03%	4.72%	4.65%	4.50%	4.27%
LCV	5.34%	5.03%	4.72%	4.65%	4.50%	4.27%
2- Axle	5.55%	4.70%	3.87%	3.47%	3.45%	3.03%
3 - Axle	5.46%	4.79%	4.11%	3.79%	3.77%	3.43%
4 to 6 Axle	5.79%	5.07%	4.35%	4.01%	3.99%	3.63%
7 and Above Axle	6.77%	5.92%	5.08%	4.68%	4.65%	4.22%

Project road is part of planned Mumbai- Kochi Economic Corridor under Bharatmala Pariyojna. At present various sections of the corridor are under the advanced stage of construction and planning. Out of total about 1300 km of total length of corridor approximately 900 km is either completed or in under construction. Balance 400 km is to be awarded soon under Bharatmala Pariyojna. It is expected that a substantial part of Mumbai – Kochi Economic Corridor would be operational by year 2024-25. This would

be shorter than the current preferred route of Bangalore highway (NH-48) by about 100 km. In such case it is expected that in the horizon year 2024-25 certain part of traffic between Gujarat / Mumbai and Kochi / Kanyakumari would starts using project corridor as most preferred route. Further development of Tuticorin – Kochi economic corridor and ports at Mangalore, Goa and Kochi would also boost traffic on project corridor by year say 2024-25. Same has been considered while taking additional growth of traffic as discussed above.

Traffic and revenue have been worked out on the basis of the above growths and some is presented in subsequent chapter of report.

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in the previous section of the report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for the following three cases of growth up to concession period.

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza 1- 119 KM

(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	3012	152	277	256	126	347	2	4172	6786
2025-26	3293	160	292	269	133	368	2	4517	7280
2026-27	3598	168	307	283	140	391	2	4889	7809
2027-28	3932	176	324	298	147	415	2	5294	8380
2028-29	4296	184	341	313	154	441	2	5731	8990
2029-30	4695	193	359	329	162	468	2	6208	9650
2030-31	5094	201	377	344	169	492	2	6679	10289
2031-32	5526	209	396	359	176	518	2	7186	10973
2032-33	5995	217	415	375	184	545	2	7733	11704
2033-34	6504	226	435	391	192	574	2	8324	12489
2034-35	7056	236	456	409	201	604	2	8964	13335
2035-36	7630	244	478	425	210	634	2	9623	14197
2036-37	8251	253	502	443	219	665	2	10335	15124
2037-38	8922	263	527	461	228	698	2	11101	16115

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2038-39	9647	273	553	480	238	732	2	11925	17173
2039-40	10432	283	580	499	248	768	2	12812	18303
2040-41	11270	293	607	519	258	805	2	13754	19493
2041-42	12174	304	636	540	269	845	2	14770	20777
2042-43	13152	315	665	562	280	886	2	15862	22142
2043-44	14208	327	696	584	292	929	2	17038	23604
2044-45	15348	339	730	608	305	975	2	18307	25182
2045-46	16510	350	764	630	317	1018	2	19591	26758
2046-47	17760	362	799	653	329	1064	2	20969	28443
2047-48	19105	374	835	677	342	1111	2	22446	30237

Table 6-2 : Total Tollable Traffic @ Toll Plaza 2- 184KM

(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	5253	323	664	886	296	1163	4	8589	16527
2025-26	5741	339	700	931	312	1235	4	9262	17654
2026-27	6274	355	737	978	329	1311	4	9988	18856
2027-28	6856	373	776	1027	346	1392	4	10774	20145
2028-29	7491	391	817	1079	364	1477	4	11623	21522
2029-30	8186	410	859	1133	383	1568	4	12543	23000
2030-31	8881	426	901	1182	400	1651	4	13445	24417
2031-32	9636	444	946	1234	418	1738	4	14420	25935
2032-33	10455	462	993	1288	437	1830	4	15469	27555
2033-34	11343	481	1042	1344	457	1927	4	16598	29283
2034-35	12306	500	1094	1402	478	2030	4	17814	31131
2035-36	13307	518	1147	1459	499	2130	4	19064	33002

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2036-37	14389	537	1204	1517	520	2235	4	20406	34993
2037-38	15560	556	1263	1579	542	2344	4	21848	37112
2038-39	16826	577	1324	1643	565	2459	4	23398	39371
2039-40	18195	598	1389	1710	589	2580	4	25065	41784
2040-41	19656	620	1454	1778	614	2706	4	26832	44319
2041-42	21235	643	1523	1850	640	2839	4	28734	47032
2042-43	22939	667	1595	1924	667	2977	4	30773	49912
2043-44	24781	691	1671	2001	696	3123	4	32967	52993
2044-45	26771	717	1750	2081	726	3276	4	35325	56278
2045-46	28799	740	1829	2158	754	3422	4	37706	59549
2046-47	30979	764	1912	2237	783	3575	4	40254	63027
2047-48	33324	788	1999	2320	813	3734	4	42982	66723

Table 6-3 : Total Tollable Traffic @ Toll Plaza 3- Chainage 243 KM

(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	6109	424	628	896	307	1159	4	9526	17470
2025-26	6677	445	661	942	323	1230	4	10282	18676
2026-27	7297	468	696	990	340	1305	4	11100	19968
2027-28	7974	491	732	1040	358	1385	4	11984	21351
2028-29	8714	516	771	1093	376	1470	4	12944	22841
2029-30	9524	541	811	1148	396	1560	4	13984	24439
2030-31	10334	564	851	1198	414	1643	4	15008	25981
2031-32	11213	587	893	1251	432	1731	4	16111	27629
2032-33	12165	612	938	1306	452	1823	4	17300	29393
2033-34	13198	637	984	1363	473	1920	4	18579	31272

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2034-35	14319	663	1032	1422	494	2022	4	19956	33275
2035-36	15484	688	1083	1479	515	2121	4	21374	35310
2036-37	16743	713	1136	1539	537	2225	4	22897	37479
2037-38	18104	740	1192	1601	559	2334	4	24534	39791
2038-39	19577	767	1250	1665	583	2449	4	26295	42260
2039-40	21169	795	1312	1732	608	2570	4	28190	44901
2040-41	22870	824	1374	1801	633	2695	4	30201	47676
2041-42	24707	854	1439	1873	660	2827	4	32364	50644
2042-43	26691	886	1507	1949	688	2965	4	34690	53813
2043-44	28835	919	1578	2027	717	3110	4	37190	57193
2044-45	31150	953	1653	2108	748	3263	4	39879	60808
2045-46	33509	985	1728	2186	777	3409	4	42598	64418
2046-47	36047	1017	1806	2267	807	3562	4	45510	68260
2047-48	38777	1051	1887	2351	838	3721	4	48629	72344

Table 6-4 : Total Tollable Traffic @ Toll Plaza 1- Chainage 119 KM (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	3012	152	277	256	126	347	2	4172	6786
2025-26	3276	158	289	267	132	367	2	4491	7238
2026-27	3564	165	303	279	138	387	2	4838	7722
2027-28	3877	173	318	291	144	409	2	5214	8245
2028-29	4218	181	333	303	151	432	2	5620	8804
2029-30	4588	189	349	317	158	456	2	6059	9405
2030-31	4954	195	364	329	164	478	2	6486	9978
2031-32	5350	202	381	341	171	501	2	6948	10596

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2032-33	5778	210	398	353	178	525	2	7444	11252
2033-34	6240	218	415	367	185	551	2	7978	11957
2034-35	6738	226	434	381	192	577	2	8550	12704
2035-36	7253	234	453	394	199	603	2	9138	13465
2036-37	7806	242	473	408	206	630	2	9767	14274
2037-38	8401	250	493	422	213	657	2	10438	15126
2038-39	9042	258	514	437	220	686	2	11159	16038
2039-40	9733	266	536	452	228	716	2	11933	17011
2040-41	10465	274	558	467	237	748	2	12751	18037
2041-42	11252	282	582	483	246	781	2	13628	19132
2042-43	12099	291	607	500	255	815	2	14569	20298
2043-44	13010	301	633	517	265	851	2	15579	21545
2044-45	13989	311	660	535	275	888	2	16660	22871
2045-46	14978	319	687	552	284	924	2	17746	24193
2046-47	16037	328	714	569	294	961	2	18905	25594
2047-48	17171	337	743	587	304	1000	2	20144	27088

Table 6-5 : Total Tollable Traffic @ Toll Plaza 2- Chainage 184 KM (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	5253	323	664	886	296	1163	4	8589	16527
2025-26	5715	337	695	927	310	1228	4	9216	17561
2026-27	6217	352	729	969	324	1298	4	9893	18670
2027-28	6763	368	764	1012	340	1371	4	10622	19851
2028-29	7357	384	801	1058	356	1448	4	11408	21112
2029-30	8004	400	839	1105	373	1530	4	12255	22458

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2030-31	8643	414	876	1148	389	1604	4	13078	23739
2031-32	9334	429	915	1192	405	1681	4	13960	25096
2032-33	10081	444	956	1238	422	1762	4	14907	26542
2033-34	10887	460	998	1285	439	1847	4	15920	28073
2034-35	11757	476	1043	1336	457	1935	4	17008	29705
2035-36	12654	491	1089	1383	474	2020	4	18115	31337
2036-37	13620	507	1137	1431	492	2109	4	19300	33069
2037-38	14659	523	1186	1482	510	2202	4	20566	34905
2038-39	15777	539	1239	1535	529	2299	4	21922	36858
2039-40	16982	557	1293	1589	549	2401	4	23375	38933
2040-41	18260	575	1347	1645	570	2506	4	24907	41104
2041-42	19635	593	1404	1702	591	2616	4	26545	43406
2042-43	21113	612	1464	1761	613	2731	4	28298	45853
2043-44	22703	631	1525	1823	635	2850	4	30171	48442
2044-45	24412	651	1590	1887	658	2975	4	32177	51199
2045-46	26138	669	1654	1947	680	3093	4	34185	53921
2046-47	27985	687	1721	2009	703	3216	4	36325	56805
2047-48	29963	706	1790	2073	726	3343	4	38605	59851

Table 6-6 : Total Tollable Traffic @ Toll Plaza 3- Chainage 243 KM (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	6109	424	628	896	307	1159	4	9526	17470
2025-26	6646	443	658	937	321	1224	4	10233	18585
2026-27	7230	463	689	979	336	1293	4	10994	19773
2027-28	7865	484	722	1023	352	1366	4	11816	21047

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2028-29	8555	505	756	1069	369	1443	4	12701	22406
2029-30	9307	528	792	1118	387	1525	4	13661	23871
2030-31	10052	547	827	1160	402	1598	4	14590	25249
2031-32	10856	567	863	1205	419	1675	4	15589	26723
2032-33	11724	588	902	1251	436	1756	4	16661	28293
2033-34	12661	609	942	1300	454	1840	4	17810	29961
2034-35	13674	631	984	1350	472	1929	4	19044	31737
2035-36	14719	652	1027	1399	490	2014	4	20305	33526
2036-37	15842	673	1072	1449	508	2103	4	21651	35420
2037-38	17052	694	1119	1501	527	2196	4	23093	37434
2038-39	18354	717	1168	1554	547	2293	4	24637	39573
2039-40	19755	740	1219	1610	568	2394	4	26290	41847
2040-41	21243	763	1271	1667	589	2499	4	28036	44232
2041-42	22841	788	1325	1726	611	2608	4	29903	46763
2042-43	24561	813	1381	1786	633	2723	4	31901	49452
2043-44	26411	838	1439	1849	657	2842	4	34040	52310
2044-45	28399	865	1499	1914	681	2967	4	36329	55348
2045-46	30407	889	1559	1974	703	3084	4	38620	58345
2046-47	32558	914	1622	2037	727	3207	4	41069	61537
2047-48	34861	939	1687	2102	751	3334	4	43678	64911

Traffic projections for Most Likely scenario is given as under

Table 6-7 : Total Tollable Traffic @ Toll Plaza 1- Chainage 119 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	3012	152	277	256	126	347	2	4172	6786

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2025-26	3286	159	292	269	132	367	2	4507	7264
2026-27	3583	167	307	282	139	389	2	4869	7777
2027-28	3907	175	322	295	146	412	2	5259	8322
2028-29	4260	183	339	310	153	436	2	5683	8912
2029-30	4645	191	356	325	160	462	2	6141	9543
2030-31	5028	199	373	338	167	485	2	6592	10152
2031-32	5442	207	390	353	174	509	2	7077	10803
2032-33	5891	215	409	368	181	535	2	7601	11504
2033-34	6376	223	428	383	188	562	2	8162	12246
2034-35	6902	231	448	399	196	591	2	8769	13046
2035-36	7446	239	469	414	203	618	2	9391	13853
2036-37	8032	247	490	430	211	647	2	10059	14716
2037-38	8665	255	513	446	219	677	2	10777	15637
2038-39	9348	263	537	463	228	709	2	11550	16626
2039-40	10085	272	562	481	237	742	2	12381	17681
2040-41	10870	282	587	499	247	776	2	13263	18793
2041-42	11716	292	614	518	257	812	2	14211	19984
2042-43	12628	302	641	537	267	849	2	15226	21246
2043-44	13610	312	670	558	277	888	2	16317	22598
2044-45	14668	322	699	579	288	929	2	17487	24039
2045-46	15742	332	728	598	298	968	2	18668	25477
2046-47	16894	342	759	619	309	1008	2	19933	27013
2047-48	18130	352	791	640	320	1051	2	21286	28650

Table 6-8 : Total Tollable Traffic @ Toll Plaza 2- Chainage 184 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	5253	323	664	886	296	1163	4	8589	16527
2025-26	5728	338	699	928	310	1232	4	9239	17608
2026-27	6246	354	734	973	326	1305	4	9942	18767
2027-28	6810	370	771	1019	343	1381	4	10698	19997
2028-29	7425	387	810	1067	360	1463	4	11516	21318
2029-30	8095	405	851	1119	378	1549	4	12401	22735
2030-31	8762	421	892	1165	394	1627	4	13265	24086
2031-32	9484	437	934	1212	411	1709	4	14191	25519
2032-33	10266	453	978	1263	429	1795	4	15188	27051
2033-34	11113	471	1024	1315	447	1886	4	16260	28683
2034-35	12030	489	1072	1369	466	1981	4	17411	30417
2035-36	12978	505	1121	1421	484	2074	4	18587	32165
2036-37	14001	523	1173	1475	503	2170	4	19849	34022
2037-38	15104	541	1227	1531	523	2272	4	21202	36001
2038-39	16295	559	1284	1589	544	2378	4	22653	38104
2039-40	17579	578	1344	1650	566	2489	4	24210	40345
2040-41	18947	597	1404	1713	588	2604	4	25857	42694
2041-42	20421	618	1468	1777	611	2725	4	27624	45197
2042-43	22009	639	1533	1844	636	2851	4	29516	47854
2043-44	23721	661	1602	1913	661	2984	4	31546	50687
2044-45	25566	684	1674	1986	687	3122	4	33723	53700
2045-46	27437	705	1745	2054	712	3254	4	35911	56689
2046-47	29445	726	1820	2124	738	3391	4	38248	59858
2047-48	31601	748	1898	2197	764	3534	4	40746	63221

Table 6-9 : Total Tollable Traffic @ Toll Plaza 3- Chainage 230 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	6109	424	628	896	307	1159	4	9526	17470
2025-26	6662	445	659	938	322	1227	4	10257	18626
2026-27	7263	466	692	983	339	1299	4	11046	19868
2027-28	7919	488	727	1030	356	1375	4	11899	21196
2028-29	8636	511	763	1080	374	1456	4	12824	22624
2029-30	9417	535	802	1132	392	1541	4	13823	24150
2030-31	10194	556	840	1179	409	1618	4	14800	25611
2031-32	11036	577	880	1228	427	1700	4	15852	27175
2032-33	11947	600	921	1278	445	1786	4	16981	28834
2033-34	12932	623	965	1331	464	1876	4	18195	30607
2034-35	13999	647	1011	1386	484	1970	4	19501	32496
2035-36	15103	670	1058	1439	503	2062	4	20839	34405
2036-37	16294	693	1108	1494	523	2159	4	22275	36442
2037-38	17579	717	1159	1551	544	2259	4	23813	38600
2038-39	18965	742	1212	1610	565	2365	4	25463	40900
2039-40	20460	767	1268	1671	587	2475	4	27232	43344
2040-41	22053	794	1325	1734	611	2590	4	29111	45927
2041-42	23769	821	1384	1799	635	2711	4	31123	48672
2042-43	25618	848	1446	1866	660	2837	4	33279	51591
2043-44	27611	877	1511	1936	686	2969	4	35594	54704
2044-45	29760	906	1579	2009	713	3107	4	38078	58022
2045-46	31939	933	1647	2078	738	3238	4	40577	61317
2046-47	34277	960	1717	2149	765	3375	4	43247	64816
2047-48	36788	989	1790	2222	793	3517	4	46103	68531

6.2 Modification in Concession Period

As per Article 29 of the concession agreement, if actual traffic on the project falls short or exceeds Target Traffic on project highway on defined date, concession period shall be

modified subject to calculation stipulated therein. For Goa/ Karnataka - Kundarpur project, the Target Date and Target Traffic are defined as under:

Target Date - 1st April 2022

Target Traffic - 21307 in PCU

Pessimistic Case

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2022	21307	11857	-44%	67%	20%	28	5.6

PCUs as per Pessimistic cases have been considered for arriving at the concession Period end date.

CHAPTER 7

FORECAST OF TOLL REVENUE

7.1 General

This chapter presents the tolling rate calculations, categories and toll revenue of the project.

7.2 Discount Categories

The fee schedule in the CA of Goa / Karnataka Border- Kundapur section of NH-17 is based on the old toll policy. As per the Toll Notification (Schedule - G) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent users monthly pass would be issued for 50 trips in month at 2/3d rate..
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travellers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: There are several categories of local discounts.
    a) Local Passenger Car Jeep Van I - Rs. 275 per month as per fee notification
    b) Local commercial vehicles single at 50% rate for normal single trip

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.

The formula for determining the applicable rate of fee shall be as follows:-

$$\text{Applicable rate of fee} = \text{base rate} + \text{base rate} \times \left\{ \frac{\text{WPI A-WPI B}}{\text{WPI B}} \right\} \times 0.4$$

Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2018-19. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. The following graph provides historical rate of inflation (WPI) in India. Data has been sourced from the Office of Economic Advisor web site (www.eaindustry.nic.in) WPI for year 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series.

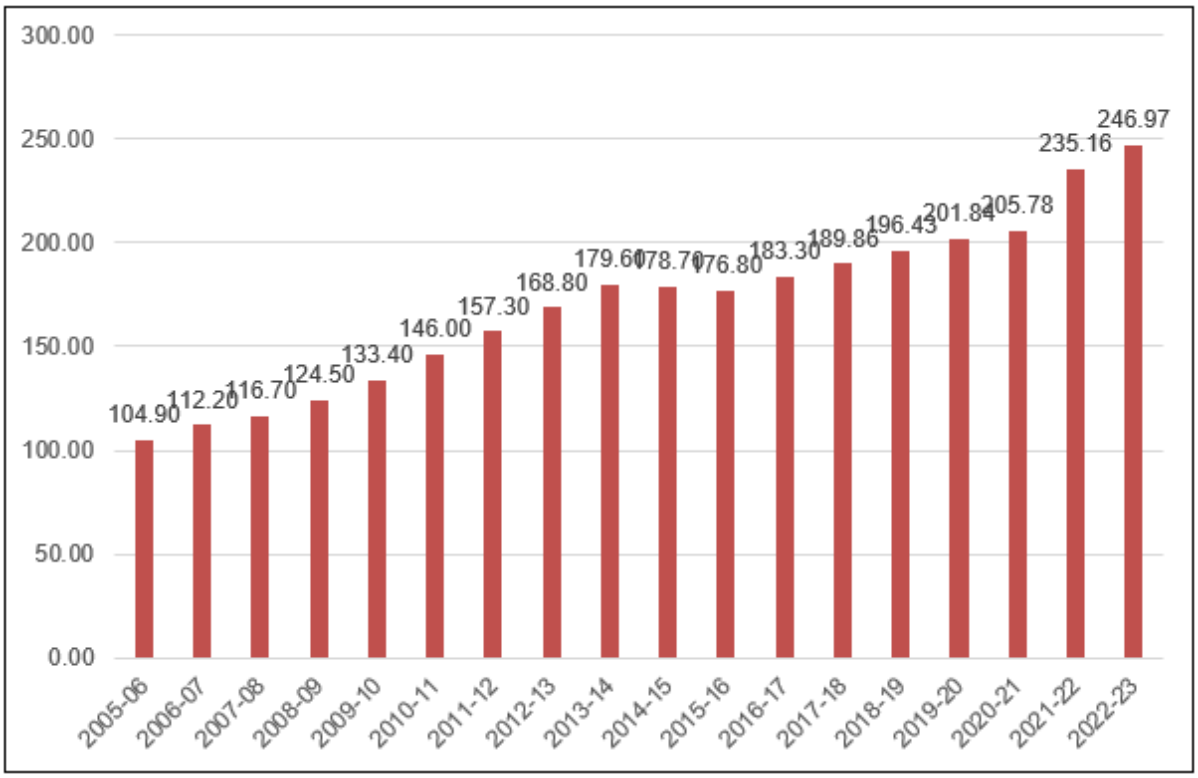


Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in the last few years is steadily growing. It grew by the range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

7.3 Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Oversized Vehicles (7 or more Axles)	4.20

There is no bypass or structure to be factored in for rates calculations.

Toll rates are calculated as per guidelines provided in schedule R (rounded to nearest Rs.) for the concession period and are given below.

The toll rates have been projected on the basis of existing project length received vide PCOD- III certificate.

Thus, worked out rates for various categories of vehicle and discounts are given as under

Table 7-2 : Toll Rates for Single Journey @ Km 119.000

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2024-25	115	180	370	370	405	570	720
2025-26	120	190	390	390	425	600	755
2026-27	125	200	410	410	450	630	795
2027-28	135	210	430	430	470	665	835
2028-29	140	220	455	455	495	695	880
2029-30	145	230	475	475	520	735	925
2030-31	155	245	500	500	550	770	975
2031-32	165	255	525	525	575	810	1025
2032-33	170	270	555	555	605	855	1075
2033-34	180	285	585	585	640	895	1135
2034-35	190	300	615	615	670	945	1195
2035-36	200	315	645	645	705	995	1255
2036-37	210	330	680	680	745	1045	1320
2037-38	220	350	715	715	785	1105	1390
2038-39	235	365	755	755	825	1160	1465
2039-40	245	385	795	795	870	1225	1545
2040-41	260	405	840	840	915	1290	1630
2041-42	275	430	885	885	965	1360	1715
2042-43	290	455	930	930	1020	1435	1810
2043-44	305	475	980	980	1075	1510	1910
2044-45	320	505	1035	1035	1135	1595	2015
2045-46	340	530	1095	1095	1195	1680	2125
2046-47	355	560	1155	1155	1260	1775	2240
2047-48	375	590	1215	1215	1330	1870	2365

Table 7-3 : Toll Rates for Single Journey @ Km 184.000

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2024-25	110	175	365	365	400	565	710
2025-26	120	185	385	385	420	595	745

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2026-27	125	195	405	405	445	625	785
2027-28	130	205	425	425	465	660	825
2028-29	135	215	445	445	490	690	865
2029-30	145	225	470	470	515	725	910
2030-31	150	240	495	495	540	765	955
2031-32	160	250	520	520	570	805	1005
2032-33	165	265	545	545	600	845	1060
2033-34	175	280	575	575	630	890	1115
2034-35	185	295	605	605	665	935	1170
2035-36	195	310	640	640	700	985	1235
2036-37	205	325	670	670	735	1040	1300
2037-38	215	340	705	705	775	1095	1370
2038-39	230	360	745	745	815	1155	1440
2039-40	240	380	785	785	860	1215	1520
2040-41	255	400	825	825	905	1280	1600
2041-42	265	420	870	870	955	1350	1685
2042-43	280	445	920	920	1005	1420	1780
2043-44	295	470	970	970	1060	1500	1875
2044-45	310	495	1020	1020	1120	1580	1975
2045-46	330	520	1080	1080	1180	1670	2085
2046-47	350	550	1140	1140	1245	1760	2200
2047-48	365	580	1200	1200	1310	1855	2320

Table 7-4 : Toll Rates for Single Journey @ Km 243.000

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2024-25	100	160	340	340	370	530	645
2025-26	105	170	355	355	390	560	680
2026-27	110	180	375	375	410	585	715
2027-28	115	190	395	395	430	615	750
2028-29	120	195	415	415	450	650	790
2029-30	130	205	435	435	475	680	830
2030-31	135	220	455	455	500	715	870
2031-32	140	230	480	480	525	755	915
2032-33	150	240	505	505	550	790	965
2033-34	155	255	530	530	580	835	1015
2034-35	165	265	560	560	610	875	1070
2035-36	175	280	590	590	640	925	1125
2036-37	185	295	620	620	675	970	1185
2037-38	195	310	655	655	710	1025	1245
2038-39	205	330	685	685	750	1080	1310
2039-40	215	345	725	725	790	1135	1385
2040-41	225	365	765	765	830	1195	1455
2041-42	240	385	805	805	875	1260	1535
2042-43	250	405	850	850	925	1330	1620
2043-44	265	425	895	895	975	1400	1705
2044-45	280	450	940	940	1030	1480	1800

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2045-46	295	475	995	995	1085	1560	1900
2046-47	310	500	1050	1050	1145	1645	2000
2047-48	325	530	1105	1105	1205	1735	2110

Table 7-5 : Toll Rates for Return journey @ Km 119.000

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2024-25	170	270	555	555	610	855	1080
2025-26	180	285	585	585	640	900	1135
2026-27	190	300	615	615	670	945	1195
2027-28	200	315	645	645	705	995	1255
2028-29	210	330	680	680	745	1045	1320
2029-30	220	345	715	715	780	1100	1390
2030-31	235	365	750	750	820	1155	1460
2031-32	245	385	790	790	865	1215	1535
2032-33	255	405	830	830	910	1280	1615
2033-34	270	425	875	875	955	1345	1700
2034-35	285	445	920	920	1005	1415	1790
2035-36	300	470	970	970	1060	1490	1885
2036-37	315	495	1020	1020	1115	1570	1985
2037-38	335	520	1075	1075	1175	1655	2090
2038-39	350	550	1130	1130	1240	1745	2200
2039-40	370	580	1195	1195	1305	1835	2320
2040-41	390	610	1255	1255	1375	1935	2445
2041-42	410	645	1325	1325	1450	2040	2575
2042-43	435	680	1395	1395	1530	2150	2715
2043-44	455	715	1475	1475	1610	2265	2865
2044-45	480	755	1555	1555	1700	2390	3020
2045-46	510	795	1640	1640	1795	2525	3185
2046-47	535	840	1730	1730	1890	2660	3360
2047-48	565	885	1825	1825	1995	2810	3545

Table 7-6 : Toll Rates for Return Journey @ Km 184.000

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2024-25	170	265	550	550	600	850	1065
2025-26	175	280	580	580	630	895	1115
2026-27	185	295	605	605	665	940	1175
2027-28	195	310	640	640	700	985	1235
2028-29	205	325	670	670	735	1040	1295
2029-30	215	340	705	705	770	1090	1365
2030-31	225	360	740	740	810	1145	1435
2031-32	240	375	780	780	855	1205	1510
2032-33	250	395	820	820	895	1270	1585
2033-34	265	415	865	865	945	1335	1670

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2034-35	280	440	910	910	995	1405	1760
2035-36	290	465	955	955	1045	1480	1850
2036-37	310	485	1010	1010	1100	1560	1950
2037-38	325	515	1060	1060	1160	1640	2050
2038-39	340	540	1120	1120	1220	1730	2160
2039-40	360	570	1180	1180	1290	1820	2275
2040-41	380	600	1240	1240	1355	1920	2400
2041-42	400	630	1310	1310	1430	2025	2530
2042-43	420	665	1380	1380	1510	2135	2665
2043-44	445	705	1455	1455	1590	2250	2810
2044-45	470	740	1535	1535	1675	2370	2965
2045-46	495	780	1620	1620	1770	2500	3130
2046-47	520	825	1705	1705	1865	2640	3300
2047-48	550	870	1800	1800	1970	2785	3480

Table 7-7 : Toll Rates for Return journey @ Km 243.000

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2024-25	150	245	510	510	555	800	970
2025-26	160	255	535	535	585	840	1020
2026-27	165	270	560	560	610	880	1070
2027-28	175	280	590	590	645	925	1125
2028-29	185	295	620	620	675	970	1185
2029-30	195	310	650	650	710	1020	1245
2030-31	200	325	685	685	745	1075	1310
2031-32	215	345	720	720	785	1130	1375
2032-33	225	360	760	760	825	1190	1445
2033-34	235	380	795	795	870	1250	1520
2034-35	250	400	840	840	915	1315	1600
2035-36	260	420	885	885	965	1385	1685
2036-37	275	445	930	930	1015	1460	1775
2037-38	290	465	980	980	1070	1535	1870
2038-39	305	490	1030	1030	1125	1615	1970
2039-40	320	520	1085	1085	1185	1705	2075
2040-41	340	545	1145	1145	1250	1795	2185
2041-42	355	575	1205	1205	1315	1890	2305
2042-43	375	605	1270	1270	1385	1995	2430
2043-44	395	640	1340	1340	1465	2100	2560
2044-45	420	675	1415	1415	1540	2215	2700
2045-46	440	710	1490	1490	1625	2340	2845
2046-47	465	750	1575	1575	1715	2465	3005
2047-48	490	790	1660	1660	1810	2600	3170

Table 7-8 : Toll Rates for Monthly Pass Local Car Ticket @ all Toll Plaza

Year	Car	Minibus /LCV
2024-25	340	340
2025-26	355	355
2026-27	375	375
2027-28	390	390
2028-29	410	410
2029-30	435	435
2030-31	455	455
2031-32	480	480
2032-33	505	505
2033-34	530	530
2034-35	560	560
2035-36	585	585
2036-37	620	620
2037-38	650	650
2038-39	685	685
2039-40	720	720
2040-41	760	760
2041-42	800	800
2042-43	845	845
2043-44	890	890
2044-45	940	940
2045-46	990	990
2046-47	1045	1045
2047-48	1105	1105

Table 7-9 : Toll Rates for Monthly Pass @ Km 119.000

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2024-25	3825	6000	12355	12355	13520	19020	24005
2025-26	4020	6310	12985	12985	14210	19990	25235
2026-27	4230	6635	13655	13655	14940	21015	26530
2027-28	4445	6975	14355	14355	15710	22100	27900
2028-29	4675	7335	15095	15095	16515	23235	29330
2029-30	4915	7710	15870	15870	17365	24425	30840
2030-31	5170	8110	16690	16690	18265	25690	32430
2031-32	5435	8530	17555	17555	19210	27020	34115
2032-33	5720	8975	18470	18470	20210	28430	35890
2033-34	6020	9440	19435	19435	21270	29915	37770
2034-35	6335	9940	20455	20455	22385	31490	39755
2035-36	6670	10465	21535	21535	23565	33150	41855
2036-37	7025	11020	22675	22675	24815	34905	44070
2037-38	7400	11605	23885	23885	26135	36765	46415
2038-39	7795	12225	25160	25160	27535	38725	48895
2039-40	8210	12880	26510	26510	29010	40805	51520
2040-41	8655	13575	27935	27935	30575	43000	54295
2041-42	9125	14310	29445	29445	32225	45325	57230
2042-43	9620	15085	31045	31045	33975	47785	60335

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2043-44	10140	15905	32735	32735	35825	50390	63625
2044-45	10695	16775	34525	34525	37785	53140	67100
2045-46	11285	17695	36420	36420	39855	56055	70780
2046-47	11905	18670	38425	38425	42050	59140	74675
2047-48	12560	19700	40545	40545	44370	62405	78800

Table 7-10 : Toll Rates for Monthly Pass @ Km 184.000

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2024-25	3730	5905	12215	12215	13355	18895	23610
2025-26	3920	6205	12835	12835	14035	19855	24815
2026-27	4120	6520	13490	13490	14750	20870	26085
2027-28	4335	6855	14185	14185	15510	21940	27425
2028-29	4555	7205	14910	14910	16300	23065	28830
2029-30	4790	7575	15675	15675	17140	24250	30310
2030-31	5035	7970	16485	16485	18025	25500	31870
2031-32	5300	8380	17340	17340	18955	26820	33525
2032-33	5575	8815	18240	18240	19945	28215	35270
2033-34	5865	9280	19195	19195	20985	29690	37110
2034-35	6175	9765	20200	20200	22085	31245	39060
2035-36	6500	10280	21265	21265	23250	32895	41120
2036-37	6845	10825	22390	22390	24485	34635	43295
2037-38	7205	11400	23585	23585	25785	36475	45595
2038-39	7590	12005	24840	24840	27160	38420	48030
2039-40	8000	12650	26175	26175	28615	40480	50605
2040-41	8430	13330	27580	27580	30155	42660	53325
2041-42	8885	14050	29070	29070	31785	44965	56205
2042-43	9365	14815	30645	30645	33505	47400	59255
2043-44	9875	15620	32315	32315	35330	49980	62480
2044-45	10415	16475	34080	34080	37260	52710	65890
2045-46	10985	17375	35945	35945	39300	55595	69505
2046-47	11590	18330	37925	37925	41465	58655	73325
2047-48	12230	19340	40015	40015	43750	61890	77370

Table 7-11 : Toll Rates for Monthly Pass @ Km 243.000

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2024-25	3340	5395	11305	11305	12330	17725	21580
2025-26	3510	5665	11875	11875	12950	18620	22665
2026-27	3685	5955	12475	12475	13605	19560	23815
2027-28	3870	6255	13105	13105	14300	20555	25020
2028-29	4070	6575	13775	13775	15025	21600	26300
2029-30	4280	6910	14480	14480	15795	22710	27645
2030-31	4500	7265	15225	15225	16610	23875	29065
2031-32	4730	7640	16010	16010	17465	25110	30565
2032-33	4975	8040	16840	16840	18375	26410	32150
2033-34	5235	8455	17720	17720	19330	27785	33825
2034-35	5510	8900	18645	18645	20340	29240	35600

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2035-36	5800	9365	19625	19625	21410	30780	37470
2036-37	6105	9860	20665	20665	22540	32405	39445
2037-38	6430	10385	21760	21760	23735	34120	41540
2038-39	6770	10935	22915	22915	25000	35935	43750
2039-40	7135	11520	24140	24140	26335	37860	46090
2040-41	7515	12140	25435	25435	27750	39890	48560
2041-42	7920	12795	26810	26810	29245	42040	51180
2042-43	8350	13485	28260	28260	30825	44315	53945
2043-44	8800	14220	29790	29790	32500	46720	56875
2044-45	9280	14995	31415	31415	34270	49265	59975
2045-46	9790	15815	33135	33135	36145	51960	63255
2046-47	10325	16680	34950	34950	38130	54810	66725

7.4 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under ***Optimistic***, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

7.5 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under all scenarios at each of the toll plaza up to 2047-48 starting from the year 2024-25 are shown in tables below.

Table 7-12 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Year	TP-1	TP2	TP3	Total
2024-25	25.98	65.11	63.09	**154.19**
2025-26	29.27	73.45	70.95	**173.67**
2026-27	32.94	82.22	79.21	**194.38**
2027-28	37.54	92.57	89.22	**219.33**
2028-29	42.01	103.11	99.94	**245.06**
2029-30	47.20	116.17	112.69	**276.06**
2030-31	53.26	129.23	125.00	**307.49**
2031-32	59.94	145.36	140.26	**345.57**
2032-33	66.55	160.82	156.52	**383.89**
2033-34	74.88	180.28	174.25	**429.41**
2034-35	84.24	201.76	195.50	**481.50**

Year	TP-1	TP2	TP3	Total
2035-36	94.58	225.09	218.74	**538.40**
2036-37	105.57	250.89	243.43	**599.89**
2037-38	118.50	279.36	272.21	**670.07**
2038-39	133.20	312.96	303.59	**749.75**
2039-40	149.54	349.77	339.46	**838.77**
2040-41	167.65	390.07	378.31	**936.04**
2041-42	188.38	434.40	423.15	**1045.92**
2042-43	211.93	485.27	472.25	**1169.45**
2043-44	238.05	544.80	529.98	**1312.83**
2044-45	266.71	606.84	593.18	**1466.72**
2045-46	300.12	678.63	660.54	**1639.29**
2046-47	334.67	757.19	736.78	**1828.64**
2047-48	375.39	842.00	820.70	**2038.08**

Table 7-13 : Toll Revenue Pessimistic Scenario

(Rs. Crores)

Year	TP-1	TP2	TP3	Total
2024-25	25.98	65.11	63.09	**154.19**
2025-26	29.13	73.11	70.63	**172.86**
2026-27	32.59	81.45	78.48	**192.53**
2027-28	36.91	91.24	87.99	**216.14**
2028-29	41.12	101.15	98.10	**240.37**
2029-30	45.99	113.45	110.14	**269.58**
2030-31	51.65	125.66	121.52	**298.83**
2031-32	57.90	140.70	135.76	**334.36**
2032-33	64.02	154.98	150.75	**369.76**
2033-34	71.73	172.93	167.03	**411.69**
2034-35	80.26	192.60	186.56	**459.41**

Year	TP-1	TP2	TP3	Total
2035-36	89.78	213.86	207.76	**511.40**
2036-37	99.68	237.27	230.15	**567.10**
2037-38	111.28	262.91	256.21	**630.39**
2038-39	124.43	293.16	284.42	**702.01**
2039-40	139.09	326.09	316.58	**781.75**
2040-41	155.22	361.87	351.08	**868.17**
2041-42	173.62	401.01	390.85	**965.48**
2042-43	194.40	445.89	434.20	**1074.48**
2043-44	217.29	498.20	484.98	**1200.47**
2044-45	242.20	552.30	540.24	**1334.73**
2045-46	271.12	614.86	598.65	**1484.63**
2046-47	300.90	682.87	664.63	**1648.40**
2047-48	335.97	755.74	736.74	**1828.45**

Table 7-14 : Toll Revenue Most Likely Scenario

(Rs. Crores)

Year	TP-1	TP2	TP3	Total
2024-25	25.98	65.11	63.09	**154.19**
2025-26	29.21	73.26	70.80	**173.26**
2026-27	32.77	81.82	78.83	**193.43**
2027-28	37.23	91.86	88.62	**217.71**
2028-29	41.61	102.11	99.01	**242.73**
2029-30	46.62	114.79	111.40	**272.81**
2030-31	52.52	127.43	123.28	**303.23**
2031-32	59.03	142.98	138.02	**340.03**
2032-33	65.38	157.85	153.60	**376.84**
2033-34	73.39	176.52	170.57	**420.48**
2034-35	82.34	197.06	191.00	**470.40**

Year	TP-1	TP2	TP3	Total
2035-36	92.23	219.31	213.22	**524.75**
2036-37	102.58	243.88	236.80	**583.26**
2037-38	114.90	270.89	264.14	**649.93**
2038-39	128.91	302.75	293.87	**725.53**
2039-40	144.46	337.56	327.89	**809.91**
2040-41	161.59	375.54	364.52	**901.65**
2041-42	181.07	417.25	406.67	**1004.98**
2042-43	203.21	465.01	452.93	**1121.15**
2043-44	227.66	520.80	507.17	**1255.64**
2044-45	254.34	578.76	566.28	**1399.38**
2045-46	285.34	645.79	629.05	**1560.18**
2046-47	317.33	718.93	699.99	**1736.25**
2047-48	355.11	797.51	777.82	**1930.45**

CHAPTER 8

CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Goa/ Karnataka to Kundapur section of NH-17 in state of Karnataka from km 93.70.000 to km 183.300 is four lane. The road is in sound condition and serves healthy traffic volumes. Project corridor is a part of the busy and prominent national highway NH-17 which is main link for traffic on west coast to from Rajasthan, Gujarat, Maharashtra to Kerala. There are large number of townships, industrial corridors and other business establishment coming up along project corridor. As Indian economy is poised to grow at 6%+ post COVID-19, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give positive impact to traffic flow on project. The following can be considered as major outcomes of the study

a) There is good amount of tollable traffic running on project

b) Project corridor has potential to witness traffic growth @ 6-8% annually in near future due to various development in area and overall development of economy

c) Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road

Based on above it can be considered a stable healthy project from traffic and revenue point of view.

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KISHANGARH TO GULABPURA SECTION OF NH-79 &NH-79A IN THE STATE OF RAJASTHAN (LENGTH 90 KM)







TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

OCTOBER 2024

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GMD CONSULTANTS ★ NAVI MUMBAI ★

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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic	**NHAI**	-	National Highway Authority of India
BOT	-	Build Operate Transfer	**NHDP**	-	National Highways Development Project
CAGR	-	Compound Annual Growth Rate	**NSDP**	-	Net State Domestic Product
CTV	-	Classified traffic volume	**O&M**	-	Operation & Maintenance
DBFOT	-	Design, Build, Finance, Operate & Transfer	**PCDP**	-	Per Capita Domestic Product
EME	-	Earth Moving Equipment	**PCI**	-	Per Capita Income
GDP	-	Gross Domestic Product	**PCU**	-	Passenger Car Unit
GSDP	-	Gross State Domestic Product	**PSC**	-	Pre-stressed Concrete
HCM	-	Heavy Construction Machinery	**RCC**	-	Reinforced cement concrete
HCV	-	Heavy Commercial Vehicle	**RHS**	-	Right Hand Side
HTMS	-	Highway Traffic Management System	**SH**	-	State Highway
IRC	-	Indian Road Congress	**TP**	-	Toll Plaza
IRR	-	Internal Rate of Return	**WPI**	-	Wholesale Price Index
LCV	-	Light Commercial Vehicle	**SIR**	-	Special Investment Region
LHS	-	Left Hand Side	**c.**	-	Circa
LGV	-	Light Goods Vehicle	**ROB**	-	Railway Over Bridge
MAV	-	Multi Axle Vehicle	**MDR**	-	Major District Road
MORTH	-	Ministry of Road Transport and Highways	**ODR**	-	Other District Road
NH	-	National Highway	**CA**	-	Concession Agreement
PCC	-	Plain Cement Concrete	**RMT**	-	Running Meter
CR	-	Coarse Rubble			

CHAPTER 1

INTRODUCTION

1.1 Background

The Government of India through National Highway Authority of India (NHAI) embarked upon a program to enhance the traffic capacity and safety for efficient transportation of goods as well as passenger traffic on National Highway Sections under NHDP Phase V. Under Phase V NHAI has planned to convert 6,500 km of existing 4-lane National Highways into 6-lane National Highway. Sections envisaged under 6-laning comprise the Golden Quadrilateral section (5,700 km) and some other sections which are 800 km in length.

The project under consideration, Six Laning of **Kishangarh** to **Gulabpura** section of NH-79A & NH-79 (length 90.00km) is one such road project NHAI intended to implement on a BOT basis in the DBFOT format. *M/s Kishangarh Gulabpura Tollway Ltd.* (Concessionaire) has been awarded the Project for a concession period of 20 years starting from 21st February 2018. The Project has been commissioned and is currently in the operation / maintenance phase. Six laning of project has also been completed in July 2022.

Length of project road is 90.00 Kms. The project road is section of NH-79A & 79 A, which connects Ajmer to Ghat Bilod. Project section of NH-79 passes through the district of Bhiwara and Ajmer.

Project road alignment passes through the small towns of Shreenagar, Nasirabad, Jharwasa, Bandanwara and Bijainagar (Vijay Nagar). The following figure shows alignment of the project road section from Kishangarh to Gulabpura.

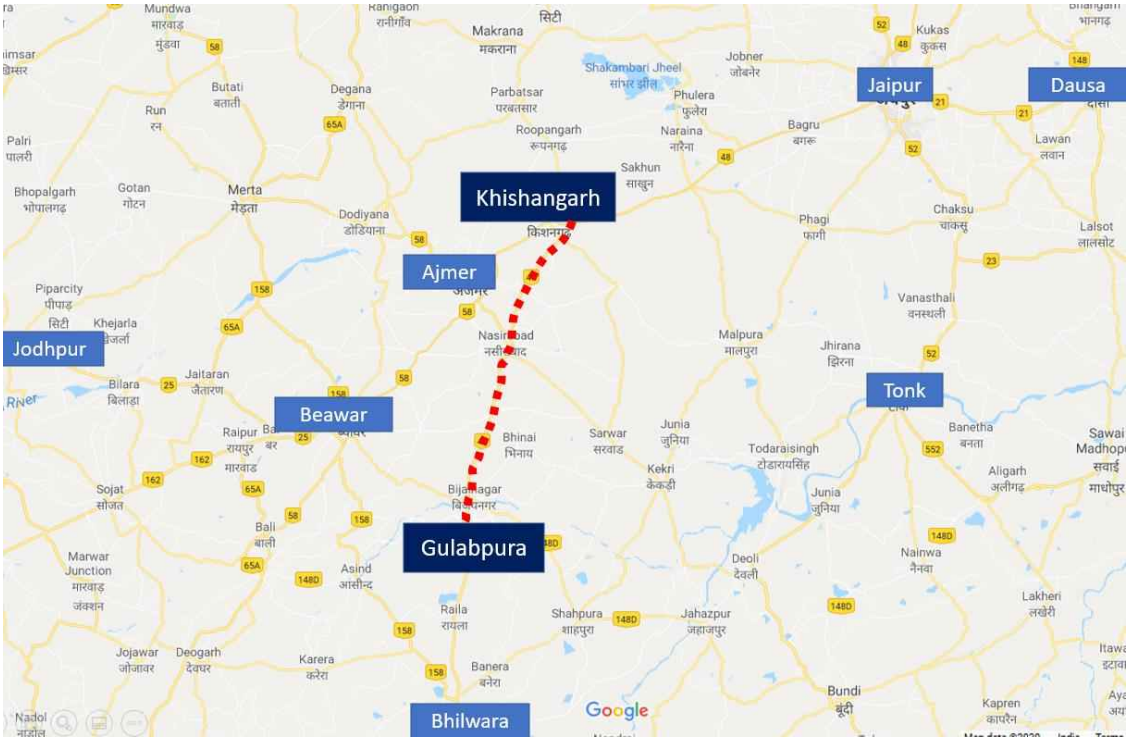


Figure 1-1 : Alignment of Project Stretch

1.2 Objective of the Study

M/s IRB INFRASTRUCTURE TRUST has engaged *GMD Consultants* to assess the future traffic and toll potential of project along with related operation & maintenance expenditure involved.
This report named as **"Traffic Study & *Toll Revenue Projection Report*"** mainly focuses on traffic and revenue aspects of the project. Other parameters like competing road, area developments etc. have been considered from a traffic development point of view.

1.2.1 Scope of Services

The broad scope of work covered in the assignment is as follows.

a) Analysis of Traffic Growth
b) Toll Rate Growth
c) Revenue Forecasting

The Concessionaire has provided basic traffic data and other project details on the basis of which the above analysis has been carried out.

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

National Highway 79 (NH 79) is an important link for traffic connecting Delhi, Jaipur to Udaipur, Chittorgarh and down south. The project road is the section of the former NH-79A &NH-79 which has now been re-designated as NH-48. The project road section takes off at Kishangarh and ends at Gulabpura, both in the state of Rajasthan. The NH-79A was the section from Kishangarh to Nasirabad and part of NH-79 (Ajmer to Ghata Billod) was the remaining section from Nasirabad to Gulabpura

It is one of the major north-south road connectivity for the traffic from northern states of Haryana, Punjab and Delhi to Industrial and tourist areas of Rajasthan like Jaipur, Chittorgarh, Udaipur and then to Dahod, Ratlam and other parts of Madhya Pradesh.

After renumbering of all national highways by National Highway Authority of India in 2010, the current NH 48 was formed by merging the old NH 8 (Delhi-Mumbai section) and NH 4 (Mumbai-Chennai). National Highway 48 starts at Delhi and terminates at Chennai and goes through Jaipur, Udaipur, Vadodara, Mumbai, Pune and Bengaluru, traversing through six states of India. It has a total length of 2807 km (1744 miles)

2.2 Project Stretch Description

Section of NH-79 from Kishangarh to Gulabpura is part of major transportation link in the area connecting industrial / tourist cities of Jaipur-, Bhilwara, Chittorgarh and Udaipur. Project stretch would be faster connectivity to Udaipur from Jaipur once six laning is complete.

Major mining industries of marble, Zink, felspar, quarts of Udaipur and textile industry of Bhiwara provide are major contributor of commercial traffic on project corridor. Additionally, Jaipur, Ajmer, Udaipur, Chittorgarh and Bhilwara major tourist centers of India. This adds substantial value for passenger traffic on the project corridor section.

Like other parts of India rapid ribbon development is happening around these cities on project highway. This also contributes to sustainable traffic growth.

There is one operative toll plaza at project stretch at Bandanwara at km 61.020. The following figure shows project alignment and toll plaza locations.

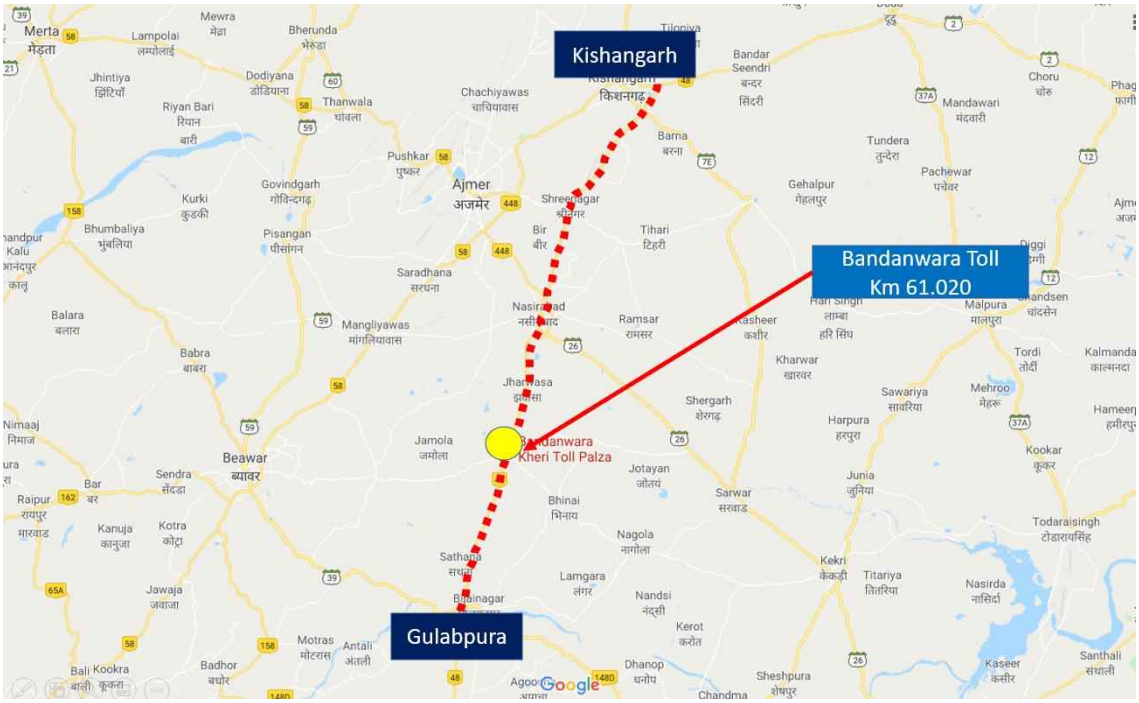


Figure 2-1 : Project Alignment with Toll Plaza

2.3 Project Corridor Illustration

Six laning of project stretch is in progress and will be completed soon. The following photographs illustrate the project section along the corridor.



Figure 2-2 : Photographs showing Project Corridor

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from a client for a project.

- Classified traffic volume counts at toll plaza location on Kishangarh – Gulabpura section of NH-79 for year 2017-18, 2018-19, 2019-20, 2020-21 ,2021-22,2022-23, April 2023 to November 2023 and traffic data from April 2024 to July 2024.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project.
- Establish base year traffic.
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1 below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	Km 61.020 Toll Plaza at Bandanwara	AADT for Year 2018-19, 2019-2020 ,2020-2021, 2021-2022, 2022-2023, Eight	For Year 2018-19, 2019-2020 ,2020-2021, 2021-2022, 2022-2023,	For Year 2018-19, 2019-2020 ,2020-2021, 2021-2022, 2022-2023,	For Year 2018-19, 2019-2020 ,2020-2021, 2021-2022, 2022-2023, Eight	For Year 2018-19, 2019-2020 ,2020-2021, 2021-2022, 2022-2023, Eight

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
		month from April 2023 to November 2023 & Four month from April 2024 to July 2024	Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	month from April 2023 to November 2023 & Four month from April 2024 to July 2024	month from April 2023 to November 2023 & Four month from April 2024 to July 2024

3.2 Classified traffic volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations based on monthly data shared with NHAI.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in the table below.

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since the project highway is currently under toll operation, the data collected corresponds to the category of tollable vehicles. The following are the types of vehicles as per concession agreement.

- Car / Jeep / van
- Min Bus /LCV
- Truck / Bus
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of the report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data for the years 2019-20 ,2020-21, 2021-22, 2022-23, April 2023 to November 2023 and traffic data from April 2024 to July 2024.
Since the traffic data available for this update is for only four months, from April 2024 to July 2024, it may not represent the whole year traffic. Hence a seasonality factor for balance part of year has been applied to average traffic of current four months to arrive at Annual Average Daily Traffic of base year 2024-25. Same corrected traffic is used for future projections and revenue calculations. The following table shows historical traffic on project stretch and derived Annual Average Daily Traffic (AADT) for year 2024-25.

Table 3-3 : Traffic Data at Bandanwara Toll Plaza at Km 61.020

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24	Annual Average Daily Traffic (Nos.)- 2024-25
1	Car	2572	448	3827	5400	6428	6747
2	Minibus /LCV	1009	326	522	736	868	758
3	Bus	376	38	337	486	624	215
4	Truck	1511	264	1756	2375	2803	2538
5	3-Axle Commercial vehicle	2095	318	1805	2045	2188	1914
6	Multi axle	4421	748	4141	4709	5396	5019

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24	Annual Average Daily Traffic (Nos.)- 2024-25
7	Oversized Vehicle	19	70	319	296	463	504
Total		**12003**	**2212**	**12707**	**16046**	**18770**	**17695**

3.4 Data Analysis

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in "IRC-64-1990: Guidelines for Capacity of Roads in Rural areas". The adopted passenger car unit values (PCU) are presented in ***Table 3-4***.

Table 3-4 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-5 : Traffic in PCU at Project Stretch Base Year 2019-20, 2020-21, 2021-22, 2022-23,2023-24 & 2024-25

Toll Plaza Location (Km)	Year	Traffic No	PCU	PCU Index
Bandanwara 61.020	**2019-20**	12003	36011	3.00
	2020-21	2212	6478	2.93
	2021-22	12707	36374	2.86
	2022-23	16046	43739	2.73
	2023-24	18770	50940	2.71
	2024-25	17695	46739	2.64

It can be observed from above that project traffic has PCU index is near by 3 which is an indicator of very high proportion of commercial traffic in traffic mix in project corridor. The following figure illustrates variation of PCU index at four toll plaza locations.

3.4.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.

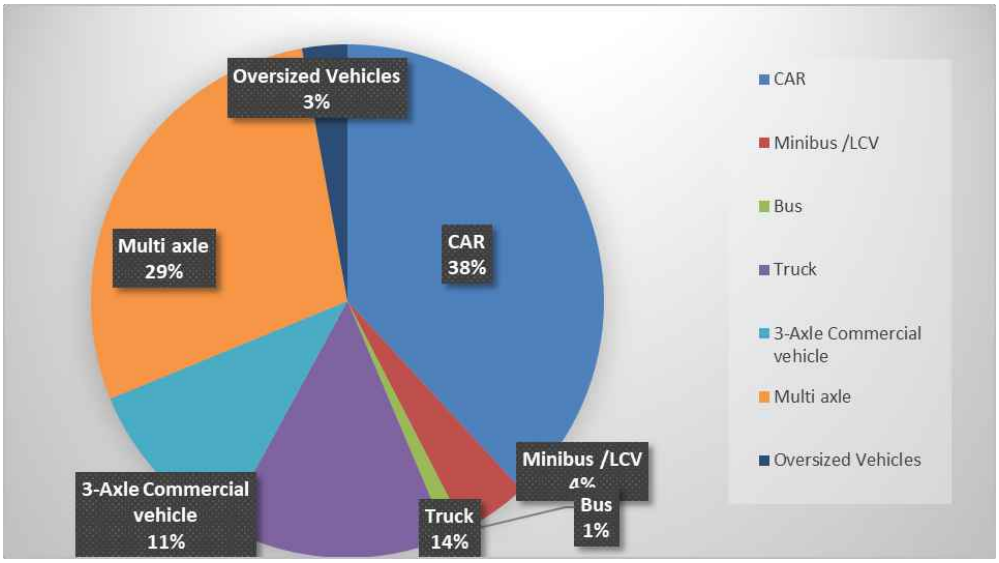


Figure 3-1 : Model Split of Tollable Vehicle

It is observed that car traffic forms about 38% of total traffic at toll plaza locations while multi axle commercial vehicles are about 43% of total traffic. Truck / Bus and LCV share about 15% and 4% of traffic volume respectively.

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

The following table provides numbers of vehicles falling in each of above category on base year 2024-25

Table 3-6 : Journey Type Bifurcation of Traffic at Bandanwara TP KM 61.020

Sr. No	Type	Traffic Volume (Nos.) 2024-25
1	Single Journey	13528
2	Return Journey	3509
3	Local Commercial Single Journey	641
4	Monthly Pass Local	12
5	Monthly Pass	5

Most dominant part of the above is the single journey type followed by return journey at project stretch. Monthly pass commuters are a very low fraction of the total traffic on the project corridor.

The single journey component in total traffic numbers is as high as 76%. Return journey component is 20%. The number of Local Commercial Single Journey is 4% and Monthly Pass Local 0% at Bandanwara toll plaza.

It is observed that the project corridor demonstrates pattern of single journey dominated mix of traffic at stretch which is typical of major national highways with high component of long-distance traffic.

3.5 Secondary Data Collection

There are several other factors which have a substantial impact on traffic patterns and growth on any project corridor. The following are some of such important factors.

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on the project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data
   a) GDP
   b) NSDP
   c) Population Growth
   d) Per Capita Income growth
   e) Industrial Growth
   f) Special Industry Potential
   g) Regional and National development vision / plan
   h) Any other relevant data
3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

Highway corridors behave like integrated circuit networks and more often than not every road is connected to various networks having different origins and destinations. Traffic running on these networks behaves like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network.

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc,
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Competing / Alternate route

Project stretch has toll application history from last few years, and it can be assumed that project traffic is settled. At the local level there is no potential competing route bypassing toll plaza between. At regional level, there can be two alternates for Udaipur traffic after Kishangarh. One via project road (Kishangarh – Bhiwara- Chittorgarh- Udaipur) and one via Ajmer, Beawer and Rajsamand.
The following maps show these routes in relation to project stretch at regional level.



Figure 4-1 : Alternate route at regional level.

It can be observed that the project highway forms one of the main spines of the corridor between Kishangarh / Jaipur and Chittorgarh. Traffic on project road is now settled and it can be assumed as dedicated traffic on project road for logistic obligations.

At regional level for Udaipur traffic alternate route is faster and traffic is already using this alternate. With six laning now nearing completion, the project stretch would become slightly more attractive due to the improved level of service. In such a case further diversion of traffic from the project road is not envisaged.

The following table provides summary of analysis of alternate route/ roads discussed above.

Table 4-1 : Competing Roads Details

Sr. No	Route Details	Designation	Length (Km)	Avg. Speed (KMPH)	Time Taken (Min)	Observations
Regional Level						
1	Jaipur – Ajmer- Udaipur	Alternate Route	395	61	6 Hr 23 Min	At present alternate route via Ajmer is a bit faster but after completion of six laning level of service would increase at project road as well
	Jaipur- Bhilwara - Chittorgarh- Udaipur	Project Road	398	51	6 Hr 58 Min	

It may be noted that since the project highway has already been commissioned and has a tolling history, the current traffic traversing the project corridor already factors in traffic diversion (if any) that may have taken place. Further after completion of six laning, level of service would improve on

project corridor, and this would create favorable conditions for traffic. Under these circumstances it is not envisaged that commercial or passenger traffic would switch to alternate roads from the project road. It is expected that there would be some additional traffic on project corridor once six lane is completed due to improvement in level of service.

CHAPTER 5

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future patterns of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor Kishangarh to Gulabpur section of NH-79 has been done taking the above factors into consideration. "**IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**" is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable for projects of short durations say 5-10 years, however for long term projections it would be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**.

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different types of vehicles. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway typically depends on a number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, in order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

$Log (P) = k \times Log (EI) + A$

Where,

P = *Number of Vehicles (Mode wise)*

EI = *Economic Indicator*

A = *Regression constant*

k = *Elasticity coefficient (Regression coefficient)*

The elasticity for cars and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

The project corridor spreads across the state of Rajasthan. Toll plaza at Bandanwara is in the state of Rajasthan but it has influence of Gujarat also. For elasticity calculations, working data from Rajasthan and Gujarat has been analyzed.

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Rajasthan State.

Table 5-1 : Per Capita Income Vs Car Rajasthan

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	57192	591069	4.76	5.77		
2013	58441	659542	4.77	5.82	2%	
2014	61053	733916	4.79	5.87	4%	
2015	64496	814079	4.81	5.91	6%	
2016	68565	899307	4.84	5.95	6%	
2017	71394	988391	4.85	5.99	4%	4.55%

Regression analysis of same is given in figure below.

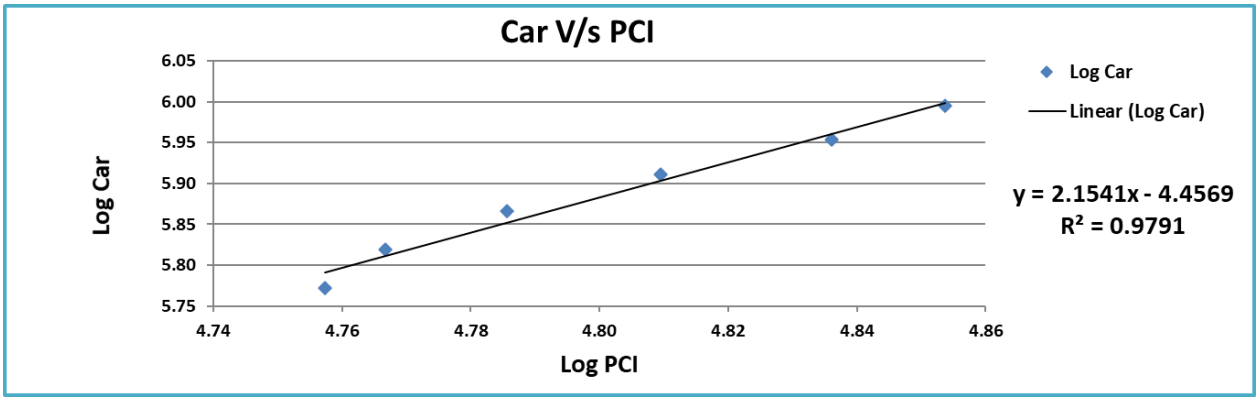


Figure 5-1 : Regression and Elasticity PCI vs. Car – Extrapolation Rajasthan

Table 5-2 : Population Vs Bus Rajasthan

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	68548437	83345	7.84	4.92		
2013	69783885	88616	7.84	4.95	2%	
2014	71016445	93892	7.85	4.97	2%	
2015	72245688	97650	7.86	4.99	2%	
2016	73471198	102818	7.87	5.01	2%	
2017	74692571	108680	7.87	5.04	2%	1.73%

Regression analysis of same is given in figure below.

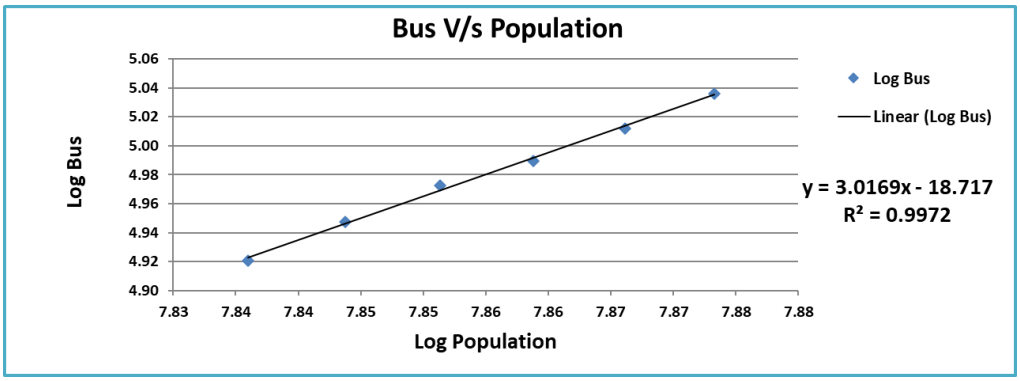


Figure 5-2 : Regression and Elasticity Population vs. Bus – Extrapolation Rajasthan

The elasticity of goods traffic has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-3 : LCV Traffic Vs NSDP Rajasthan

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth
2012	395331	69509	5.60	4.84		
2013	409802	76396	5.61	4.88	4%	
2014	434292	33379	5.64	4.52	6%	
2015	465408	91787	5.67	4.96	7%	
2016	501922	99763	5.70	5.00	8%	6.16%

The following figure depicts regression analysis and extrapolation.

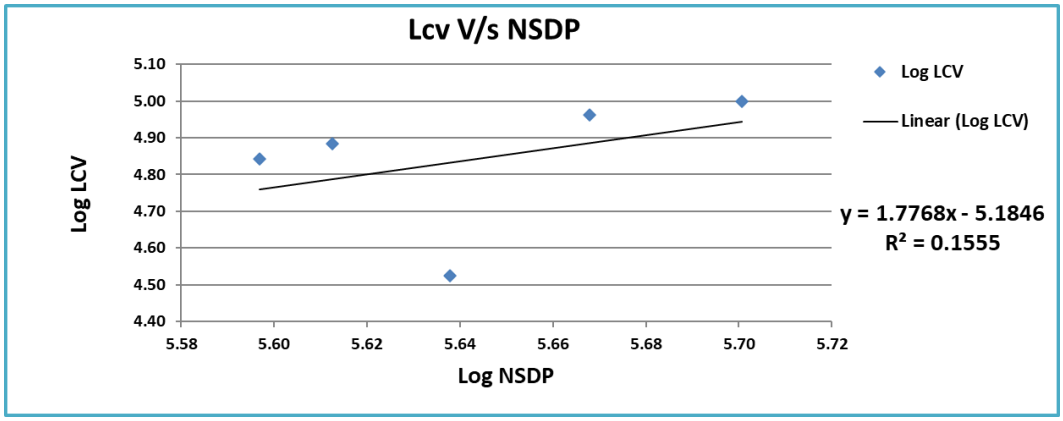


Figure 5-3 : Regression and Elasticity NSDP vs. LCV Traffic - extrapolation Rajasthan.

The following figure depicts regression analysis and extrapolation.

Table 5-4 : Goods Traffic Vs NSDP Rajasthan

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth
2012	395331	362028	5.60	5.56		
2013	409802	401983	5.61	5.60	4%	
2014	434292	434379	5.64	5.64	6%	
2015	465408	472365	5.67	5.67	7%	
2016	501922	517604	5.70	5.71	8%	
2017	530172	561158	5.72	5.75	6%	6.06%

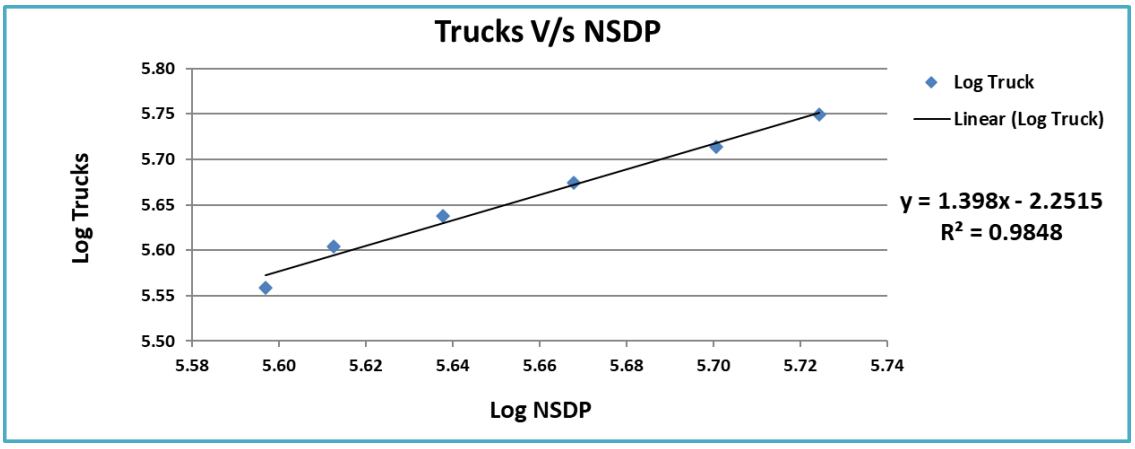


Figure 5-4 : Regression and Elasticity NSDP vs. Goods Traffic - extrapolation Rajasthan.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-5 : Summary Regression Analysis Rajasthan

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Rajasthan	Car/Jeep	PCI	y = 2.1541x + -4.4569	R² = 0.9791	2.1541	4.55%	9.79%	Good Regression
	Bus	Population	y = 3.0169x - -18.7174	R² = 0.9972	3.0169	1.73%	5.22%	Good Regression
	LCV	NSDP	y = 1.7768x - -5.1846	R² = 0.1555	1.7768	6.16%	10.95%	Poor Regression
	Truck	NSDP	y = 1.398x - -2.2515	R² = 0.9848	1.3980	6.06%	8.46%	Good Regression

Table 5-6 : Per Capita Income Vs Car Gujarat

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	87481	1411898	4.94	6.15		
2013	96683	1602129	4.99	6.20	11%	
2014	102589	1771298	5.01	6.25	6%	
2015	111370	2008748	5.05	6.30	9%	
2016	120683	2260084	5.08	6.35	8%	
2017	129738	2527537	5.11	6.40	8%	8.21%

Regression analysis of same is given in figure below.

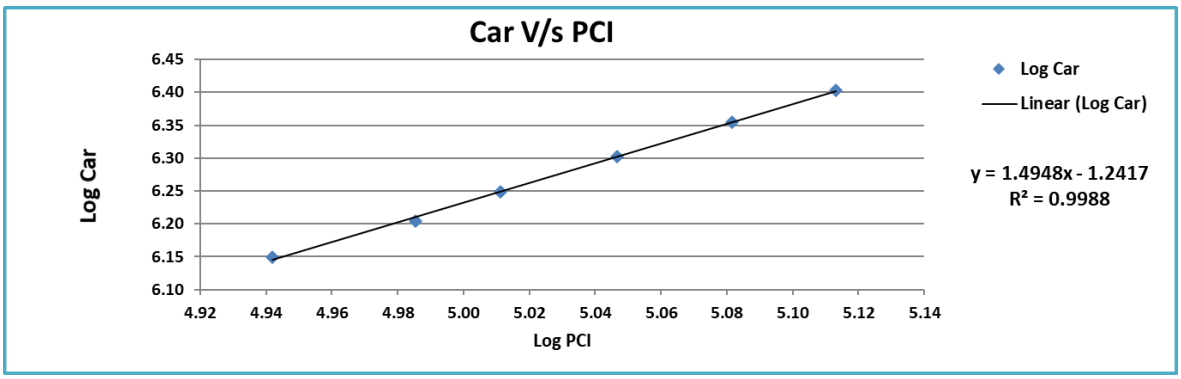


Figure 5-5 : Regression and Elasticity PCI vs. Car – Extrapolation Gujarat

Table 5-7 : Population Vs Bus Gujarat

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	60439692	67546	7.78	4.83		
2013	61563037	70615	7.79	4.85	2%	
2014	62684375	72998	7.80	4.86	2%	
2015	63803304	76435	7.80	4.88	2%	
2016	64919427	82734	7.81	4.92	2%	
2017	66032362	74855	7.82	4.87	2%	1.79%

Regression analysis of same is given in figure below.

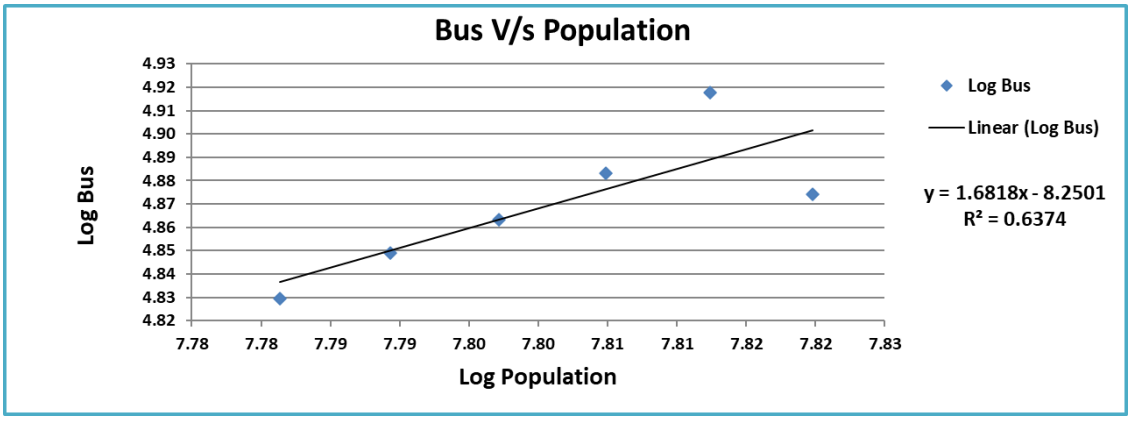


Figure 5-6 : Regression and Elasticity Population vs. Bus – Extrapolation Gujarat

The elasticity of goods traffic has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-8 : LCV Traffic Vs NSDP Gujarat

Year	NSDP	LCV	Log NSDP	Log LCV	NSDP Growth	Average Growth
2012	532809	448958	5.73	5.65		
2013	596659	499277	5.78	5.70	12%	
2014	641489	542918	5.81	5.73	8%	
2015	705629	589984	5.85	5.77	10%	
2016	774775	633599	5.89	5.80	10%	9.82%

The following figure depicts regression analysis and extrapolation.

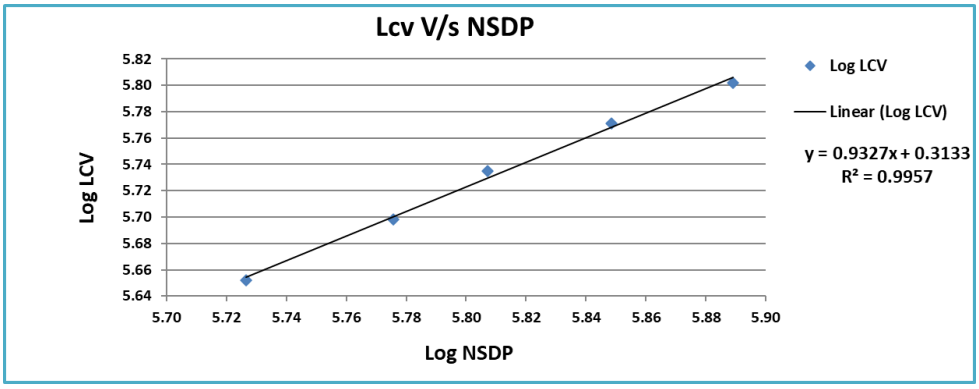


Figure 5-7 : Regression and Elasticity NSDP vs. LCV Traffic - extrapolation Gujarat.

The following figure depicts regression analysis and extrapolation.

Table 5-9 : Goods Traffic Vs NSDP Gujarat

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth
2012	532809	301533	5.73	5.48		
2013	596659	319207	5.78	5.50	12%	
2014	641489	332185	5.81	5.52	8%	
2015	705629	352225	5.85	5.55	10%	
2016	774775	375265	5.89	5.57	10%	
2017	843930	396061	5.93	5.60	9%	9.64%

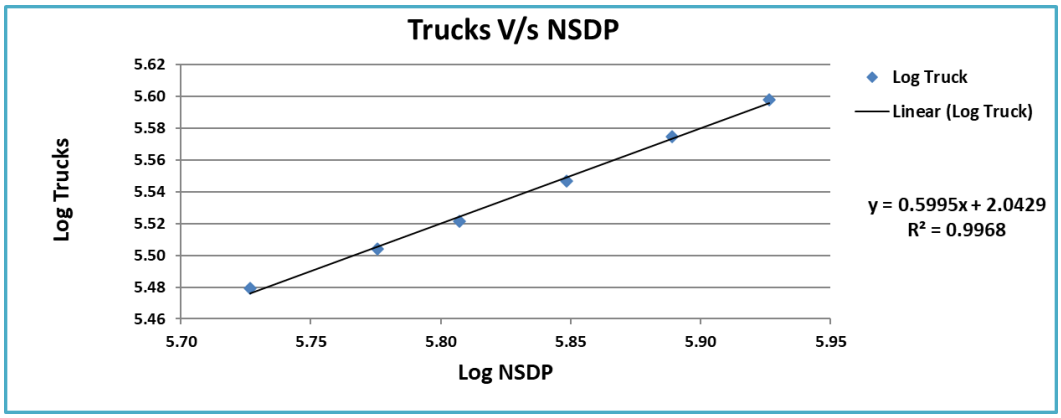


Figure 5-8 : Regression and Elasticity NSDP vs. Goods Traffic - extrapolation Gujarat.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-10 : Summary Regression Analysis Gujarat

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Gujarat	Car/Jeep	PCI	y = 1.4948x + -1.2417	R^2 = 0.9988	1.4948	8.21%	12.27%	Good Regression
	Bus	Population	y = 1.6818x - -8.2501	R^2 = 0.6374	1.6818	1.79%	3.00%	Fair Regression
	LCV	NSDP	y = 0.9327x - 0.3133	R^2 = 0.9957	0.9327	9.82%	9.16%	Good Regression
	Truck	NSDP	y = 0.5995x - 2.0429	R^2 = 0.9968	0.5995	9.64%	5.78%	Good Regression

The economic model for predicting growth is a good tool, however other local, regional, and national factors should also be considered before finalizing growth factors. Considering factors such as proposed developments and other influencing economic factors, moderated growth should be considered. These factors are discussed in subsequent sections.

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trends of growth. Project stretch of Kishangarh to Gulabpura is under tolling operation with current concessionaire and has two years of tolling history from 2018-19. As traffic data is available with the project concessionaire of year two years, we do not have sufficient data points to be able to establish a reliable past trend of traffic growth. A minimum of about 5 -6 years' traffic data is required for establishing a reliable past trend.

5.5 Other Factors Influencing Growth

There are many factors which have an impact on traffic growth. As discussed previously these factors can be economical, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

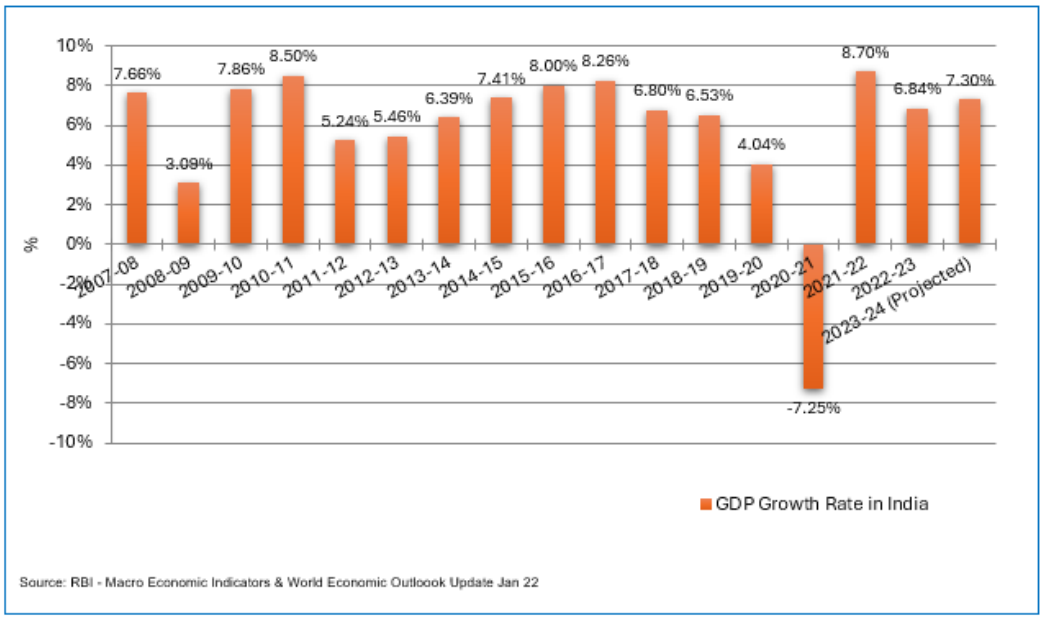


Figure 5-9 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had a slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. The government took major policy decisions including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honorable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into an opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on **Make -In- India** it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. The World Economic Outlook update also has predicted a growth rate of about 7.5 % in the year 2022-23.

5.6 Developments along and around the Project Corridor & State

This Highway passes through Ajmer district of Rajasthan, having Industrial Areas of RIICO Kishangarh and Silora. There are Large Scale Industries of Cement, Marble & Granite and Medium Scale Industries of engineering and instrumentation in this area. Asset primarily serves traffic travelling between Delhi, Rajasthan, Gujarat and Maharashtra. It is observed that the vehicle distribution to be dominated by heavy vehicles. We further noticed several textile industries and marble/granite industries bordering the Asset. Udaipur serves as a big tourism hub as well as a consumption centre which also results in traffic feeding into the demand being generated.

In addition, Chittorgarh has 4 major cement plants located in Chanderiya and Nimbahera villages. There is a regular movement of Cement bulkers to and from these locations along

asset. Chanderiya Lead-Zinc Smelter, is the one of the largest zinc-lead smelting complexes in the world, is also located in Chittorgarh. Bhilwara is home to the textile industry and the only centre in the country producing insulation bricks. Mining is another major sector for large scale mining of sandstone, soap stone feldspar, quartz, mica China clay and granite. Also, Iron Ore, Led, and Zinc are mined and processed in Bhilwara.

growth of Rajasthan has been comparable to the national average economic growth. Rajasthan is rich in natural resources and benefits from its strategic geographic location in India. The state is pre-eminent in quarrying, mining in India and has been a leader in crude oil extraction over the past the few years. Moreover, Rajasthan is also a relevant tourism attractor in India. Considering the scenario, it may be assumed that the traffic growth on the project highway would remain high and there are minimal risks in terms of growth.

Table 5-11 : GDP of India, UP and other important states

Year	India (GDP)	Bihar	Haryana	Madhya Pradesh	Maharashtra	Odisha	Punjab	Rajasthan	Uttar Pradesh	Uttarakhand	West Bengal	Delhi
1980-81	12336	514	357	623	1464	529	504	560	1631	138	830	269
1981-82	13030	543	371	639	1498	528	551	607	1670	141	808	291
1982-83	13411	548	394	668	1556	497	568	620	1800	152	840	328
1983-84	14464	601	402	702	1654	597	578	761	1871	158	939	320
1984-85	15037	658	418	668	1675	569	623	706	1900	161	964	333
1985-86	15663	672	493	726	1807	635	670	704	1975	167	1005	386
1986-87	16339	725	493	694	1832	643	694	771	2060	174	1045	411
1987-88	16917	685	484	789	1955	623	730	718	2154	182	1101	447
1988-89	18635	772	602	847	2159	754	769	1014	2434	206	1148	486
1989-90	19778	759	610	865	2515	805	834	993	2502	212	1188	531
1990-91	20824	831	674	987	2629	668	849	1149	2651	224	1251	553
1991-92	21122	784	688	916	2620	753	888	1061	2662	225	1349	638
1992-93	22254	737	688	983	3017	740	930	1220	2690	228	1389	660
1993-94	23519	755	719	1088	3349	788	970	1121	2757	233	1490	705
1994-95	25023	842	771	1107	3414	826	995	1325	2901	254	1594	790
1995-96	26846	712	787	1174	3791	864	1032	1374	2995	251	1713	804
1996-97	28987	893	879	1252	3941	804	1107	1535	3327	267	1832	915
1997-98	30234	850	887	1318	4158	920	1137	1721	3292	270	1985	1063
1998-99	32255	904	934	1405	4324	948	1203	1797	3316	274	2112	1116
1999-00	34837	950	1002	1552	4735	1008	1267	1801	3440	274	2264	1170
2000-01	36282	1106	1081	1426	4589	982	1309	1743	3511	308	2343	1215
2001-02	38236	1043	1165	1528	4751	1042	1326	1941	3575	323	2512	1262
2002-03	39719	1175	1236	1449	5079	1034	1348	1708	3690	353	2600	1359
2003-04	42883	1099	1358	1611	5471	1185	1433	2251	3885	381	2753	1433
2004-05	45906	1238	1475	1664	5948	1340	1504	2196	4079	431	2936	1588
2005-06	50257	1207	1608	1748	6810	1399	1577	2344	4317	492	3121	1752
2006-07	55066	1416	1791	1907	7748	1574	1748	2620	4660	551	3366	1969
2007-08	60199	1489	1931	1997	8650	1708	1899	2739	4959	648	3627	2191
2008-09	64248	1716	2080	2250	8786	1837	2004	2969	5336	716	3774	2464
2009-10	69769	1798	2340	2463	9634	1852	2132	3142	5668	839	4067	2667
2010-11	75987	2073	2498	2592	10732	1968	2270	3614	6120	927	4313	2888
2011-12	81069	2285	2712	2824	11222	2042	2392	3953	6451	1020	4471	3147
2012-13	85463	2369	2894	3069	11842	2163	2518	4098	6736	1095	4838	3342
2013-14	90636	2469	3142	3226	12671	2331	2675	4343	7075	1178	5247	3565
2014-15	97121	2557	3314	3394	13322	2359	2777	4656	7297	1257	5633	3882
2015-16	105033	2749	3612	3597	14417	2557	2926	4981	7894	1355	-	4291
2016-17	112476	3033	3927	4129	15744	2828	3095	5352	8457	1448	-	4658
2017-18	119762	-	-	4432	-	3029	-	5736	9011	1547	-	5035
Growth 1981-2018	6.34	5.05	6.88	5.44	6.82	4.83	5.17	6.49	4.73	6.75	5.79	8.24
Growth 1994-2018	7.02	6.23	7.66	6.03	6.96	5.77	5.17	7.04	5.06	8.20	6.54	8.53

Growth 2000-2018	7.10	7.07	8.37	6.00	7.32	6.30	5.40	6.65	5.50	10.10	6.27	8.45

5.6.1 Industrial Units along Project Corridor

There are a number of medium and big size industrial establishments along the project corridor. The following figure shows the spread of these industries along project road.

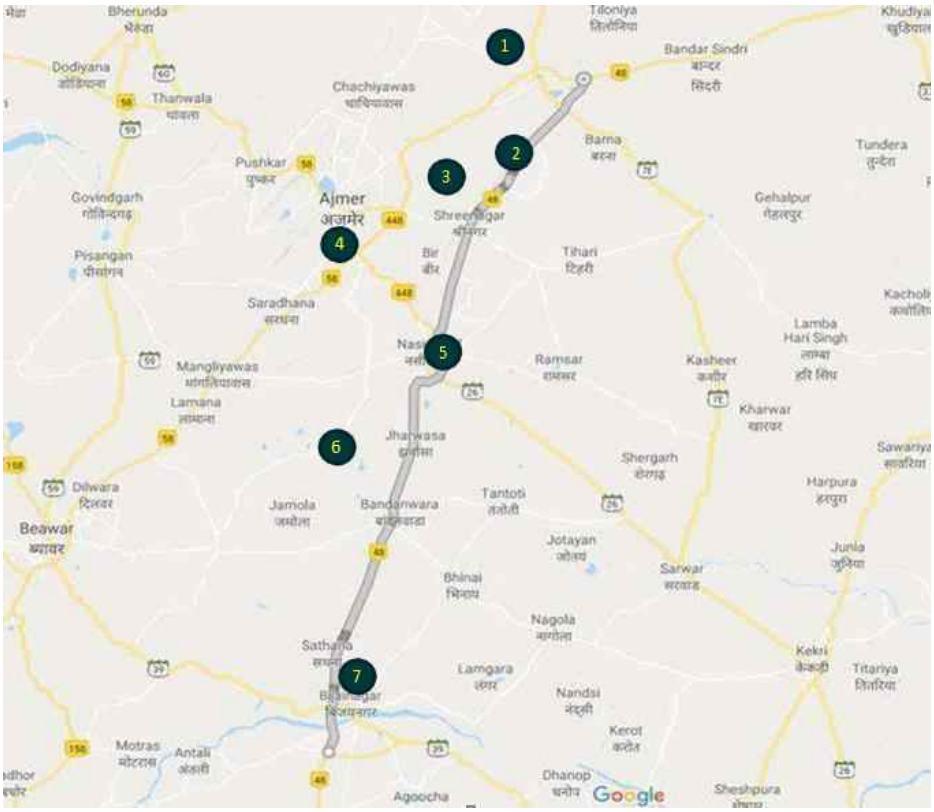


Figure 5-10 : Industrial Units along project corridor.

1. RIICO Industrial Area **Kishangarh** (Marbel & Cement Manufacturing Industries)
2. RIICO **Silora** (Wire Product, Ice Factory)
3. Welding Wire & Plastic Manufacturing Industries
4. Industrial Process Measurement & Control Instruments
5. FMCG & Quartz Manufacturers
6. Brick Manufacturers
7. **Bijainnagar** (Cattle Feed Products Manufacturer – Kapila)

The presence of these units promotes sustainable traffic in the project corridor.

5.7 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as below. The rate of growth is moderate in light of overall regional trends. Growth of multi-Axle is kept slightly higher as trend of technological advances in logistic industry favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to

developed, the rate of growth diminishes. The same growth rate is not sustainable for long. Traffic growth is suitably stepped down for future years.

Growth rates are recommended for three scenarios for sensitivity analysis namely **Optimistic, Pessimistic** and **Most Likely** with a positive and negative variation 0.5% from Most Likely case for corridor in both states.

5.7.1 Recommended Growth Rates of Traffic for Project Stretch

Table 5-12 : Recommended Growth Rates Optimistic

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	9.26%	8.70%	8.16%	7.62%	7.58%	7.03%
Bus	4.38%	4.12%	3.88%	3.64%	3.57%	3.33%
LCV	3.56%	3.74%	3.92%	4.10%	4.27%	4.44%
2- Axle	4.39%	3.95%	3.52%	3.09%	2.86%	2.41%
3 - Axle	5.43%	4.88%	4.33%	3.80%	3.67%	3.08%
4 to 6 Axle	6.46%	5.80%	5.15%	4.50%	4.27%	3.58%
7 and Above Axle	6.46%	5.80%	5.15%	4.50%	4.27%	3.58%

Table 5-13 : Recommended Growth Rates Pessimistic

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	8.76%	8.20%	7.66%	7.12%	7.08%	6.53%
Bus	3.88%	3.62%	3.38%	3.14%	3.07%	2.83%
LCV	3.06%	3.24%	3.42%	3.60%	3.77%	3.94%
2- Axle	3.89%	3.45%	3.02%	2.59%	2.36%	1.91%
3 - Axle	4.93%	4.38%	3.83%	3.30%	3.17%	2.58%
4 to 6 Axle	5.96%	5.30%	4.65%	4.00%	3.77%	3.08%
7 and Above Axle	5.96%	5.30%	4.65%	4.00%	3.77%	3.08%

Table 5-14 : Recommended Growth Rates Most Likely

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	9.01%	8.45%	7.91%	7.37%	7.33%	6.78%
Bus	4.13%	3.87%	3.63%	3.39%	3.32%	3.08%
LCV	3.31%	3.49%	3.67%	3.85%	4.02%	4.19%
2- Axle	4.14%	3.70%	3.27%	2.84%	2.61%	2.16%
3 - Axle	5.18%	4.63%	4.08%	3.55%	3.42%	2.83%
4 to 6 Axle	6.21%	5.55%	4.90%	4.25%	4.02%	3.33%
7 and Above Axle	6.21%	5.55%	4.90%	4.25%	4.02%	3.33%

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in the previous section of the report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for the following three cases of growth up to concession period.

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza Chainage KM 61.02

(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	6747	758	215	2538	1914	5019	504	17695	46739
2025-26	7335	786	224	2638	2007	5310	533	18833	49415
2026-27	7973	815	233	2743	2104	5618	564	20050	52255
2027-28	8666	845	242	2851	2207	5944	596	21351	55264
2028-29	9420	876	252	2964	2314	6288	630	22744	58455
2029-30	10239	908	262	3081	2427	6652	666	24235	61842
2030-31	11074	943	272	3189	2532	6994	700	25704	65091
2031-32	11976	980	282	3302	2641	7354	736	27271	68526
2032-33	12953	1018	293	3418	2755	7733	774	28944	72160
2033-34	14010	1058	304	3538	2874	8131	813	30728	75993
2034-35	15153	1099	316	3663	2998	8550	854	32633	80051
2035-36	16308	1144	327	3777	3112	8934	892	34494	83889
2036-37	17551	1191	339	3894	3230	9336	932	36473	87933
2037-38	18888	1239	351	4014	3353	9756	974	38575	92186
2038-39	20327	1289	364	4138	3480	10195	1018	40811	96665
2039-40	21876	1341	377	4266	3612	10655	1064	43191	101388
2040-41	23534	1398	390	4389	3745	11110	1109	45675	106189
2041-42	25188	1460	403	4495	3860	11507	1148	48061	110600
2042-43	26958	1524	416	4603	3978	11918	1189	50586	115217

Table 6-2 : Total Tollable Traffic @ Toll Plaza 2- Chainage KM 61.02
(Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	6747	758	215	2538	1914	5019	504	17695	46739
2025-26	7301	782	223	2625	1998	5285	530	18744	49180
2026-27	7899	807	231	2715	2085	5565	558	19860	51756
2027-28	8546	833	239	2808	2176	5860	587	21049	54476
2028-29	9246	860	247	2904	2271	6170	618	22316	57348

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2029-30	10004	888	256	3004	2370	6497	650	23669	60388
2030-31	10769	918	264	3094	2460	6799	680	24984	63256
2031-32	11593	949	273	3187	2554	7115	711	26382	66276
2032-33	12480	981	282	3282	2652	7445	744	27866	69450
2033-34	13436	1014	291	3381	2753	7791	778	29444	72793
2034-35	14466	1048	301	3483	2858	8153	814	31123	76316
2035-36	15496	1085	310	3573	2952	8480	846	32742	79596
2036-37	16600	1124	320	3665	3049	8819	880	34457	83034
2037-38	17782	1164	330	3759	3149	9172	915	36271	86634
2038-39	19049	1206	340	3855	3253	9539	951	38193	90407
2039-40	20406	1249	350	3955	3360	9921	989	40230	94370
2040-41	21849	1296	361	4048	3466	10295	1026	42341	98363
2041-42	23274	1347	371	4125	3555	10612	1057	44341	101958
2042-43	24792	1400	381	4204	3646	10939	1089	46451	105711

Table 6-3 : Total Tollable Traffic @ Toll Plaza 3- Chainage KM 61.02 (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	6747	758	215	2538	1914	5019	504	17695	46739
2025-26	7318	784	223	2632	2003	5297	532	18789	49299
2026-27	7936	811	231	2729	2096	5590	561	19954	52000
2027-28	8606	839	240	2831	2193	5900	592	21201	54871
2028-29	9333	868	249	2936	2294	6228	624	22532	57906
2029-30	10121	898	258	3045	2400	6573	658	23953	61117
2030-31	10921	931	267	3145	2498	6895	690	25347	64180
2031-32	11784	965	276	3248	2599	7233	723	26828	67403
2032-33	12715	1000	286	3354	2705	7587	758	28405	70803
2033-34	13721	1036	296	3463	2815	7958	795	30084	74386
2034-35	14805	1074	307	3577	2930	8348	834	31875	78177
2035-36	15896	1115	317	3679	3034	8702	869	33612	81728
2036-37	17067	1158	328	3784	3141	9072	906	35456	85464
2037-38	18325	1202	339	3891	3252	9457	944	37410	89379
2038-39	19675	1248	350	4002	3367	9859	984	39485	93498
2039-40	21125	1296	362	4116	3486	10278	1026	41689	97829
2040-41	22672	1348	374	4224	3605	10691	1067	43981	102214
2041-42	24209	1404	385	4316	3706	11046	1102	46168	106202
2042-43	25850	1462	397	4410	3811	11414	1138	48482	110381

6.2 Modification in Concession Period

As per Article 29 of the concession agreement, if actual traffic on the project falls short or exceeds Target Traffic on project highway on defined date, concession period shall be modified subject to calculation stipulated therein. For Gulabpura - Chittorgarh project, the Target Date and Target Traffic are defined as under:

Target Date - 1st May 2026

Target Traffic - 76236 in PCU

It was observed that as per traffic projections, average traffic volume falls short of target traffic in all scenarios. The probable extension of the concession period is estimated according to article 29 of the concession agreement which comes to about three years. Traffic forecast and revenue projections are done for probable extended period accordingly.

Most Likely

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2026	76236	52056	-32%	48%	20%	20	4.0

Optimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2026	76236	52311	-31%	47%	20%	20	4.0

Pessimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2026	76236	51804	-32%	48%	20%	20	4.0

CHAPTER 7

FORECAST OF TOLL REVENUE

7.1 General

This chapter presents the tolling rate calculations, categories and toll revenue of the project.

7.2 Discount Categories

The fee schedule in the CA of Kishangarh- Gulabpura section of NH-79 is based on the old toll policy. As per the Toll Notification (Schedule - G) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent user's monthly pass would be issued for 50 trips in month at 2/3d rate.
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travelers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: There are several categories of local discounts.
    a) Local Car Jeep Van I - Rs. 275 per
    b) Local Commercial Vehicles at 50% rate for single journey

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.

The formula for determining the applicable rate of fee shall be as follows:-

$$\text{Applicable rate of fee} = \text{base rate} + \text{base rate} \times \left\{ \frac{\text{WPI A-WPI B}}{\text{WPI B}} \right\} \times 0.4$$

Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2018-19. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. The following graph provides historical rate of inflation (WPI) in India. Data has been sourced from the Office of Economic Advisor web site (www.eaindustry.nic.in) WPI for year 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series.

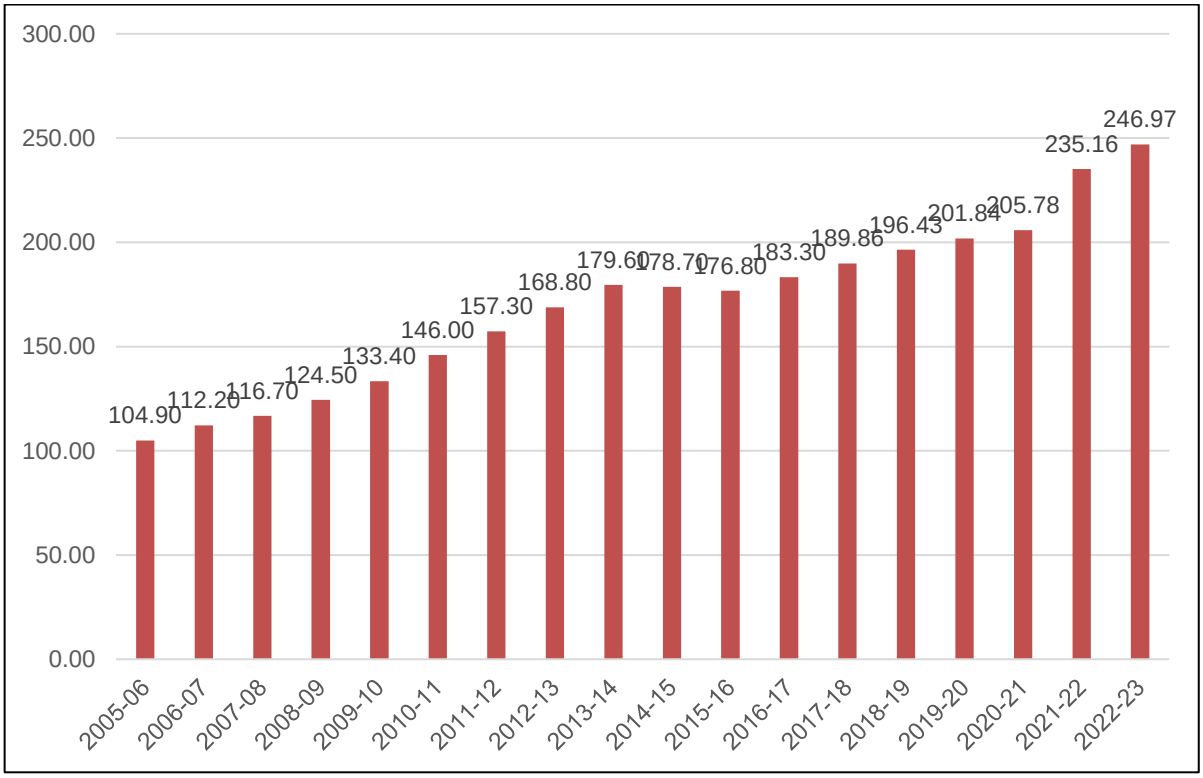


Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in the last few years is steadily growing. It grew by the range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

7.3 Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45
Oversized Vehicles (7 or more Axles)	4.20

There is no bypass or structure to be factored in for rates calculations.

Toll rates are calculated as per guidelines provided in schedule R (rounded to nearest Rs.) for the concession period and are given below.

Thus, worked out rates for various categories of vehicle and discounts are given as under

Table 7-2 : Toll Rates for Single Journey @ Chainage KM 61.02

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles
2024-25	145	230	485	485	530	760	925
2025-26	150	245	510	510	555	800	975
2026-27	160	255	535	535	585	840	1025
2027-28	165	270	565	565	615	885	1075
2028-29	175	285	590	590	645	930	1130
2029-30	185	295	620	620	680	975	1190
2030-31	195	310	655	655	715	1025	1250
2031-32	205	330	690	690	750	1080	1315
2032-33	215	345	725	725	790	1135	1380
2033-34	225	365	760	760	830	1195	1455
2034-35	235	380	800	800	875	1255	1530
2035-36	250	405	845	845	920	1325	1610
2036-37	260	425	890	890	970	1395	1695
2037-38	275	445	935	935	1020	1465	1785
2038-39	290	470	985	985	1075	1545	1880
2039-40	305	495	1040	1040	1130	1625	1980
2040-41	325	520	1095	1095	1195	1715	2085
2041-42	340	550	1150	1150	1255	1805	2200
2042-43	360	580	1215	1215	1325	1905	2320

Table 7-3 : Toll Rates for Return Journey @ Chainage KM 61.02

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles
2024-25	215	350	730	730	795	1145	1390
2025-26	225	365	765	765	835	1200	1460
2026-27	240	385	805	805	875	1260	1535
2027-28	250	405	845	845	920	1325	1615
2028-29	260	425	890	890	970	1395	1695
2029-30	275	445	935	935	1020	1465	1780
2030-31	290	470	980	980	1070	1540	1875
2031-32	305	495	1030	1030	1125	1620	1970
2032-33	320	520	1085	1085	1185	1705	2075
2033-34	340	545	1140	1140	1245	1790	2180
2034-35	355	575	1200	1200	1310	1885	2295
2035-36	375	605	1265	1265	1380	1985	2415
2036-37	395	635	1330	1330	1455	2090	2545
2037-38	415	670	1405	1405	1530	2200	2680
2038-39	435	705	1475	1475	1610	2315	2820

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles
2039-40	460	745	1555	1555	1700	2440	2970
2040-41	485	785	1640	1640	1790	2570	3130
2041-42	510	825	1730	1730	1885	2710	3300
2042-43	540	870	1820	1820	1985	2855	3480

Table 7-4 : Toll Rates for Monthly Pass Local@ Chainage KM 61.02

Year	Car	Minibus /LCV
2024-25	340	340
2025-26	355	355
2026-27	375	375
2027-28	390	390
2028-29	410	410
2029-30	435	435
2030-31	455	455
2031-32	480	480
2032-33	505	505
2033-34	530	530
2034-35	560	560
2035-36	585	585
2036-37	620	620
2037-38	650	650
2038-39	685	685
2039-40	720	720
2040-41	760	760
2041-42	800	800
2042-43	845	845

Table 7-5 : Toll Rates for Monthly Pass @ Chainage KM 61.02

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial Vehicle	Multi Axle	Oversized Vehicle
2024-25	4785	7730	16195	16195	17665	25395	30915
2025-26	5025	8120	17010	17010	18555	26675	32475
2026-27	5280	8530	17870	17870	19495	28025	34115
2027-28	5550	8960	18780	18780	20485	29445	35850
2028-29	5830	9420	19735	19735	21530	30950	37675
2029-30	6130	9900	20745	20745	22630	32530	39605
2030-31	6445	10410	21810	21810	23795	34205	41640
2031-32	6775	10950	22940	22940	25025	35970	43790
2032-33	7130	11515	24130	24130	26320	37840	46065
2033-34	7500	12115	25385	25385	27695	39810	48465
2034-35	7895	12750	26715	26715	29145	41890	51000
2035-36	8310	13420	28120	28120	30675	44095	53680

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial Vehicle	Multi Axle	Oversized Vehicle
2036-37	8745	14130	29600	29600	32295	46420	56515
2037-38	9210	14875	31170	31170	34005	48885	59510
2038-39	9700	15670	32830	32830	35815	51485	62680
2039-40	10220	16505	34585	34585	37730	54240	66030
2040-41	10765	17395	36445	36445	39755	57150	69570
2041-42	11345	18330	38405	38405	41900	60230	73320
2042-43	11960	19320	40485	40485	44165	63485	77285

7.4 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under ***Optimistic***, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

7.5 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under all scenarios at each of the toll plaza up to 2042-43 starting from the year 2023-24 are shown in tables below.

Table 7-6 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Year	TP-1
2024-25	270.07
2025-26	299.41
2026-27	332.77
2027-28	370.61
2028-29	410.05
2029-30	455.26
2030-31	503.73
2031-32	559.15
2032-33	616.32
2033-34	681.79
2034-35	753.33
2035-36	835.05
2036-37	916.94
2037-38	1009.48
2038-39	1113.84
2039-40	1231.68
2040-41	1356.86
2041-42	1483.75
2042-43	1630.10

Table 7-7 : Toll Revenue Pessimistic Scenario

(Rs. Crores)

Year	TP-1
2024-25	270.07
2025-26	298.02
2026-27	329.70
2027-28	365.46
2028-29	402.41
2029-30	444.68
2030-31	489.70
2031-32	540.93
2032-33	593.41
2033-34	653.29
2034-35	718.45
2035-36	792.58
2036-37	866.07
2037-38	949.03
2038-39	1042.15
2039-40	1146.91
2040-41	1257.45
2041-42	1368.49
2042-43	1496.33

Table 7-8 : Toll Revenue Most Likely Scenario

(Rs. Crores)

Year	TP-1
2024-25	270.07
2025-26	298.69
2026-27	331.17
2027-28	367.99
2028-29	406.18
2029-30	449.97
2030-31	496.71
2031-32	549.97
2032-33	604.77
2033-34	667.40
2034-35	735.80
2035-36	813.59
2036-37	891.15
2037-38	978.88
2038-39	1077.54
2039-40	1188.70
2040-41	1306.52
2041-42	1425.33
2042-43	1562.25

CHAPTER 8

CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Kishangarh to Gulabpura section of NH-79 in state of Rajasthan is nearing completion of six laning. The road is in sound condition and serves healthy traffic volumes. Project corridor is a part of the busy and prominent national highway NH-79 which connects Kishangarh to Udaipur via Bhiwala and Chittorgarh. There are large number of townships, industrial corridors and other business establishments coming up along the project corridor. As discussed, the dominant portion of traffic is long route traffic, which is more sensitive towards the growth of national economy. As Indian economy is poised to grow at 7%+ post COVID-19, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give a positive impact to traffic flow on the project. The following can be considered as major outcomes of the study.

a) There is a good amount of tollable traffic running on the project.

b) Project corridor has potential to witness traffic growth @ 7-8% annually in near future due to various development in area and overall development of economy.

c) The Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road.

Based on the above it can be considered a stable healthy project from the traffic and revenue point of view.

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KAITHAL TO RAJASTHAN SECTION OF NH 152/65 (KM 33.250 TO KM 241.580) IN THE STATE OF HARYANA









TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

OCTOBER 2024

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KAITHAL TO RAJASTHAN SECTION OF NH-152/65

(KM 33.250 TO 241.580)

IN THE STATE OF HARYANA

TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

OCTOBER 2024

GMD CONSULTANTS NAVI MUMBAI

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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic	**NHAI**	-	National Highway Authority of India
BOT	-	Build Operate Transfer	**NHDP**	-	National Highways Development Project
CAGR	-	Compound Annual Growth Rate	**NSDP**	-	Net State Domestic Product
CTV	-	Classified traffic volume	**O&M**	-	Operation & Maintenance
DBFOT	-	Design, Build, Finance, Operate & Transfer	**PCDP**	-	Per Capita Domestic Product
EME	-	Earth Moving Equipment	**PCI**	-	Per Capita Income
GDP	-	Gross Domestic Product	**PCU**	-	Passenger Car Unit
GSDP	-	Gross State Domestic Product	**PSC**	-	Pre-stressed Concrete
HCM	-	Heavy Construction Machinery	**RCC**	-	Reinforced cement concrete
HCV	-	Heavy Commercial Vehicle	**RHS**	-	Right Hand Side
HTMS	-	Highway Traffic Management System	**SH**	-	State Highway
IRC	-	Indian Road Congress	**TP**	-	Toll Plaza
IRR	-	Internal Rate of Return	**WPI**	-	Wholesale Price Index
LCV	-	Light Commercial Vehicle	**SIR**	-	Special Investment Region
LHS	-	Left Hand Side	**c.**	-	Circa
LGV	-	Light Goods Vehicle	**ROB**	-	Railway Over Bridge
MAV	-	Multi Axle Vehicle	**MDR**	-	Major District Road
MORTH	-	Ministry of Road Transport and Highways	**ODR**	-	Other District Road
NH	-	National Highway	**CA**	-	Concession Agreement
PCC	-	Plain Cement Concrete	**RMT**	-	Running Meter
CR	-	Coarse Rubble			

CHAPTER 1

INTRODUCTION

1.1 Background

The Government of India through National Highway Authority of India (NHAI) embarked upon a program to enhance the traffic capacity and safety for efficient transportation of goods as well as passenger traffic on National Highway Sections under various NHDP Phases.

The project under consideration, Four Laning of **Kaithal** to **Rajasthan** section of NH-152/65 from km 33.250 to km 241.580 in the state of Haryana is one such road project NHAI intended to implement on a BOT basis in the DBFOT format. *M/s Kaithal Tollway Ltd*. (Concessionaire) has been awarded the Project for a concession period of 27 years starting from appointed date of 15th July 2015. COD was achieved for part length of project in September 2017 and Tolling Operation on Project started. Final COD for full length was achieved on 29th March-2019

Project road section from Kaithal to Rajasthan border is part of important corridor which connects part of Haryana, Punjab, Himachal Pradesh, J&K and certain part of Uttarakhand to Rajasthan, Gujarat and Costal parts of Maharashtra and then to down to south.

Project road section form Kaithal to Rajasthan border passes through three districts of Haryana namely Kaithal, Hisar and Bhiwani. Project road also passes through important towns and development areas of Narwana, Hisar and Siwani in addition to Kaithal.

Following figure shows the project road alignment.



Figure 1-1 : Alignment of Project Stretch

1.2 Objective of the Study

M/s IRB INFRASTRUCTURE TRUST has engaged *GMD Consultants* to assess the future traffic and toll potential of project along with related operation & maintenance expenditure involved.

This report named as **"Traffic Study & *Toll Revenue Projection Report*"** mainly focuses on traffic and revenue aspects of the project. Other parameters like competing road, area developments etc. have been considered from a traffic development point of view.

1.2.1 Scope of Services

The broad scope of work covered in the assignment is as follows.

a) Analysis of Traffic Growth
b) Toll Rate Growth
c) Revenue Forecasting

The Concessionaire has provided basic traffic data and other project details on the basis of which the above analysis has been carried out.

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

The project road forms part of important connectivity between Northern states like Haryana,Punjab,Himachal Pradesh,J&K and states like Maharashtra,Gujarat (Kandla and Mundra),and parts of Rajasthan. It is the shortest route between Punjab / J&K, Gujarat, Rajasthan, Maharashtra, Goa, Kerala and becomes good alternate route to NH-1 and NH-8 for Gujarat, Rajasthan, Maharashtra Goa and Kerala bound traffic from Haryana, Punjab, J&K Himachal Pradesh.

Project road also caters to local intrastate traffic between districts of Ambala, Chandigarh, Kaithal, Jind, Hisar, Bhiwani in Haryana and Churu, Sikar, Nagaur and Jodhpur in Rajasthan.

2.2 Project Stretch Description

The Project highway from Kaithal to Rajasthan border from Km 33.250 to km 241.580 has been widened to four lanes as per schedules. The project has following bypasses which are part of project road.

Table 2-1 : Bypass Details

Sr. No	Bypass Name	Length	Toll Plaza
1	Kalyat	3.450	125.790
2	Dhanaudha	3.800	
3	Narwana	1.900	
4	Barwala	7.850	171.580
5	Hisar+Talwandi Rana		
6	Barwa	3.300	212.400
7	Siwani	6.150	

Full COD for project is achieved on 29th March 2019.

Project road forms part of very important transportation corridor which connects Northern states like Haryana, Punjab, J&K, Himachal etc to Southern states and development centres especially on west coastline of India. In previous years project road from Ambala to onwards was in bad shape. There were large number of congestion points along the route in form of narrow roads inside towns, level crossings and bad riding quality. Project road from Kaithal to Rajasthan Border is almost complete which has taken up bypasses and ROBs. Also, the road from Ambala to Kaithal is under four laning construction as of now. The project is awarded to M/s Sadbhav Engineering Limited and is expected to complete in current year. This would improve the flow of traffic on project corridor to great extent.

Following figure show project alignment and toll plaza locations.

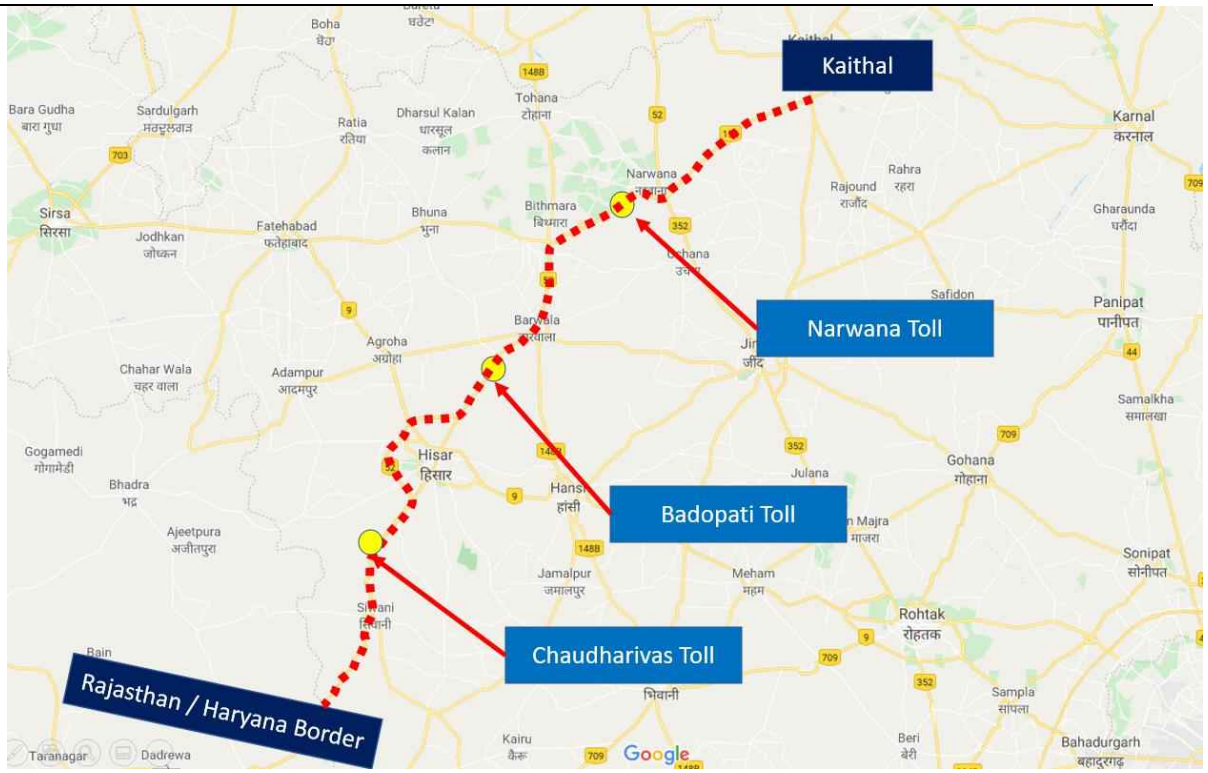


Figure 2-1 : Project Alignment with Toll Plaza

2.3 Project Corridor Illustration

Six laning of project stretch is complete. Following photographs illustrate project section along the corridor.









Figure 2-2 : Photographs showing Project Corridor

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from client for project.

- Classified traffic volume counts at three toll plaza locations on Kaithal- Rajasthan Border section of NH-152/65 for year 2017-18, 2018-19, 2019-20, 2020-21 ,2021-22,2022-23, April 2023 to November 2023 and traffic data from April 2024 to July 2024.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project.
- Establish base year traffic.
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1 below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	Km 125 Toll Plaza at Narwana	AADT for Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023, Eight month from April 2023 to November	For Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023, Eight month from April 2023 to November	For Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023, Eight month from April 2023 to November	For Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023, Eight month from April 2023 to November	For Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023, Eight month from April 2023 to November

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
		2023 & Four month from April 2024 to July 2024	2023 & Four month from April 2024 to July 2024	2023 & Four month from April 2024 to July 2024	2023 & Four month from April 2024 to July 2024	2023 & Four month from April 2024 to July 2024
2	Km 171 Toll Plaza at Badopatti	AADT for Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024
3	Km 212 Toll Plaza at Chaudhariwas	AADT for Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024

3.2 Classified traffic volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations based on monthly data shared with NHAI.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in table below.

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since project highway is currently under toll operation, the data collected is corresponding to category of tollable vehicles. Following is the type of vehicles as per concession agreement.

- Car / Jeep / van
- Min Bus /LCV
- Truck / Bus
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data for the years 2019-20 ,2020-21, 2021-22, 2022-23, April 2023 to November 2023 and traffic data from April 2024 to July 2024.

Since the traffic data available for this update is for only four months, from April 2024 to July 2024, it may not represent the whole year traffic. Hence a seasonality factor for balance part of year has been applied to average traffic of current four months to arrive at Annual Average Daily Traffic of base

year 2024-25. Same corrected traffic is used for future projections and revenue calculations. The following table shows historical traffic on project stretch and derived Annual Average Daily Traffic (AADT) for year 2024-25.

Table 3-3 : Traffic Data at Narwana Toll Plaza at Km 125

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24	Annual Average Daily Traffic (Nos.)- 2024-25
1	Car	2952	2657	4351	4094	4282	4520
2	Minibus/LCV	633	569	381	325	367	381
3	Bus	310	279	315	289	338	364
4	Truck	320	287	529	462	477	428
5	3-Axle	314	283	416	345	321	249
6	Multi Axle	771	694	1347	1343	1382	1149
7	Oversized Vehicles	5	5	20	47	48	32
	Total	**5305**	**4774**	**7357**	**6905**	**7215**	**7123**

Table 3-4 : Traffic Data at Badopatti Toll Plaza at Km 171

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24	Annual Average Daily Traffic (Nos.)- 2024-25
1	Car	5387	4850	4915	4591	4132	4560
2	Minibus/LCV	630	567	374	331	306	360
3	Bus	431	387	395	384	405	459
4	Truck	327	295	577	503	437	437
5	3-Axle	376	339	505	400	336	341

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24	Annual Average Daily Traffic (Nos.)- 2024-25
6	Multi Axle	923	831	1522	1326	1130	1109
7	Oversized Vehicles	3	3	16	46	55	65
	Total	**8077**	**7272**	**8303**	**7581**	**6800**	**7331**

Table 3-5 : Traffic Data at Chaudhariwas Toll Plaza at Km 212

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24	Annual Average Daily Traffic (Nos.)- 2024-25
1	Car	2947	2652	4371	4076	4167	4342
2	Minibus/LCV	592	532	335	335	356	417
3	Bus	162	147	181	159	164	169
4	Truck	367	331	629	522	497	539
5	3-Axle	470	423	630	537	452	481
6	Multi Axle	1395	1257	2121	1812	1656	1695
7	Oversized Vehicles	6	5	29	65	65	77
	Total	**5939**	**5347**	**8295**	**7506**	**7356**	**7721**

3.4 Data Analysis

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in "IRC-64-1990: Guidelines for Capacity of Roads in Rural areas". The adopted passenger car unit values (PCU) are presented in ***Table 3-6.***

Table 3-6 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-7 : Traffic in PCU at Project Stretch Base Year 2023-24

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
2019-20	Narwana Km 125.79	5305	10226	1.93
	Badopatti Km 171.58	8077	13901	1.72
	Chaudhariwas Km 212.400	5939	13136	2.21
2020-21	Narwana Km 125.79	4774	9203	1.93
	Badopatti Km 171.58	7272	12516	1.72
	Chaudhariwas Km 212.400	5347	11832	2.21
2021-22	Narwana Km 125.79	7357	14849	2.02
	Badopatti Km 171.58	8303	16824	2.03
	Chaudhariwas Km 212.400	8295	18866	2.27

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
2022-23	Narwana Km 125.79	6905	14124	2.05
	Badopatti Km 171.58	7581	15122	1.99
	Chaudhariwas Km 212.400	7506	16679	2.22
2023-24	Narwana Km 125.79	7215	14676	2.03
	Badopatti Km 171.58	6800	13455	1.98
	Chaudhariwas Km 212.400	7356	15782	2.15
2024-25	Narwana Km 125.79	7123	13530	1.90
	Badopatti Km 171.58	7331	14094	1.92
	Chaudhariwas Km 212.400	7721	16509	2.14

It can be observed from above that project traffic has PCU index ranging from 2.0 to 2.3 which is an indicator of good proportion of commercial traffic in traffic mix in project corridor. Following figure illustrates variation of PCU index at three toll plaza locations.

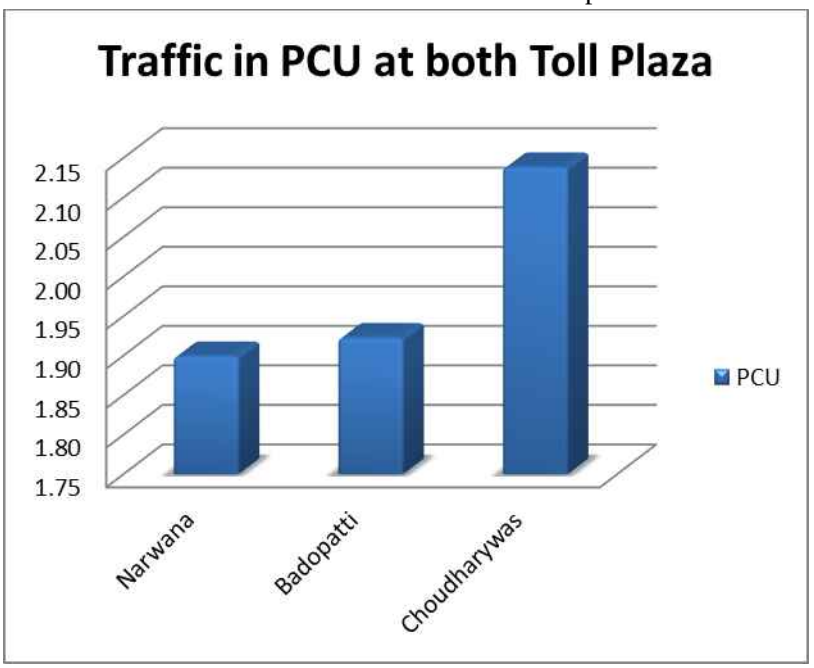


Figure 3-1 : Comparison of PCU Index

3.4.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds

to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.

It is observed that car traffic forms about 50%-65% of total traffic at toll plaza locations while multi axle commercial vehicles are about 20%-30% of total traffic. Truck / Bus and LCV share about 10%-15% and 2%-5% of traffic volume respectively.

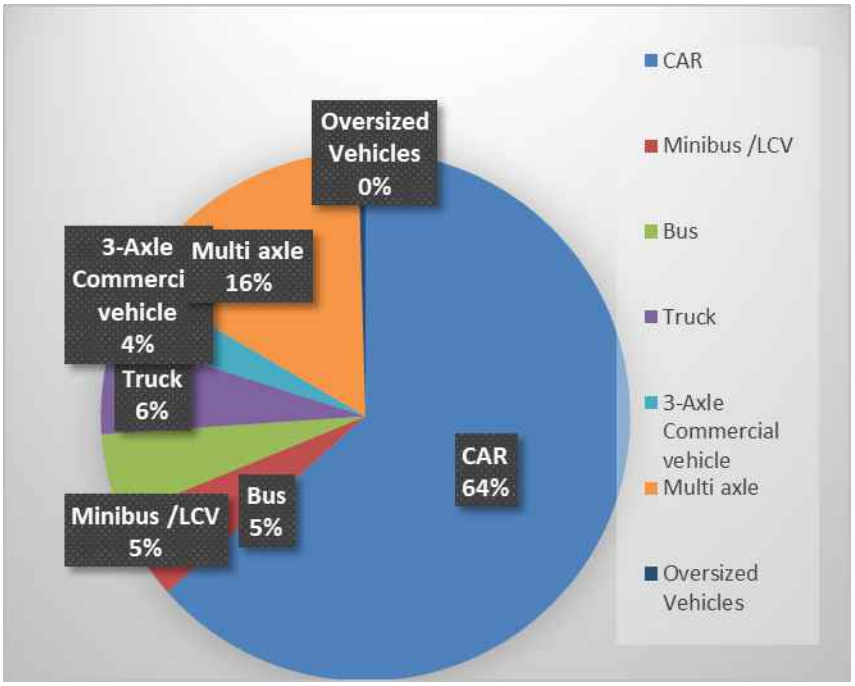


Figure 3-2 :Model Split of Tollable Vehicle-Km 125.790

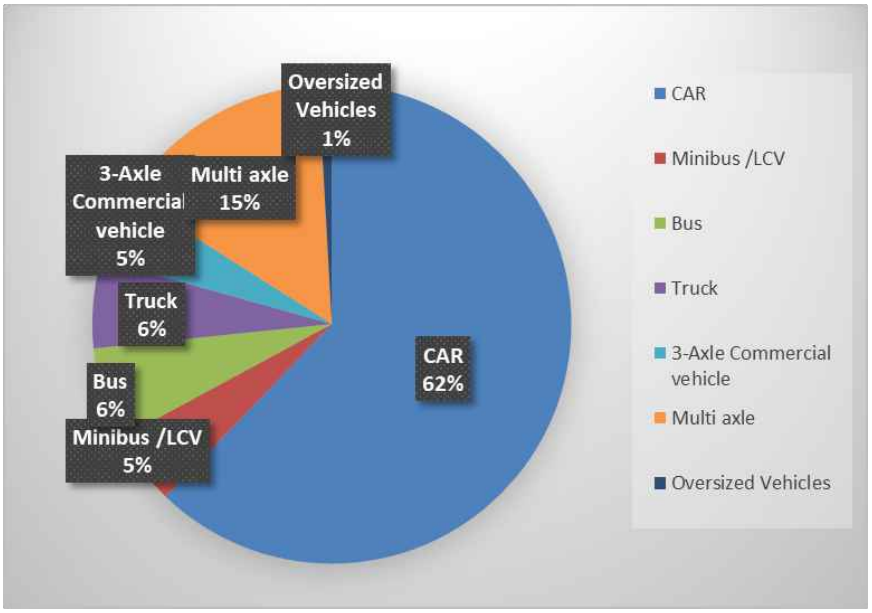


Figure 3-3 :Model Split of Tollable Vehicle-Km 171.58

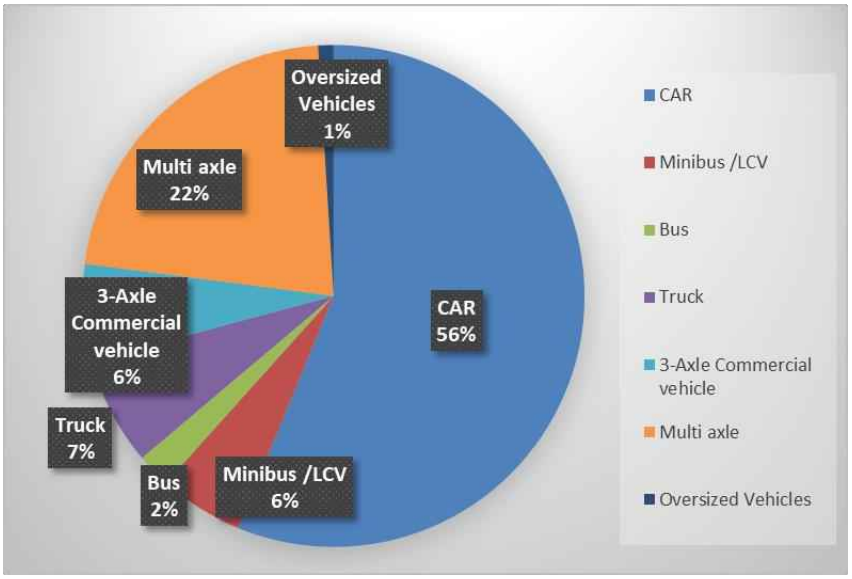


Figure 3-4 :Model Split of Tollable Vehicle-Km 212.400

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

The following table provides numbers of vehicles falling in each of above category on base year 2024-25.

Table 3-8 : Journey Type Bifurcation of Traffic at Narwana TP-1 KM 125

Sr. No	Type	Traffic Volume (Nos.) 2024-25
1	Single Journey	3952
2	Return Journey	3082
3	Local Commercial Single Journey	61
4	Monthly Pass Local	28
5	Monthly Pass	0

Most dominant part of the above is the single journey type followed by return journey at project stretch. Monthly pass commuters are a very low fraction of the total traffic on the project corridor.

The single journey component in total traffic numbers is a high as 56%. Return journey component is 43%. The number of monthly pass local is 0% and local commercial single Journey also 1% at Narwana toll plaza.

Following tables give the detail of journey distribution at Badopatti and Chaudhariwas toll plaza.

Table 3-9 : Journey Type Bifurcation of Traffic at Badopatti TP KM 171

Sr. No	Type	Traffic Volume (Nos.) 2024-25
1	Single Journey	3876
2	Return Journey	3168
3	Local Commercial Single Journey	178
4	Monthly Pass Local	109
5	Monthly Pass	0

Table 3-10 : Journey Type Bifurcation of Traffic at Chaudhariwas TP KM 212

Sr. No	Type	Traffic Volume (Nos.) 2024-25
1	Single Journey	4538
2	Return Journey	3052
3	Local Commercial Single Journey	89
4	Monthly Pass Local	42
5	Monthly Pass	0

3.5 Secondary Data Collection

There are several other factors which have a substantial impact on traffic pattern and growth on any project corridor. Following is some of such important factors.

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data

a) GDP
b) NSDP
c) Population Growth
d) Per Capita Income growth
e) Industrial Growth
f) Special Industry Potential
g) Regional and National development vision / plan
h) Any other relevant data

3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

Highway corridors behave like integrated circuit network and more often than not every road is connected to various networks having different origin and destinations. Traffic running on these networks behave like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network.

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc,
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Competing / Alternate route

Though project road has started collecting toll form mid of year 2017-18 but it was for partial completion of project stretch. Some critical location bypasses and ROBs were pending at beginning of toll. Also stretch from Ambala to Kaithal which is just before project stretch is under four laning. In this case project traffic can be considered as under settlement. Shifting of traffic depends on factors such as road length, type, geometry, riding quality and capacity. Competing road analysis was done at two levels. First at regional level and second at local level. Project road forms an optimal route for the traffic between following zones.

Zone-1- J & K, Punjab (Ludhiana, Amritsar parts), Haryana, Himachal, Part of Uttarakhand
Zone-2 – Rajasthan, Gujarat (Kandla, Mundra), Maharashtra (Coastal), Southern States (Coastal).

As alternate routes converge at Ajmer, the Project Influence Area (PIA) is considered between Ambala and Ajmer only.

Following figures show the layout of competing routes between both these Zones.

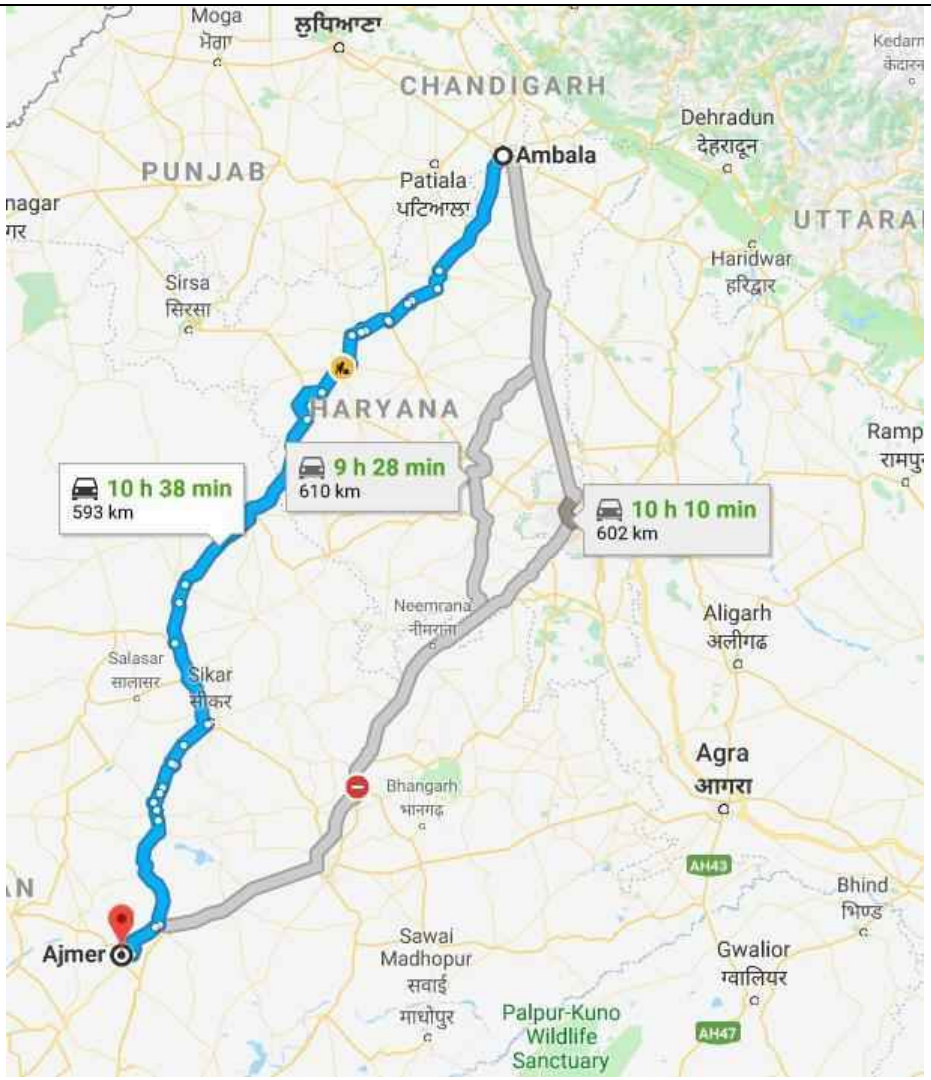


Figure 4-1 : Alternate route at regional level between Zones.

Above figure depicts alternate route between Ambala and Ajmer. Following figure shows alternate routes between Ludhiana and Ajmer

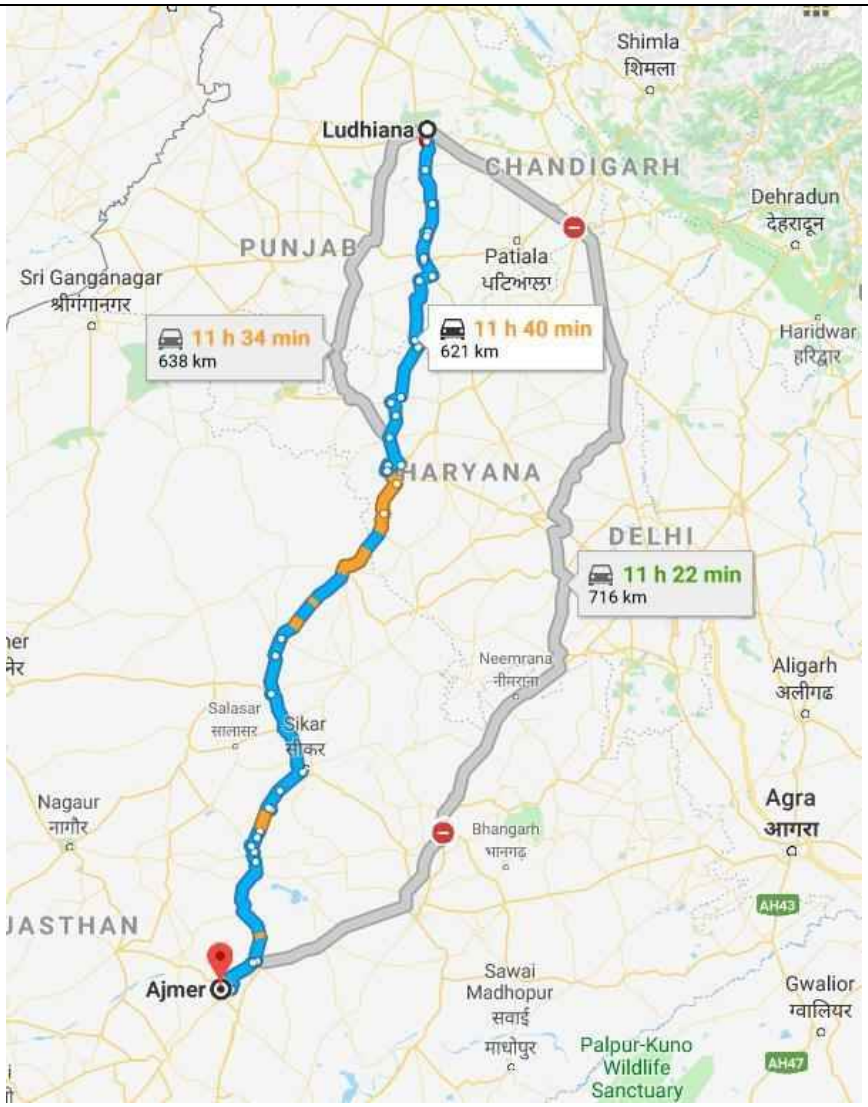


Figure 4-2 : Alternate route at regional level between Ludhiana & Ajmer

From above figures it can be seen that the route containing project alignment has least distance between these origin and destination zones.

Following facts improve probability of target traffic getting attracted to project road.

- Project corridor between Ambala to Rajasthan Border is expected to complete four laning with all bypasses and ROBs.
- Road from Ludhiana to Hisar is part of Bharatmala project and will be converted to four lanes. Currently road from Hisar to Fatehabad only in four lanes.

- Project Corridor is part of ambitious project of Bharatmala which will improve entire length of corridor in terms of capacity and traffic flow. The Government of India has identified the Ludhiana – Ajmer corridor as an optimal route which shall provide time and cost savings to traffic moving from western India to northern India. This will also allow traffic to avoid heavy traffic jams around New Delhi which it is facing on the present route.
- NH-1 and NH-8 which are currently major corridor for traffic between Zone1 and Zone2 will face capacity constraints in coming years. NH-1 for example is four lane road between Ambala and Panipat and runs about 80,000 PCU which is already above its capacity.

At local level it was observed that there is no formidable local alternate route to bypass toll plaza. There can a combination of village roads to form alternate loop around toll plazas, but these are too long as compared to project road between said nodes. Thus, no local diversion of traffic from project road is anticipated.

Following table provide summary of analysis of alternate route/ roads discussed above.

Table 4-1 : Summary Network analysis

Sr. No	Route Details	Designation	Length (Km)	Avg. Speed (KMPH)	Time Taken (Min)	Observations
Regional Level						
1	Ambala-Panipat-Karnal-Rohtak-Ajmer	Alternate Route	610	64	9 Hr 28 Min	Alternate route is longer but has shorter travel time. With completion of Ambala - Kaithal four laning of Road induced traffic is expected onto project stretch
	Ambala-Kaithal-Hisar-Ajmer	Project Road	593	55	10 Hr 38 Min	
2	Ludhiana-Chandigarh Panipat-Karnal-Ajmer	Alternate Route	716	63	11 Hr 22 Min	Alternate route is longer but has shorted travel time. With completion of Ambala - Kaithal four laning of Road induced traffic is expected onto project stretch
	Ludhiana - Ambala-Kaithal-Hisar-Ajmer	Project Road	621	53	11 Hr 40 Min	

Table 4-2 : Competing Roads Details

Under these circumstances it is not envisaged that commercial or passenger traffic would switch to alternate roads from the project road.

CHAPTER 5

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future pattern of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor Kaithal – Rajasthan Border section of NH-152/65 has been done taking the above factors into consideration. "**IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**" is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable to projects of short durations say 5-10 years, however for long term projections it would-be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**.

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different type of vehicle. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway typically depends on number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modelling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, in order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

Log (P) = k x Log (EI) + A

Where,

P = Number of Vehicles (Mode wise)

EI = Economic Indicator

A = Regression constant

k = Elasticity coefficient (Regression coefficient)

The elasticity for car and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

The project corridor spreads across state of Haryana. Toll plazas at Narwana, Badopatti and Choudhariwas are in the state of Haryana, but project stretch is under impact of Rajasthan state as well. In such circumstances for elasticity calculations, working data from above two states has been analysed.

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Haryana State.

Table 5-1 : Per Capita Income Vs Car Haryana

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	106085	989519	5.03	6.00		
2013	111780	1134616	5.05	6.05	5%	
2014	119791	1278272	5.08	6.11	7%	
2015	125032	1420621	5.10	6.15	4%	
2016	137818	1711692	5.14	6.23	10%	
2017	150241	1851788	5.18	6.27	9%	7.23%

Regression analysis of same is given in figure below.

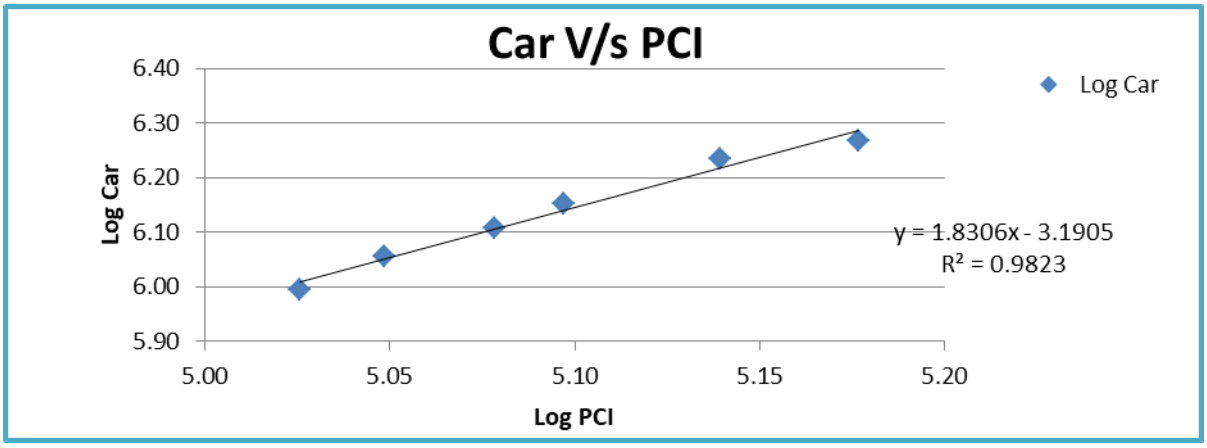


Figure 5-1 : Regression and Elasticity PCI vs. Car – Extrapolation Haryana

Table 5-2 : Population Vs Bus Haryana

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	25351462	39153	7.40	4.59		
2013	25751257	43456	7.41	4.64	2%	
2014	26149236	46558	7.42	4.67	2%	
2015	26545282	52640	7.42	4.72	2%	
2016	26939286	55781	7.43	4.75	1%	
2017	27331141	60129	7.44	4.78	1%	1.52%

Regression analysis of same is given in figure below.

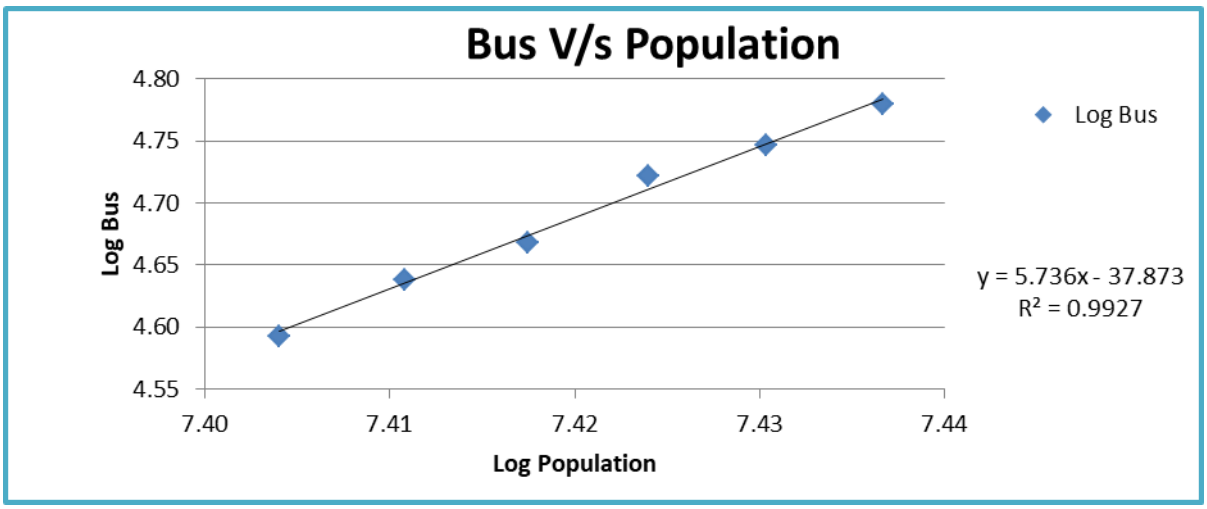


Figure 5-2 : Regression and Elasticity Population vs. Bus – Extrapolation Haryana

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-3 : LCV Traffic Vs NSDP Haryana

Year	NSDP	LCV	Log NSDP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	271152	124897	5.43	5.10		
2013	289756	137511	5.46	5.14	7%	
2014	314931	152069	5.50	5.18	9%	
2015	333359	167901	5.52	5.23	6%	
2016	372659	182776	5.57	5.26	12%	8.30%

Following figure depict regression analysis and extrapolation.

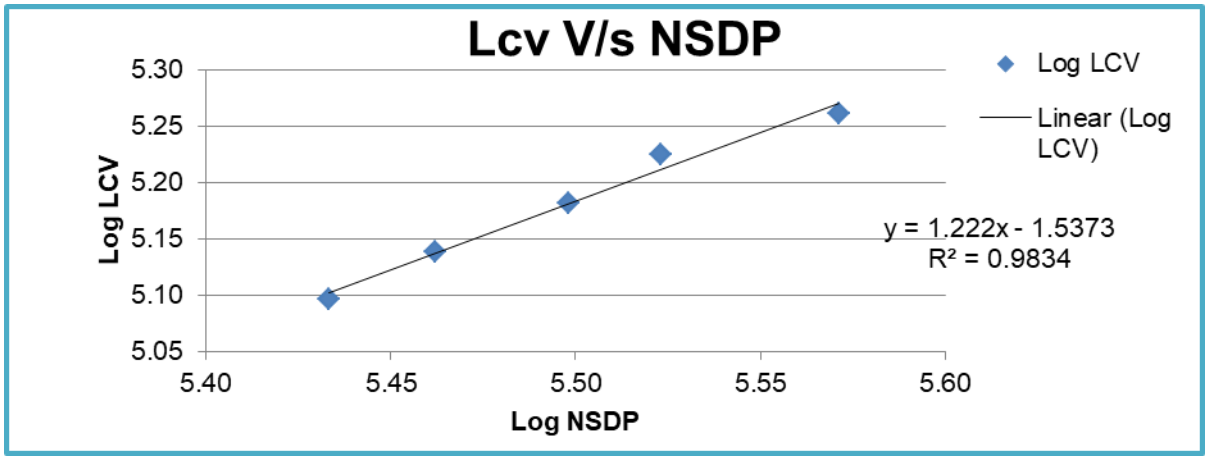


Figure 5-3 : Regression and Elasticity NSDP vs. LCV Traffic - extrapolation Haryana.

Table 5-4 : Goods Traffic Vs NSDP Haryana

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	271152	292735	5.43	5.47		
2013	289756	307509	5.46	5.49	7%	
2014	314931	327882	5.50	5.52	9%	
2015	333359	348732	5.52	5.54	6%	
2016	372659	367730	5.57	5.57	12%	
2017	412006	390321	5.61	5.59	11%	8.75%

Following figure depict regression analysis and extrapolation.

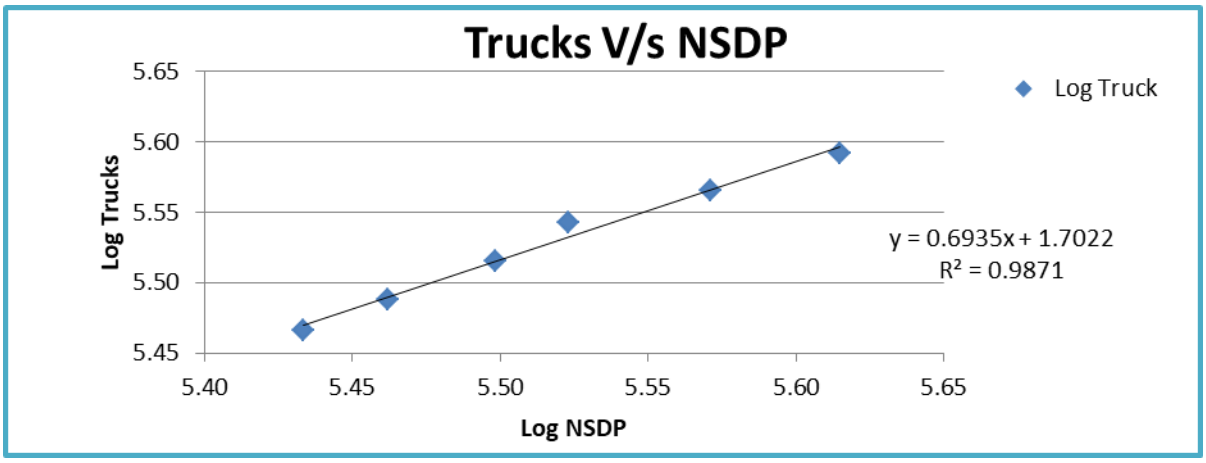


Figure 5-4 : Regression and Elasticity NSDP vs. Goods Traffic - extrapolation Haryana.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-5 : Summary Regression Analysis Haryana

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Haryana	Car/Jeep	PCI	y = 1.8306x + -3.1905	R^2 = 0.9823	1.8306	7.23%	13.24%	Good Regression
	Bus	Population	y = 5.736x - -37.8732	R^2 = 0.9927	5.7360	1.52%	8.69%	Good Regression
	LCV	NSDP	y = 1.222x - -1.5373	R^2 = 0.9834	1.2220	8.30%	10.14%	Good Regression
	Truck	NSDP	y = 0.6935x - 1.7022	R^2 = 0.9871	0.6935	8.75%	6.07%	Good Regression

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Rajasthan State.

Table 5-6 : Per Capita Income Vs Car Rajasthan

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	57192	591069	4.76	5.77		
2013	58441	659542	4.77	5.82	2%	
2014	61053	733916	4.79	5.87	4%	
2015	64496	814079	4.81	5.91	6%	
2016	68565	899307	4.84	5.95	6%	
2017	71394	988391	4.85	5.99	4%	4.55%

Regression analysis of same is given in figure below.

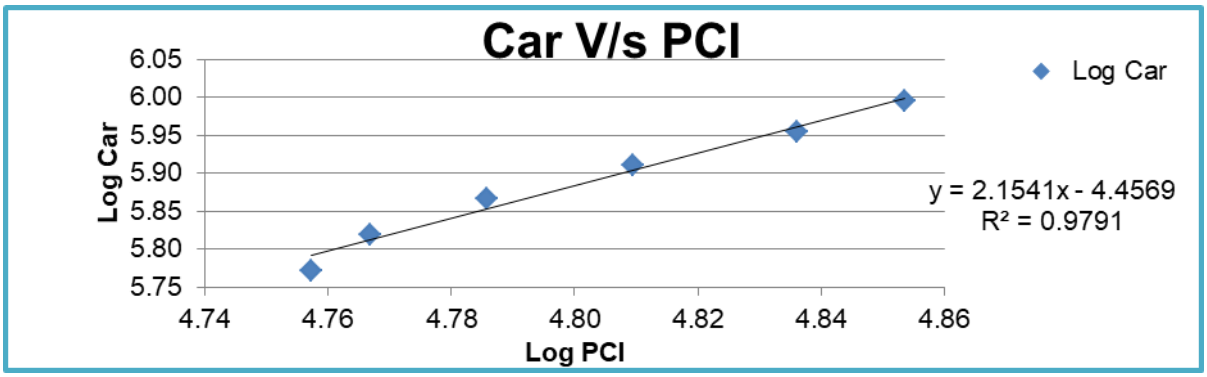


Figure 5-5 : Regression and Elasticity PCI vs. Car – Extrapolation Rajasthan

Table 5-7 : Population Vs Bus Rajasthan

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	68548437	83345	7.84	4.92		
2013	69783885	88616	7.84	4.95	2%	
2014	71016445	93892	7.85	4.97	2%	
2015	72245688	97650	7.86	4.99	2%	
2016	73471198	102818	7.87	5.01	2%	
2017	74692571	108680	7.87	5.04	2%	1.73%

Regression analysis of same is given in figure below.

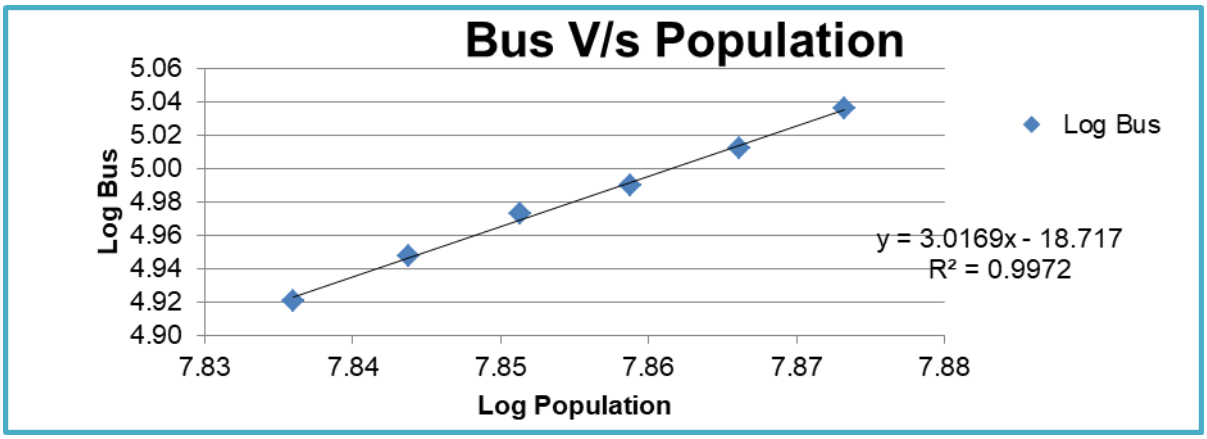


Figure 5-6 : Regression and Elasticity Population vs. Bus – Extrapolation Rajasthan

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-8 : LCV Traffic Vs NSDP Rajasthan

Year	NSDP	LCV	Log NSDP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	395331	69509	5.60	4.84		
2013	409802	76396	5.61	4.88	4%	
2014	434292	33379	5.64	4.52	6%	
2015	465408	91787	5.67	4.96	7%	
2016	501922	99763	5.70	5.00	8%	6.16%

Following figure depict regression analysis and extrapolation.

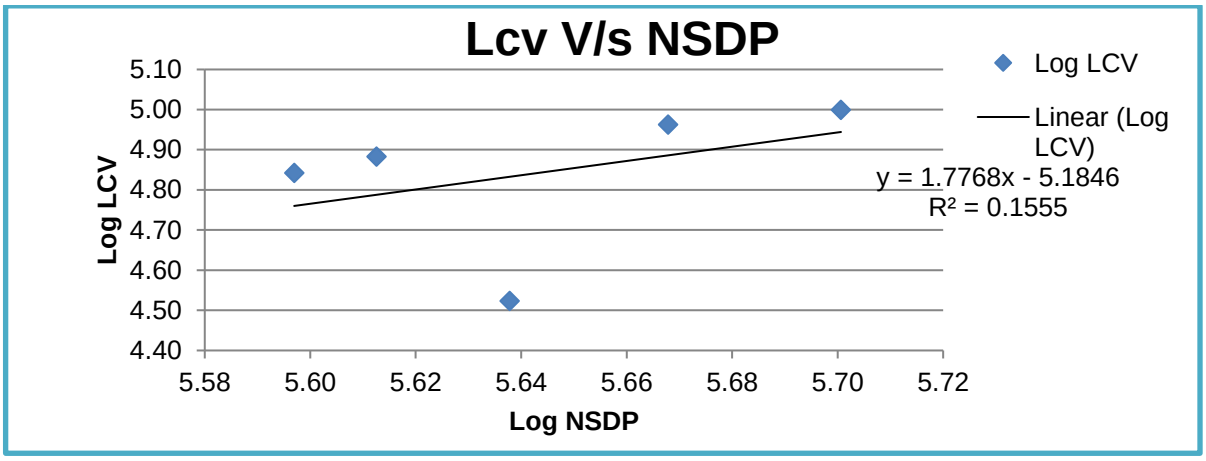


Figure 5-7 : Regression and Elasticity NSDP vs. LCV Traffic - extrapolation Rajasthan.

Table 5-9 : Goods Traffic Vs NSDP Rajasthan

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	395331	362028	5.60	5.56		
2013	409802	401983	5.61	5.60	4%	
2014	434292	434379	5.64	5.64	6%	
2015	465408	472365	5.67	5.67	7%	
2016	501922	517604	5.70	5.71	8%	
2017	530172	561158	5.72	5.75	6%	6.06%

Following figure depict regression analysis and extrapolation.

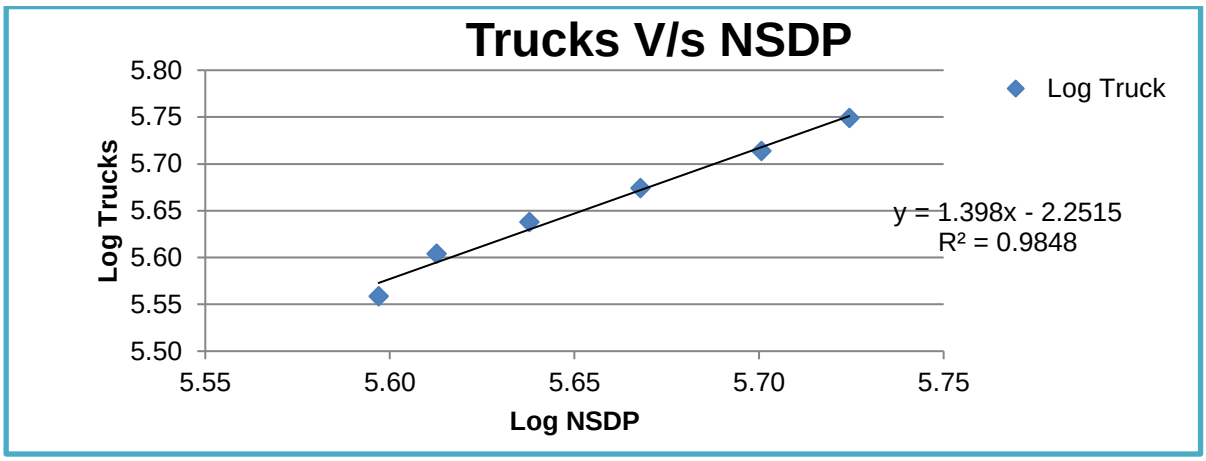


Figure 5-8 : Regression and Elasticity NSDP vs. Goods Traffic - extrapolation Rajasthan.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-10 : Summary Regression Analysis Rajasthan

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Rajasthan	Car/Jeep	PCI	y = 2.1541x + -4.4569	R² = 0.9791	2.1541	4.55%	9.79%	Good Regression
	Bus	Population	y = 3.0169x - -18.7174	R² = 0.9972	3.0169	1.73%	5.22%	Good Regression
	LCV	NSDP	y = 1.7768x - -5.1846	R² = 0.1555	1.7768	6.16%	10.95 %	Good Regression

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
	Truck	NSDP	y = 1.398x - - 2.2515	R^2 = 0.9848	1.3980	6.06%	8.46%	Good Regression

Economical model for predicting growth is good tool, however other local, regional, national factors should also be considered before finalizing growth factors. Considering factors such as proposed developments and other influencing economic factors, moderated growth should be considered. These factors are discussed in subsequent sections.

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trend of growth. Project stretch of Kaithal to Rajasthan Border is under tolling operation with current concessionaire and has only two years of tolling history from 2018-19. After that traffic was affected due to COVID-19 pandemic. Thus, sufficient data points to be able to establish a reliable past trend of traffic growth are not available. A minimum of about 5 -6 years' consistent traffic data is required for establishing a reliable past trend.

5.5 Other Factors Influencing Growth

There are many factors which have impact on traffic growth. As discussed previously these factors can be economical, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

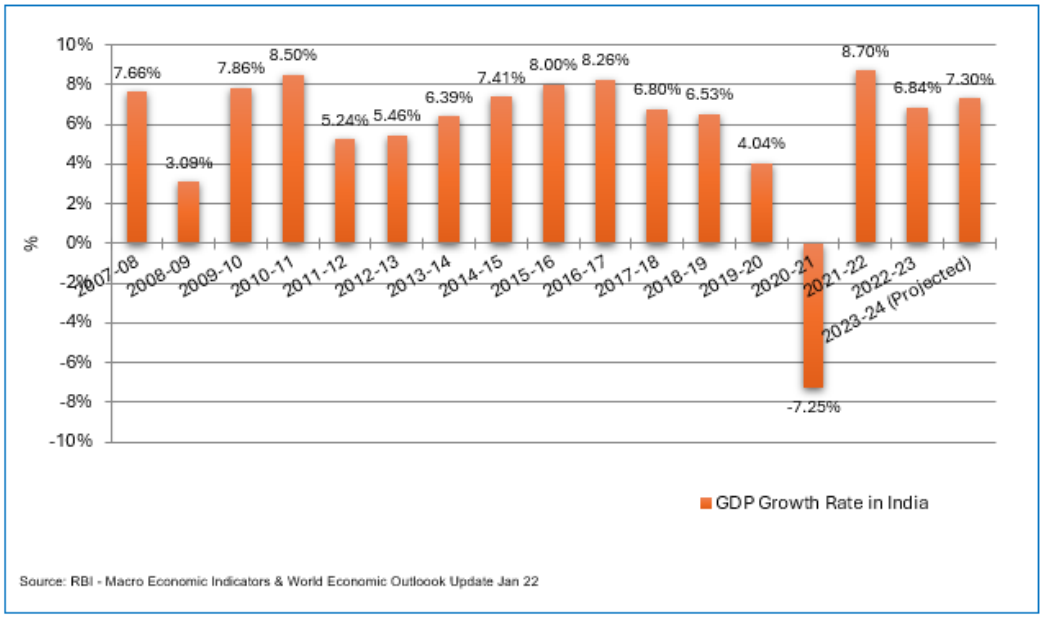


Figure 5-9 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had a slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. The government took major policy decisions including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honourable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on **Make -In- India** it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. World Economic Outlook update also has predicted a growth rate of about 7.5 % in year 2022-23.

5.6 Developments along and around the Project Corridor & State

Project stretch falls in region of good development potential. The same is discussed as under.

Haryana is the largest recipient of investment per capita since 2000 in India, and among one of the wealthiest and most economically developed regions in South Asia. Haryana has the sixth highest per capita income among Indian states and union territories. Haryana is also boosted by 30 SEZs (mainly along DMIC, ADKIC and DWPE in NCR), 7% national agricultural exports, 60% of national Basmati rice export, 67% cars, 60% motorbikes, 50% tractors and 50% refrigerators produced in India. In services. Since Haryana surrounds the country's capital Delhi on three sides (north, west and south), consequently a large area of Haryana is included in the economically important National Capital Region for the purposes of planning and development.

Major Cities of Haryana state & their characteristics are as below.

Faridabad is one of the biggest industrial cities of Haryana as well as North India. Faridabad has been described as eighth fastest growing city in the world and third most in India by City Mayors Foundation survey. Faridabad is home to large-scale companies like Escorts Limited, India Yamaha Motor Pvt. Ltd., Havells India Limited, JCB India Limited, Indian Oil (R&D), Larsen & Toubro (L&T), Whirlpool India Ltd., ABB Group, Goodyear India Ltd., Bata India Ltd and Eicher Tractor Ltd. and Beebay Kidswear. Eyewear e-tailer Lenskart and healthcare startup Lybrate have their headquarters in Faridabad. More than
5,000 units of auto parts producers are based in Faridabad.

Many directorates of different union government ministries are headquartered in Faridabad including Central Ground Water Board, Department of Plant Quarantine and Central Insecticide Lab and Union Government Offices from Haryana including the Commissioner of Central Excise within Department of Revenue, Government of India, Department of Explosives, and Department of Labour. The Apex Central Training Institute of the Department of Revenue, Government of India, National Academy of Customs Excise & Narcotics is located at Sector 29. The National Power Training Institute, an autonomous body under Ministry of Power, Government of India has a corporate office in Faridabad. The city also hosts the National Institute of Financial Management,
which serves as training academy for accounting and financial services. Also

headquartered here is NHPC Limited which is a Central PSU under Ministry of

Power, Government of India and the largest Hydro-power Company in India.

Hisar, city has been identified as a counter-magnet city for the National Capital Region to attract migrants and develop as an alternative centre of growth to Delhi. With upcoming integrated industrial aerocity and aero MRO hub at Hisar Airport, it is a fast-developing city.

The city has a large steel industry and is known as the 'city of steel'. Hisar is India's largest manufacturer of galvanized iron. The Jindal Group is based in Hisar. Jindal Stainless Steel is also the world's largest producer of Stainless-Steel strips for razor blades and India's largest producer of coin blanks. Textile and automobile industry is also a major contributor to the economy of the city. It also has a large number of livestock farms with the Central Livestock Farm, established in 1809 being one of the Asia's largest cattle farms.

Panipat city is famous in India by the name of "City of Weavers" and "Textile City". It is also known as the "cast-off capital" due to being "the global centre for recycling textiles. It is known for its woven modhas or round stools. Panipat has heavy industry, including a refinery operated by the Indian Oil Corporation, a urea manufacturing plant operated by National Fertilizers Limited and a National Thermal Power Corporation power plant. The IOCL refinery in Panipat is one of the major Industry in area which contributes to growth.

Gurugram: Witnessing rapid urbanisation, Gurgaon has become a leading financial and industrial hub with the third-highest per capita income in India. Gurgaon ranks number 1 in India in IT growth rate and existing technology infrastructure, and number 2 in startup ecosystem, innovation and liability.

The city's economic growth story started when the leading Indian automobile manufacturer Maruti Suzuki India Limited established a manufacturing plant in Gurgaon in the 1970s. Today, Gurgaon has local offices for more than 250.
Fortune 500 companies. Various international companies, including Coca-Cola, Pepsi, BMW, Agilent Technologies, Hyundai have chosen Gurugram to be their Indian corporate headquarters.
IMT Minesar, Dundahera and Sohna are industrial and logistics hub, that also has National Security Guards, Indian Institute of Corporate Affairs, National
Brain Research Centre and National Bomb Data Centre. Retail is an important industry in Gurgaon, with the presence of 26 shopping malls.

Ambala is connected to all the other major cities of north India including Delhi, Panipat, Chandigarh, Ludhiana, Amritsar and Shimla. It is a big interchange for various commuters for all neighbouring states. The Ambala Cantt bus stand witnesses roughly 50,000 commuters daily.

National highway NH 1 popularly known as GT road passes through Ambala and connects it to National capital Delhi, Panipat, Ludhiana and Amritsar. NH 22 connects it to state capital Chandigarh and Shimla. National Highway 52 (new NH-165) connects it to Kaithal, Narwana and Hisar.

Being located in the Indo-Gangetic Plain, the land is generally fertile and conducive to agriculture.

Small scale industries form the bulk of the industrial landscape in the district. It is one of the largest producers of scientific and surgical instruments in the country and home to a large number of scientific instrument manufacturers. It produces microscopes and other instruments used in chemistry laboratories. Manufacture of submersible pumps and mixers and grinders is another industry that has traditionally flourished.

Ambala is also an important textile trading centre, besides Delhi and Ludhiana and has a well-known cloth market, which is famous in the region especially for those seeking bridal wear. It also produces rugs, known locally as Durries, and houses many suppliers to Indian defence forces.

Punjab state is one of the most fertile regions in India. The region is ideal for wheat-growing. Rice, sugar cane, fruits and vegetables are also grown. Punjab is called the "Granary of India" or "India's breadbasket". It produces 10.26% of India's cotton, 19.5% of India's wheat, and 11% of India's rice. The Firozpur and Fazilka Districts are the largest producers of wheat and rice in the state. In worldwide terms, Indian Punjab produces 2% of the world's cotton, 2% of its wheat and 1% of its rice. The largest cultivated crop is wheat. Other important crops are rice, cotton, sugarcane, pearl millet, maize, barley and fruit.

Ludhiana is one of the City in India with best business environment. The riches are brought mostly by small-scale industrial units, which produce industrial goods, machine parts, auto parts, household appliances, hosiery, apparel, and garments. Ludhiana is Asia's

largest hub for bicycle manufacturing and produces more than 50% of India's bicycle consumption of more than 10 million each.
year. Ludhiana produces 60% of India's tractor parts and a large portion of auto.
and two-wheeler parts. Many parts used in German cars are Mercedes and BMW exclusively produced in Ludhiana to satisfy the world requirement. It is one of the largest manufacturers of domestic sewing machines. Hand tools and industrial equipment are other specialties. The apparel industry of Ludhiana is famous all over India for its woollen sweaters and cotton T-shirts; most of the top Indian woollen apparel brands are based in Ludhiana. Ludhiana also has a growing IT sector with multiple software services and product companies having development centres in the city.

Chandigarh has been rated as one of the "Wealthiest Towns" of India. The Reserve Bank of India ranked Chandigarh as the Third largest deposit centre and seventh largest credit centre nationwide.

Chandigarh is ranked 4th in the top 50 cities identified globally as "emerging outsourcing and IT services destinations" ahead of cities like Beijing. Chandigarh IT Park (also known as Rajiv Gandhi Chandigarh Technology Park) is the city's attempt to break into the information technology world. Major Indian firms and multinational corporations like Quark, Infosys, EVRY, Dell, IBM, Tec Mahindra, Airtel, Amadeus IT Group, DLF have set up base in the city and its suburbs.

Additionally, the government is a major employer in Chandigarh with three governments having their base here i.e. Chandigarh Administration, Punjab government and Haryana government.

Ordnance Cable Factory of the Ordnance Factories Board has been set up by the Government of India. There are about 15 mediums to large industries including two in the public sector. In addition, Chandigarh has over 2500 units registered under small-scale sector. The important industries are paper manufacturing, basic metals and alloys and machinery. Other industries are relating to food products, sanitary ware, auto parts, machine tools, pharmaceuticals and electrical appliances.

Rajasthan state is a fast-developing state. Last year Rajasthan was the leading investment destination in India after Maharashtra and Gujarat because of peaceful environment, relatively better law and order situation, excellent infrastructure, and investment friendly climate. Rajasthan is pre-eminent in quarrying and mining in India. The state is the second largest source of cement. It has rich salt deposits at Sambhar, copper mines at Khetri and zinc mines at Dariba and Zawar. Jaipur is the capital and largest city of Rajasthan. It is also.
known as Pink City of India and a famous travel destination.
There is large amount of information available on open platform including internet regarding this. Relevant information is compiled as under.

Delhi Mumbai Industrial Corridor (DMIC)

Rajasthan is strategically located along the Delhi-Mumbai section of the Golden Quadrilateral highway project, the proposed Dedicated Freight Corridor (DFC) and the Delhi Mumbai Industrial Corridor (DMIC).

Rajasthan has access to 46% of DMIC. It falls within major districts of Jaipur, Alwar, Kota and Bhilwara. Over 58% area of the state falls within the influence area of DMIC. The DMIC will provide high quality environment with state-of-the-art infrastructure for new investors.

The state of Rajasthan has a rich agricultural and mineral base. Key industrial sectors in the state include Cement, Building Stones, Gypsum, Gems & Jewellery, Chemical, Food processing and Textiles. The emerging sectors include IT/ITES, Auto Component and Knowledge Hubs. Based on the strengths of specific regions across the state, five development nodes are identified in the influence area of DMIC. It includes two investment regions and three industrial areas.

Project road would act as feeder road for traffic destined for DMIC logistic hubs from northern states.

5.7 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as under. Rate of growth is moderated in light of overall regional trend. Growth of multi-Axle is kept slightly higher as trend of technological advances in logistic industry Favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, rate of growth diminishes. Same growth rate is not sustainable for long Traffic growth is suitably stepped down for future years.

Growth rates are recommended for three scenarios for sensitivity analysis namely **Optimistic, Pessimistic** and **Most Likely** with a positive and negative variation 0.5% from Most Likely case for corridor in both states.

5.7.1 Recommended Growth Rates of Traffic for Project Stretch

Table 5-11 : Recommended Growth Rates Optimistic

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	5.67%	5.45%	5.22%	5.00%	4.78%	4.56%
Bus	3.21%	3.09%	2.72%	2.61%	2.50%	2.40%
LCV	3.38%	3.17%	2.72%	2.53%	2.35%	2.17%
2- Axle	3.96%	3.74%	3.23%	3.04%	2.86%	2.67%
3 - Axle	3.96%	3.74%	3.23%	3.04%	2.86%	2.67%
4 to 6 Axle	3.96%	3.74%	3.53%	3.32%	3.12%	2.91%
7 and Above Axle	3.96%	3.74%	3.53%	3.32%	3.12%	2.91%

Table 5-12 : Recommended Growth Rates Pessimistic

Category / Year	2024-2026	2026-2031	2031-2036	2036-2040	2041-2046	2046-2051
Car/Jeep/Van	5.17%	4.95%	4.72%	4.50%	4.28%	4.06%
Bus	2.71%	2.59%	2.22%	2.11%	2.00%	1.90%
LCV	2.88%	2.67%	2.22%	2.03%	1.85%	1.67%
2- Axle	3.46%	3.24%	2.73%	2.54%	2.36%	2.17%
3 - Axle	3.46%	3.24%	2.73%	2.54%	2.36%	2.17%

Category / Year	2024-2026	2026-2031	2031-2036	2036-2040	2041-2046	2046-2051
4 to 6 Axle	3.46%	3.24%	3.03%	2.82%	2.62%	2.41%
7 and Above Axle	3.46%	3.24%	3.03%	2.82%	2.62%	2.41%

Table 5-13 : Recommended Growth Rates Most Likely

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	5.42%	5.20%	4.97%	4.75%	4.53%	4.31%
Bus	2.96%	2.84%	2.47%	2.36%	2.25%	2.15%
LCV	3.13%	2.92%	2.47%	2.28%	2.10%	1.92%
2- Axle	3.71%	3.49%	2.98%	2.79%	2.61%	2.42%
3 - Axle	3.71%	3.49%	2.98%	2.79%	2.61%	2.42%
4 to 6 Axle	3.71%	3.49%	3.28%	3.07%	2.87%	2.66%
7 and Above Axle	3.71%	3.49%	3.28%	3.07%	2.87%	2.66%

Traffic and revenue have been worked out on the basis of above growths and same is presented in subsequent chapter of report.

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in previous section of report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for following three cases of growth up to concession period.

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza 1- Narwana 125.00 KM

(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	4520	381	364	428	249	1149	32	7123	13530
2025-26	4765	393	375	444	259	1192	33	7461	14101
2026-27	5024	405	387	461	269	1236	34	7816	14698
2027-28	5296	417	399	478	279	1282	35	8186	15316
2028-29	5585	430	411	495	289	1330	36	8576	15962
2029-30	5889	443	424	514	300	1380	37	8987	16644
2030-31	6196	455	436	531	310	1429	38	9395	17311
2031-32	6519	467	448	548	320	1479	39	9820	17999
2032-33	6859	479	460	565	330	1531	40	10264	18712
2033-34	7217	492	472	583	341	1585	41	10731	19460
2034-35	7593	505	485	602	352	1641	42	11220	20241
2035-36	7972	517	498	621	363	1696	43	11710	21019
2036-37	8370	530	511	640	374	1752	44	12221	21822
2037-38	8787	543	524	659	385	1810	45	12753	22653
2038-39	9225	556	537	679	396	1871	46	13310	23522
2039-40	9685	569	551	699	408	1933	47	13892	24423
2040-41	10147	582	565	719	419	1994	48	14474	25318
2041-42	10632	595	579	739	431	2056	49	15081	26244
2042-43	11140	608	593	761	443	2120	50	15715	27208
2043-44	11672	622	607	783	455	2187	51	16377	28211
2044-45	12229	636	622	805	468	2255	53	17068	29254
2045-46	12787	649	637	827	480	2320	54	17754	30276
2046-47	13370	662	652	849	492	2388	56	18469	31340
2047-48	13979	676	667	872	505	2457	58	19214	32443
2048-49	14617	690	682	895	519	2528	60	19991	33586

Table 6-2 : Total Tollable Traffic @ Toll Plaza 2- Badopatti 171.00 KM

(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	4560	360	459	437	341	1109	65	7331	14094
2025-26	4807	372	473	453	354	1150	67	7676	14682
2026-27	5068	384	488	469	367	1193	69	8038	15295
2027-28	5344	396	504	487	380	1237	72	8420	15942
2028-29	5635	409	520	505	394	1283	75	8821	16617
2029-30	5942	422	537	524	408	1331	78	9242	17323
2030-31	6252	434	551	540	421	1378	81	9657	18005
2031-32	6578	446	567	558	434	1427	84	10094	18724
2032-33	6922	458	583	576	448	1477	87	10551	19468
2033-34	7283	470	599	594	462	1529	90	11027	20239
2034-35	7663	483	616	613	477	1583	93	11528	21048
2035-36	8045	495	633	632	491	1635	96	12027	21845
2036-37	8448	507	650	651	506	1689	99	12550	22676
2037-38	8871	520	667	670	521	1745	102	13096	23537
2038-39	9315	533	685	690	536	1803	105	13667	24434
2039-40	9780	546	703	710	552	1863	108	14262	25364
2040-41	10247	559	721	730	567	1921	111	14856	26284
2041-42	10737	572	739	750	583	1981	114	15476	27239
2042-43	11250	585	757	771	599	2043	117	16122	28229
2043-44	11788	599	776	793	616	2106	121	16799	29263
2044-45	12351	613	795	816	633	2171	125	17504	30335
2045-46	12914	626	814	838	650	2234	129	18205	31393
2046-47	13503	639	833	861	667	2299	133	18935	32489
2047-48	14119	653	853	884	684	2365	137	19695	33621
2048-49	14763	667	873	907	702	2434	141	20487	34797

Table 6-3 : Total Tollable Traffic @ Toll Plaza 3- Chainage 212.00 KM

(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	4342	417	169	539	481	1695	77	7721	16509
2025-26	4579	430	174	559	499	1758	80	8079	17191
2026-27	4828	443	179	580	518	1823	83	8454	17901
2027-28	5091	456	184	602	538	1892	86	8849	18648
2028-29	5368	470	190	624	558	1963	89	9262	19423
2029-30	5660	485	196	647	579	2036	92	9695	20230
2030-31	5954	498	201	668	598	2108	95	10122	21016
2031-32	6264	511	206	689	617	2182	98	10567	21827
2032-33	6590	524	211	711	637	2259	101	11033	22673
2033-34	6934	537	217	734	658	2339	104	11523	23560
2034-35	7296	552	223	757	679	2421	108	12036	24482
2035-36	7661	565	229	780	700	2501	112	12548	25394

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2036-37	8044	579	235	803	721	2585	116	13083	26344
2037-38	8446	594	241	827	743	2671	120	13642	27330
2038-39	8868	609	247	853	765	2759	124	14225	28350
2039-40	9311	624	253	879	788	2851	128	14834	29413
2040-41	9756	639	259	905	810	2940	132	15441	30461
2041-42	10222	654	265	931	833	3032	136	16073	31546
2042-43	10710	669	271	958	857	3126	140	16731	32669
2043-44	11222	684	277	985	881	3223	144	17416	33829
2044-45	11758	700	284	1013	906	3324	148	18133	35041
2045-46	12294	715	290	1040	930	3421	152	18842	36225
2046-47	12854	730	297	1068	955	3521	156	19581	37456
2047-48	13441	745	304	1096	980	3624	160	20350	38727
2048-49	14054	761	311	1125	1006	3729	165	21151	40045

Table 6-4 : Total Tollable Traffic @ Toll Plaza 1- Chainage 125.000 KM (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	4520	381	364	428	249	1149	32	7123	13530
2025-26	4743	391	374	442	258	1186	33	7427	14037
2026-27	4976	401	384	456	267	1224	34	7742	14560
2027-28	5221	411	394	470	276	1263	35	8070	15099
2028-29	5478	421	404	485	285	1303	36	8412	15657
2029-30	5748	431	415	501	294	1346	37	8772	16248
2030-31	6018	440	425	515	302	1386	38	9124	16812
2031-32	6302	449	435	529	311	1428	39	9493	17402
2032-33	6599	459	445	543	320	1471	40	9877	18011
2033-34	6910	469	455	558	329	1515	41	10277	18642
2034-35	7236	479	465	573	338	1561	42	10694	19296
2035-36	7562	488	475	587	347	1605	43	11107	19937
2036-37	7902	498	485	602	356	1650	44	11537	20601
2037-38	8258	508	495	617	365	1696	45	11984	21286
2038-39	8629	518	506	633	374	1744	46	12450	22000
2039-40	9017	528	517	649	384	1793	47	12935	22739
2040-41	9402	538	528	664	393	1839	48	13412	23456
2041-42	9803	548	539	680	402	1887	49	13908	24200
2042-43	10222	558	550	696	412	1937	50	14425	24975
2043-44	10659	568	561	713	422	1988	51	14962	25775
2044-45	11115	578	572	730	432	2040	52	15519	26598
2045-46	11566	587	583	746	441	2089	53	16065	27396
2046-47	12036	597	594	762	451	2139	54	16633	28221
2047-48	12525	607	605	779	461	2190	55	17222	29073
2048-49	13034	617	616	796	471	2242	56	17832	29950

Table 6-5 : Total Tollable Traffic @ Toll Plaza 2- Chainage 171.00 KM (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	4560	360	459	437	341	1109	65	7331	14094
2025-26	4786	370	470	451	352	1145	67	7641	14614
2026-27	5023	380	482	465	363	1182	69	7964	15153
2027-28	5271	390	494	480	375	1221	71	8302	15717
2028-29	5531	400	506	495	387	1261	73	8653	16298
2029-30	5805	410	518	510	399	1302	75	9019	16898
2030-31	6079	418	529	524	410	1342	77	9379	17481
2031-32	6367	428	540	538	421	1383	79	9756	18085
2032-33	6667	438	552	552	432	1425	81	10147	18709
2033-34	6982	448	564	567	444	1468	83	10556	19359
2034-35	7312	458	576	582	456	1512	85	10981	20028
2035-36	7641	468	588	597	467	1554	87	11402	20684
2036-37	7985	478	600	612	479	1598	89	11841	21367
2037-38	8344	488	612	627	491	1643	91	12296	22069
2038-39	8719	498	624	642	503	1690	94	12770	22801
2039-40	9110	508	637	658	516	1738	97	13264	23563
2040-41	9499	518	649	673	528	1783	99	13749	24295
2041-42	9906	528	661	688	540	1830	102	14255	25059
2042-43	10331	538	674	704	553	1878	105	14783	25855
2043-44	10773	548	687	720	566	1927	108	15329	26672
2044-45	11234	558	700	736	579	1977	111	15895	27512
2045-46	11690	568	713	752	591	2025	114	16453	28336
2046-47	12164	578	726	768	604	2074	117	17031	29185
2047-48	12658	588	739	784	617	2124	120	17630	30058
2048-49	13173	598	752	800	630	2175	123	18251	30957

Table 6-6 : Total Tollable Traffic @ Toll Plaza 3- Chainage 212.00 KM (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	4342	417	169	539	481	1695	77	7721	16509
2025-26	4558	428	173	557	496	1750	79	8041	17109
2026-27	4783	439	178	575	512	1806	81	8374	17728
2027-28	5019	451	183	594	528	1864	84	8723	18377
2028-29	5267	463	188	613	546	1925	87	9089	19057
2029-30	5527	475	193	633	564	1987	90	9469	19756
2030-31	5787	486	197	651	579	2048	93	9841	20432
2031-32	6060	497	201	669	594	2110	96	10227	21125
2032-33	6345	508	206	688	610	2174	99	10630	21848
2033-34	6644	519	211	707	626	2239	102	11048	22589
2034-35	6957	530	216	726	644	2307	105	11485	23364
2035-36	7270	541	221	745	660	2372	108	11917	24120
2036-37	7597	552	226	764	676	2439	111	12365	24898
2037-38	7938	563	231	783	693	2508	114	12830	25703

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2038-39	8294	574	236	803	711	2579	117	13314	26537
2039-40	8667	586	241	823	729	2651	120	13817	27395
2040-41	9038	597	246	842	747	2721	123	14314	28237
2041-42	9425	608	251	862	765	2792	126	14829	29102
2042-43	9829	619	256	882	783	2865	129	15363	29994
2043-44	10250	630	261	903	802	2940	132	15918	30917
2044-45	10688	642	266	924	821	3017	135	16493	31868
2045-46	11122	653	271	944	839	3090	138	17057	32790
2046-47	11574	664	276	964	858	3165	141	17642	33741
2047-48	12043	675	281	985	877	3242	144	18247	34722
2048-49	12531	686	286	1006	896	3320	147	18872	35726

Traffic projections for Most Likely scenario is given as under

Table 6-7 : Total Tollable Traffic @ Toll Plaza 1- Chainage 125.000 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	4520	381	364	428	249	1149	32	7123	13530
2025-26	4755	391	375	443	258	1189	33	7444	14069
2026-27	5001	402	386	458	267	1231	34	7779	14630
2027-28	5260	413	397	474	277	1274	35	8130	15214
2028-29	5532	425	408	491	287	1318	36	8497	15821
2029-30	5819	437	420	508	297	1364	37	8882	16454
2030-31	6108	447	431	523	306	1409	38	9262	17070
2031-32	6411	457	442	539	315	1455	39	9658	17708
2032-33	6730	467	453	555	325	1503	40	10073	18373
2033-34	7064	478	464	572	335	1552	41	10506	19063
2034-35	7414	489	476	589	345	1603	42	10958	19780
2035-36	7766	499	487	606	355	1652	43	11408	20486
2036-37	8134	510	499	623	365	1703	44	11878	21222
2037-38	8520	521	511	640	375	1755	45	12367	21980
2038-39	8924	532	523	657	385	1809	46	12876	22765
2039-40	9347	544	535	676	396	1865	47	13410	23588
2040-41	9770	555	547	693	406	1918	48	13937	24388
2041-42	10212	566	559	711	416	1973	49	14486	25218
2042-43	10674	577	571	730	427	2030	50	15059	26084
2043-44	11157	589	584	749	438	2088	51	15656	26979
2044-45	11662	601	597	769	449	2147	52	16277	27904
2045-46	12165	612	610	788	460	2204	53	16892	28814
2046-47	12689	623	623	807	471	2262	54	17529	29749
2047-48	13236	635	636	827	482	2323	55	18194	30725
2024-25	4520	381	364	428	249	1149	32	7123	13530

Table 6-8 : Total Tollable Traffic @ Toll Plaza 2- Chainage 171.00 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	4560	360	459	437	341	1109	65	7331	14094
2025-26	4796	370	472	452	353	1148	67	7658	14650
2026-27	5045	380	486	467	365	1188	69	8000	15226
2027-28	5306	391	500	483	378	1229	71	8358	15826
2028-29	5582	402	514	499	391	1272	73	8733	16450
2029-30	5873	414	528	517	404	1316	75	9127	17101
2030-31	6166	424	541	532	416	1359	77	9515	17731
2031-32	6473	434	555	547	428	1403	79	9919	18383
2032-33	6795	444	569	563	441	1449	82	10343	19070
2033-34	7133	455	583	579	454	1497	85	10786	19783
2034-35	7487	466	597	596	467	1546	88	11247	20519
2035-36	7842	476	611	612	480	1594	91	11706	21248
2036-37	8214	487	625	628	493	1643	94	12184	21999
2037-38	8603	498	640	646	507	1694	97	12685	22789
2038-39	9012	509	655	664	521	1746	100	13207	23603
2039-40	9440	520	671	683	535	1799	103	13751	24446
2040-41	9868	531	686	701	549	1851	106	14292	25279
2041-42	10315	542	702	719	563	1904	109	14854	26139
2042-43	10782	553	718	738	577	1958	112	15438	27026
2043-44	11271	564	735	757	592	2014	115	16048	27950
2044-45	11782	575	752	776	607	2072	118	16682	28905
2045-46	12290	586	769	795	621	2127	121	17309	29840
2046-47	12821	597	786	814	636	2183	124	17961	30806
2047-48	13374	608	803	833	651	2242	127	18638	31808
2048-49	13951	619	821	853	666	2302	130	19342	32844

Table 6-9 : Total Tollable Traffic @ Toll Plaza 3- Chainage 212.00 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	4342	417	169	539	481	1695	77	7721	16509
2025-26	4568	429	174	558	498	1755	80	8062	17159
2026-27	4805	441	179	578	516	1816	83	8418	17831
2027-28	5054	453	184	598	534	1879	86	8788	18524
2028-29	5315	466	189	619	553	1944	89	9175	19246
2029-30	5590	479	194	640	572	2012	92	9579	19995
2030-31	5867	491	199	659	589	2078	95	9978	20723
2031-32	6158	503	204	679	607	2146	98	10395	21481
2032-33	6464	515	209	699	625	2216	101	10829	22262
2033-34	6784	527	214	720	644	2288	104	11281	23073
2034-35	7121	539	219	741	663	2363	107	11753	23914
2035-36	7458	551	224	762	682	2435	110	12222	24741
2036-37	7811	563	229	783	701	2510	113	12710	25598
2037-38	8182	575	234	805	721	2587	116	13220	26488

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2038-39	8570	588	239	827	741	2666	120	13751	27410
2039-40	8977	601	244	850	762	2747	124	14305	28366
2040-41	9384	613	249	872	782	2826	127	14853	29301
2041-42	9809	625	254	894	802	2907	131	15422	30268
2042-43	10254	638	260	917	823	2991	135	16018	31278
2043-44	10718	651	266	940	844	3077	139	16635	32317
2044-45	11203	664	272	965	866	3165	143	17278	33394
2045-46	11686	676	278	988	887	3250	147	17912	34446
2046-47	12190	689	284	1011	908	3337	151	18570	35529
2047-48	12716	702	290	1036	930	3426	155	19255	36652
2048-49	13264	715	296	1061	952	3518	159	19965	37810

6.2 Modification in Concession Period

As per Article 29 of the concession agreement, if actual traffic on the project falls short or exceeds Target Traffic on project highway on defined date, concession period shall be modified subject to calculation stipulated therein. For Kaithal – Rajasthan Border project, the Target Date and Target Traffic are defined as under:

Target Date - 1st April 2023

Target Traffic - 21919 in PCU

Pessimistic Case

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2023	21919	14886	-32%	48%	20%	27	5.4

PCUs as per Pessimistic cases have been considered for arriving at the concession Period end date.

CHAPTER 7

FORECAST OF TOLL REVENUE

7.1 General

This chapter presents the tolling rate calculations, categories and toll revenue of the project.

7.2 Discount Categories

As per the Toll Notification (Schedule - R) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent user's monthly pass would be issued at fee 50 time the single journey fee.
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travellers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: Local Car Jeep Van - Rs. 275 per month (for locals residing within a radius of 20 kms from toll plaza) and local commercial and 50% rate of single trip.

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.

The formula for determining the applicable rate of fee shall be as follows:-

$$\text{Applicable rate of fee} = \text{base rate} + \text{base rate} \times \left\{ \frac{\text{WPI A-WPI B}}{\text{WPI B}} \right\} \times 0.4$$

Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2018-19. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. The following graph provides historical rate of inflation (WPI) in India. Data has been sourced from the Office of Economic Advisor web site (www.eaindustry.nic.in) WPI for year 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series.

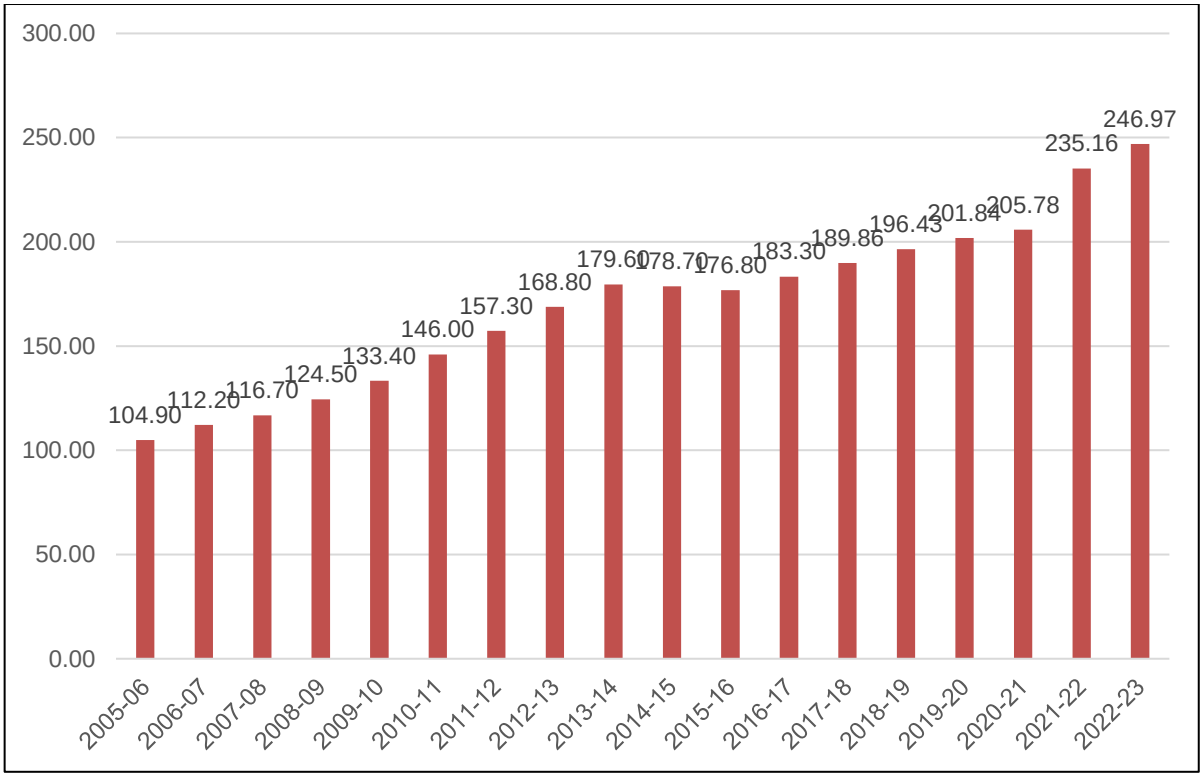


Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in last few years is steadily growing. It grew in range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

7.3 Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45
Oversized Vehicles (7 or more Axles)	4.20

Toll rates are calculated as per guidelines provided in schedule R (rounded to nearest Rs.) for the concession period and are given below.

Thus, worked out rates for various categories of vehicle and discounts are given as under

Table 7-2 : Toll Rates for Single Journey @ Km 125.000

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2024-25	90	145	305	305	330	475	580
2025-26	95	155	320	320	350	500	610
2026-27	100	160	335	335	365	525	640
2027-28	105	170	355	355	385	555	675
2028-29	110	175	370	370	405	580	710
2029-30	115	185	390	390	425	610	745
2030-31	120	195	410	410	445	645	785
2031-32	125	205	430	430	470	675	825
2032-33	135	215	455	455	495	710	865
2033-34	140	230	475	475	520	750	910
2034-35	150	240	500	500	550	785	960
2035-36	155	250	530	530	575	830	1010
2036-37	165	265	555	555	605	875	1060
2037-38	175	280	585	585	640	920	1120
2038-39	180	295	615	615	675	970	1180
2039-40	190	310	650	650	710	1020	1240
2040-41	200	325	685	685	745	1075	1310
2041-42	215	345	720	720	790	1130	1380
2042-43	225	365	760	760	830	1195	1455
2043-44	235	385	800	800	875	1260	1530
2044-45	250	405	845	845	925	1325	1615
2045-46	265	425	890	890	975	1400	1705
2046-47	280	450	940	940	1025	1475	1795
2047-48	295	475	995	995	1085	1555	1895
2048-49	310	500	1050	1050	1145	1645	2000

Table 7-3 : Toll Rates for Single Journey @ Km 171.00

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2024-25	120	195	410	410	450	645	785
2025-26	130	205	430	430	470	680	825
2026-27	135	215	455	455	495	710	865
2027-28	140	230	475	475	520	750	910
2028-29	150	240	500	500	545	785	955
2029-30	155	250	525	525	575	825	1005
2030-31	165	265	555	555	605	870	1060
2031-32	170	280	585	585	635	915	1115
2032-33	180	295	615	615	670	960	1170
2033-34	190	310	645	645	705	1010	1230
2034-35	200	325	680	680	740	1065	1295
2035-36	210	340	715	715	780	1120	1365
2036-37	220	360	750	750	820	1180	1435
2037-38	235	380	790	790	865	1240	1510
2038-39	245	400	835	835	910	1310	1595
2039-40	260	420	880	880	960	1380	1680
2040-41	275	440	925	925	1010	1450	1770

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2041-42	290	465	975	975	1065	1530	1865
2042-43	305	490	1030	1030	1120	1615	1965
2043-44	320	520	1085	1085	1185	1700	2070
2044-45	340	545	1145	1145	1250	1795	2185
2045-46	355	575	1205	1205	1315	1890	2305
2046-47	375	605	1275	1275	1390	1995	2430
2047-48	395	640	1345	1345	1465	2105	2565
2048-49	420	675	1415	1415	1545	2220	2705

Table 7-4 : Toll Rates for Single Journey @ Km 212.00

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2024-25	70	115	240	240	260	375	455
2025-26	75	120	250	250	275	395	480
2026-27	80	125	265	265	285	415	500
2027-28	80	130	275	275	300	435	530
2028-29	85	140	290	290	315	455	555
2029-30	90	145	305	305	335	480	585
2030-31	95	155	320	320	350	505	615
2031-32	100	160	340	340	370	530	645
2032-33	105	170	355	355	390	555	680
2033-34	110	180	375	375	410	585	715
2034-35	115	190	395	395	430	615	750
2035-36	120	200	415	415	450	650	790
2036-37	130	210	435	435	475	685	830
2037-38	135	220	460	460	500	720	875
2038-39	145	230	485	485	525	760	925
2039-40	150	245	510	510	555	800	970
2040-41	160	255	535	535	585	840	1025
2041-42	165	270	565	565	615	885	1080
2042-43	175	285	595	595	650	935	1140
2043-44	185	300	630	630	685	985	1200
2044-45	195	315	665	665	725	1040	1265
2045-46	205	335	700	700	765	1095	1335
2046-47	220	350	735	735	805	1155	1410
2047-48	230	370	780	780	850	1220	1485
2048-49	245	390	820	820	895	1285	1565

Table 7-5 : Toll Rates for Return Journey @ Km 125.000

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2024-25	135	220	455	455	500	715	870
2025-26	140	230	480	480	525	750	915
2026-27	150	240	505	505	550	790	960
2027-28	155	255	530	530	580	830	1010
2028-29	165	265	555	555	605	875	1060
2029-30	175	280	585	585	640	915	1115
2030-31	180	295	615	615	670	965	1175
2031-32	190	310	645	645	705	1015	1235
2032-33	200	325	680	680	740	1065	1300
2033-34	210	340	715	715	780	1120	1365
2034-35	225	360	755	755	820	1180	1440
2035-36	235	380	795	795	865	1245	1515
2036-37	245	400	835	835	910	1310	1595
2037-38	260	420	880	880	960	1380	1680
2038-39	275	440	925	925	1010	1450	1765
2039-40	290	465	975	975	1065	1530	1860
2040-41	305	490	1030	1030	1120	1610	1960
2041-42	320	515	1085	1085	1180	1700	2065
2042-43	335	545	1140	1140	1245	1790	2180
2043-44	355	575	1205	1205	1315	1885	2300
2044-45	375	605	1270	1270	1385	1990	2425
2045-46	395	640	1340	1340	1460	2100	2555
2046-47	415	675	1410	1410	1540	2215	2695
2047-48	440	710	1490	1490	1625	2335	2845
2048-49	465	750	1570	1570	1715	2465	3000

Table 7-6 : Toll Rates for Return Journey @ Km 171.00

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2024-25	180	295	615	615	675	970	1180
2025-26	190	310	650	650	705	1015	1240
2026-27	200	325	680	680	745	1070	1300
2027-28	210	340	715	715	780	1120	1365
2028-29	220	360	750	750	820	1180	1435
2029-30	235	375	790	790	865	1240	1510
2030-31	245	395	830	830	905	1305	1585
2031-32	260	415	875	875	955	1370	1670
2032-33	270	440	920	920	1005	1440	1755
2033-34	285	460	970	970	1055	1520	1845
2034-35	300	485	1020	1020	1110	1595	1945
2035-36	315	510	1070	1070	1170	1680	2045
2036-37	335	540	1130	1130	1230	1770	2155
2037-38	350	565	1190	1190	1295	1865	2270
2038-39	370	595	1250	1250	1365	1965	2390
2039-40	390	630	1320	1320	1440	2070	2515
2040-41	410	665	1390	1390	1515	2180	2650
2041-42	435	700	1465	1465	1595	2295	2795
2042-43	455	735	1545	1545	1685	2420	2945

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2043-44	480	775	1625	1625	1775	2550	3105
2044-45	505	820	1715	1715	1870	2690	3275
2045-46	535	865	1810	1810	1975	2840	3455
2046-47	565	910	1910	1910	2080	2995	3645
2047-48	595	960	2015	2015	2195	3160	3845
2048-49	630	1015	2125	2125	2320	3330	4055

Table 7-7 : Toll Rates for Return Journey @ Km 212.00

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2024-25	105	170	360	360	390	560	685
2025-26	110	180	375	375	410	590	715
2026-27	115	190	395	395	430	620	755
2027-28	125	200	415	415	455	650	790
2028-29	130	210	435	435	475	685	830
2029-30	135	220	460	460	500	720	875
2030-31	140	230	480	480	525	755	920
2031-32	150	240	505	505	555	795	965
2032-33	155	255	535	535	580	835	1020
2033-34	165	270	560	560	610	880	1070
2034-35	175	280	590	590	645	925	1125
2035-36	185	295	620	620	680	975	1185
2036-37	195	310	655	655	715	1025	1250
2037-38	205	330	690	690	750	1080	1315
2038-39	215	345	725	725	790	1135	1385
2039-40	225	365	765	765	835	1200	1460
2040-41	240	385	805	805	880	1260	1535
2041-42	250	405	850	850	925	1330	1620
2042-43	265	425	895	895	975	1400	1705
2043-44	280	450	945	945	1030	1480	1800
2044-45	295	475	995	995	1085	1560	1900
2045-46	310	500	1050	1050	1145	1645	2000
2046-47	325	530	1105	1105	1205	1735	2110
2047-48	345	555	1165	1165	1275	1830	2230
2048-49	365	590	1230	1230	1345	1930	2350

Table 7-8 : Toll Rates for Monthly Pass Local @ Km 125.000

Year	Car	Minibus /LCV
2024-25	340	340
2025-26	355	355
2026-27	375	375
2027-28	390	390
2028-29	410	410
2029-30	435	435
2030-31	455	455
2031-32	480	480

Year	Car	Minibus /LCV
2032-33	505	505
2033-34	530	530
2034-35	560	560
2035-36	585	585
2036-37	620	620
2037-38	650	650
2038-39	685	685
2039-40	720	720
2040-41	760	760
2041-42	800	800
2042-43	845	845
2043-44	890	890
2044-45	940	940
2045-46	990	990
2046-47	1045	1045
2047-48	1105	1105
2048-49	1165	1165

Table 7-9 : Toll Rates for Monthly Pass Local @ Km 171.000

Year	Car	Minibus /LCV
2024-25	340	340
2025-26	355	355
2026-27	375	375
2027-28	390	390
2028-29	410	410
2029-30	435	435
2030-31	455	455
2031-32	480	480
2032-33	505	505
2033-34	530	530
2034-35	560	560
2035-36	585	585
2036-37	620	620
2037-38	650	650
2038-39	685	685
2039-40	720	720
2040-41	760	760
2041-42	800	800
2042-43	845	845
2043-44	890	890
2044-45	940	940
2045-46	990	990
2046-47	1045	1045
2047-48	1105	1105
2048-49	1165	1165

Table 7-10 : Toll Rates for Monthly Pass Local @ Km 212.000

Year	Car	Minibus /LCV
2024-25	340	340
2025-26	355	355
2026-27	375	375
2027-28	390	390
2028-29	410	410
2029-30	435	435
2030-31	455	455
2031-32	480	480
2032-33	505	505
2033-34	530	530
2034-35	560	560
2035-36	585	585
2036-37	620	620
2037-38	650	650
2038-39	685	685
2039-40	720	720
2040-41	760	760
2041-42	800	800
2042-43	845	845
2043-44	890	890
2044-45	940	940
2045-46	990	990
2046-47	1045	1045
2047-48	1105	1105
2048-49	1165	1165

Table 7-11 : Toll Rates for Monthly Pass @ Km 125.000

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2024-25	3000	4845	10145	10145	11070	15915	19370
2025-26	3150	5085	10660	10660	11625	16715	20350
2026-27	3310	5345	11195	11195	12215	17560	21375
2027-28	3475	5615	11765	11765	12835	18450	22460
2028-29	3655	5900	12365	12365	13490	19390	23605
2029-30	3840	6205	13000	13000	14180	20385	24815
2030-31	4040	6525	13665	13665	14910	21435	26090
2031-32	4245	6860	14375	14375	15680	22540	27440
2032-33	4465	7215	15120	15120	16495	23710	28865
2033-34	4700	7590	15905	15905	17350	24945	30365
2034-35	4945	7990	16740	16740	18260	26250	31955
2035-36	5205	8410	17620	17620	19220	27630	33635
2036-37	5480	8855	18550	18550	20235	29085	35410
2037-38	5770	9320	19530	19530	21310	30630	37290
2038-39	6080	9820	20570	20570	22440	32260	39275
2039-40	6405	10345	21670	21670	23640	33985	41375
2040-41	6745	10900	22835	22835	24910	35810	43595
2041-42	7110	11485	24065	24065	26255	37740	45940
2042-43	7495	12105	25365	25365	27675	39780	48425
2043-44	7900	12765	26745	26745	29175	41940	51055
2044-45	8330	13460	28200	28200	30765	44225	53840

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2045-46	8790	14195	29745	29745	32445	46645	56785
2046-47	9270	14975	31375	31375	34230	49200	59900
2047-48	9780	15800	33105	33105	36110	51910	63195
2048-49	10320	16670	34930	34930	38105	54775	66685

Table 7-12 : Toll Rates for Monthly Pass @ Km 171.00

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2024-25	4055	6545	13720	13720	14965	21515	26190
2025-26	4255	6875	14410	14410	15720	22595	27510
2026-27	4475	7225	15140	15140	16515	23740	28900
2027-28	4700	7590	15905	15905	17355	24945	30365
2028-29	4940	7980	16720	16720	18235	26215	31915
2029-30	5190	8385	17575	17575	19170	27560	33550
2030-31	5460	8820	18475	18475	20155	28975	35275
2031-32	5740	9275	19430	19430	21200	30470	37095
2032-33	6040	9755	20440	20440	22295	32055	39020
2033-34	6355	10265	21505	21505	23460	33725	41055
2034-35	6685	10800	22630	22630	24685	35485	43200
2035-36	7035	11370	23820	23820	25985	37355	45475
2036-37	7410	11970	25075	25075	27355	39325	47875
2037-38	7800	12605	26405	26405	28805	41410	50410
2038-39	8215	13275	27810	27810	30340	43615	53095
2039-40	8655	13985	29300	29300	31960	45945	55935
2040-41	9120	14735	30870	30870	33675	48410	58935
2041-42	9610	15530	32535	32535	35490	51020	62110
2042-43	10130	16370	34295	34295	37410	53780	65470
2043-44	10680	17255	36155	36155	39445	56700	69025
2044-45	11265	18195	38125	38125	41590	59790	72785
2045-46	11880	19190	40210	40210	43865	63060	76765
2046-47	12530	20245	42415	42415	46275	66520	80980
2047-48	13220	21360	44750	44750	48820	70180	85435
2048-49	13950	22540	47225	47225	51515	74055	90155

Table 7-13 : Toll Rates for Monthly Pass @ Km 212.00

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2024-25	2350	3795	7950	7950	8675	12465	15175
2025-26	2465	3985	8350	8350	9110	13095	15940
2026-27	2590	4185	8770	8770	9570	13755	16745
2027-28	2725	4400	9220	9220	10055	14455	17600
2028-29	2860	4625	9690	9690	10570	15190	18495
2029-30	3010	4860	10185	10185	11110	15970	19440
2030-31	3165	5110	10705	10705	11680	16790	20440
2031-32	3325	5375	11260	11260	12285	17660	21495
2032-33	3500	5655	11845	11845	12920	18575	22610
2033-34	3680	5950	12460	12460	13595	19540	23790
2034-35	3875	6260	13115	13115	14305	20565	25035
2035-36	4080	6590	13805	13805	15060	21645	26350
2036-37	4295	6935	14530	14530	15855	22790	27745

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2037-38	4520	7305	15300	15300	16695	23995	29215
2038-39	4760	7690	16115	16115	17580	25275	30770
2039-40	5015	8105	16980	16980	18520	26625	32415
2040-41	5285	8540	17890	17890	19515	28055	34155
2041-42	5570	9000	18855	18855	20570	29565	35995
2042-43	5870	9485	19875	19875	21680	31165	37940
2043-44	6190	10000	20950	20950	22855	32855	40000
2044-45	6530	10545	22095	22095	24105	34650	42180
2045-46	6885	11120	23300	23300	25420	36540	44485
2046-47	7265	11730	24580	24580	26815	38545	46925
2047-48	7660	12380	25935	25935	28290	40670	49510
2048-49	8085	13060	27365	27365	29855	42915	52245

7.4 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under ***Optimistic***, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

7.5 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under all scenario at each of the toll plaza up to 2048-49 starting from the year 2024-25 are shown in tables below.

Table 7-14 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Year	TP-1	TP-2	TP-3	Total
2024-25	44.68	62.79	44.69	**152.16**
2025-26	48.95	69.12	48.97	**167.04**
2026-27	53.67	75.38	53.55	**182.60**
2027-28	58.97	82.73	58.52	**200.22**
2028-29	64.22	90.37	63.73	**218.31**
2029-30	70.37	98.91	69.87	**239.16**
2030-31	76.74	108.27	76.15	**261.16**
2031-32	83.81	118.48	83.56	**285.85**
2032-33	91.80	128.89	90.59	**311.28**
2033-34	100.19	140.98	99.16	**340.33**
2034-35	110.01	154.26	108.28	**372.55**
2035-36	120.09	168.57	118.52	**407.19**
2036-37	130.85	183.76	129.46	**444.07**
2037-38	143.31	200.85	140.94	**485.11**
2038-39	156.01	219.44	154.22	**529.67**
2039-40	171.03	240.80	168.35	**580.18**
2040-41	186.04	261.67	183.24	**630.95**
2041-42	203.64	286.04	198.93	**688.61**
2042-43	222.02	311.82	217.53	**751.38**

Year	TP-1	TP-2	TP-3	Total
2043-44	242.90	340.97	238.13	**821.99**
2044-45	264.97	371.92	259.28	**896.18**
2045-46	289.34	404.82	282.00	**976.16**
2046-47	315.37	441.97	307.46	**1064.80**
2047-48	345.36	481.74	287.47	**1114.57**
2048-49	376.07	526.31	314.55	**1216.94**

Table 7-15 : Toll Revenue Pessimistic Scenario

(Rs. Crores)

Year	TP-1	TP-2	TP-3	Total
2024-25	44.68	62.79	44.69	**152.16**
2025-26	48.71	68.76	48.76	**166.23**
2026-27	53.15	74.58	53.07	**180.80**
2027-28	58.12	81.46	57.72	**197.30**
2028-29	63.00	88.53	62.59	**214.11**
2029-30	68.70	96.41	68.29	**233.40**
2030-31	74.51	105.02	74.07	**253.60**
2031-32	81.01	114.34	80.89	**276.23**
2032-33	88.32	123.79	87.31	**299.42**
2033-34	95.95	134.80	95.09	**325.83**
2034-35	104.93	146.71	103.33	**354.97**
2035-36	114.00	159.56	112.56	**386.12**
2036-37	123.70	173.10	122.34	**419.14**
2037-38	134.87	188.21	132.53	**455.61**
2038-39	146.11	204.65	144.34	**495.10**
2039-40	159.41	223.52	156.80	**539.74**
2040-41	172.57	241.70	169.82	**584.09**
2041-42	187.95	262.93	183.50	**634.39**
2042-43	203.97	285.31	199.69	**688.96**
2043-44	222.13	310.46	217.55	**750.13**
2044-45	241.21	336.97	235.72	**813.90**
2045-46	262.11	364.99	255.15	**882.25**
2046-47	284.34	396.51	276.86	**957.71**
2047-48	309.90	430.19	257.66	**997.75**
2048-49	335.76	467.80	280.47	**1084.03**

Table 7-16 : Toll Revenue Most Likely Scenario

(Rs. Crores)

Year	TP-1	TP-2	TP-3	Total
2024-25	44.68	62.79	44.69	**152.16**
2025-26	48.84	68.94	48.88	**166.66**
2026-27	53.40	74.99	53.34	**181.73**
2027-28	58.55	82.07	58.12	**198.73**
2028-29	63.61	89.42	63.15	**216.17**
2029-30	69.57	97.65	69.05	**236.28**

Year	TP-1	TP-2	TP-3	Total
2030-31	75.69	106.62	75.04	**257.36**
2031-32	82.49	116.32	82.13	**280.95**
2032-33	90.20	126.28	88.81	**305.28**
2033-34	98.25	137.87	96.97	**333.08**
2034-35	107.67	150.42	105.60	**363.70**
2035-36	117.30	164.06	115.31	**396.67**
2036-37	127.57	178.39	125.63	**431.59**
2037-38	139.38	194.50	136.43	**470.31**
2038-39	151.31	211.98	148.92	**512.21**
2039-40	165.45	232.11	162.21	**559.77**
2040-41	179.52	251.65	176.08	**607.25**
2041-42	195.96	274.40	190.69	**661.05**
2042-43	213.11	298.47	208.05	**719.63**
2043-44	232.58	325.66	227.21	**785.45**
2044-45	253.08	354.38	246.85	**854.31**
2045-46	275.75	384.81	267.86	**928.42**
2046-47	299.80	419.06	291.35	**1010.21**
2047-48	327.52	455.79	271.87	**1055.17**
2048-49	355.72	496.85	296.73	**1149.29**

CHAPTER 8

CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Kaithal to Rajasthan Border section of NH-152/65 in state of Haryana from km 33.250 to km 241.580 has been widened to four lanes. The road is in sound condition and serves healthy traffic volumes. Project corridor has potential to develop as main link for traffic from Punjab, Haryana, and parts of Himachal to Rajasthan and south. There are large number of townships, industrial corridors and other business establishment coming up along project corridor. As Indian economy is poised to grow at 7%+ post COVID-19, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give positive impact to traffic flow on project. The following can be considered as major outcomes of the study.

a) There is good amount of tollable traffic running on project.

b) Project corridor has potential to witness traffic growth @ 6-8% annually in near future due to various development in area and overall development of economy.

c) Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road.

Based on above it can be considered a stable healthy project from traffic and revenue point of view.

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SOLAPUR TO YEDISHI SECTION OF NH 211 IN THE STATE OF MAHARASHTRA (KM 0.000 TO KM 100.000)









TTRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

OCTOBER 2024

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SOLAPUR TO YESDISHI SECTION OF NH 211

(KM 0.000 TO KM 100.000)

IN THE STATE OF MAHARASHTRA.

TRAFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

OCTOBER 2024

GMD CONSULTANTS ★ NAVI MUMBAI ★

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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic	**NHAI**	-	National Highway Authority of India
BOT	-	Build Operate Transfer	**NHDP**	-	National Highways Development Project
CAGR	-	Compound Annual Growth Rate	**NSDP**	-	Net State Domestic Product
CTV	-	Classified traffic volume	**O&M**	-	Operation & Maintenance
DBFOT	-	Design, Build, Finance, Operate & Transfer	**PCDP**	-	Per Capita Domestic Product
EME	-	Earth Moving Equipment	**PCI**	-	Per Capita Income
GDP	-	Gross Domestic Product	**PCU**	-	Passenger Car Unit
GSDP	-	Gross State Domestic Product	**PSC**	-	Pre-stressed Concrete
HCM	-	Heavy Construction Machinery	**RCC**	-	Reinforced cement concrete
HCV	-	Heavy Commercial Vehicle	**RHS**	-	Right Hand Side
HTMS	-	Highway Traffic Management System	**SH**	-	State Highway
IRC	-	Indian Road Congress	**TP**	-	Toll Plaza
IRR	-	Internal Rate of Return	**WPI**	-	Wholesale Price Index
LCV	-	Light Commercial Vehicle	**SIR**	-	Special Investment Region
LHS	-	Left Hand Side	**c.**	-	Circa
LGV	-	Light Goods Vehicle	**ROB**	-	Railway Over Bridge
MAV	-	Multi Axle Vehicle	**MDR**	-	Major District Road
MORTH	-	Ministry of Road Transport and Highways	**ODR**	-	Other District Road
NH	-	National Highway	**CA**	-	Concession Agreement
PCC	-	Plain Cement Concrete	**RMT**	-	Running Meter
CR	-	Coarse Rubble			

CHAPTER 1

INTRODUCTION

1.1 Background

The Government of India through National Highway Authority of India (NHAI) embarked upon a program to enhance the traffic capacity and safety for efficient transportation of goods as well as passenger traffic on National Highway Sections under various NHDP Phases.

The project under consideration, Four Laning of **Solapur** to **Yedeshi** section of NH-211 from km 0.000 to km 100.000 in the state of Maharashtrais one such road project NHAI intended to implement on a BOT basis in the DBFOT format. *M/s Solapur Yedeshi Tollway Ltd*. (Concessionaire) has been awarded the Project for a concession period of 29 years starting from appointed date of 21st January2015.COD was achieved for part length of project on 15th October 2019 and Tolling Operation on Project started for full length.

Project road section from Solapur to Yedeshi is part of important north-south connectivity. It connects Karnataka, southern parts of Maharashtra and other southern states to Solapur, Aurangabad, Dhule and then northern parts of India.

The following figure shows the project road alignment.

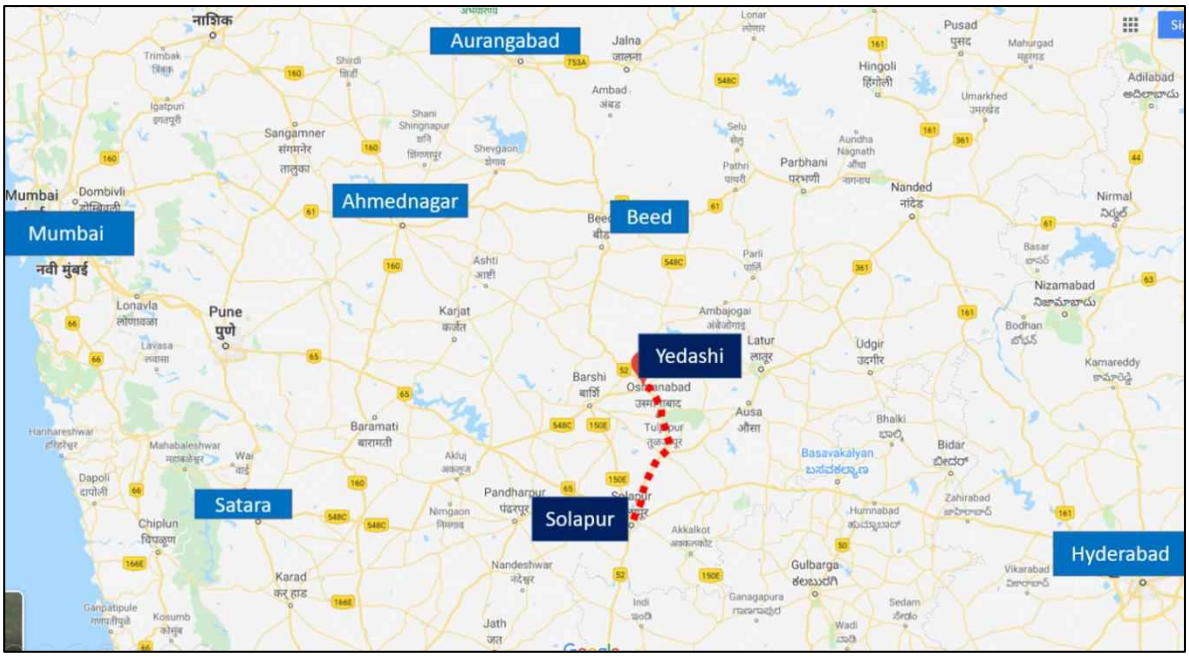


Figure 1-1: Alignment of Project Stretch

1.2 Objective of the Study

M/s IRB INFRASTRUCTURE TRUST has engaged *GMD Consultants* to assess the future traffic and toll potential of project along with related operation & maintenance expenditure involved.

This report named as **"Traffic Study &*Toll Revenue Projection Report*"** mainly focuses on traffic and revenue aspects of the project. Other parameters like competing road, area developments etc. have been considered from a traffic development point of view.

1.2.1 Scope of Services

The broad scope of work covered in the assignment is as follows.

a) Analysis of Traffic Growth
b) Toll Rate Growth
c) Revenue Forecasting

The Concessionaire has provided basic traffic data and other project details on the basis of which the above analysis has been carried out.

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

NH-211 is an important national highway of Maharashtra. It connects northern Karnataka to Marathwada region of Maharashtra.
Solapur, the textile and sugar belt of Maharashtra, Jalna, India's first dry port, Aurangabad fall in project corridor. Bidkin, Shendre areas which are coming up with mega green field Industrial smart city of 10000 acre at Bidkin and Shendra in Maharashtra also fall in influence zone of project corridor.

2.2 Project Stretch Description

The Project highway from Solapur to Yedeshi border from Km 0.000 to km 100.00 has been widened to four lanes as per schedules.

Project road forms part of very important transportation corridor which works as gateway to Karnataka and rest of south India for Marathwada region of Maharashtra. Though it connects Solapur – Dhule but forms important transportation link for traffic from Vijapur, Hubli and other parts of north Karnataka to Aurangabad, Jalna, Beed and other places in Marathwada region. Project has two toll plazas at Tamamwadi and Yedeshi.

The following figure shows project alignment and toll plaza locations.

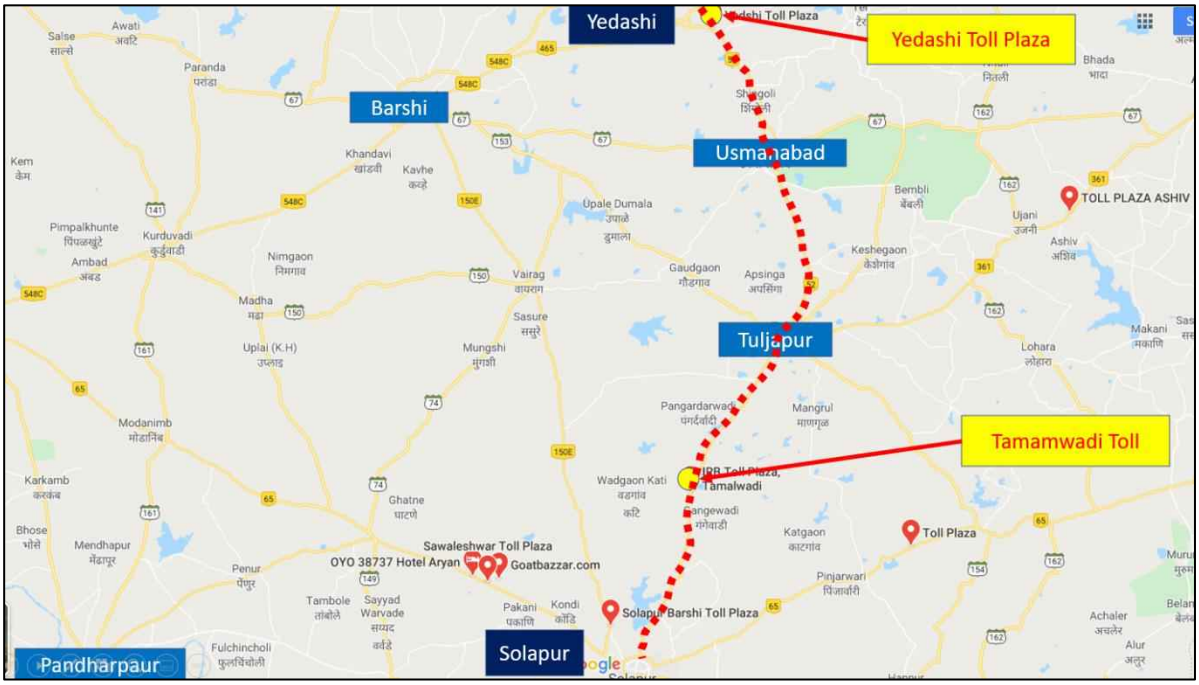


Figure 2-1: Project Alignment with Toll Plaza

2.3 Project Corridor Illustration

Four laning of project stretch is complete. The following photographs illustrate the project section along the corridor.



Figure 2-2: Photographs showing Project Corridor

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from a client for a project.

- Classified traffic volume counts at two toll plaza locations on Solapur- Yedeshi section of NH-211 for years 2017-18, 2018-19, 2019-20, 2020-21 ,2021-22,2022-23, April 2023 to November 2023 and traffic data from April 2024 to July 2024.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project.
- Establish base year traffic.
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1 below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. No.	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	Km 19.300 Toll Plaza at Tamalwadi	AADT for Period for Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023, Eight month from April	For Period for Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023, Eight month from April	For Period for Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023, Eight month from April	For Period for Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023, Eight month from April	For Period for Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023, Eight month from April

SR. No.	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
		2023 to November 2023 & Four month from April 2024 to July 2024	2023 to November 2023 & Four month from April 2024 to July 2024	2023 to November 2023 & Four month from April 2024 to July 2024	2023 to November 2023 & Four month from April 2024 to July 2024	2023 to November 2023 & Four month from April 2024 to July 2024
2	Km 77.400 Toll Plaza at Yedeshi	AADT for Period for Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Period for Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Period for Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Period for Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Period for Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024

3.2 Classified Traffic Volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations based on monthly data shared with NHAI.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in the table below.

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since the project highway is currently under toll operation, the data collected corresponds to the category of tollable vehicles. The following are the types of vehicles as per concession agreement.

- Car / Jeep / van
- Minibus /LCV
- Bus
- Truck
- 3-Axle
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of the report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data for the years 2019-20 ,2020-21, 2021-22, 2022-23, April 2023 to November 2023 and traffic data from April 2024 to July 2024.
Since the traffic data available for this update is for only four months, from April 2024 to July 2024, it may not represent the whole year traffic. Hence a seasonality factor for balance part of year has been applied to average traffic of current four months to arrive at Annual Average Daily Traffic of base year 2024-25. Same corrected traffic is used for future projections and revenue

calculations. The following table shows historical traffic on project stretch and derived Annual Average Daily Traffic (AADT) for year 2024-25.

Table 3-3 : Traffic Data at Tamalwadi Toll Plaza at Km 19.300

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24	Annual Average Daily Traffic (Nos.)- 2024-25
1	Car	4964	3564	6308	7840	9084	10676
2	Minibus/LCV	1068	782	362	442	420	509
3	Bus	675	304	343	678	812	988
4	Truck	907	835	946	1149	1229	1343
5	3-Axle	861	783	823	953	903	927
6	Multi Axle	934	1074	1286	1889	1868	1696
7	Oversized Vehicles	4	1	1	6	11	9
Total		**9413**	**7343**	**10070**	**12958**	**14326**	**16148**

Table 3-4 : Traffic Data at Yedeshi Toll Plaza at Km 77.400

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24	Annual Average Daily Traffic (Nos.)- 2024-25
1	Car	2840	2132	3308	3647	4273	5394
2	Minibus/LCV	613	514	263	283	296	315
3	Bus	233	118	127	238	284	334
4	Truck	674	682	783	951	1042	1044
5	3-Axle	807	826	870	986	918	862

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24	Annual Average Daily Traffic (Nos.)- 2024-25
6	Multi Axle	1101	1343	1615	2132	2026	1596
7	Oversized Vehicles	0	1	1	6	12	10
Total		**6269**	**5616**	**6967**	**8245**	**8850**	**9555**

3.4 Data Analysis

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in "IRC-64-1990: Guidelines for Capacity of Roads in Rural areas". The adopted passenger car unit values (PCU) are presented in ***Table*** 3-5**.**

Table 3-5 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-6 : Traffic in PCU at Project Stretch Base Year 2024-25

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
2019-20	Tamalwadi Km 19.300	9413	18116	1.92
	Yedeshi Km 77.400	6269	13859	2.21
2020-21	Tamalwadi Km 19.300	7343	15339	2.09
	Yedeshi Km 77.400	5616	13829	2.46
2021-22	Tamalwadi Km 19.300	10070	18981	1.88
	Yedeshi Km 77.400	6967	16316	2.34
2022-23	Tamalwadi Km 19.300	12958	25377	1.96
	Yedeshi Km 77.400	8245	20222	2.45
2023-24	Tamalwadi Km 19.300	14326	27001	1.88
	Yedeshi Km 77.400	8850	20619	2.33
2024-25	Tamalwadi Km 19.300	16148	28884	1.79
	Yedeshi Km 77.400	9555	19811	2.07

It can be observed from above that project traffic has PCU index more than 2 which is an indicator of high proportion of commercial traffic in traffic mix in project corridor. The following figure illustrates variation of PCU index at two toll plaza locations.

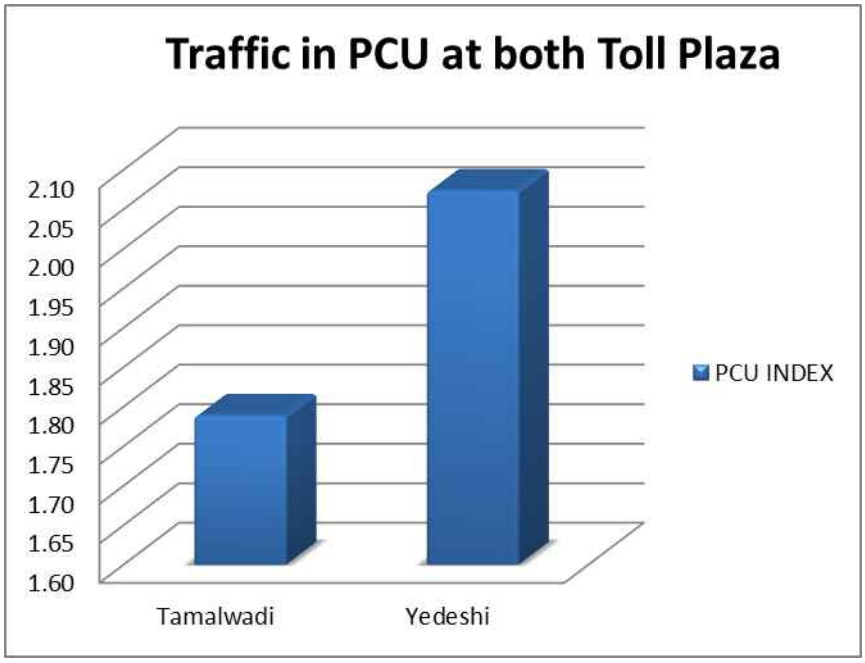


Figure 3-1: Comparison of PCU Index

It can be observed that PCU index is consistent at two toll plaza locations with commercial traffic slightly higher at Yedeshi toll plaza.

3.4.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.

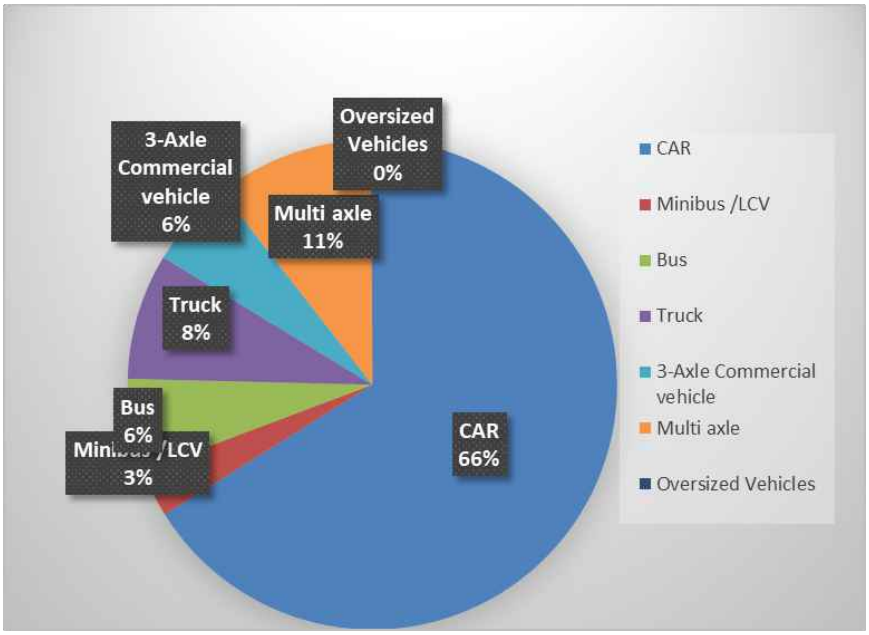


Figure 3-2: Model Split of Tollable Vehicle @TP-1

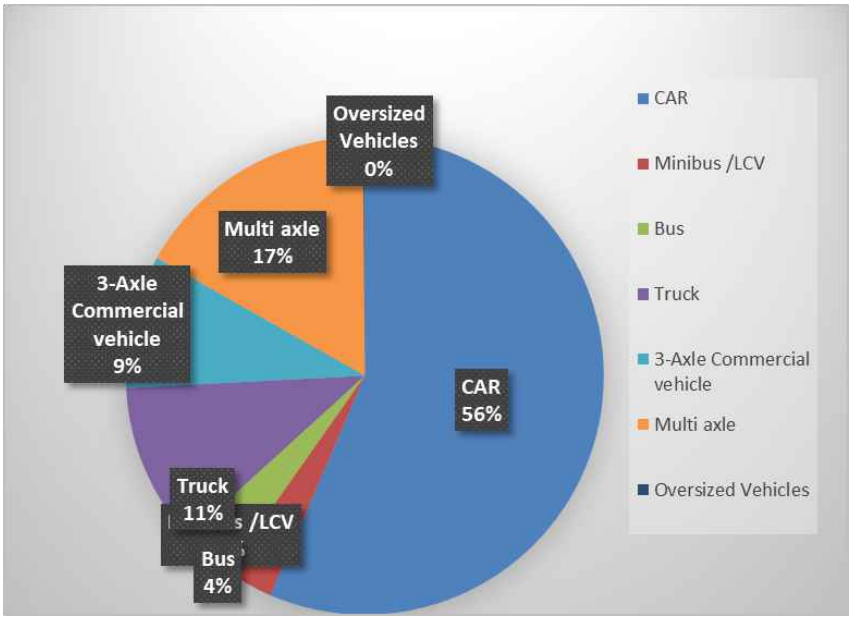


Figure 3-3: Model Split of Tollable Vehicle @TP-2

It is observed that car traffic forms about 50% - 65% of total traffic at toll plaza locations while multi axle commercial vehicles are about 17% -26% of total traffic. Truck / Bus and LCV share about 14%-15% and 3%-4% of traffic volume respectively.

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

The following table provides numbers of vehicles falling in each of above category on base year 2024-25

Table 3-7 : Journey Type Bifurcation of Traffic at Tamalwadi TP-1 KM 19.300

Sr. No	Type	Traffic Volume (Nos.) 2024-25
1	Single Journey	8136
2	Return Journey	7708
3	Local Commercial Single Journey	274
4	Monthly Pass Local	12
5	Monthly Pass	7
6	Local Monthly Pass Commercial	12

Most dominant part of the above is the single journey type followed by return journey at project stretch. Monthly pass commuters are a very low fraction of the total traffic on the project corridor.

The single journey component in total traffic numbers is as high as 71%. Return journey component is 28%. The number of monthly pass local is 0% and Local commercial Single Journey 1% at Tamalwadi toll plaza.

The following tables give the details of journey distribution at Yedeshi toll plaza at Km 77.400.

Table 3-8 : Journey Type Bifurcation of Traffic at Yedashi TP-2 KM 77.400

Sr. No	Type	Traffic Volume (Nos.) 2024-25
1	Single Journey	6350
2	Return Journey	3038
3	Local Commercial Single Journey	130
4	Monthly Pass Local	22
5	Monthly Pass	8
6	Local Monthly Pass Commercial	7

It is observed that the project corridor demonstrates a similar pattern of single journey dominated mix of traffic across the entire stretch which is typical of major national highways.

3.5 Secondary Data Collection

There are several other factors which have a substantial impact on traffic patterns and growth on any project corridor. The following are some of such important factors.

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on the project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data

a) GDP
b) NSDP
c) Population Growth
d) Per Capita Income growth
e) Industrial Growth
f) Special Industry Potential
g) Regional and National development vision / plan
h) Any other relevant data

3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

Highway corridors behave like integrated circuit networks and more often than not every road is connected to various networks having different origins and destinations. Traffic running on these networks behaves like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network.

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc,
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Competing / Alternate route

Project road from Solapur to Yedashi is important transportation link between Solapur and Aurangabad. It can be observed that between Solapur and Yedashi all other roads cross or meet project road alignment radially. There is no important parallel road network which can be a competing link for project road traffic. At the local level there is no competing road. Moreover, after completion of four laning project road is under toll operation for last two years from 2018. In such a case local diversion, if any, would have settled by now.
At regional level also project road (NH-211) is preferred route for Solapur – Aurangabad traffic. Though there could be one alternate route via Ahmednager for Solapur-Aurangabad pair origin and destination.

The following figures show the layout of competing routes between both these Zones.



Figure 4-1: Alternate route at regional level.

For this alternate route also, traffic would have settled since project road is under toll operation for last two years under toll. With completion of Aurangabad – Yedashi stretch four laning last year project route has become more attractive for candidate traffic. The following table provides a summary of analysis of competing or alternate routes.

Sr. No	Route Details	Designation	Length (Km)	Avg. Speed (KMPH)	Time Taken (Min)	Observations
Regional Level						
1	Solapur-Ahmednagar-Aurangabad	Alternate Route	346	64	6 Hr 50 Min	Alternate route is longer and has higher travel time. Project road has clear advantage
	Solapur-Yedeshi-Aurangabad	Project Road	310	55	5 Hr 27 Min	

Table 4-1 : Competing Roads Details

Under these circumstances it is not envisaged that commercial or passenger traffic would switch to alternate roads from the project road.

CHAPTER 5

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future patterns of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor Solapur–Yedeshi section of NH-211has been done taking the above factors into consideration. "**IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**" is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable for projects of short durations say 5-10 years, however for long term projections it would be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**.

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different types of vehicles. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway typically depends on a number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, in order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

$Log (P) = k \times Log (EI) + A$

Where,

P = *Number of Vehicles (Mode wise)*
EI = *Economic Indicator*
A = *Regression constant*
k = *Elasticity coefficient (Regression coefficient)*

The elasticity for cars and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

The project corridor is entirely in the state of Maharashtra but being at the border of Karnataka there is certain of Karnataka on project traffic. In such circumstances for elasticity calculations, working data from above Maharashtra and Karnataka states has been analyzed.

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Maharashtra State.

Table 5-1 : Per Capita Income Vs Car Maharashtra

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	99564	2307841	5.00	6.36		
2013	103904	2592565	5.02	6.41	4%	
2014	109399	2834847	5.04	6.45	5%	
2015	114746	3113773	5.06	6.49	5%	
2016	122422	3406872	5.09	6.53	7%	
2017	132899	3715744	5.12	6.57	9%	5.96%

Regression analysis of same is given in figure below.

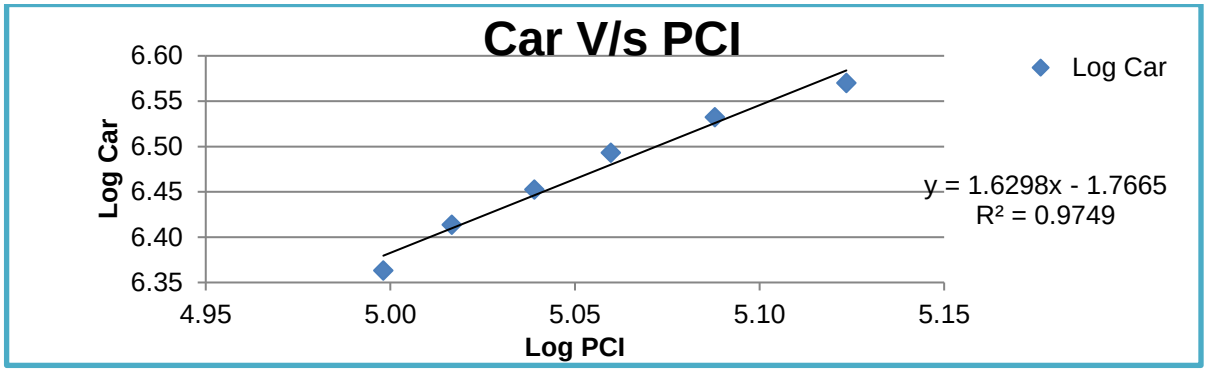


Figure 5-1: Regression and Elasticity PCI vs. Car–Extrapolation Maharashtra

Table 5-2 : Population Vs Bus Maharashtra

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	112374333	119298	8.05	5.08		
2013	113807248	129535	8.06	5.11	1%	
2014	115229410	140087	8.06	5.15	1%	
2015	116640546	140102	8.07	5.15	1%	
2016	118040394	150427	8.07	5.18	1%	
2017	119428710	160042	8.08	5.20	1%	1.23%

Regression analysis of same is given in figure below.

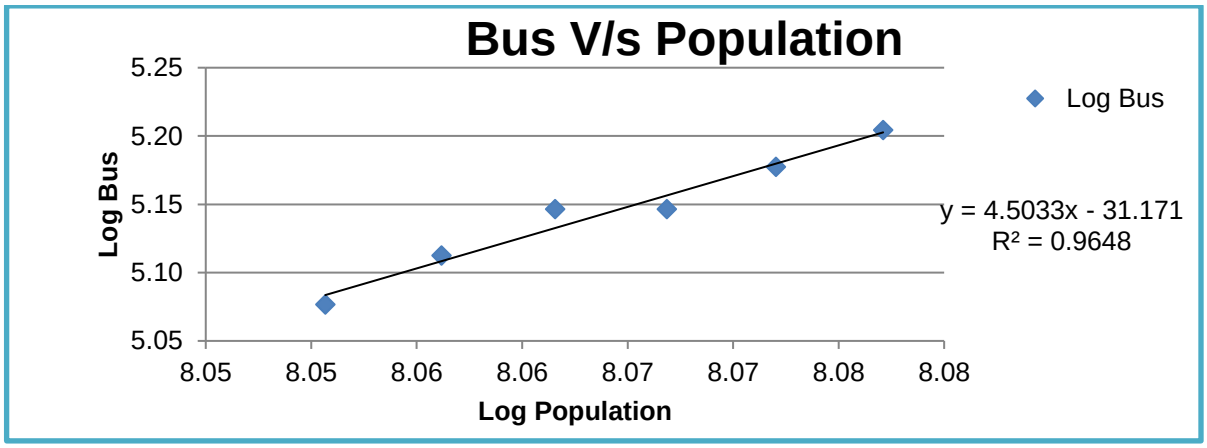


Figure 5-2: Regression and Elasticity Population vs. Bus – Extrapolation Maharashtra

The elasticity of goods traffic has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-3 : LCV Traffic Vs NSDP Maharashtra

Year	NSDP	LCV	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	1126595	656407	6.05	5.82		
2013	1189711	739725	6.08	5.87	6%	
2014	1267551	803128	6.10	5.90	7%	
2015	1345341	868632	6.13	5.94	6%	
2016	1452439	927903	6.16	5.97	8%	6.56%

The following figure depicts regression analysis and extrapolation.

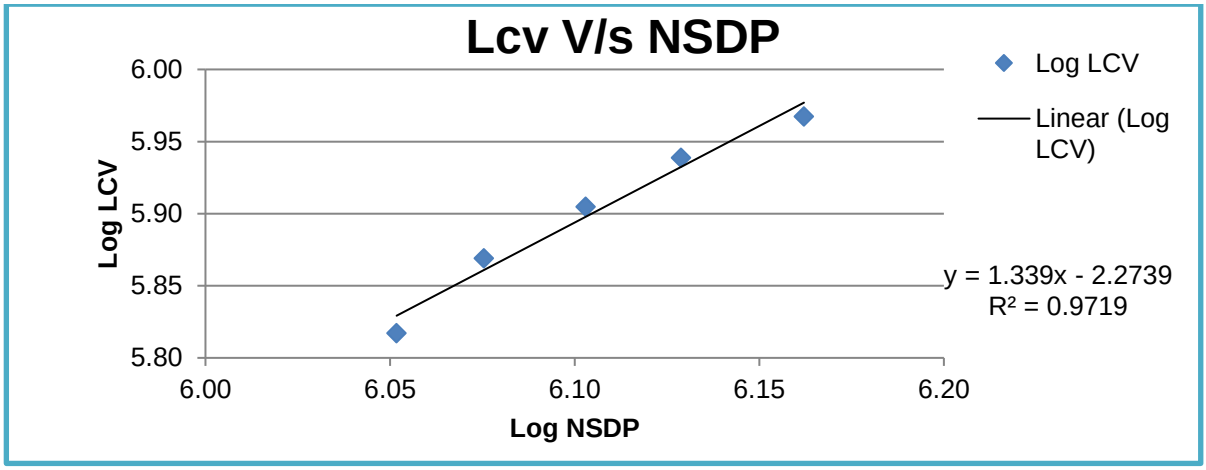


Table 5-4: Truck Traffic Vs NSDP Maharashtra

Year	NSDP	TRUCK	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	1126595	411418	6.05	5.61		
2013	1189711	402366	6.08	5.60	6%	
2014	1267551	470128	6.10	5.67	7%	
2015	1345341	491582	6.13	5.69	6%	
2016	1452439	468810	6.16	5.67	8%	
2017	1595514	496439	6.20	5.70	10%	7.22%

The following figure depicts regression analysis and extrapolation.

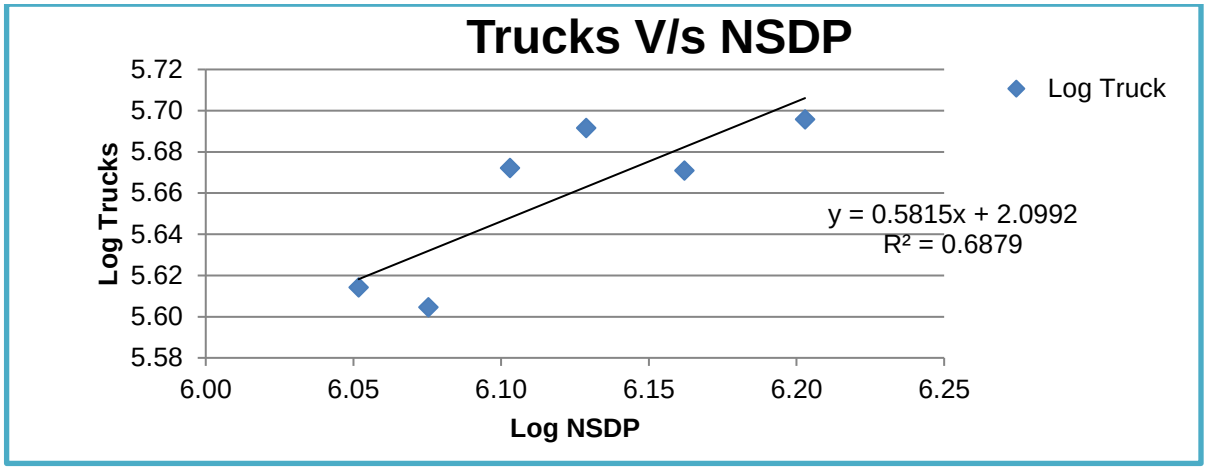


Figure 5-3: Regression and Elasticity NSDP vs. Goods Traffic – extrapolation Maharashtra.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-4 : Summary Regression Analysis Maharashtra

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth	Growth Elastic Model
Maharashtra	Car/Jeep	PCI	y = 1.6298x + -1.7665	R² = 0.9749	1.6298	5.96%	9.71%
	Bus	Population	y = 4.5033x - -31.1713	R² = 0.9648	4.5033	1.23%	5.52%
	LCV	NSDP	y = 1.339x - -2.2739	R² = 0.9719	1.3390	6.56%	8.78%
	Truck	NSDP	y = 0.5815x - 2.0992	R² = 0.6879	0.5815	7.22%	4.20%

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Karnataka State.

Table 5-5 : Per Capita Income Vs Car Karnataka

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	90269	1269430	4.96	6.10		
2013	94382	1420767	4.97	6.15	5%	
2014	101864	1572521	5.01	6.20	8%	
2015	105703	1741831	5.02	6.24	4%	
2016	116819	1916373	5.07	6.28	11%	
2017	131260	2110493	5.12	6.32	12%	7.83%

Regression analysis of same is given in figure below.

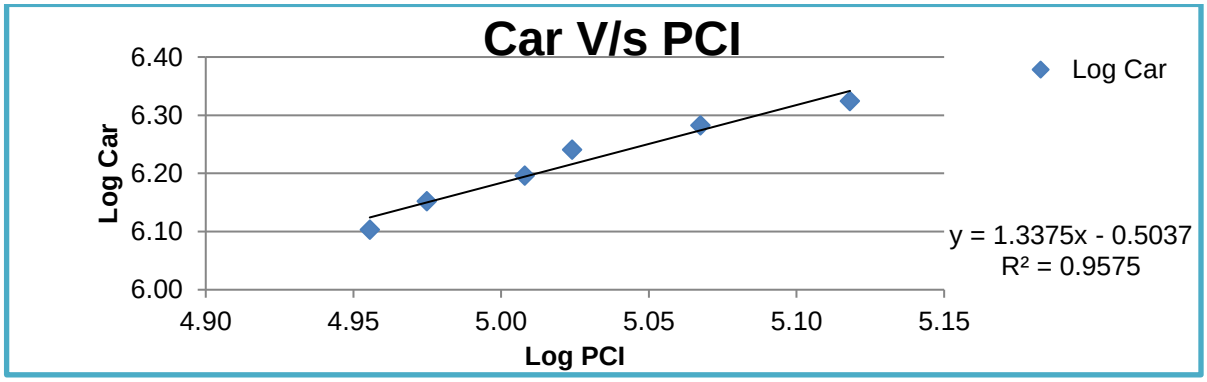


Figure 5-4: Regression and Elasticity PCI vs. Car–Extrapolation Karnataka

Table 5-6 : Population Vs Bus Karnataka

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	61095297	175705	7.79	5.24		
2013	62058777	186705	7.79	5.27	2%	
2014	63017877	195913	7.80	5.29	2%	
2015	63972322	204803	7.81	5.31	2%	
2016	64921845	213699	7.81	5.33	1%	

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2017	65866188	224580	7.82	5.35	1%	1.52%

Regression analysis of same is given in figure below.

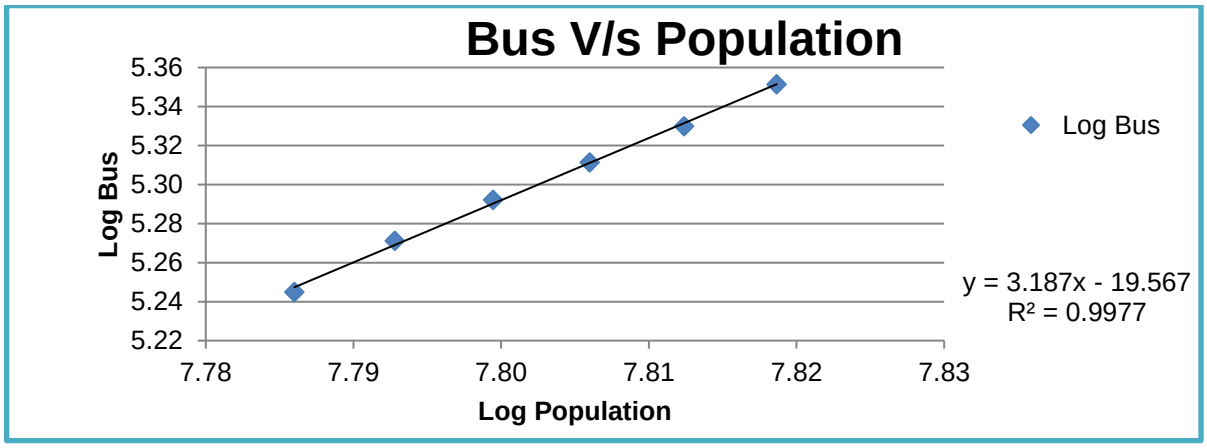


Figure 5-5: Regression and Elasticity Population vs. Bus – Extrapolation Karnataka

The elasticity of goods traffic has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-7 : LCV Traffic Vs NSDP Karnataka

Year	NSDP	LCV	Log NSDP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	554990	221160	5.74	5.34		
2013	586592	258701	5.77	5.41	6%	
2014	639981	294266	5.81	5.47	9%	
2015	671322	331381	5.83	5.52	5%	
2016	749990	367572	5.88	5.57	12%	7.85%

The following figure depicts regression analysis and extrapolation.

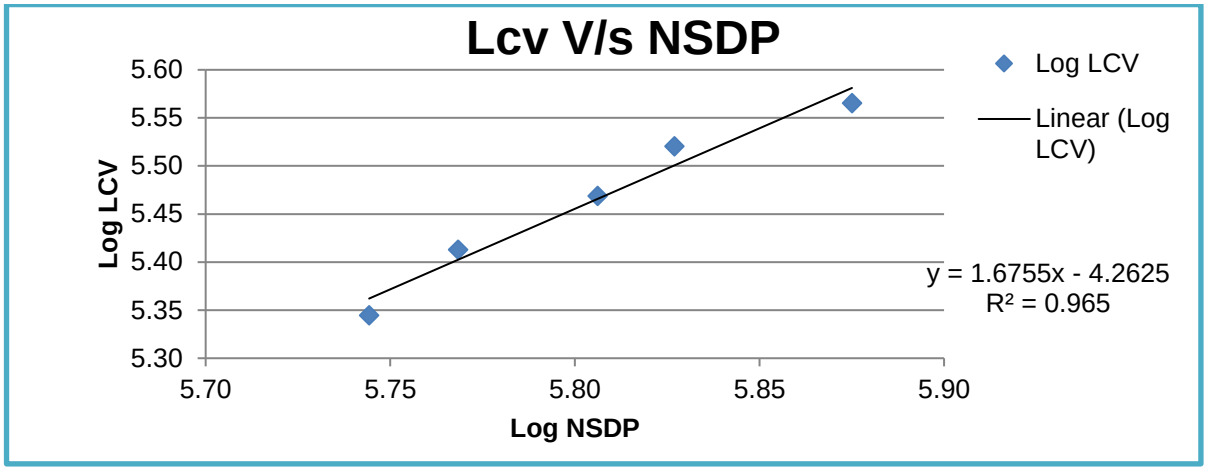


Table 5-4: Truck Traffic Vs NSDP Karnataka

Year	NSDP	TRUCK	Log NSDP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	554990	233422	5.74	5.37		
2013	586592	247639	5.77	5.39	6%	
2014	639981	260989	5.81	5.42	9%	
2015	671322	274971	5.83	5.44	5%	
2016	749990	290415	5.88	5.46	12%	
2017	851880	306290	5.93	5.49	14%	9.00%

The following figure depicts regression analysis and extrapolation.

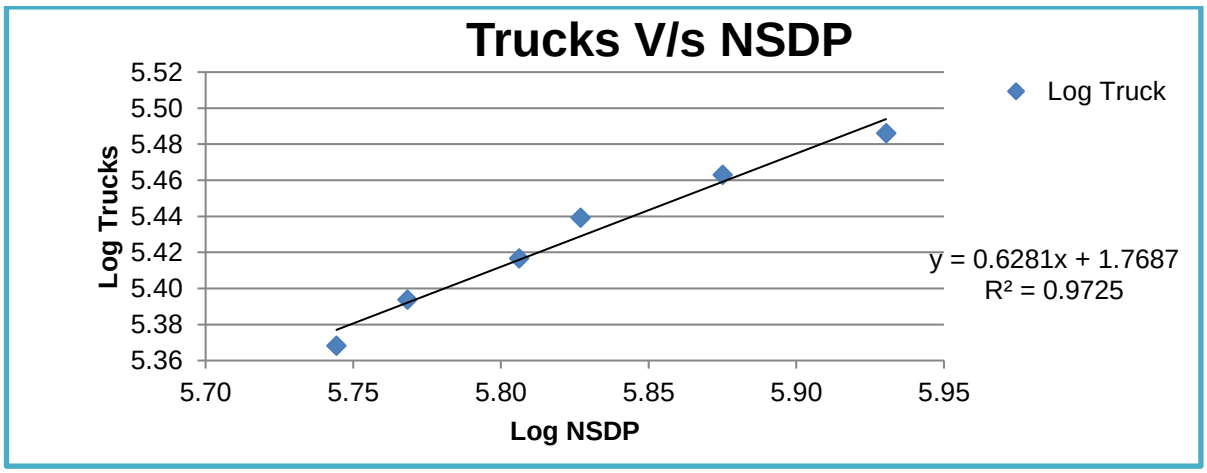


Figure 5-6: Regression and Elasticity NSDP vs. Goods Traffic – extrapolation Karnataka.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-8 : Summary Regression Analysis Karnataka

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth	Growth Elastic Model
Karnataka	Car/Jeep	PCI	y = 1.3375x + -0.5037	R² = 0.9575	1.3375	7.83%	10.47%
	Bus	Population	y = 3.187x - -19.567	R² = 0.9977	3.1870	1.52%	4.83%
	LCV	NSDP	y = 1.6755x - -4.2625	R² = 0.965	1.6755	7.85%	13.16%
	Truck	NSDP	y = 0.6281x - 1.7687	R² = 0.9725	0.6281	9.00%	5.65%

The economic model for predicting growth is a good tool, however other local, regional, and national factors should also be considered before finalizing growth factors. Considering factors such as proposed developments and other influencing economic factors, moderated growth should be considered. These factors are discussed in subsequent sections.

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trends of growth. Project stretch of Kaithal to Rajasthan Border is under tolling operation with current concessionaire and has only two years of tolling history from 2018-19. As traffic data is available with the project concessionaires of just a year about, we do not have sufficient data points to be able to establish a reliable past trend of traffic growth. A minimum of about 5 -6 years' traffic data is required for establishing a reliable past trend.

5.5 Other Factors Influencing Growth

There are many factors which have an impact on traffic growth. As discussed previously these factors can be economical, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

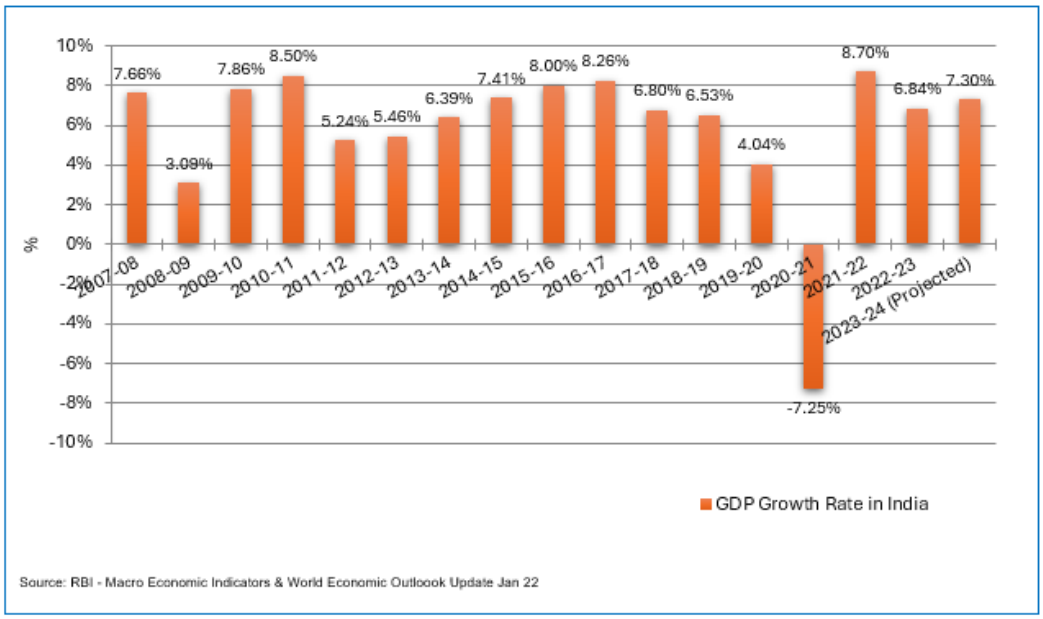


Figure 5-7 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had a slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. The government took major policy decisions including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honorable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into an opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on **Make -In- India** it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. The World Economic Outlook update also has predicted a growth rate of about 7.5 % in the year 2022-23.

5.6 Developments along and around the Project Corridor & State

Project stretch falls in regions of good development potential. The same is discussed as under.

Solapur

Solapur is one of the major cities of Karnataka which shares boundary with Karnataka. Thus, it can be called the gateway to the south for this region. Solapur district has highest number of sugar factories in India.

Solapur leads Karnataka in production of Indian cigarettes or beedi.Solapuri Chadars and towels are famous in India and also at a global level, however, there has been a significant decline in their exports due to quality reasons. ***"SolapuriChadars"*** are the most famous and first product in Karnataka. It has been a leading centre for cotton mills and power looms in Karnataka. Solapur had the world's second largest and Asia's largest spinning mill. The National Research Centre on Pomegranate (NRCP) of India is located in Solapur and pomegranate farming is done on a large scale in Solapur District. MIDC (Karnataka Industrial Development Corporation) has been very successful in creating and promoting industrial hubs in various parts of Karnataka. It provides businesses with infrastructure such as land (open plot or built-up spaces), roads, water supply, drainage facilities and streetlights along with necessary clearances. In total MIDC has developed about 300 industrial centres which have attracted a large number of domestic and international industries to set up their business and production houses in Karnataka. Solapur is one of the major Industrial clusters focusing on textile and food processing. The following are major MIDCs spread over Solapur district.

- Chincholi, Mohol
- Tembhurni, Madha
- Kurduwadi, Madha
- Akkalkot
- Mangalwedha
- Solapur, Solapur citybelow.

Pandharpur

This is a holy place of Shri.Vitthal and Shri Rukmini. It is also known as the Southern Kashi of India and Kuldaivat of Karnataka State. It is located at a distance of 72 kms by road. from Solapur District headquarters. Large numbers of devotees from all over Karnataka and surrounding States gather at Pandharpur mainly to celebrate the Aashadhi and Kartiki Ekadashis (in the month of June and July) every year in addition to the regular rush of devotees every day. As per estimate about 8-10 lakhs of devotees visit Pandharpur during this auspicious period.

Jalna

The government of Karnataka and JNPT are developing dry ports at Jalna and Bidkin Shendra which is on Paithan road. Project road would work like feeder to these economic hubs for traffic from Karnataka and other southern states.

5.7 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as below. The

rate of growth is moderate in light of overall regional trends. Growth of multi-Axle is kept slightly higher as trend of technological advances in logistic industry favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, the rate of growth diminishes. The same growth rate is not sustainable for long. Traffic growth is suitably stepped down for future years.

Growth rates are recommended for three scenarios for sensitivity analysis namely **Optimistic, Pessimistic** and **Most Likely** with a positive and negative variation 0.5% from Most Likely case for corridor in both states.

5.7.1 Recommended Growth Rates of Traffic for Project Stretch

Table 5-9 : Recommended Growth Rates Optimistic

Category / Year	2024-2025	2026-2030	2031-2035	2036-2040	2041-2045
Car/Jeep/Van	9.53%	8.92%	8.77%	8.47%	8.11%
Bus	5.83%	5.50%	5.47%	5.41%	5.15%
LCV	4.31%	4.02%	3.88%	3.61%	3.32%
2- Axle	5.13%	4.56%	4.43%	4.15%	3.86%
3 - Axle	6.46%	5.72%	5.55%	5.20%	4.82%
4 to 6 Axle	7.12%	6.30%	6.11%	5.72%	5.30%
7 and Above Axle	7.12%	6.30%	6.11%	5.72%	5.30%

Table 5-10 : Recommended Growth Rates Pessimistic

Category / Year	2024-2025	2026-2030	2031-2035	2036-2040	2041-2045
Car/Jeep/Van	9.03%	8.42%	8.27%	7.97%	7.61%
Bus	5.33%	5.00%	4.97%	4.91%	4.65%
LCV	3.81%	3.52%	3.38%	3.11%	2.82%
2- Axle	4.63%	4.06%	3.93%	3.65%	3.36%
3 - Axle	5.96%	5.22%	5.05%	4.70%	4.32%
4 to 6 Axle	6.62%	5.80%	5.61%	5.22%	4.80%
7 and Above Axle	6.62%	5.80%	5.61%	5.22%	4.80%

Table 5-11 : Recommended Growth Rates Most Likely

Category / Year	2024-2025	2026-2030	2031-2035	2036-2040	2041-2045
Car/Jeep/Van	9.28%	8.67%	8.52%	8.22%	7.86%
Bus	5.58%	5.25%	5.22%	5.16%	4.90%
LCV	4.06%	3.77%	3.63%	3.36%	3.07%
2- Axle	4.88%	4.31%	4.18%	3.90%	3.61%
3 - Axle	6.21%	5.47%	5.30%	4.95%	4.57%
4 to 6 Axle	6.87%	6.05%	5.86%	5.47%	5.05%
7 and Above Axle	6.87%	6.05%	5.86%	5.47%	5.05%

It is observed that a PIL was filed at Hon'ble Bombay High Court (Aurangabad bench) to augment the Autram Ghat section (between Chalisgaon and Aurangabad). The Hon'ble High Court has passed an interim order in August 2023. It directed NHAI to submit a plan for augmentation of the road and till then movement of commercial vehicles is restricted on that section of the road. The matter is sub judice.
This has affected the traffic on stretch. It is assumed that the matter is temporary and should be resolved soon, in the near future and would result in increased traffic in the project corridor. Hence additional growth has been considered in the year 2025-26 to cater for the above.

Traffic and revenue have been worked out on the basis of the above growths and some are presented in subsequent chapters of the report.

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in the previous section of the report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for the following three cases of growth up to concession period.

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza 1- Tamalwadi19.300 KM

(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2024-25	10676	509	988	1343	927	1696	9	16148	28884
2025-26	10904	520	948	1581	1167	2533	13	17666	34228
2026-27	11877	541	1000	1653	1234	2692	15	19012	36531
2027-28	12936	563	1055	1728	1305	2861	16	20464	38991
2028-29	14089	585	1112	1807	1380	3041	17	22031	41625
2029-30	15345	609	1173	1889	1459	3233	18	23726	44451
2030-31	16690	633	1237	1972	1540	3431	19	25522	47412
2031-32	18153	657	1305	2059	1625	3641	20	27460	50580
2032-33	19746	682	1376	2149	1715	3864	21	29553	53972
2033-34	21478	708	1451	2243	1810	4100	22	31812	57601
2034-35	23361	735	1530	2342	1911	4350	23	34252	61491
2035-36	25340	761	1613	2440	2011	4599	24	36788	65477
2036-37	27486	788	1700	2542	2116	4862	25	39519	69734
2037-38	29814	817	1791	2648	2227	5140	26	42463	74285
2038-39	32340	846	1888	2758	2343	5433	27	45635	79146
2039-40	35080	876	1990	2872	2464	5745	28	49055	84351
2040-41	37924	905	2092	2983	2583	6049	29	52565	89607
2041-42	40998	935	2200	3098	2707	6371	30	56339	95220
2042-43	44321	966	2313	3218	2838	6709	31	60396	101207
2043-44	47915	998	2432	3342	2975	7065	32	64759	107596
2044-45	51799	1030	2557	3471	3119	7440	34	69450	114418

Table 6-2 : Total Tollable Traffic @ Toll Plaza 2- Yedashi77.400 KM
(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2024-25	5394	315	334	1044	862	1596	10	9555	19811
2025-26	5216	371	347	1358	1208	2771	15	11285	27047
2026-27	5682	385	365	1419	1278	2946	15	12090	28770
2027-28	6188	400	385	1484	1351	3132	16	12956	30614
2028-29	6739	415	406	1551	1428	3329	17	13885	32574
2029-30	7340	431	428	1621	1510	3538	18	14886	34666
2030-31	7983	447	452	1692	1594	3753	19	15940	36842
2031-32	8683	464	477	1767	1682	3982	20	17075	39166
2032-33	9444	482	503	1845	1775	4224	21	18294	41639
2033-34	10272	501	531	1926	1874	4482	22	19608	44285
2034-35	11173	520	560	2012	1978	4756	23	21022	47109
2035-36	12119	539	591	2095	2081	5028	24	22477	49963
2036-37	13145	558	623	2182	2189	5316	25	24038	52999
2037-38	14257	578	657	2273	2302	5620	26	25713	56227
2038-39	15465	598	692	2368	2422	5942	27	27514	59669
2039-40	16774	619	730	2466	2548	6281	28	29446	63325
2040-41	18133	639	768	2562	2671	6614	29	31416	66988
2041-42	19602	660	807	2661	2800	6964	30	33524	70869
2042-43	21190	681	849	2764	2935	7333	31	35783	74994
2043-44	22908	704	892	2871	3076	7722	32	38205	79374
2044-45	24765	727	938	2981	3224	8131	33	40799	84023

Table 6-3 : Total Tollable Traffic@ Toll Plaza 1- Tamalwadi19.300 KM
(Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2024-25	10676	509	988	1343	927	1696	9	16148	28884
2025-26	10894	520	947	1580	1166	2531	13	17652	34205
2026-27	11811	538	994	1644	1228	2678	15	18908	36335
2027-28	12806	557	1043	1711	1292	2833	16	20258	38600
2028-29	13884	576	1094	1781	1360	2997	17	21709	41016
2029-30	15052	597	1149	1853	1431	3171	18	23271	43597
2030-31	16297	618	1206	1926	1503	3348	19	24917	46281
2031-32	17645	639	1266	2001	1579	3535	20	26685	49139
2032-33	19103	660	1329	2079	1659	3734	21	28585	52192

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2033-34	20683	682	1394	2161	1743	3944	22	30629	55447
2034-35	22394	705	1463	2246	1831	4166	23	32828	58922
2035-36	24179	727	1534	2328	1916	4383	24	35091	62435
2036-37	26107	749	1609	2413	2005	4612	25	37520	66178
2037-38	28188	772	1687	2501	2098	4853	26	40125	70160
2038-39	30434	796	1770	2592	2197	5106	27	42922	74404
2039-40	32859	820	1856	2686	2301	5372	28	45922	78918
2040-41	35359	843	1942	2776	2401	5630	29	48980	83446
2041-42	38048	867	2032	2869	2505	5901	30	52252	88256
2042-43	40942	891	2127	2965	2613	6185	31	55754	93366
2043-44	44056	916	2225	3066	2726	6482	32	59503	98794
2044-45	47407	942	2328	3169	2843	6793	33	63515	104557

Table 6-4 : Total Tollable Traffic @ Toll Toll Plaza 2- Yedashi77.400 KM (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2024-25	5394	315	334	1044	862	1596	10	9555	19811
2025-26	5211	371	347	1357	1208	2769	15	11277	27029
2026-27	5651	384	364	1412	1270	2929	15	12025	28613
2027-28	6127	397	382	1469	1337	3099	16	12827	30304
2028-29	6642	411	401	1528	1407	3279	17	13685	32099
2029-30	7201	425	421	1589	1481	3470	18	14605	34008
2030-31	7797	439	442	1651	1556	3665	19	15569	35981
2031-32	8441	453	464	1716	1634	3870	20	16598	38068
2032-33	9138	468	487	1783	1717	4086	21	17700	40283
2033-34	9894	483	511	1852	1803	4315	22	18880	42633
2034-35	10712	499	536	1924	1893	4556	23	20143	45125
2035-36	11565	514	562	1994	1982	4793	24	21434	47627
2036-37	12486	529	590	2066	2075	5042	25	22813	50274
2037-38	13481	545	619	2141	2172	5306	26	24290	53089
2038-39	14555	561	650	2219	2274	5583	27	25869	56071
2039-40	15715	579	682	2299	2381	5875	28	27559	59233
2040-41	16910	595	714	2376	2484	6157	29	29265	62362
2041-42	18196	611	747	2455	2591	6453	30	31083	65665
2042-43	19579	628	782	2537	2702	6763	31	33022	69157

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2043-44	21068	646	818	2622	2819	7088	32	35093	72854
2044-45	22670	664	856	2710	2941	7428	33	37302	76762

Traffic projections for Most Likely scenario is given as under

Table 6-5 : Total Tollable Traffic @ Toll Plaza 1- Tamalwadi19.300 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2024-25	10676	509	988	1343	927	1696	9	16148	28884
2025-26	10899	520	948	1580	1167	2532	13	17659	34217
2026-27	11844	540	997	1649	1231	2685	15	18961	36435
2027-28	12870	561	1050	1720	1299	2847	16	20363	38802
2028-29	13986	582	1105	1794	1370	3019	17	21873	41328
2029-30	15198	604	1162	1871	1445	3202	18	23500	44028
2030-31	16492	626	1223	1949	1521	3389	19	25219	46846
2031-32	17897	648	1286	2030	1601	3588	20	27070	49856
2032-33	19422	672	1353	2115	1685	3799	21	29067	53079
2033-34	21078	696	1423	2203	1774	4022	22	31218	56520
2034-35	22874	721	1497	2295	1867	4258	23	33535	60197
2035-36	24754	745	1574	2384	1959	4491	24	35931	63940
2036-37	26788	770	1655	2477	2055	4737	25	38507	67933
2037-38	28990	796	1740	2573	2157	4996	26	41278	72193
2038-39	31373	823	1830	2674	2264	5269	27	44260	76744
2039-40	33952	850	1925	2779	2376	5557	28	47467	81600
2040-41	36619	876	2019	2880	2485	5837	29	50745	86482
2041-42	39495	903	2117	2985	2598	6132	30	54260	91679
2042-43	42598	930	2220	3093	2717	6442	31	58031	97212
2043-44	45945	959	2329	3205	2841	6768	32	62079	103109
2044-45	49556	988	2442	3321	2970	7110	33	66420	109381

Table 6-6 : Total Tollable Traffic @ Toll Toll Plaza 2- Yedeshi 77.400 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2024-25	5394	315	334	1044	862	1596	10	9555	19811
2025-26	5213	371	347	1357	1208	2770	15	11281	27038
2026-27	5667	384	365	1416	1275	2937	15	12059	28695

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2027-28	6157	398	384	1477	1345	3115	16	12892	30462
2028-29	6690	413	404	1540	1419	3304	17	13787	32343
2029-30	7269	428	425	1606	1496	3504	18	14746	34341
2030-31	7888	443	447	1673	1575	3709	19	15754	36414
2031-32	8559	458	471	1742	1659	3926	20	16835	38619
2032-33	9288	474	496	1814	1747	4156	21	17996	40967
2033-34	10079	491	521	1890	1840	4399	22	19242	43463
2034-35	10937	509	548	1968	1937	4656	23	20578	46115
2035-36	11836	526	576	2045	2033	4911	24	21951	48795
2036-37	12809	544	605	2124	2134	5180	25	23421	51637
2037-38	13862	562	636	2206	2240	5463	26	24995	54652
2038-39	15001	581	668	2292	2350	5762	27	26681	57853
2039-40	16234	600	703	2382	2466	6077	28	28490	61260
2040-41	17510	618	738	2468	2578	6384	29	30325	64648
2041-42	18885	637	774	2557	2697	6707	30	32287	68241
2042-43	20368	656	812	2649	2821	7045	31	34382	72040
2043-44	21967	676	851	2745	2950	7401	32	36622	76068
2044-45	23693	696	893	2844	3084	7775	33	39018	80336

6.2 Modification in Concession Period

As per Article 29 of the concession agreement, if actual traffic on the project falls short or exceeds Target Traffic on project highway on defined date, concession period shall be modified subject to calculation stipulated therein. For Solapur- Yedeshi project, the Target Date and Target Traffic are defined as under:

Target Date - 1st October 2023

Target Traffic - 22210 in PCU

Pessimistic Case

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2023	22210	23652	6%	-5%	-5%	29	-1.4

PCUs as per Pessimistic cases have been considered for arriving at the concession Period end date.

CHAPTER 7

FORECAST OF TOLL REVENUE

7.1 General

This chapter presents the tolling rate calculations, categories and toll revenue of the project.

7.2 Discount Categories

As per the Toll Notification (Schedule -R) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent user's monthly pass would be issued for 50 trips at 2/3rd rate as per provision of fee notification.
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travelers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: There are several categories of local discounts.
    a) Local Car – Rs. 275 Per Month
    b) Local Commercial Traffic at 50% rate for single trip.

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.

The formula for determining the applicable rate of fee shall be as follows:-

$$\text{Applicable rate of fee} = \text{base rate} + \text{base rate} \times \left\{ \frac{\text{WPI A} - \text{WPI B}}{\text{WPI B}} \right\} \times 0.4$$

Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2018-19. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. The following graph provides historical rate of inflation (WPI) in India. Data has been sourced from the Office of Economic Advisor web site (www.eaindustry.nic.in) WPI for year 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series.

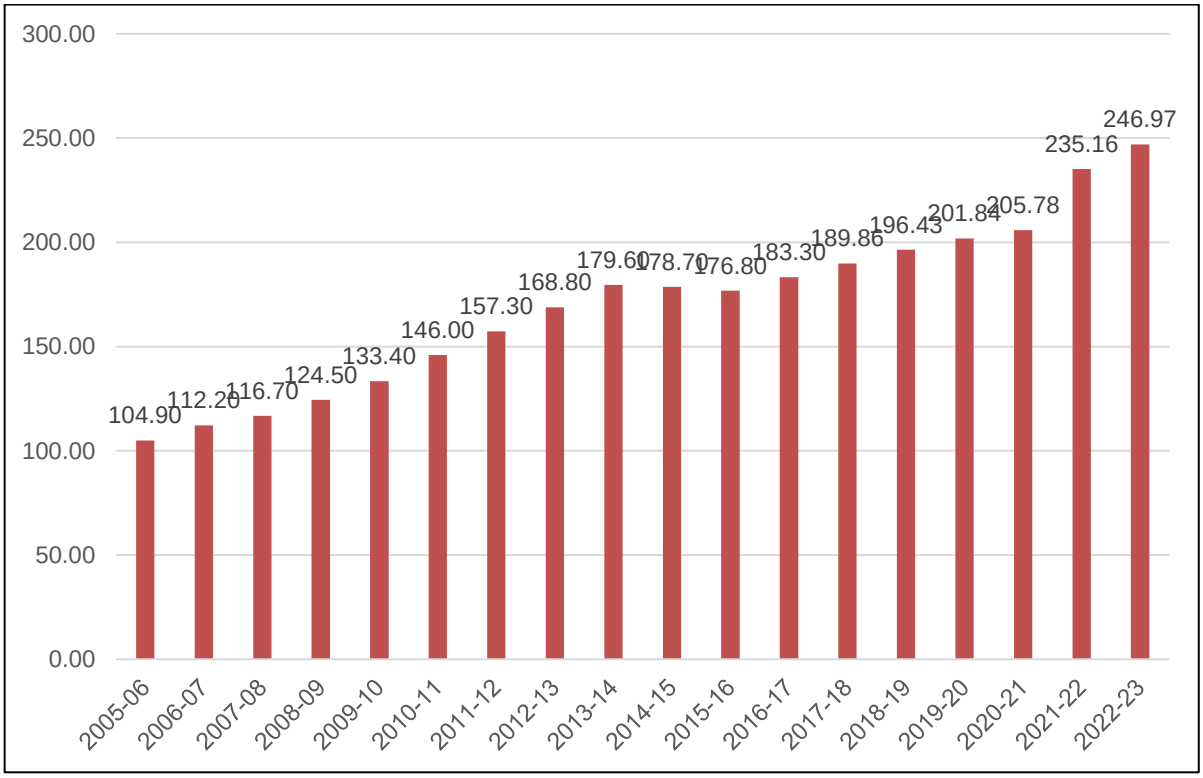


Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in the last few years is steadily growing. It grew by the range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

7.3 Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Oversized Vehicles (7 or more Axles)	4.20

There is no bypass or structure to be factored in for rates calculations.

Toll rates are calculated as per guidelines provided in schedule R (rounded to nearest Rs.) for the concession period and are given below.

Thus, worked out rates for various categories of vehicle and discounts are given as under

Table 7-2 : Toll Rates for Single Journey@ Toll Plaza 1- Tamalwadi 19.300 KM

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2024-25	75	120	250	250	275	395	480
2025-26	80	125	265	265	290	415	505
2026-27	80	130	280	280	305	435	530
2027-28	85	140	290	290	320	455	555
2028-29	90	145	305	305	335	480	585
2029-30	95	155	320	320	350	505	615
2030-31	100	160	340	340	370	530	645
2031-32	105	170	355	355	390	560	680
2032-33	110	180	375	375	410	590	715
2033-34	115	190	395	395	430	620	755
2034-35	125	200	415	415	455	650	790
2035-36	130	210	435	435	475	685	835
2036-37	135	220	460	460	500	720	880
2037-38	145	230	485	485	530	760	925
2038-39	150	245	510	510	555	800	975
2039-40	160	255	535	535	585	845	1025
2040-41	165	270	565	565	620	890	1080
2041-42	175	285	595	595	650	935	1140
2042-43	185	300	630	630	685	985	1200
2043-44	195	315	665	665	725	1040	1265
2044-45	205	335	700	700	765	1095	1335

Table 7-3 : Toll Rates for Single Journey @ Toll Plaza 2- Yedashi 77.400 KM

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2024-25	75	120	250	250	275	395	480
2025-26	80	125	265	265	290	415	505
2026-27	80	135	280	280	305	435	530

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2027-28	85	140	290	290	320	460	560
2028-29	90	145	305	305	335	480	585
2029-30	95	155	325	325	350	505	615
2030-31	100	160	340	340	370	530	650
2031-32	105	170	355	355	390	560	680
2032-33	110	180	375	375	410	590	715
2033-34	115	190	395	395	430	620	755
2034-35	125	200	415	415	455	650	795
2035-36	130	210	435	435	475	685	835
2036-37	135	220	460	460	500	720	880
2037-38	145	230	485	485	530	760	925
2038-39	150	245	510	510	555	800	975
2039-40	160	255	540	540	585	845	1025
2040-41	165	270	565	565	620	890	1080
2041-42	175	285	595	595	650	935	1140
2042-43	185	300	630	630	685	985	1200
2043-44	195	315	665	665	725	1040	1265
2044-45	205	335	700	700	765	1100	1335

Table 7-4 : Toll Rates for Return Journey@ Toll Plaza 1- Tamalwadi 19.300 KM

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2024-25	110	180	375	375	410	590	720
2025-26	115	190	395	395	430	620	755
2026-27	125	200	415	415	455	655	795
2027-28	130	210	440	440	475	685	835
2028-29	135	220	460	460	500	720	880
2029-30	145	230	485	485	525	760	925
2030-31	150	245	510	510	555	795	970
2031-32	160	255	535	535	585	840	1020
2032-33	165	270	560	560	615	880	1075
2033-34	175	280	590	590	645	930	1130
2034-35	185	295	620	620	680	975	1190
2035-36	195	315	655	655	715	1025	1250
2036-37	205	330	690	690	750	1080	1315
2037-38	215	345	725	725	790	1140	1385
2038-39	225	365	765	765	835	1200	1460
2039-40	240	385	805	805	880	1265	1540
2040-41	250	405	850	850	925	1330	1620
2041-42	265	425	895	895	975	1405	1710
2042-43	280	450	945	945	1030	1480	1800
2043-44	295	475	995	995	1085	1560	1900
2044-45	310	500	1050	1050	1145	1645	2000

Table 7-5 : Toll Rates for Return Journey @ Toll Plaza 2- Yedashi 77.400 KM

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2024-25	110	180	380	380	410	590	720
2025-26	115	190	395	395	435	620	760
2026-27	125	200	415	415	455	655	795
2027-28	130	210	440	440	480	685	835
2028-29	135	220	460	460	500	720	880
2029-30	145	230	485	485	530	760	925
2030-31	150	245	510	510	555	800	970
2031-32	160	255	535	535	585	840	1020
2032-33	165	270	565	565	615	885	1075
2033-34	175	285	590	590	645	930	1130
2034-35	185	295	625	625	680	975	1190
2035-36	195	315	655	655	715	1030	1250
2036-37	205	330	690	690	755	1085	1320
2037-38	215	345	725	725	795	1140	1390
2038-39	225	365	765	765	835	1200	1460
2039-40	240	385	805	805	880	1265	1540
2040-41	250	405	850	850	925	1335	1625
2041-42	265	430	895	895	975	1405	1710
2042-43	280	450	945	945	1030	1480	1805
2043-44	295	475	995	995	1085	1560	1900
2044-45	310	500	1050	1050	1145	1645	2005

Table 7-6 : Toll Rates for Monthly Pass Local @ Toll Plaza 1- Tamalwadi 19.300 KM

Year	Car
2024-25	340
2025-26	355
2026-27	375
2027-28	390
2028-29	410
2029-30	435
2030-31	455
2031-32	480
2032-33	505
2033-34	530
2034-35	560
2035-36	585
2036-37	620
2037-38	650
2038-39	685
2039-40	720
2040-41	760
2041-42	800
2042-43	845

Year	Car
2043-44	890
2044-45	940

Table 7-7 : Toll Rates for Monthly Pass Local @ Toll Plaza 2- Yedashi 77.400 KM

Year	Car
2024-25	340
2025-26	355
2026-27	375
2027-28	390
2028-29	410
2029-30	435
2030-31	455
2031-32	480
2032-33	505
2033-34	530
2034-35	560
2035-36	585
2036-37	620
2037-38	650
2038-39	685
2039-40	720
2040-41	760
2041-42	800
2042-43	845
2043-44	890
2044-45	940

Table 7-8 : Toll Rates for Monthly Pass @ Toll Plaza 1- Tamalwadi 19.300 KM

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2024-25	2480	4000	8385	8385	9150	13150	16010
2025-26	2600	4205	8810	8810	9610	13810	16815
2026-27	2735	4415	9255	9255	10095	14510	17665
2027-28	2875	4640	9725	9725	10605	15245	18560
2028-29	3020	4875	10220	10220	11150	16025	19510
2029-30	3175	5125	10740	10740	11720	16845	20505
2030-31	3335	5390	11295	11295	12320	17710	21560
2031-32	3510	5670	11875	11875	12955	18625	22675
2032-33	3690	5965	12495	12495	13630	19590	23850
2033-34	3885	6275	13145	13145	14340	20615	25095
2034-35	4085	6600	13830	13830	15090	21690	26405
2035-36	4300	6950	14560	14560	15885	22830	27795
2036-37	4530	7315	15330	15330	16720	24035	29265
2037-38	4770	7705	16140	16140	17610	25310	30815
2038-39	5025	8115	17000	17000	18545	26660	32455

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2039-40	5290	8545	17910	17910	19535	28085	34190
2040-41	5575	9005	18870	18870	20585	29590	36025
2041-42	5875	9490	19885	19885	21695	31185	37965
2042-43	6195	10005	20960	20960	22870	32875	40020
2043-44	6530	10550	22100	22100	24110	34655	42190
2044-45	6885	11125	23305	23305	25425	36545	44490

Table 7-9 : Toll Rates for Monthly Pass @ Toll Plaza 2- Yedashi77.400 KM

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2024-25	2480	4005	8395	8395	9160	13165	16030
2025-26	2605	4210	8820	8820	9620	13830	16835
2026-27	2735	4420	9265	9265	10105	14530	17685
2027-28	2875	4645	9735	9735	10620	15265	18585
2028-29	3025	4885	10230	10230	11160	16045	19535
2029-30	3180	5135	10755	10755	11735	16865	20535
2030-31	3340	5395	11310	11310	12335	17735	21590
2031-32	3515	5675	11890	11890	12975	18650	22705
2032-33	3695	5970	12510	12510	13645	19615	23880
2033-34	3890	6280	13160	13160	14355	20640	25125
2034-35	4090	6610	13850	13850	15110	21720	26440
2035-36	4305	6960	14580	14580	15905	22860	27830
2036-37	4535	7325	15345	15345	16740	24065	29300
2037-38	4775	7715	16160	16160	17630	25345	30850
2038-39	5030	8125	17020	17020	18570	26690	32495
2039-40	5300	8560	17930	17930	19560	28120	34230
2040-41	5580	9015	18895	18895	20610	29630	36070
2041-42	5885	9505	19910	19910	21720	31225	38015
2042-43	6200	10015	20990	20990	22895	32915	40070
2043-44	6540	10560	22130	22130	24140	34700	42245
2044-45	6895	11135	23335	23335	25455	36590	44545

7.4 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under ***Optimistic***, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

7.5 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under all scenarios at each of the toll plaza up to 2045-46 starting from the year 2024-25 are shown in tables below.

Table 7-10 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Year	Toll Plaza Km 19.300	Toll Plaza Km 77.400	Total
2024-25	76.94	56.85	**133.80**
2025-26	99.26	84.26	**183.52**
2026-27	110.86	93.86	**204.72**
2027-28	124.24	105.28	**229.52**
2028-29	138.82	116.78	**255.61**
2029-30	156.24	131.03	**287.27**
2030-31	174.76	145.97	**320.72**
2031-32	196.92	163.85	**360.77**
2032-33	219.43	182.50	**401.93**
2033-34	245.97	203.74	**449.70**
2034-35	277.31	228.46	**505.78**
2035-36	310.52	254.83	**565.35**
2036-37	345.71	282.83	**628.55**
2037-38	388.81	316.93	**705.74**
2038-39	433.56	352.44	**786.00**
2039-40	489.67	396.35	**886.02**
2040-41	542.83	438.20	**981.03**

Year	Toll Plaza Km 19.300	Toll Plaza Km 77.400	Total
2041-42	607.38	487.52	**1094.90**
2042-43	680.22	543.54	**1223.77**
2043-44	763.65	607.94	**1371.60**
2044-45	851.12	676.22	**1527.34**

Table 7-11 : Toll Revenue Pessimistic Scenario (Rs. Crores)

Year	Toll Plaza Km 19.300	Toll Plaza Km 77.400	Total
2024-25	76.94	56.85	**133.80**
2025-26	99.19	84.21	**183.40**
2026-27	110.27	93.38	**203.64**
2027-28	122.99	104.24	**227.23**
2028-29	136.77	115.11	**251.88**
2029-30	153.19	128.56	**281.75**
2030-31	170.51	142.56	**313.08**
2031-32	191.22	159.27	**350.49**
2032-33	212.11	176.53	**388.64**
2033-34	236.65	196.12	**432.76**
2034-35	265.58	218.91	**484.49**
2035-36	295.99	243.02	**539.01**
2036-37	327.99	268.51	**596.51**
2037-38	367.14	299.43	**666.57**
2038-39	407.48	331.40	**738.89**
2039-40	458.08	370.96	**829.04**
2040-41	505.38	408.19	**913.57**
2041-42	562.79	451.94	**1014.73**

Year	Toll Plaza Km 19.300	Toll Plaza Km 77.400	Total
2042-43	627.33	501.48	**1128.81**
2043-44	701.00	558.27	**1259.28**
2044-45	777.54	618.07	**1395.61**

Table 7-12 : Toll Revenue Most Likely Scenario

(Rs. Crores)

Year	Toll Plaza Km 19.300	Toll Plaza Km 77.400	Total
2024-25	76.94	56.85	**133.80**
2025-26	99.22	84.23	**183.46**
2026-27	110.58	93.62	**204.20**
2027-28	123.60	104.77	**228.37**
2028-29	137.77	115.98	**253.75**
2029-30	154.65	129.82	**284.48**
2030-31	172.55	144.29	**316.84**
2031-32	193.95	161.61	**355.56**
2032-33	215.63	179.58	**395.21**
2033-34	241.18	200.02	**441.20**
2034-35	271.29	223.77	**495.06**
2035-36	303.02	249.04	**552.06**
2036-37	336.60	275.81	**612.41**
2037-38	377.62	308.28	**685.90**
2038-39	420.11	341.95	**762.06**
2039-40	473.37	383.72	**857.08**
2040-41	523.50	423.23	**946.73**
2041-42	584.31	469.76	**1054.08**
2042-43	652.91	522.49	**1175.40**
2043-44	731.26	583.03	**1314.29**
2044-45	813.03	647.05	**1460.08**

CHAPTER 8

CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Solapur to Yedashi section of NH-211 in state of Karnataka from km 0.000 to km 100.000has been widened to four lane. The road is in sound condition and serves healthy traffic volumes. Project corridor is the main transport link for Karnataka-Marathwada traffic. There are large number of townships, industrial corridors and other business establishments coming up along the project corridor. As Indian economy is poised to grow at 6%+ post COVID-19, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give a positive impact to traffic flow on the project. The following can be considered as major outcomes of the study.

a) There is a good amount of tollable traffic running on the project.

b) Project corridor has potential to witness traffic growth @ 6-8% annually in near future due to various development in area and overall development of economy.

c) The Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road.

Based on the above it can be considered a stable healthy project from the traffic and revenue point of view.

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YEDISHI TO AURANGABAD SECTION OF NH-211

(KM 100.000 TO KM 290.200)

IN THE STATE OF MAHARASHTRA







TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

GMD CONSULTANTS NAVI MUMBAI

OCTOBER 2024

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YEDISHI TO AURANGABAD SECTION OF NH-211

(KM 100.000 TO KM 290.200)

IN THE STATE OF MAHARASHTRA

TRAFFIC STUDY & REVENUE

PROJECTION REPORT

(FINAL)

OCTOBER 2024

GMD CONSULTANTS ★ NAVI MUMBAI ★

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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic	**NHAI**	-	National Highway Authority of India
BOT	-	Build Operate Transfer	**NHDP**	-	National Highways Development Project
CAGR	-	Compound Annual Growth Rate	**NSDP**	-	Net State Domestic Product
CTV	-	Classified traffic volume	**O&M**	-	Operation & Maintenance
DBFOT	-	Design, Build, Finance, Operate & Transfer	**PCDP**	-	Per Capita Domestic Product
EME	-	Earth Moving Equipment	**PCI**	-	Per Capita Income
GDP	-	Gross Domestic Product	**PCU**	-	Passenger Car Unit
GSDP	-	Gross State Domestic Product	**PSC**	-	Pre-stressed Concrete
HCM	-	Heavy Construction Machinery	**RCC**	-	Reinforced cement concrete
HCV	-	Heavy Commercial Vehicle	**RHS**	-	Right Hand Side
HTMS	-	Highway Traffic Management System	**SH**	-	State Highway
IRC	-	Indian Road Congress	**TP**	-	Toll Plaza
IRR	-	Internal Rate of Return	**WPI**	-	Wholesale Price Index
LCV	-	Light Commercial Vehicle	**SIR**	-	Special Investment Region
LHS	-	Left Hand Side	**c.**	-	Circa
LGV	-	Light Goods Vehicle	**ROB**	-	Railway Over Bridge
MAV	-	Multi Axle Vehicle	**MDR**	-	Major District Road
MORTH	-	Ministry of Road Transport and Highways	**ODR**	-	Other District Road
NH	-	National Highway	**CA**	-	Concession Agreement
PCC	-	Plain Cement Concrete	**RMT**	-	Running Meter
CR	-	Coarse Rubble			

CHAPTER 1

INTRODUCTION

1.1 Background

The Government of India through National Highway Authority of India (NHAI) embarked upon a program to enhance the traffic capacity and safety for efficient transportation of goods as well as passenger traffic on National Highway Sections under various NHDP Phases.

The project under consideration, four laning of **Yedeshi** to **Aurangabad** section of NH-211 from km 100.000 to km 290.200 is one such road project NHAI intended to implement on a BOT basis in the DBFOT format. *M/s YA Tollway Ltd*. (Concessionaire) has been awarded the Project for a concession period of 26 years starting from 1st July 2015. Four laning of project has also been completed in September 2020.

Length of project road is 189.090 Kms. The project road is section of NH-211, is one of the important transportation link in Maharashtra which connects Solapur to Dhule and then at Dhule it can join other important highway like NH-3 (Mumbai – Agra Road) and NH-6 (east-west highway). The project road passes through the important places like Chausala, Beed, Adul, Chitegaon and then Aurangabad. The Project Road passes through the districts of Beed and Aurangabad.

The following figure shows alignment of project road section from Yedeshi to Aurangabad.



Figure 1-1 : Alignment of Project Stretch

1.2 Objective of the Study

M/s IRB INFRASTRUCTURE TRUST has engaged *GMD Consultants* to assess the future traffic and toll potential of project along with related operation & maintenance expenditure involved.

This report named as **"Traffic Study & *Toll Revenue Projection Report*"** mainly focuses on traffic and revenue aspects of the project. Other parameters like competing road, area developments etc. have been considered from a traffic development point of view.

1.2.1 Scope of Services

The broad scope of work covered in the assignment is as follows.

a) Analysis of Traffic Growth
b) Toll Rate Growth
c) Revenue Forecasting

The Concessionaire has provided basic traffic data and other project details on the basis of which the above analysis has been carried out.

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

National Highway 211 which is now part of NH-52. The national highway 52 was numbered after amalgamating many existing national highways of India.

It connects the important places like Chausala, Beed, Adul, Chitegaon and then Aurangabad. The Project Road passes through the districts of Beed and Aurangabad. Following are the major centres of development around project road.

Project Stretch Description

Like other parts of India rapid ribbon development is happening around these cities on project highway. This also contributes to sustainable traffic growth.

There are three operative toll plazas at project stretch. The first is at Yedeshi at Km 134.000, second at Padalshingi at Km 194.000 and third at Bhokarwadi at Km 254.000. The following figure show project alignment and toll plaza locations.

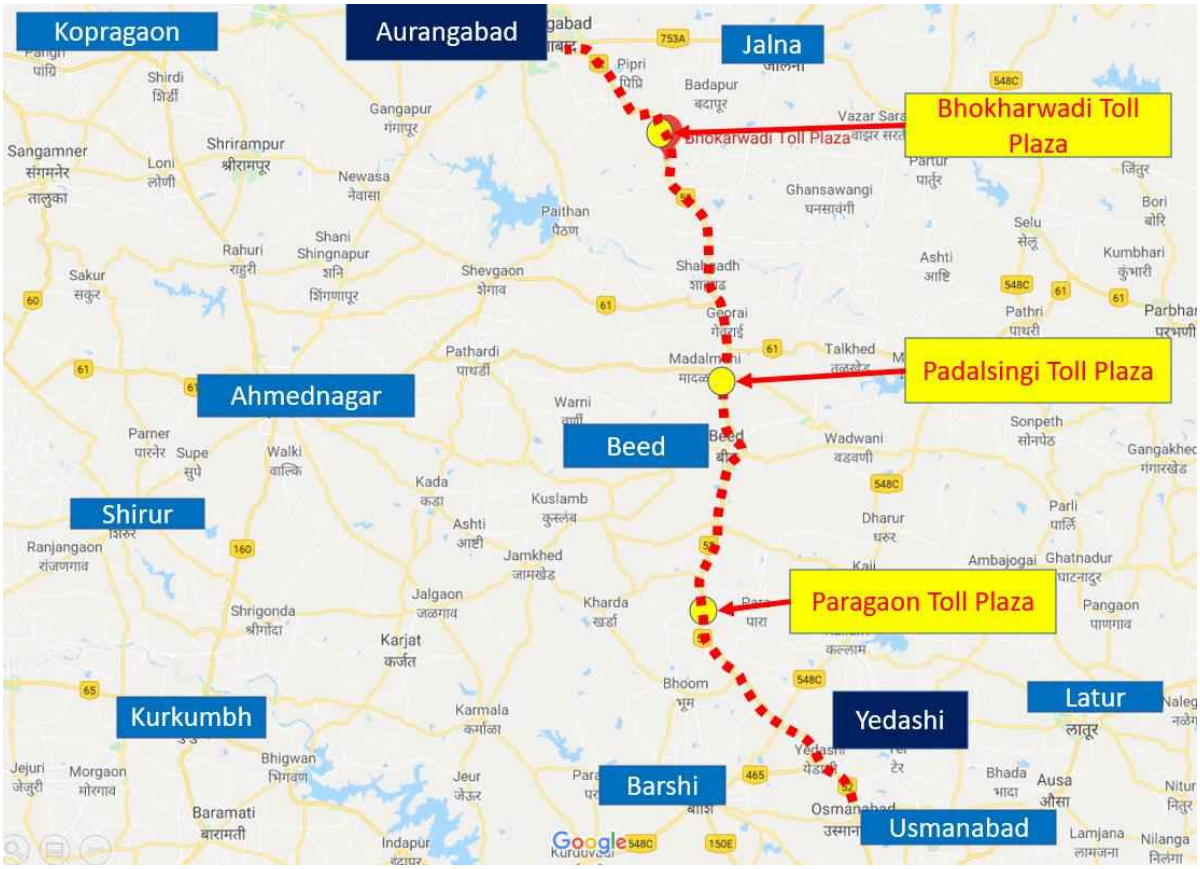


Figure 2-1 : Project Alignment with Toll Plaza

2.2 Project Corridor Illustration

Four laning of project stretch is complete. The following photographs illustrate the project section along the corridor.



Figure 2-2 : Photographs showing Project Corridor

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from a client for a project.

- Classified traffic volume counts at toll plaza locations on Yedeshi - Aurangabad section of NH-211 for years 2017-18, 2018-19, 2019-20, 2020-21 ,2021-22,2022-23, April 2023 to November 2023 and traffic data from April 2024 to July 2024.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project
- Establish base year traffic
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1 below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

Sr. No	Location	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	Km 134.000 Toll Plaza at Pargaon	AADT for Year 2019-20, 2020-2021, 2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Year 2019-20 ,2020-2021, 2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Year 2019-20 ,2020-2021, 2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Year 2019-20 ,2020-2021, 2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Year 2019-20 ,2020-2021, 2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024
2	Km 194.000 Toll Plaza at Padalshingi	AADT for Year 2019-20, 2020-2021, 2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Year 2019-20 ,2020-2021, 2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Year 2019-20 ,2020-2021, 2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Year 2019-20 ,2020-2021, 2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Year 2019-20 ,2020-2021, 2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024
3	Km 254.000 Toll Plaza at Maliwadi	AADT for Year 2019-20, 2020-2021, 2021-22, 2022-2023, Eight month from April 2023 to	For Year 2019-20 ,2020-2021, 2021-22, 2022-2023, Eight month	For Year 2019-20 ,2020-2021, 2021-22, 2022-2023, Eight month	For Year 2019-20 ,2020-2021, 2021-22, 2022-2023, Eight month	For Year 2019-20 ,2020-2021, 2021-22, 2022-2023, Eight month

Sr. No	Location	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
		November 2023 & Four month from April 2024 to July 2024	from April 2023 to November 2023 & Four month from April 2024 to July 2024	from April 2023 to November 2023 & Four month from April 2024 to July 2024	from April 2023 to November 2023 & Four month from April 2024 to July 2024	from April 2023 to November 2023 & Four month from April 2024 to July 2024

All toll plazas are located in Maharashtra.

3.2 Classified Traffic Volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations based on monthly data shared with NHAI.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in table below .

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since the project highway is currently under toll operation, the data collected corresponds to the category of tollable vehicles. The following are the types of vehicles as per concession agreement.

- Car / Jeep / van
- Minibus /LCV
- Bus
- Truck /
- 3 Axle commercial vehicle
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data for the years 2019-20 ,2020-21, 2021-22, 2022-23, April 2023 to November 2023 and traffic data from April 2024 to July 2024.
Since the traffic data available for this update is for only four months, from April 2024 to July 2024, it may not represent the whole year traffic. Hence a seasonality factor for balance part of year has been applied to average traffic of current four months to arrive at Annual Average Daily Traffic of base year 2024-25. Same corrected traffic is used for future projections and revenue calculations. The following table shows historical traffic on project stretch and derived Annual Average Daily Traffic (AADT) for year 2024-25.

Table 3-3 : Traffic Data at Pargaon Toll Plaza at Km 134.000

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24	Annual Average Daily Traffic (Nos.)- 2024-25
1	Car	1641	1439	2426	2863	3388	4123
2	Minibus /LCV	658	482	257	317	332	376
3	Bus	199	109	110	215	244	284
4	Truck	635	704	786	988	1078	1082

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24	Annual Average Daily Traffic (Nos.)- 2024-25
5	3-Axle Commercial vehicle	793	845	876	967	924	882
6	Multi axle	1081	1284	1567	2164	2089	1642
7	Oversize Vehicle	0	50	74	31	29	28
	Total	**5007**	**4913**	**6096**	**7544**	**8084**	**8417**

Table 3-4 : Traffic Data at Padalshingi Toll Plaza at Km 194.000

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24	Annual Average Daily Traffic (Nos.)- 2024-25
1	Car	4114	3166	4969	5458	6558	8516
2	Minibus /LCV	1095	883	383	451	483	579
3	Bus	473	260	252	478	547	684
4	Truck	788	839	891	1159	1324	1456
5	3-Axle Commercial vehicle	944	1049	1098	1119	1145	1187
6	Multi axle	1134	1363	1641	2290	2270	1894
7	Oversize Vehicle	1	60	65	29	28	28
	Total	**8549**	**7620**	**9299**	**10985**	**12357**	**14344**

Table 3-5 : Traffic Data at Maliwadi Toll Plaza at Km 254.000

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24	Annual Average Daily Traffic (Nos.)- 2024-25
1	Car	3089	2492	3992	4717	5799	7099
2	Minibus /LCV	687	546	192	295	353	426
3	Bus	347	177	177	341	388	470
4	Truck	547	579	567	892	1075	992
5	3-Axle Commercial vehicle	679	737	718	841	928	857
6	Multi axle	866	1046	1164	1914	1918	1323
7	Oversize Vehicle	1	47	52	23	21	22
	Total	**6216**	**5623**	**6862**	**9023**	**10484**	**11189**

3.4 Data Analysis

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in "IRC-64-1990: Guidelines for Capacity of Roads in Rural areas". The adopted passenger car unit values (PCU) are presented in Table 3-6.

Table 3-6 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0

Vehicle Type	PCUs
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-7 : Traffic in PCU at Project Stretch

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
2019-2020	Km 134.000 Toll Plaza at Pargaon	5007	12373	2.47
	Km 194.000 Toll Plaza at Padalshingi	8549	17479	2.04
	Km 254.000 Toll Plaza at Maliwadi	6216	12740	2.05
2020-2021	Km 134.000 Toll Plaza at Pargaon	4913	13136	2.67
	Km 194.000 Toll Plaza at Padalshingi	7620	17339	2.28
	Km 254.000 Toll Plaza at Maliwadi	5623	12706	2.26
2021-2022	Km 134.000 Toll Plaza at	6096	15511	2.54

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
	Pargaon			
	Km 194.000 Toll Plaza at Padalshingi	9299	19945	2.14
	Km 254.000 Toll Plaza at Maliwadi	6862	14138	2.06
2022-2023	Km 134.000 Toll Plaza at Pargaon	7544	19724	2.61
	Km 194.000 Toll Plaza at Padalshingi	10985	24840	2.26
	Km 254.000 Toll Plaza at Maliwadi	9023	20097	2.23
2023-2024	Km 134.000 Toll Plaza at Pargaon	8084	20153	2.49
	Km 194.000 Toll Plaza at Padalshingi	12357	26677	2.16
	Km 254.000 Toll Plaza at Maliwadi	10484	22233	2.12
2024-2025	Km 134.000 Toll Plaza at Pargaon	8417	18946	2.25
	Km 194.000 Toll Plaza at Padalshingi	14344	28015	1.95
	Km 254.000	11189	20746	1.85

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
	Toll Plaza at Maliwadi			

It can be observed from above that project traffic has PCU index 2 to 2.6 which is an indicator of high proportion of commercial traffic in traffic mix in project corridor. The following figure illustrates variation of PCU index at three toll plaza locations.

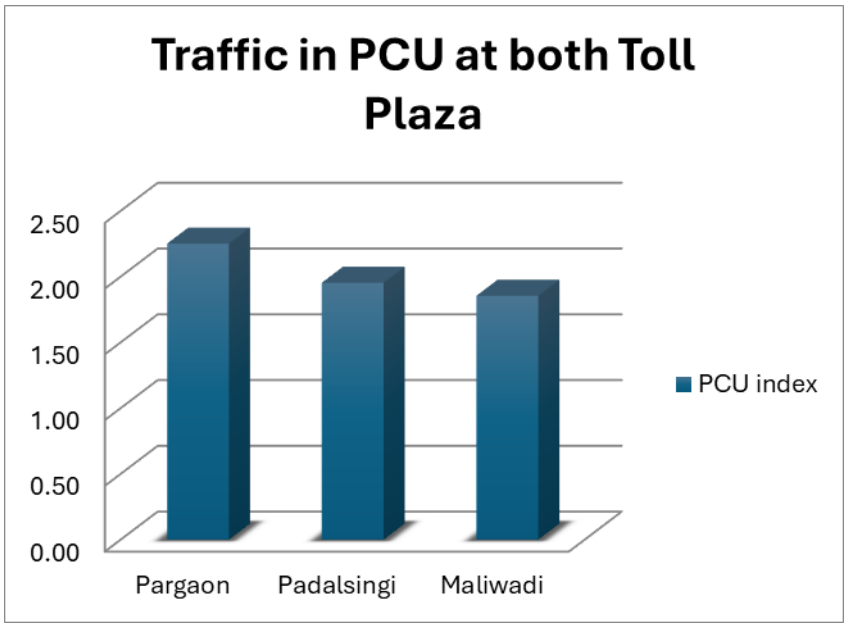


Figure 3-1 : Comparison of PCU Index

It can be observed that PCU index is consistent at all three toll plaza locations.

3.4.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.

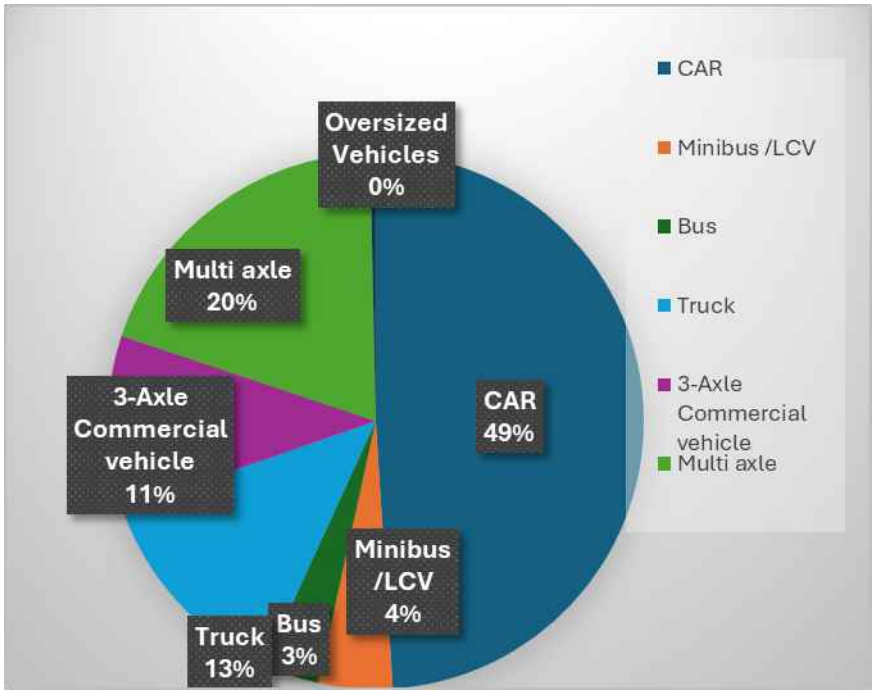


Figure 3-2: Model split of tollable vehicle @ Km 134.000

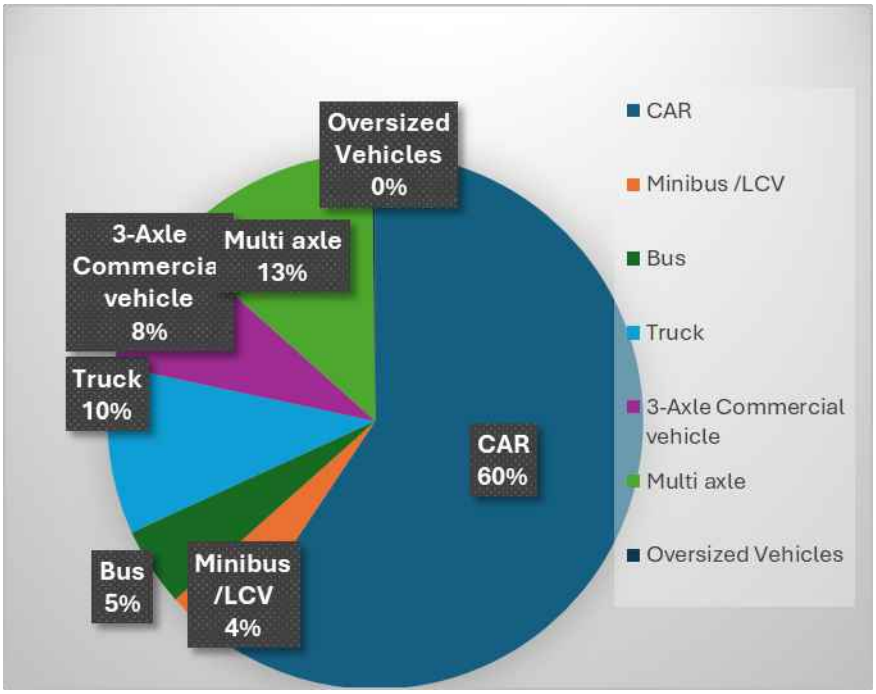


Figure 3-3: Model split of tollable vehicle @ Km 194.000

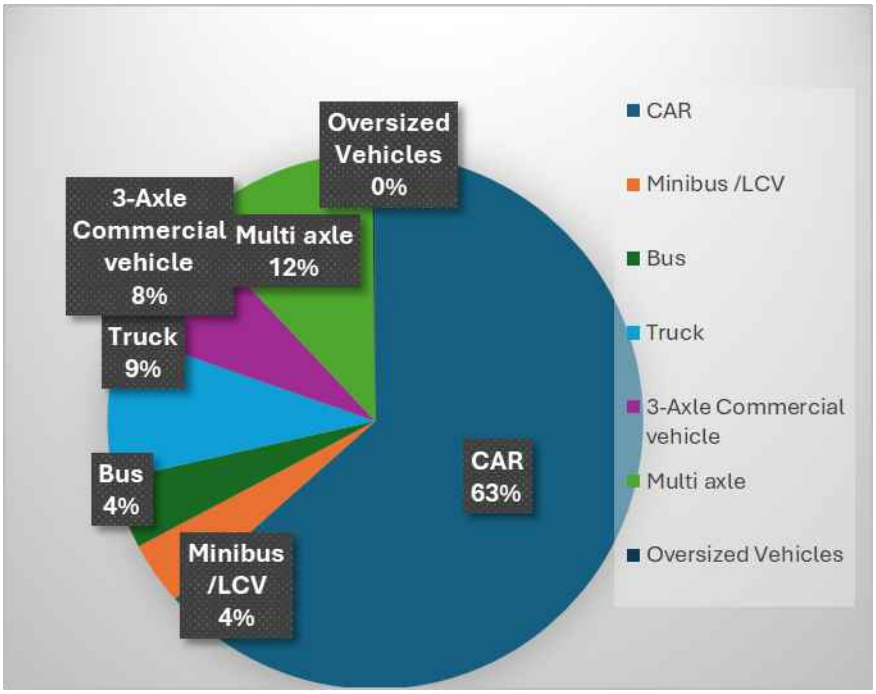


Figure 3-3: Model split of tollable vehicle @ Km 254.000

It is observed that car traffic forms about 49% of total traffic at toll plaza location KM 134.000 while multi axle commercial vehicles are about 31% of total traffic. Truck / Bus and LCV share about 16% and 4% of traffic volume respectively.

It is observed that car traffic forms about 60% of total traffic at toll plaza location KM 194.000 while multi axle commercial vehicles are about 21% of total traffic. Truck / Bus and LCV share about 15% and 4% of traffic volume respectively.

It is observed that car traffic forms about 63% of total traffic at toll plaza location KM 254.000 while multi axle commercial vehicles are about 20% of total traffic. Truck / Bus and LCV share about 13% and 4% of traffic volume respectively.

At second & third toll plaza passenger traffic component is higher due to urban settlement around.

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

The following table provides numbers of vehicles falling in each of above category on base year 2024-25

Table 3-8 : Journey Type Bifurcation of Traffic at Pargaon Toll Plaza KM 134.000

Sr. No	Type	Traffic Volume (Nos.)
		2024-25
1	Single Journey	5882
2	Return Journey	2464
3	Local Commercial Single Journey	61
4	Monthly Pass Local	10
5	Monthly Pass	0

Most dominant part of the above is the single journey type followed by return journey at project stretch. Monthly pass commuters are a very low fraction of the total traffic on the project corridor.

The single journey component in total traffic numbers is as high as 70%. Return journey component is 29%. The number of monthly pass Local is 0% and Local Commercial single Journey 1% at Pargaon toll plaza.

The following tables give the details of journey distribution at Padalshingi toll plaza at Km 194.000 and Km 254.000.

Table 3-9 : Journey Type Bifurcation of Traffic at Padalshingi Toll Plaza KM 194.000

Sr. No	Type	Traffic Volume (Nos.)
		2024-25
1	Single Journey	7894
2	Return Journey	5784
3	Local Commercial Single Journey	545
4	Monthly Pass Local	120
5	Monthly Pass	1

Table 3-10 : Journey Type Bifurcation of Traffic at Maliwadi Toll Plaza KM 254.000

Sr. No	Type	Traffic Volume (Nos.)
		2024-25
1	Single Journey	6286
2	Return Journey	4824
3	Local Commercial Single Journey	32
4	Monthly Pass Local	42
5	Monthly Pass	5

It is observed that the project corridor demonstrates a similar pattern of single journey dominated mix of traffic across the entire stretch which is typical of major national highways.

3.5 Secondary Data Collection

There are several other factors which have a substantial impact on traffic patterns and growth on any project corridor. The following are some of such important factors.

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on the project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data
   a) GDP
   b) NSDP
   c) Population Growth
   d) Per Capita Income growth
   e) Industrial Growth
   f) Special Industry Potential
   g) Regional and National development vision / plan
   h) Any other relevant data
3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

Highway corridors behave like integrated circuit networks and more often than not every road is connected to various networks having different origins and destinations. Traffic running on these networks behaves like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network.

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc.
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Competing / Alternate route

In BOT projects there is always a risk factor of traffic shifting on competing roads after imposition of toll. Shifting of traffic depends on factors such as road length, type, geometry, riding quality and capacity. Competing road networks were identified around section and a speed delay analysis was conducted. In this detail of competing roads are provided and a comparison with project road is made. There can be some alternate route between Yedashi and Aurangabad. The following figure provides alignment of competing road network between Yedashi and Aurangabad.



Figure 4-1 : Alternate routes – Yedashi- Aurangabad

It can be observed that alternate routes are quite long and take more time to travel. Hence project road remains the most preferred option for travel between Yedashi and Aurangabad.

Similarly, at regional level there can be alternate via Ahmednagar for travel between Solapur and Aurangabad. The following figure shows competing networks in the area.



Figure 4-2 : Alternate route Between Solapur and Aurangabad

For travel between Solapur and Aurangabad as well project road is the most preferred option due to shorter length and less travel time. Completion of four laning of Solapur Yedashi section has complemented travel on this route.

The following table provides summary of analysis of alternate route/ roads discussed above.

Table 4-1 : Competing Roads Details

Sr. No	Route Details	Designation	Length (Km)	Avg. Speed (KMPH)	Time Taken (Min)	Observations
Regional Level						
1	Solapur-Ahmednagar-Aurangabad	Alternate Route	346	50	6 Hr 50 Min	Project road has minimum travel time and shortest road
	Solapur- Yedashi-Aurangabad	Project Road	310	60	5 Hr 10 Min	
2	Yedashi- Kalam-Madalmoni-Aurangabad (SH-61)	Alternate Route	270	50	5 Hr 24 Min	Project road has minimum travel time and shortest road
	Yedashi-Ahmednagar-Aurangabad	Alternate Route	289	50	5 Hr 49 Min	
	Yedashi- Beed-Aurangabad	Project Road	223	57	3 Hr 54 Min	

It light of the above discussion project road remains most preferred route for the traffic of influence area. Moreover, project stretch is under toll operation for last one year. Hence any shifting of traffic, if any, would have settled by now and any further shifting of traffic is not envisaged from project road.

Regional Network

Project corridor is an important transportation link for the traffic between Karnataka and Rajasthan / Delhi and other northern states. Part of this traffic uses the Bijapur- Solapur- Ahmednagar- Shirdi route to join back at Dhule and proceed towards northern parts of country. The length of route between Bijapur via project road and route via Ahmednagar is almost equal. Thus, it is expected that some part traffic will come back on the project road as the four laning is complete. The following figures show the route between Bijapur and Dhule via Project Road and via Ahmednagar for better understanding.

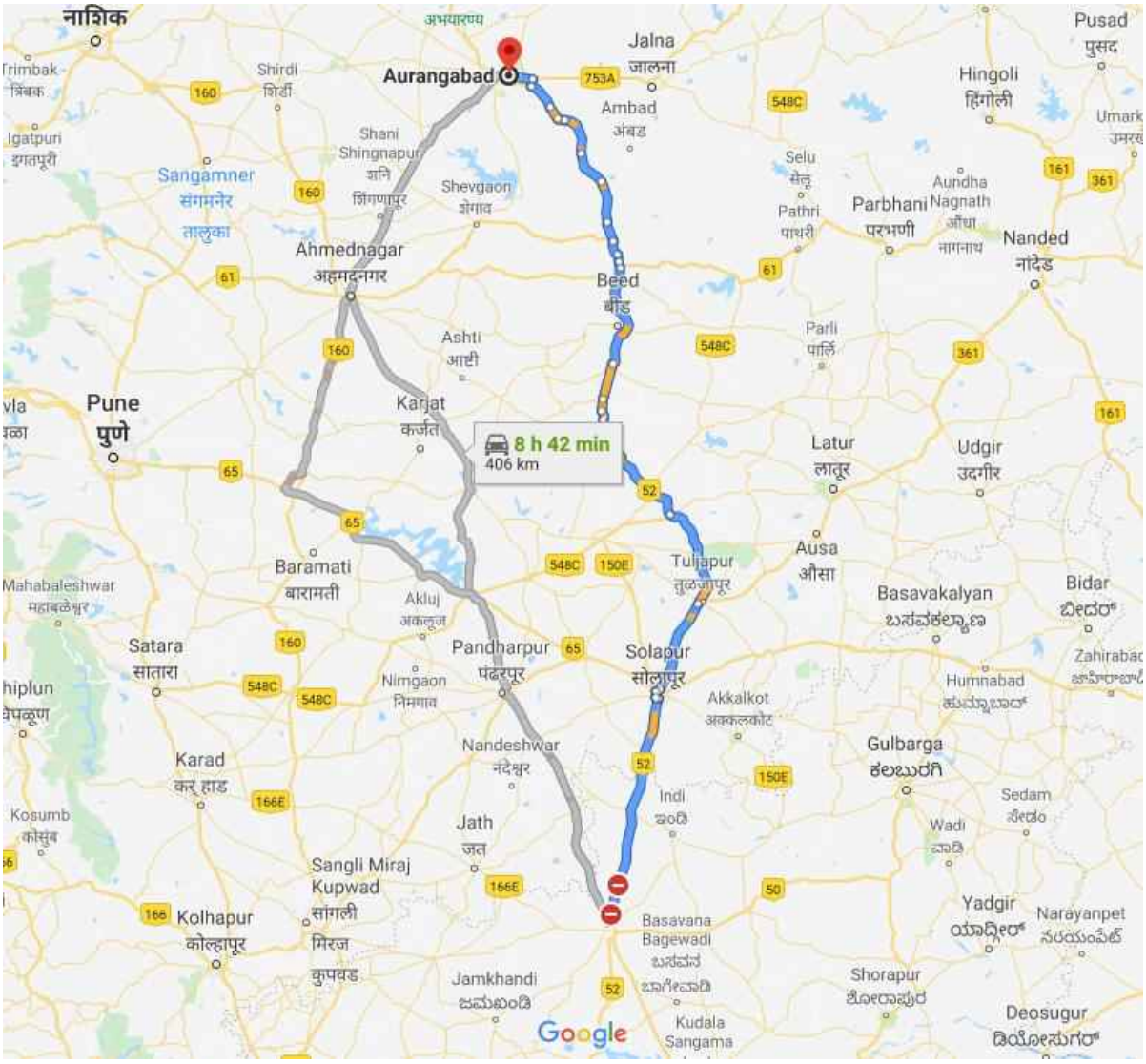


Figure 4-3 : Project Road in regional network.

CHAPTER 5

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future patterns of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor Yedeshi - Aurangabad section of NH-8 has been done taking the above factors into consideration. "**IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**" is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable to projects of short durations say 5-10 years, however for long term projections it would-be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-12015-Guidelines for Traffic Prediction on Rural Highways**.

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different types of vehicles. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway typically depends on a number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income

- Bus / Minibus – Population
- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, In order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

$Log (P) = k \times Log (EI) + A$

Where,

P = *Number of Vehicles (Mode wise)*
EI = *Economic Indicator*
A = *Regression constant*
k = *Elasticity coefficient (Regression coefficient)*

The elasticity for car and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

The project corridor spreads across state of Maharashtra. Toll plazas at Paragaon, Padalsingi and Bhokharwadi are in the state of Maharashtra. Project traffic share of many states like Karnataka, Gujarat & Haryana also. For elasticity calculations, working data from these states also has been analyzed.

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Maharashtra State.

Table 5-1 : Per Capita Income Vs Car Maharashtra

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	99564	2307841	5.00	6.36		
2013	103904	2592565	5.02	6.41	4%	
2014	109399	2834847	5.04	6.45	5%	
2015	114746	3113773	5.06	6.49	5%	
2016	122422	3406872	5.09	6.53	7%	
2017	132899	3715744	5.12	6.57	9%	5.96%

Regression analysis of same is given in figure below

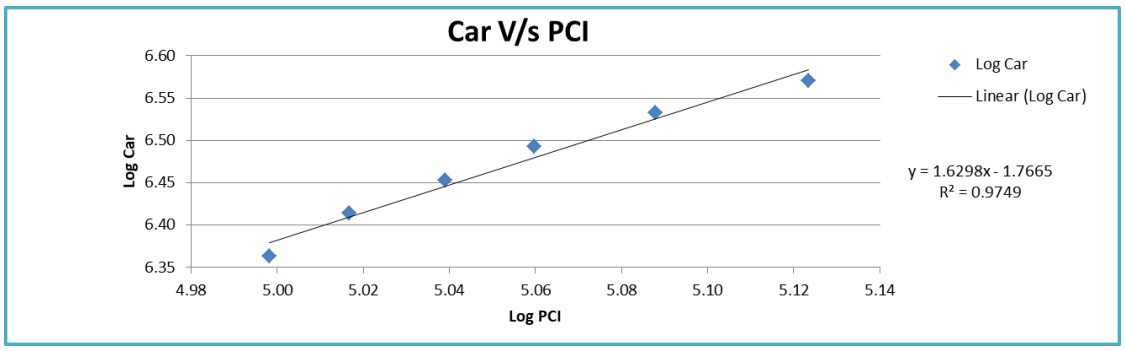


Figure 5-1 : Regression and Elasticity PCI vs. Car – Extrapolation Maharashtra

Table 5-2 : Population Vs Bus Maharashtra

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	112374333	119298	8.05	5.08		
2013	113807248	129535	8.06	5.11	1%	
2014	115229410	140087	8.06	5.15	1%	
2015	116640546	140102	8.07	5.15	1%	
2016	118040394	150427	8.07	5.18	1%	
2017	119428710	160042	8.08	5.20	1%	1.23%

Regression analysis of same is given in figure below

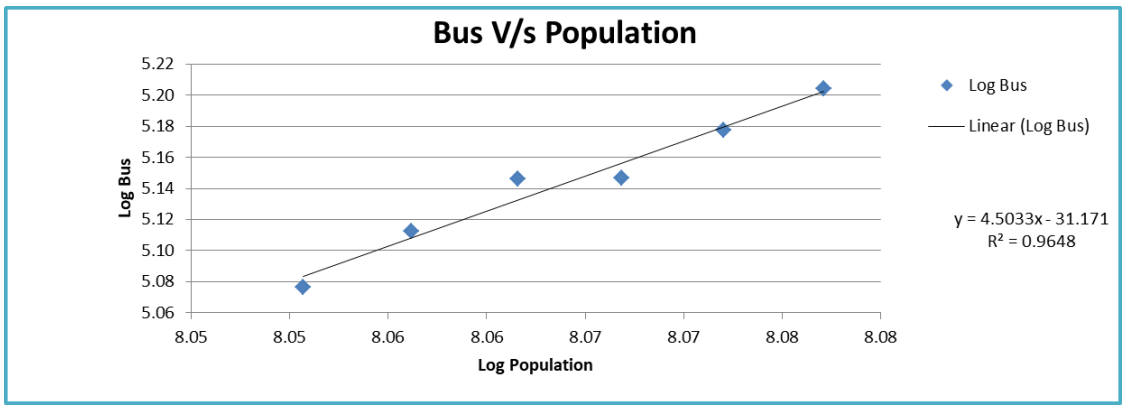


Figure 5-2 : Regression and Elasticity Population vs. Bus – Extrapolation Maharashtra

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-3 : LCV Traffic Vs NSDP Maharashtra

Year	NSDP	LCV	Log NSDP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	1126595	656407	6.05	5.82		
2013	1189711	739725	6.08	5.87	6%	
2014	1267551	803128	6.10	5.90	7%	
2015	1345341	868632	6.13	5.94	6%	
2016	1452439	927903	6.16	5.97	8%	6.56%

Following figure depict regression analysis and extrapolation.

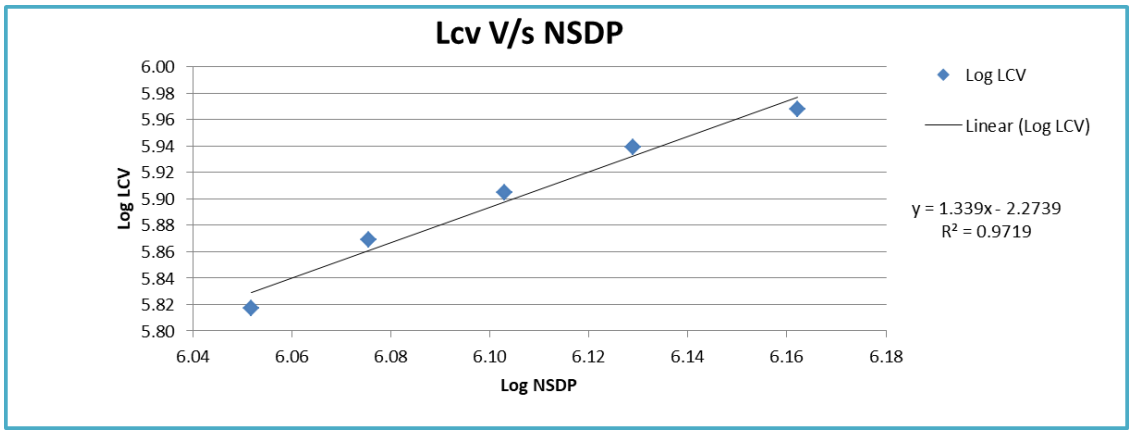


Table 5-4 : Truck Traffic Vs NSDP Maharashtra

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	1126595	411418	6.05	5.61		
2013	1189711	402366	6.08	5.60	6%	
2014	1267551	470128	6.10	5.67	7%	
2015	1345341	491582	6.13	5.69	6%	
2016	1452439	468810	6.16	5.67	8%	
2017	1595514	496439	6.20	5.70	10%	7.22%

Following figure depict regression analysis and extrapolation

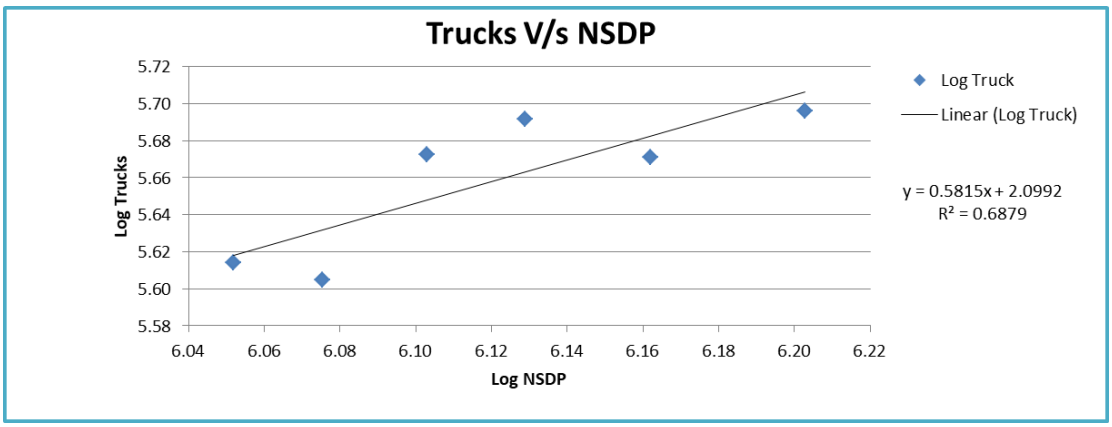


Figure 5-3 : Regression and Elasticity NSDP vs. Truck Traffic - extrapolation Maharashtra.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-5 : Summary Regression Analysis Maharashtra

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth	Growth Elastic Model
Maharashtra	Car/Jeep	PCI	y = 1.6298x + -1.7665	R² = 0.9749	1.6298	5.96%	9.71%
	Bus	Population	y = 4.5033x - -31.1713	R² = 0.9648	4.5033	1.23%	5.52%
	LCV	NSDP	y = 1.339x - -2.2739	R² = 0.9719	1.3390	6.56%	8.78%
	Truck	NSDP	y = 0.5815x - 2.0992	R² = 0.6879	0.5815	7.22%	4.20%

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Gujrat State.

Table 5-6 : Per Capita Income Vs Car Gujarat

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	87481	1411898	4.94	6.15		
2013	96683	1602129	4.99	6.20	11%	
2014	102589	1771298	5.01	6.25	6%	

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2015	111370	2008748	5.05	6.30	9%	
2016	120683	2260084	5.08	6.35	8%	
2017	129738	2527537	5.11	6.40	8%	8.21%

Regression analysis of same is given in figure below

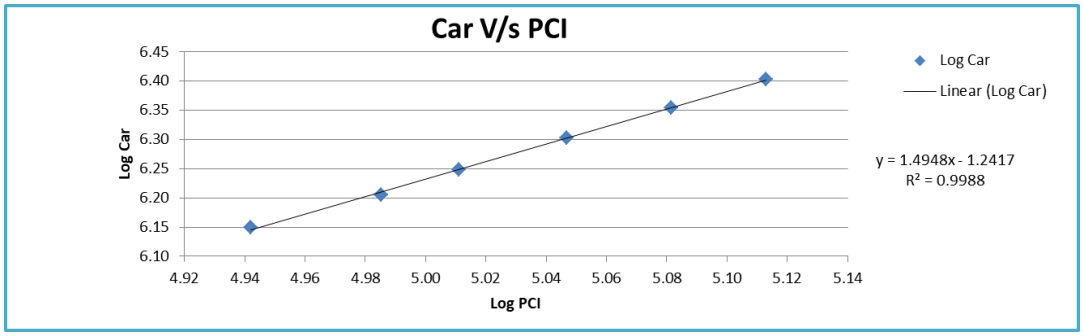


Figure 5-4 : Regression and Elasticity PCI vs. Car – Extrapolation Uttar Pradesh

Table 5-7 : Population Vs Bus Gujrat

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	60439692	67546	7.78	4.83		
2013	61563037	70615	7.79	4.85	2%	
2014	62684375	72998	7.80	4.86	2%	
2015	63803304	76435	7.80	4.88	2%	
2016	64919427	82734	7.81	4.92	2%	
2017	66032362	74855	7.82	4.87	2%	1.79%

Regression analysis of same is given in figure below

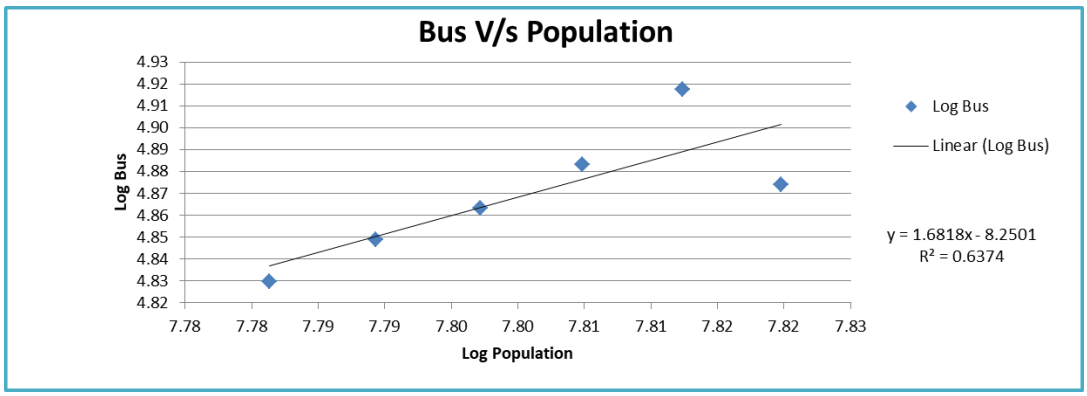


Figure 5-5 : Regression and Elasticity Population vs. Bus – Extrapolation Gujarat

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-8 : LCV Traffic Vs NSDP Gujarat

Year	NSDP	LCV	Log NSDP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	532809	448958	5.73	5.65		
2013	596659	499277	5.78	5.70	12%	
2014	641489	542918	5.81	5.73	8%	
2015	705629	589984	5.85	5.77	10%	
2016	774775	633599	5.89	5.80	10%	9.82%

Following figure depict regression analysis and extrapolation.

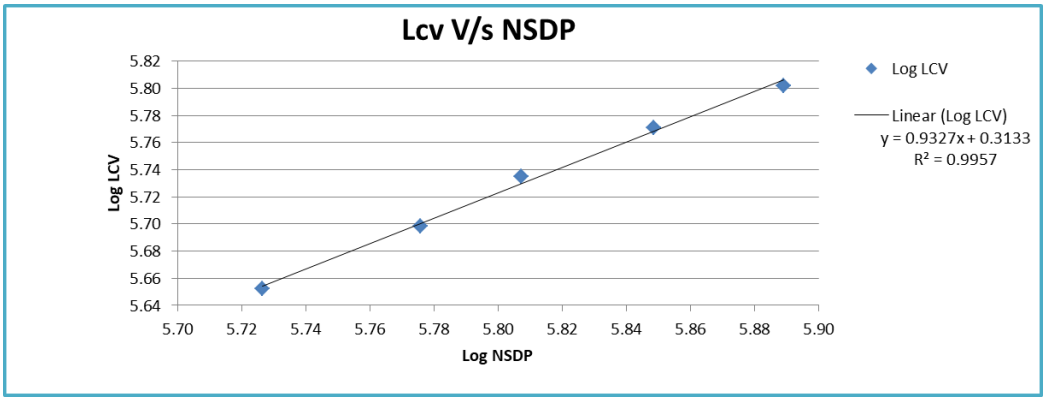


Table 5-9 : Truck Traffic Vs NSDP Gujarat

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	532809	301533	5.73	5.48		
2013	596659	319207	5.78	5.50	12%	
2014	641489	332185	5.81	5.52	8%	
2015	705629	352225	5.85	5.55	10%	
2016	774775	375265	5.89	5.57	10%	
2017	843930	396061	5.93	5.60	9%	9.64%

Following figure depict regression analysis and extrapolation

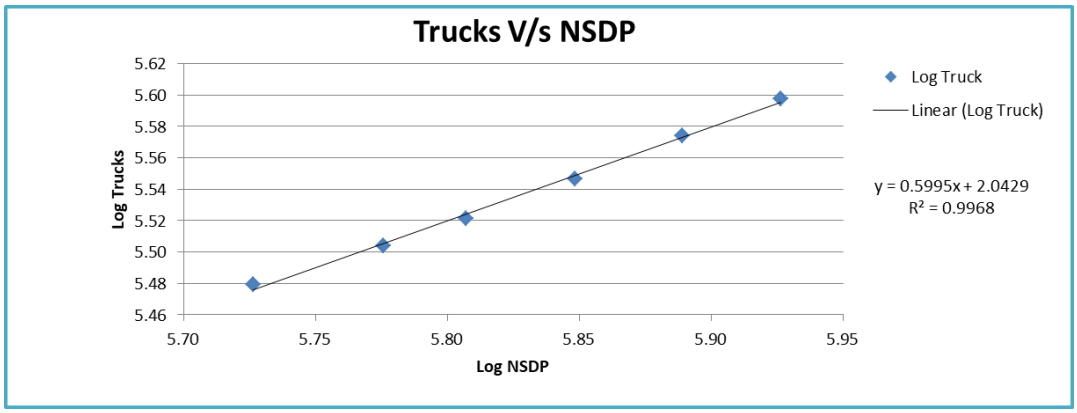


Figure 5-6 : Regression and Elasticity NSDP vs. Truck Traffic - extrapolation Gujarat.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below

Table 5-10 : Summary Regression Analysis Gujrat

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth	Growth Elastic Model
Gujarat	Car/Jeep	PCI	y = 1.4948x + -1.2417	R^2 = 0.9988	1.4948	8.21%	12.27%
	Bus	Population	y = 1.6818x - -8.2501	R^2 = 0.6374	1.6818	1.79%	3.00%
	LCV	NSDP	y = 0.9327x - 0.3133	R^2 = 0.9957	0.9327	9.82%	9.16%
	Truck	NSDP	y = 0.5995x - 2.0429	R^2 = 0.9968	0.5995	9.64%	5.78%

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Haryana State.

Table 5-11 : Per Capita Income Vs Car Haryana

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	106085	1134514	5.03	6.05		
2013	111780	1293065	5.05	6.11	5%	
2014	119791	1454182	5.08	6.16	7%	
2015	125032	1609544	5.10	6.21	4%	
2016	137818	1764448	5.14	6.25	10%	
2017	150241	1879587	5.18	6.27	9%	7.23%

Regression analysis of same is given in figure below

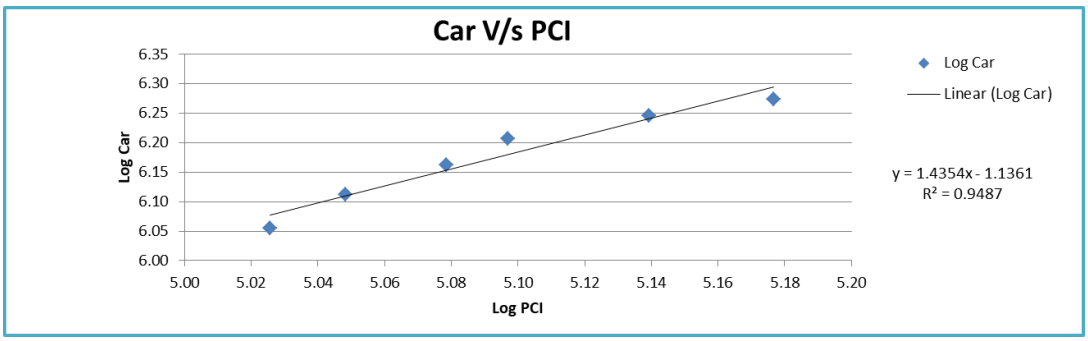


Figure 5-7 : Regression and Elasticity PCI vs. Car – Extrapolation Haryana

Table 5-12 : Population Vs Bus Haryana

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	25351462	39153	7.40	4.59		
2013	25751257	43456	7.41	4.64	2%	
2014	26149236	46558	7.42	4.67	2%	
2015	26545282	52640	7.42	4.72	2%	
2016	26939286	55781	7.43	4.75	1%	
2017	27331141	60129	7.44	4.78	1%	1.52%

Regression analysis of same is given in figure below

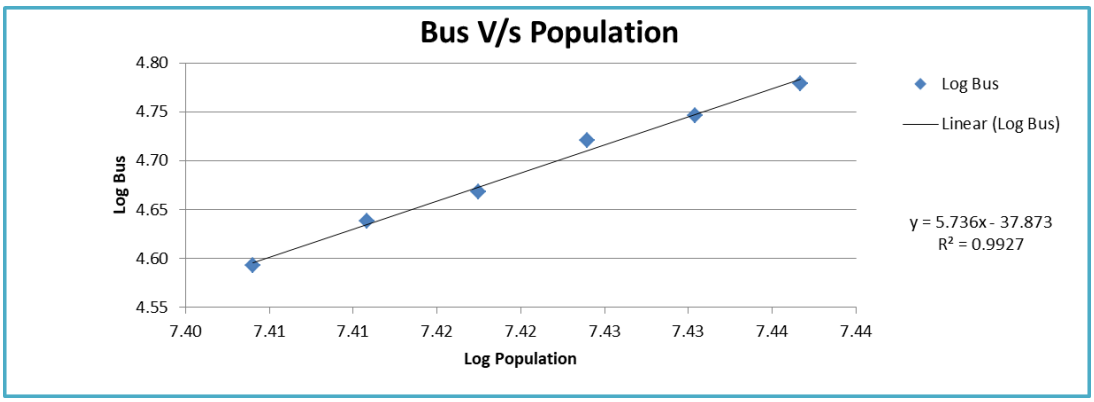


Figure 5-8 : Regression and Elasticity Population vs. Bus – Extrapolation Haryana

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-13 : LCV Traffic Vs NSDP Haryana

Year	NSDP	LCV	Log NSDP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	271152	124897	5.43	5.10		
2013	289756	137511	5.46	5.14	7%	
2014	314931	152069	5.50	5.18	9%	
2015	333359	167901	5.52	5.23	6%	

Year	NSDP	LCV	Log NSDP	Log LCV	NSDP Growth	Average Growth (5 Year)
2016	372659	182776	5.57	5.26	12%	8.30%

Following figure depict regression analysis and extrapolation.

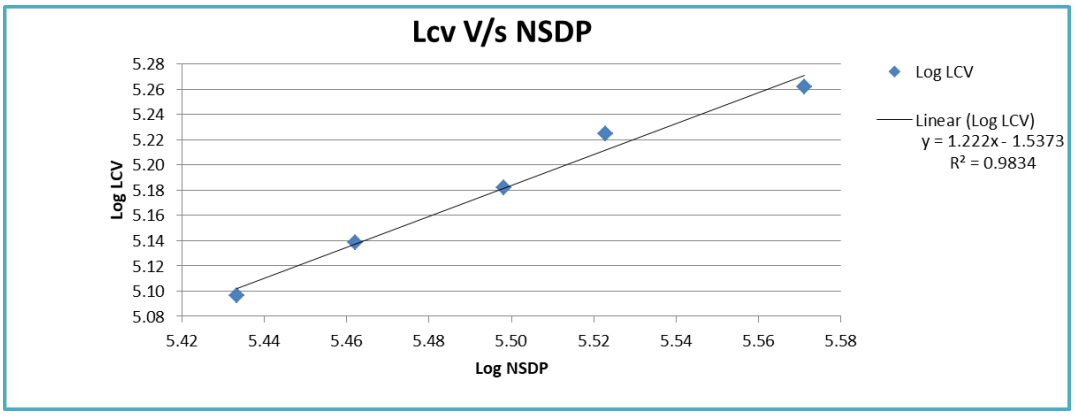


Figure 5-9 : Regression and Elasticity NSDP vs. Lcv – Extrapolation Haryana

Table 5-14 : Truck Traffic Vs NSDP Haryana

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	271152	292735	5.43	5.47		
2013	289756	307509	5.46	5.49	7%	
2014	314931	327882	5.50	5.52	9%	
2015	333359	348732	5.52	5.54	6%	
2016	372659	367730	5.57	5.57	12%	
2017	412006	390321	5.61	5.59	11%	8.75%

Following figure depict regression analysis and extrapolation

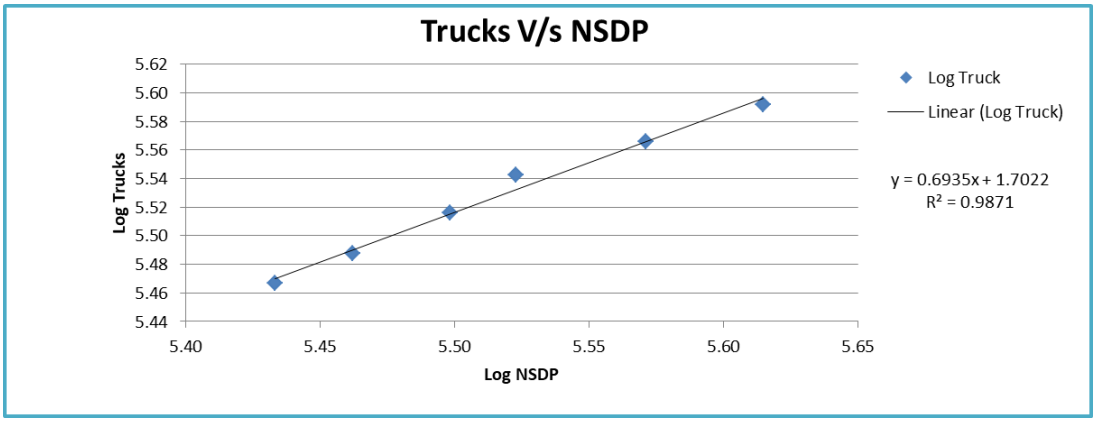


Figure 5-10 : Regression and Elasticity NSDP vs. Goods Traffic - extrapolation Haryana.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below

Table 5-15 : Summary Regression Analysis Haryana

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth	Growth Elastic Model
Haryana	Car/Jeep	PCI	y = 1.4354x - -1.1361	R² = 0.9487	1.4354	7.23%	10.38%
	Bus	Population	y = 5.736x - -37.8732	R² = 0.9927	5.7360	1.52%	8.69%
	LCV	NSDP	y = 1.222x - -1.5373	R² = 0.9834	1.2220	8.30%	10.14%
	Truck	NSDP	y = 0.6935x - 1.7022	R² = 0.9871	0.6935	8.75%	6.07%

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Karnataka State.

Table 5-16 : Per Capita Income Vs Car Karnataka

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	90269	1454309	4.96	6.16		
2013	94382	1626924	4.97	6.21	5%	
2014	101864	1798035	5.01	6.25	8%	

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2015	105703	1992262	5.02	6.30	4%	
2016	116819	2207852	5.07	6.34	11%	
2017	131260	2203562	5.12	6.34	12%	7.83%

Regression analysis of same is given in figure below

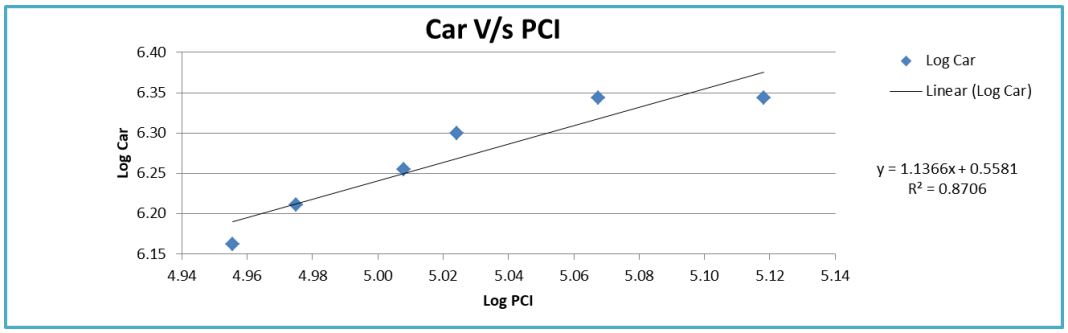


Figure 5-11 : Regression and Elasticity PCI vs. Car – Extrapolation Karnataka

Table 5-17 : Population Vs Bus Karnataka

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	61095297	175705	7.79	5.24		
2013	62058777	186705	7.79	5.27	2%	
2014	63017877	195913	7.80	5.29	2%	
2015	63972322	204803	7.81	5.31	2%	
2016	64921845	213699	7.81	5.33	1%	
2017	65866188	224580	7.82	5.35	1%	1.52%

Regression analysis of same is given in figure below

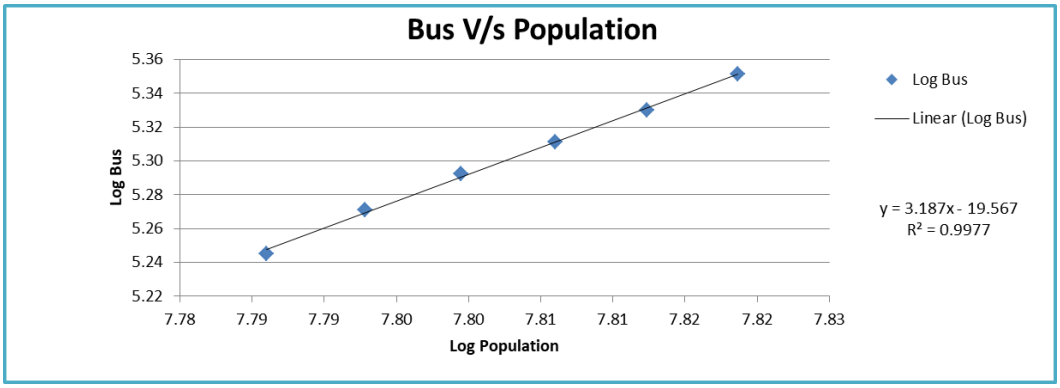


Figure 5-12 : Regression and Elasticity Population vs. Bus – Extrapolation Karnataka

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-18 : LCV Traffic Vs NSDP Karnataka

Year	NSDP	LCV	Log NSDP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	554990	221160	5.74	5.34		
2013	586592	258701	5.77	5.41	6%	
2014	639981	294266	5.81	5.47	9%	
2015	671322	331381	5.83	5.52	5%	
2016	749990	367572	5.88	5.57	12%	8%

Following figure depict regression analysis and extrapolation.

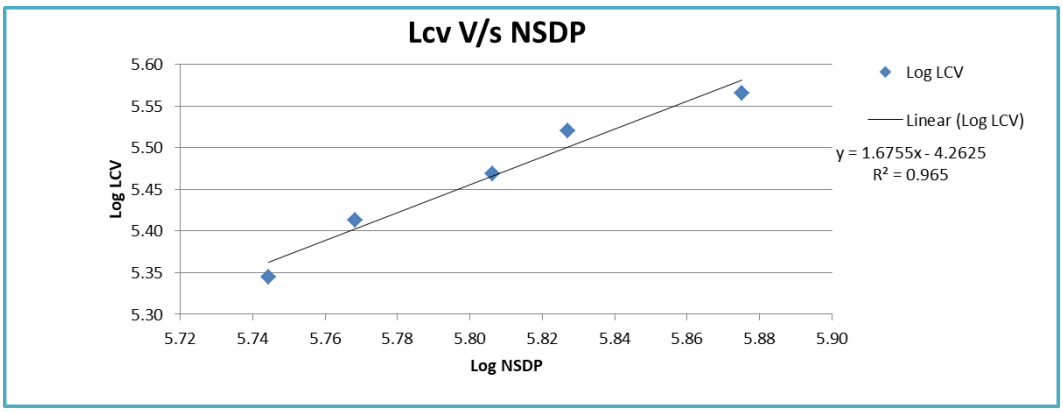


Figure 5-13 : Regression and Elasticity NSDP vs. LCV – Extrapolation Karnataka

Table 5-19 : Truck Traffic Vs NSDP Karnataka

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	554990	233422	5.74	5.37		
2013	586592	247639	5.77	5.39	6%	
2014	639981	260989	5.81	5.42	9%	
2015	671322	274971	5.83	5.44	5%	
2016	749990	290415	5.88	5.46	12%	
2017	851880	306290	5.93	5.49	14%	9.00%

Following figure depict regression analysis and extrapolation

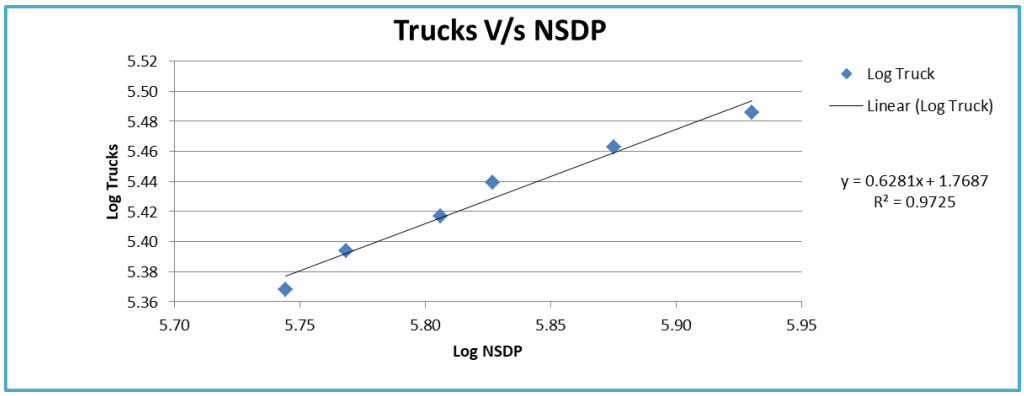


Figure 5-14 : Regression and Elasticity NSDP vs. Goods Traffic - extrapolation Karnataka.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-20 : Summary Regression Analysis Karnataka

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth	Growth Elastic Model
Karnataka	Car/Jeep	PCI	y = 1.1366x - 0.5581	R^2 = 0.8706	1.1366	7.83%	8.90%
	Bus	Population	y = 3.187x - -19.567	R^2 = 0.9977	3.1870	1.52%	4.83%
	LCV	NSDP	y = 1.6755x - -4.2625	R^2 = 0.965	1.6755	7.85%	13.16%
	Truck	NSDP	y = 0.6281x - 1.7687	R^2 = 0.9725	0.6281	9.00%	5.65%

Economical model for predicting growth is good tool, however other local, regional, national factors should also be considered before finalizing growth factors. Considering factors such as proposed developments and other influencing economic factors, moderated growth should be considered. These factors are discussed in subsequent sections.

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trend of growth. Project stretch of Yedashi to Aurangabad has recently been commissioned and is under tolling operation since March 2019. As traffic data available for last two years was affected due to COVID-19 the same cannot be taken as representative. A minimum of about 5 -6 years' consistent traffic data is required for establishing a reliable past trend.

5.5 Other Factors Influencing Growth

There are many factors which have an impact on traffic growth. As discussed previously these factors can be economical, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

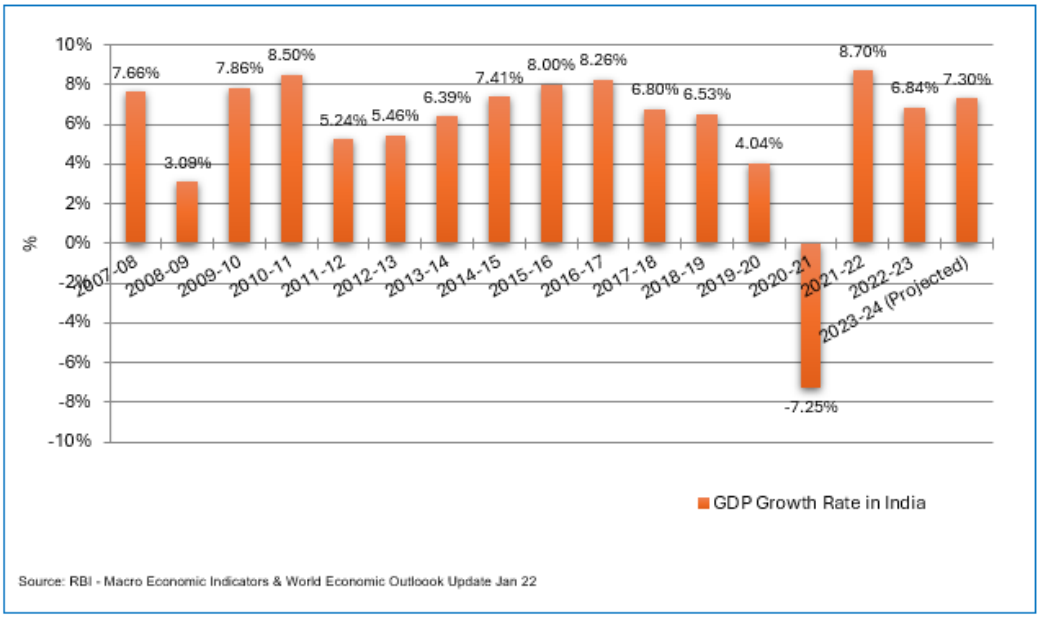


Figure 5-15 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had a slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. The government took major policy decisions including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honorable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into an opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on **Make -In- India** it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. The World Economic Outlook update also has predicted a growth rate of about 7.5 % in the year 2022-23.

5.6 Developments along and around the Project Corridor & State

Aurangabad: is the fifth largest city in Maharashtra. It lies on a major trade route that used to connect north-west India's sea and land ports to the Deccan region. Aurangabad is administrative headquarters of the Aurangabad Division or Marathwada region.

Beed: Agriculture is the main business in Beed, and it is largely dependent on monsoon rain. Beed also is a district which provides a large number of laborers in India specially in the form of sugarcane cutters.

Jalna: is connected to major towns of the state-by-state highways. Road connectivity is excellent, roads connecting to Aurangabad, Pune, Ahmednagar, Nagpur, Beed, Mumbai having been upgraded to four-lane highways. A New Nagpur-Aurangabad-Mumbai highway,

passing through Jalna, is being developed. There are various cotton-ginning & oil-pressing factories in Jalna.

Until 1960 Aurangabad was a undeveloped city and industrially backward area. After 1960 Growth began when the Maharashtra Industrial Development Corporation (MIDC) began acquiring land and setting up industrial estates. Aurangabad is a now classic example of efforts of a state government towards the balanced industrialisation of the state. Major Industrial areas of Aurangabad are Chikhalthana MIDC, Shendra MIDC and Waluj MIDC. Many of the large India and multinational firms have established themselves in Industrial areas of Shendra, Waluj, Paithan.

Some of the big names include Audi, Skoda, Videocon, Siemens, Bajaj, Forbes, Goodyear, Wockhardt, Johnson & Johnson, Kenstar which have set up their production houses in Industrial areas of Aurangabad.

DMIC

Delhi Mumbai Industrial Corridor (DMIC) which is passing close to PIA envisaged to influence the pattern of development and industrialization of the region. To tap the development potential of the proposed freight corridor, an area spanning 150 kilometers wide on both sides of the freight corridor has been identified as Influence Region and is proposed to be developed as Delhi-Mumbai Industrial Corridor (DMIC). One of the Nashik Sinnar Igatpuri Investment Region's identified early bird projects is an industrial area comprising of total 40 sq. km to be developed into two parts one of 8 sq. km in Shendra and other with an area of 32 sq. km at Bidkin some 24 km from Aurangabad on the Paithan road.

The Aurangabad Industrial City (AURIC) Bidkin Industrial Area (BIA) is strategically positioned and directly connected to the major state highways which are Paithan Road, NH-211 and SH-178 (Jalna Road). The nearest major city is Aurangabad which is served by NH-211, Major State Highway (MSH) 6 and MSH-8, and SH-16, SH-60 and SH-148.

Considering the scenario, it may be assumed that the traffic growth on the project highway would remain high and there are minimal risks in terms of growth.

5.7 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as under. Rate of growth is moderated in light of overall regional trend. Growth of Multi-Axle is kept slightly higher as trend of technological advances in logistic industry favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, rate of growth diminishes. Same growth rate is not sustainable for long. Traffic growth has been suitably stepped down for future years.

Growth rates are recommended for three scenarios for sensitivity analysis namely **Optimistic, Pessimistic** and **Most Likely** with a positive and negative variation 0.25% from Most Likely case for corridor in both states.

5.7.1 Recommended Growth Rates of Traffic for Maharashtra Part of Stretch

Table 5-21 : Recommended Growth Rates Optimistic

Category / Year	2024-2025	2025-2030	2031-2035	2036-2040	2041-2045
Car/Jeep/Van	9.46%	7.71%	7.08%	6.77%	6.72%
Bus	6.00%	4.79%	4.27%	4.01%	4.01%
Minibus	6.00%	4.79%	4.27%	4.01%	4.01%
LCV	5.98%	4.10%	3.41%	3.07%	3.00%
2- Axle	4.92%	3.69%	3.17%	2.91%	2.86%
3 - Axle	6.19%	4.75%	4.05%	3.71%	3.65%
4 to6 Axle	6.82%	4.75%	4.05%	3.71%	3.65%
7 and Above Axle	6.82%	4.75%	4.05%	3.71%	3.65%

Table 5-22 : Recommended Growth Rates Pessimistic

Category / Year	2024-2025	2025-2030	2031-2035	2036-2040	2041-2045
Car/Jeep/Van	8.96%	7.21%	6.58%	6.27%	6.22%
Bus	5.50%	4.29%	3.77%	3.51%	3.51%
Minibus	5.50%	4.29%	3.77%	3.51%	3.51%
LCV	5.48%	3.60%	2.91%	2.57%	2.50%
2- Axle	4.42%	3.19%	2.67%	2.41%	2.36%
3 - Axle	5.69%	4.25%	3.55%	3.21%	3.15%
4 to6 Axle	6.32%	4.25%	3.55%	3.21%	3.15%
7 and Above Axle	6.32%	4.25%	3.55%	3.21%	3.15%

Table 5-23 : Recommended Growth Rates Most Likely

Category / Year	2024-2025	2025-2030	2031-2035	2036-2040	2041-2045
Car/Jeep/Van	9.21%	7.46%	6.83%	6.52%	6.47%
Bus	5.75%	4.54%	4.02%	3.76%	3.76%
Minibus	5.75%	4.54%	4.02%	3.76%	3.76%
LCV	5.73%	3.85%	3.16%	2.82%	2.75%
2- Axle	4.67%	3.44%	2.92%	2.66%	2.61%
3 - Axle	5.94%	4.50%	3.80%	3.46%	3.40%
4 to6 Axle	6.57%	4.50%	3.80%	3.46%	3.40%
7 and Above Axle	6.57%	4.50%	3.80%	3.46%	3.40%

It is observed that a PIL was filed at Hon'ble Bombay High Court (Aurangabad bench) to augment the Autram Ghat section (between Chalisgaon and Aurangabad). The Hon'ble High Court has passed an interim order in August 2023. It directed NHAI to submit a plan for augmentation of the road and till then movement of commercial vehicles is restricted on that section of the road. The matter is sub judice.
This has affected the traffic on stretch. It is assumed that the matter is temporary and should be resolved soon, in the near future and would result in increased traffic in the project corridor. Hence additional growth has been considered in the year 2025-26 to cater for the above.

Traffic and revenue have been worked out on the basis of the above growths and some are presented in subsequent chapters of the report.

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in the previous section of the report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for the following three cases of growth up to concession period.

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza 1- Chainage 134.000 KM

(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	4123	376	284	1082	882	1642	28	8417	18946
2025-26	4045	412	301	1386	1195	2830	31	10201	26187
2026-27	4357	429	315	1437	1252	2964	33	10787	27499
2027-28	4693	446	330	1490	1312	3105	34	11410	28884
2028-29	5055	464	346	1545	1374	3252	35	12071	30338
2029-30	5444	483	363	1601	1439	3406	37	12773	31871
2030-31	5829	499	379	1652	1497	3544	38	13438	33281
2031-32	6241	516	395	1704	1558	3687	39	14140	34753
2032-33	6682	534	412	1758	1621	3836	40	14883	36298
2033-34	7154	552	429	1813	1687	3991	42	15668	37918
2034-35	7660	570	447	1870	1755	4153	44	16499	39618
2035-36	8179	587	465	1924	1820	4306	46	17327	41271
2036-37	8732	605	484	1980	1887	4466	48	18202	43006
2037-38	9323	623	504	2037	1957	4632	50	19126	44821
2038-39	9953	642	524	2097	2029	4804	52	20101	46718
2039-40	10626	661	545	2158	2104	4982	54	21130	48701
2040-41	11340	680	566	2220	2181	5163	56	22206	50747

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2041-42	12102	700	589	2283	2261	5351	58	23344	52892
2042-43	12914	720	613	2348	2343	5546	60	24544	55133
2043-44	13780	742	637	2415	2428	5748	62	25812	57478
2044-45	14706	764	663	2483	2516	5957	64	27153	59933

Table 6-2 : Total Tollable Traffic @ Toll Plaza 2- Chainage 194.000 KM

(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	8516	579	684	1456	1187	1894	28	14344	28015
2025-26	7650	597	670	1678	1387	3007	29	15017	33410
2026-27	8240	622	702	1740	1453	3150	31	15938	35173
2027-28	8875	647	736	1804	1522	3299	32	16915	37021
2028-29	9559	673	772	1870	1594	3455	33	17956	38973
2029-30	10296	701	809	1940	1670	3619	34	19069	41043
2030-31	11025	725	843	2002	1737	3765	35	20132	42959
2031-32	11805	750	880	2065	1807	3917	36	21260	44975
2032-33	12640	775	918	2130	1880	4075	37	22455	47091
2033-34	13535	801	957	2197	1957	4240	38	23725	49321
2034-35	14492	828	997	2267	2036	4412	39	25071	51664
2035-36	15473	853	1037	2332	2112	4576	40	26423	53968
2036-37	16521	879	1079	2399	2191	4746	41	27856	56388
2037-38	17640	906	1122	2470	2272	4922	42	29374	58929
2038-39	18834	934	1167	2542	2356	5104	43	30980	61592
2039-40	20108	962	1214	2616	2443	5293	44	32680	64387
2040-41	21458	990	1263	2691	2532	5486	45	34465	67291
2041-42	22899	1019	1314	2769	2624	5686	47	36358	70347
2042-43	24437	1050	1366	2848	2720	5893	49	38363	73553
2043-44	26078	1082	1421	2929	2819	6107	51	40487	76919
2044-45	27830	1115	1478	3012	2922	6330	53	42740	80462

Table 6-3 : Total Tollable Traffic @ Toll Plaza 3- Chainage 254.000 KM

(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	7099	426	470	992	857	1323	22	11189	20746
2025-26	6671	418	481	1362	1152	2592	18	12695	28031
2026-27	7184	435	504	1412	1206	2715	19	13475	29506
2027-28	7738	452	528	1464	1264	2844	20	14310	31072
2028-29	8335	471	553	1518	1325	2979	21	15202	32730
2029-30	8977	490	580	1573	1388	3120	22	16150	34474
2030-31	9612	506	604	1623	1444	3247	23	17059	36099
2031-32	10292	523	629	1674	1503	3379	24	18024	37808
2032-33	11021	540	656	1727	1564	3516	25	19049	39607
2033-34	11801	559	684	1781	1628	3658	26	20137	41497
2034-35	12636	578	713	1837	1694	3806	27	21291	43484
2035-36	13491	595	742	1890	1757	3947	28	22450	45438
2036-37	14403	614	772	1945	1822	4093	29	23678	47490
2037-38	15378	633	803	2001	1890	4244	30	24979	49643
2038-39	16418	652	836	2059	1961	4402	31	26359	51913
2039-40	17528	672	870	2119	2034	4566	32	27821	54296
2040-41	18705	692	905	2180	2108	4733	33	29356	56769
2041-42	19962	712	941	2242	2184	4906	34	30981	59361
2042-43	21303	734	979	2306	2264	5085	35	32706	62091
2043-44	22733	756	1018	2372	2347	5270	36	34532	64955
2044-45	24261	779	1059	2440	2432	5462	37	36470	67968

Table 6-4 : Total Tollable Traffic @ Toll Plaza 1- Chainage 134.000 KM
(Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	4123	376	284	1082	882	1642	28	8417	18946
2025-26	4042	411	301	1386	1195	2828	31	10195	26172
2026-27	4333	426	314	1430	1245	2948	33	10729	27354
2027-28	4645	441	327	1475	1298	3073	34	11293	28588
2028-29	4980	456	341	1521	1353	3204	35	11890	29885
2029-30	5339	472	355	1570	1410	3340	36	12522	31244
2030-31	5690	486	368	1612	1460	3458	37	13111	32467
2031-32	6064	500	382	1655	1512	3581	38	13732	33747
2032-33	6462	514	396	1699	1565	3708	39	14383	35075
2033-34	6887	529	411	1744	1620	3840	40	15071	36466
2034-35	7339	544	427	1790	1677	3976	41	15794	37914
2035-36	7798	558	442	1833	1731	4104	42	16508	39310
2036-37	8287	572	458	1877	1786	4236	43	17259	40764
2037-38	8806	586	474	1922	1843	4372	44	18047	42274
2038-39	9357	601	491	1968	1902	4512	45	18876	43848
2039-40	9943	616	508	2015	1963	4656	46	19747	45484
2040-41	10561	631	526	2062	2025	4802	47	20654	47167

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2041-42	11217	646	544	2111	2089	4953	48	21608	48923
2042-43	11915	662	563	2161	2155	5109	49	22614	50756
2043-44	12656	678	583	2212	2223	5270	50	23672	52667
2044-45	13443	694	603	2264	2293	5436	51	24784	54656

Table 6-5 : Total Tollable Traffic @ Toll Plaza 2- Chainage 194.000 KM (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	8516	579	684	1456	1187	1894	28	14344	28015
2025-26	7643	597	670	1677	1386	3005	29	15007	33391
2026-27	8194	618	698	1731	1444	3133	31	15849	34978
2027-28	8784	640	728	1786	1505	3266	32	16741	36642
2028-29	9417	663	759	1843	1569	3405	33	17689	38396
2029-30	10096	687	791	1901	1635	3549	34	18693	40231
2030-31	10759	708	821	1951	1693	3674	35	19641	41907
2031-32	11467	729	852	2003	1753	3804	36	20644	43665
2032-33	12220	750	884	2057	1815	3939	37	21702	45505
2033-34	13024	772	917	2112	1879	4079	38	22821	47433
2034-35	13880	794	952	2168	1945	4224	39	24002	49450
2035-36	14750	815	985	2220	2007	4360	40	25177	51409
2036-37	15676	836	1020	2274	2071	4500	41	26418	53460
2037-38	16659	858	1057	2329	2137	4644	42	27726	55602
2038-39	17702	880	1095	2385	2205	4793	43	29103	57839
2039-40	18811	902	1134	2442	2276	4946	44	30555	60175
2040-41	19980	924	1174	2499	2348	5101	45	32071	62586
2041-42	21221	947	1215	2557	2422	5261	46	33669	65105
2042-43	22540	971	1258	2617	2499	5427	47	35359	67752
2043-44	23941	995	1302	2679	2578	5598	48	37141	70518
2044-45	25430	1020	1347	2742	2659	5774	49	39021	73408

Table 6-6 : Total Tollable Traffic @ Toll Plaza 3- Chainage 254.000 KM (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	7099	426	470	992	857	1323	22	11189	20746
2025-26	6666	418	481	1362	1151	2591	18	12686	28014
2026-27	7146	433	502	1404	1199	2701	19	13404	29351
2027-28	7662	449	524	1449	1250	2816	20	14170	30767
2028-29	8215	465	547	1495	1303	2936	21	14982	32254
2029-30	8807	481	570	1542	1358	3061	22	15841	33812
2030-31	9386	495	592	1583	1406	3170	23	16655	35240

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2031-32	10003	509	614	1625	1456	3283	24	17514	36733
2032-33	10661	524	637	1668	1507	3400	25	18422	38296
2033-34	11362	539	661	1712	1560	3521	26	19381	39931
2034-35	12109	555	686	1757	1615	3646	27	20395	41644
2035-36	12868	569	710	1799	1666	3763	28	21403	43306
2036-37	13675	584	735	1842	1719	3884	29	22468	45048
2037-38	14532	599	760	1886	1773	4009	30	23589	46863
2038-39	15442	615	787	1931	1829	4138	31	24773	48766
2039-40	16410	631	815	1977	1888	4271	32	26024	50760
2040-41	17430	647	844	2023	1947	4405	33	27329	52814
2041-42	18513	663	873	2070	2008	4543	34	28704	54957
2042-43	19664	679	903	2119	2071	4686	35	30157	57206
2043-44	20887	696	935	2169	2136	4833	36	31692	59562
2044-45	22185	713	968	2220	2202	4985	37	33310	62024

Traffic projections for Most Likely scenario is given as under

Table 6-7 : Total Tollable Traffic @ Toll Plaza 1- Chainage 134.000 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	4123	376	284	1082	882	1642	28	8417	18946
2025-26	4044	411	301	1386	1195	2829	31	10198	26179
2026-27	4345	428	315	1433	1248	2956	33	10758	27426
2027-28	4669	444	329	1482	1304	3089	34	11351	28734
2028-29	5017	461	344	1533	1362	3228	35	11980	30109
2029-30	5391	479	360	1586	1424	3373	36	12649	31560
2030-31	5759	494	374	1632	1478	3501	37	13275	32873
2031-32	6152	509	389	1679	1534	3634	38	13935	34246
2032-33	6572	524	405	1728	1592	3772	39	14632	35683
2033-34	7020	540	421	1778	1653	3915	40	15367	37184
2034-35	7499	557	438	1830	1716	4063	41	16144	38755
2035-36	7987	572	455	1879	1775	4203	42	16913	40275
2036-37	8508	587	472	1929	1837	4348	43	17724	41862
2037-38	9063	603	490	1980	1901	4498	44	18579	43520
2038-39	9654	620	508	2032	1967	4653	45	19479	45246
2039-40	10283	638	528	2086	2035	4814	46	20430	47057
2040-41	10947	656	548	2140	2104	4978	47	21420	48920
2041-42	11655	674	569	2195	2175	5147	48	22463	50861
2042-43	12408	692	590	2252	2248	5322	50	23562	52890
2043-44	13210	711	612	2311	2324	5502	52	24722	55011
2044-45	14064	730	635	2371	2403	5688	54	25945	57225

Table 6-8 : Total Tollable Traffic @ Toll Plaza 2- Chainage 194.000 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	8516	579	684	1456	1187	1894	28	14344	28015
2025-26	7647	597	670	1677	1386	3006	29	15012	33400
2026-27	8217	619	701	1735	1449	3141	31	15893	35075
2027-28	8831	643	732	1794	1514	3282	32	16828	36829
2028-29	9489	668	765	1856	1581	3429	33	17821	38676
2029-30	10197	693	800	1920	1652	3583	34	18879	40629
2030-31	10893	715	832	1976	1715	3719	35	19885	42428
2031-32	11636	737	865	2033	1780	3860	36	20947	44308
2032-33	12429	760	900	2092	1847	4006	37	22071	46280
2033-34	13277	784	937	2153	1917	4158	38	23264	48356
2034-35	14183	809	975	2216	1990	4315	39	24527	50533
2035-36	15107	832	1012	2274	2058	4464	40	25787	52655
2036-37	16092	856	1050	2334	2129	4618	41	27120	54881
2037-38	17141	880	1089	2396	2203	4777	42	28528	57211
2038-39	18258	905	1130	2459	2280	4942	43	30017	59655
2039-40	19448	930	1173	2524	2359	5113	44	31591	62218
2040-41	20707	955	1217	2589	2439	5286	45	33238	64864
2041-42	22047	981	1262	2656	2522	5465	46	34979	67638
2042-43	23473	1008	1309	2725	2607	5650	47	36819	70545
2043-44	24991	1036	1359	2797	2695	5841	48	38767	73599
2044-45	26607	1064	1410	2870	2787	6039	50	40827	76805

Table 6-9 : Total Tollable Traffic @ Toll Plaza 3- Chainage 254.000 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	7099	426	470	992	857	1323	22	11189	20746
2025-26	6668	418	481	1362	1151	2592	18	12691	28022
2026-27	7164	434	503	1409	1202	2708	19	13439	29429
2027-28	7699	450	526	1458	1255	2830	20	14238	30916
2028-29	8274	467	550	1508	1311	2957	21	15088	32483
2029-30	8891	485	575	1560	1370	3090	22	15993	34138
2030-31	9498	501	598	1605	1422	3208	23	16855	35664
2031-32	10146	517	622	1651	1475	3330	24	17765	37259
2032-33	10838	533	647	1700	1530	3457	25	18730	38938
2033-34	11578	550	674	1750	1588	3588	26	19754	40702
2034-35	12368	567	701	1801	1648	3724	27	20836	42548
2035-36	13174	583	728	1849	1705	3853	28	21920	44359
2036-37	14033	599	756	1898	1764	3986	29	23065	46253
2037-38	14947	616	784	1949	1825	4124	30	24275	48238
2038-39	15921	633	813	2001	1888	4266	31	25553	50313
2039-40	16958	650	843	2054	1953	4413	32	26903	52486
2040-41	18054	668	875	2107	2019	4562	33	28318	54737

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2041-42	19222	687	908	2162	2088	4717	34	29818	57106
2042-43	20465	706	942	2219	2159	4878	35	31404	59593
2043-44	21789	725	977	2277	2232	5044	36	33080	62195
2044-45	23198	745	1013	2336	2307	5215	37	34851	64918

6.2 Modification in Concession Period

As per Article 29 of the concession agreement, if actual traffic on the project falls short or exceeds Target Traffic on project highway on defined date, concession period shall be modified subject to calculation stipulated therein. For Yedeshi – Aurangabad project, the Target Date and Target Traffic are defined as under:

Target Date - 1st October 2023

Target Traffic -24407 in PCU

Pessimistic Case

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2023	24407	22381	-8%	12%	12%	26	3.2

PCUs as per Pessimistic cases have been considered for arriving at the concession Period end date.

CHAPTER 7

FORECAST OF TOLL REVENUE

1.1 General

This chapter presents the tolling rate calculations, categories and toll revenue of the project.

1.2 Discount Categories

The fee schedule in the CA of Surat- Dahisar section of NH-8 is based on the old toll policy. As per the Toll Notification (Schedule - G) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent users monthly pass would be issued at fee at 2/3rd rate for 50 single journey trips.
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travellers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: There are several categories of local discounts.
    a) Local Car Jeep Van - Rs. 275 per month (for locals residing within a radius of 20 kms from toll plaza)

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.

The formula for determining the applicable rate of fee shall be as follows:-

$$\text{Applicable rate of fee} = \text{base rate} + \text{base rate} \times \left\{ \frac{\text{WPI A-WPI B}}{\text{WPI B}} \right\} \times 0.4$$

Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2018-19. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. The following graph provides historical rate of inflation (WPI) in India. Data has been sourced from the Office of Economic Advisor web site (www.eaindustry.nic.in) WPI for year 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series.

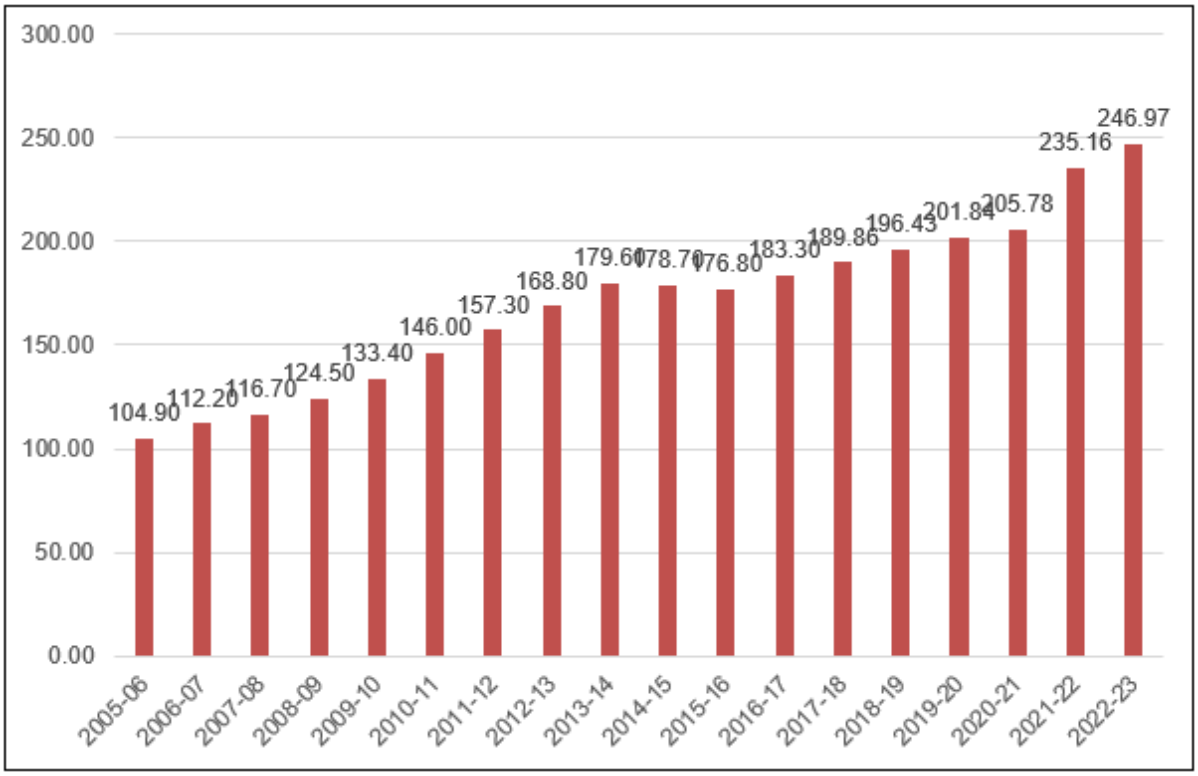


Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in the last few years is steadily growing. It grew by the range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

1.3 Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Oversized Vehicles (7 or more Axles)	4.20

Toll rates are calculated as per guidelines provided in schedule R (rounded to nearest Rs. five) for the concession period and are given below. Since applicable length of highway length is equal for both plazas, applicable toll rates are also same

Thus, worked out rates for various categories of vehicle and discounts are given as under.

Table 7-2 : Toll Rates for Single Journey @ Km 134.000

Year	Car	Minibus /LCV	Bus	Truck	3 -Axle	Multi axle	Oversized Vehicles
2024-25	80	130	270	270	295	425	515
2025-26	85	135	285	285	310	445	540
2026-27	90	140	300	300	325	465	570
2027-28	90	150	315	315	340	490	595
2028-29	95	155	330	330	360	515	630
2029-30	100	165	345	345	375	540	660
2030-31	105	175	365	365	395	570	695
2031-32	115	180	380	380	415	600	730
2032-33	120	190	400	400	440	630	765
2033-34	125	200	425	425	460	665	805
2034-35	130	210	445	445	485	700	850
2035-36	140	225	470	470	510	735	895
2036-37	145	235	495	495	540	775	940
2037-38	155	250	520	520	565	815	990
2038-39	160	260	545	545	595	860	1045
2039-40	170	275	575	575	630	905	1100
2040-41	180	290	605	605	660	950	1160
2041-42	190	305	640	640	700	1005	1220
2042-43	200	320	675	675	735	1060	1290
2043-44	210	340	710	710	775	1115	1360
2044-45	220	360	750	750	820	1175	1430

Table 7-3 : Toll Rates for Single Journey @ Km 194.000

Year	Car	Minibus /LCV	Bus	Truck	3 -Axle	Multi axle	Oversized Vehicles
2024-25	110	180	375	375	405	585	715
2024-25	115	185	390	390	430	615	750
2025-26	120	195	410	410	450	645	785
2026-27	130	205	435	435	470	680	825
2027-28	135	215	455	455	495	715	870
2028-29	140	230	480	480	520	750	915
2029-30	150	240	505	505	550	790	960
2030-31	155	250	530	530	575	830	1010

Year	Car	Minibus /LCV	Bus	Truck	3 -Axle	Multi axle	Oversized Vehicles
2031-32	165	265	555	555	605	870	1060
2032-33	175	280	585	585	640	915	1115
2033-34	180	295	615	615	670	965	1175
2034-35	190	310	650	650	705	1015	1235
2035-36	200	325	680	680	745	1070	1300
2036-37	210	345	720	720	785	1125	1370
2037-38	225	360	755	755	825	1185	1445
2038-39	235	380	795	795	870	1250	1520
2039-40	250	400	840	840	915	1315	1605
2040-41	260	420	885	885	965	1390	1690
2041-42	275	445	935	935	1020	1465	1780
2042-43	290	470	985	985	1075	1545	1880
2043-44	305	495	1035	1035	1130	1625	1980
2044-45	325	520	1095	1095	1195	1715	2090

Table 7-4 : Toll Rates for Single Journey @ Km 243.00

Year	Car	Minibus /LCV	Bus	Truck	3 -Axle	Multi axle	Oversized Vehicles
2024-25	110	175	365	365	400	570	695
2025-26	115	185	385	385	420	600	730
2026-27	120	190	405	405	440	630	770
2027-28	125	200	425	425	460	665	810
2028-29	130	210	445	445	485	695	850
2029-30	140	225	465	465	510	735	890
2030-31	145	235	490	490	535	770	940
2031-32	155	245	515	515	565	810	985
2032-33	160	260	545	545	595	855	1040
2033-34	170	275	570	570	625	895	1090
2034-35	180	285	600	600	655	945	1150
2035-36	185	300	635	635	690	995	1210
2036-37	195	320	665	665	730	1045	1275
2037-38	210	335	700	700	765	1100	1340
2038-39	220	355	740	740	805	1160	1410
2039-40	230	370	780	780	850	1220	1490
2040-41	245	390	820	820	895	1290	1570
2041-42	255	415	865	865	945	1355	1650
2042-43	270	435	910	910	995	1430	1740
2043-44	285	460	960	960	1050	1510	1835
2044-45	300	485	1015	1015	1105	1590	1935

Table 7-5 : Toll Rates for Return Journey @ Km 134.000

Year	Car	Minibus /LCV	Bus	Truck	3 -Axle	Multi axle	Oversized Vehicles
2024-25	120	195	405	405	440	635	775
2025-26	125	205	425	425	465	665	810
2026-27	130	215	445	445	485	700	855
2027-28	140	225	470	470	510	735	895
2028-29	145	235	495	495	540	775	940
2029-30	155	245	520	520	565	815	990
2030-31	160	260	545	545	595	855	1040
2031-32	170	275	575	575	625	900	1095
2032-33	180	290	605	605	660	945	1150
2033-34	185	305	635	635	690	995	1210
2034-35	195	320	670	670	730	1045	1275
2035-36	210	335	705	705	765	1100	1340
2036-37	220	355	740	740	805	1160	1410
2037-38	230	370	780	780	850	1220	1485
2038-39	240	390	820	820	895	1285	1565
2039-40	255	415	865	865	945	1355	1650
2040-41	270	435	910	910	995	1430	1740
2041-42	285	460	960	960	1045	1505	1830
2042-43	300	485	1010	1010	1105	1585	1930
2043-44	315	510	1065	1065	1165	1675	2035
2044-45	330	535	1125	1125	1225	1765	2145

Table 7-6 : Toll Rates for Return journey @ Km 194.000

Year	Car	Minibus /LCV	Bus	Truck	3 -Axle	Multi axle	Oversized Vehicles
2024-25	165	265	560	560	610	880	1070
2025-26	175	280	590	590	640	920	1125
2026-27	185	295	620	620	675	970	1180
2027-28	190	310	650	650	710	1020	1240
2028-29	200	325	680	680	745	1070	1300
2029-30	210	340	715	715	780	1125	1370
2030-31	225	360	755	755	825	1185	1440
2031-32	235	380	795	795	865	1245	1515
2032-33	245	400	835	835	910	1310	1590
2033-34	260	420	880	880	955	1375	1675
2034-35	275	440	925	925	1005	1450	1765
2035-36	285	465	970	970	1060	1525	1855
2036-37	300	490	1025	1025	1115	1605	1955
2037-38	320	515	1080	1080	1175	1690	2055
2038-39	335	540	1135	1135	1240	1780	2165
2039-40	355	570	1195	1195	1305	1875	2285
2040-41	370	600	1260	1260	1375	1975	2405
2041-42	390	635	1330	1330	1450	2080	2535
2042-43	415	670	1400	1400	1525	2195	2670

Year	Car	Minibus /LCV	Bus	Truck	3 -Axle	Multi axle	Oversized Vehicles
2043-44	435	705	1475	1475	1610	2315	2815
2044-45	460	745	1555	1555	1695	2440	2970

Table 7-7 : Toll Rates for Return journey @ Km 243.000

Year	Car	Minibus /LCV	Bus	Truck	3 -Axle	Multi axle	Oversized Vehicles
2024-25	160	260	545	545	595	860	1045
2025-26	170	275	575	575	625	900	1100
2026-27	180	290	605	605	660	945	1155
2027-28	190	305	635	635	690	995	1210
2028-29	195	320	665	665	730	1045	1275
2029-30	205	335	700	700	765	1100	1340
2030-31	220	350	735	735	805	1155	1410
2031-32	230	370	775	775	845	1215	1480
2032-33	240	390	815	815	890	1280	1555
2033-34	255	410	860	860	935	1345	1640
2034-35	265	430	905	905	985	1415	1725
2035-36	280	455	950	950	1035	1490	1815
2036-37	295	480	1000	1000	1090	1570	1910
2037-38	310	505	1055	1055	1150	1650	2010
2038-39	330	530	1110	1110	1210	1740	2120
2039-40	345	560	1170	1170	1275	1835	2230
2040-41	365	590	1230	1230	1345	1930	2350
2041-42	385	620	1300	1300	1415	2035	2480
2042-43	405	655	1370	1370	1495	2145	2615
2043-44	425	690	1445	1445	1575	2260	2755
2044-45	450	725	1520	1520	1660	2385	2905

Table 7-8 : Toll Rates for Monthly Pass Local@ all Toll Plaza

Year	Car	Minibus /LCV
2024-25	340	340
2025-26	355	355
2026-27	375	375
2027-28	390	390
2028-29	410	410
2029-30	435	435
2030-31	455	455
2031-32	480	480
2032-33	505	505
2033-34	530	530
2034-35	560	560
2035-36	585	585

Year	Car	Minibus /LCV
2036-37	620	620
2037-38	650	650
2038-39	685	685
2039-40	720	720
2040-41	760	760
2041-42	800	800
2042-43	845	845
2043-44	890	890
2044-45	940	940

Table 7-9 : Toll Rates for Monthly Pass @ Km 134.000

Year	Car	Minibus /LCV	Bus	Truck	3 -Axle	Multi axle	Oversized Vehicles
2024-25	2655	4295	8995	8995	9810	14105	17170
2025-26	2790	4510	9445	9445	10305	14815	18035
2026-27	2930	4735	9925	9925	10825	15565	18945
2027-28	3080	4975	10430	10430	11375	16355	19910
2028-29	3240	5230	10960	10960	11955	17190	20925
2029-30	3405	5500	11520	11520	12570	18070	21995
2030-31	3580	5780	12115	12115	13215	18995	23125
2031-32	3765	6080	12740	12740	13900	19980	24320
2032-33	3960	6395	13400	13400	14620	21015	25585
2033-34	4165	6730	14100	14100	15380	22110	26915
2034-35	4385	7080	14835	14835	16185	23265	28325
2035-36	4615	7455	15615	15615	17035	24490	29815
2036-37	4855	7845	16440	16440	17935	25780	31385
2037-38	5115	8265	17310	17310	18885	27150	33050
2038-39	5385	8705	18235	18235	19890	28595	34810
2039-40	5675	9170	19210	19210	20955	30120	36670
2040-41	5980	9660	20240	20240	22080	31740	38640
2041-42	6300	10180	21330	21330	23270	33450	40720
2042-43	6645	10730	22485	22485	24530	35260	42925
2043-44	7005	11315	23705	23705	25860	37175	45255
2044-45	7385	11930	24995	24995	27270	39200	47720

Table 7-10 : Toll Rates for Monthly Pass @ Km 194.000

Year	Car	Minibus /LCV	Bus	Truck	3 -Axle	Multi axle	Oversized Vehicles
2024-25	3675	5940	12440	12440	13570	19510	23750
2025-26	3860	6235	13070	13070	14255	20495	24950
2026-27	4055	6550	13730	13730	14975	21530	26210
2027-28	4260	6885	14425	14425	15735	22620	27540
2028-29	4480	7235	15160	15160	16540	23775	28945
2029-30	4710	7605	15935	15935	17385	24995	30425
2030-31	4950	8000	16755	16755	18280	26280	31990

Year	Car	Minibus /LCV	Bus	Truck	3 -Axle	Multi axle	Oversized Vehicles
2031-32	5205	8410	17620	17620	19225	27635	33645
2032-33	5475	8845	18535	18535	20220	29070	35390
2033-34	5760	9310	19500	19500	21275	30585	37230
2034-35	6065	9795	20525	20525	22390	32185	39180
2035-36	6380	10310	21600	21600	23565	33875	41240
2036-37	6720	10855	22740	22740	24810	35665	43415
2037-38	7075	11430	23950	23950	26125	37555	45720
2038-39	7450	12040	25220	25220	27515	39555	48150
2039-40	7850	12680	26570	26570	28985	41670	50725
2040-41	8270	13360	27995	27995	30540	43905	53450
2041-42	8720	14080	29505	29505	32190	46270	56330
2042-43	9190	14845	31100	31100	33930	48775	59375
2043-44	9690	15650	32790	32790	35770	51420	62600
2044-45	10215	16505	34575	34575	37720	54225	66010

Table 7-11 : Toll Rates for Monthly Pass @ Km 243.000

Year	Car	Minibus /LCV	Bus	Truck	3 -Axle	Multi axle	Oversized Vehicles
2024-25	3595	5805	12165	12165	13270	19075	23225
2025-26	3775	6100	12775	12775	13940	20035	24395
2026-27	3965	6405	13425	13425	14645	21050	25625
2027-28	4165	6730	14105	14105	15385	22120	26930
2028-29	4380	7075	14825	14825	16170	23245	28300
2029-30	4605	7435	15585	15585	17000	24435	29750
2030-31	4840	7820	16385	16385	17875	25695	31280
2031-32	5090	8225	17230	17230	18795	27020	32895
2032-33	5355	8650	18125	18125	19770	28420	34600
2033-34	5635	9100	19070	19070	20800	29905	36405
2034-35	5930	9575	20065	20065	21890	31470	38310
2035-36	6240	10080	21120	21120	23040	33120	40325
2036-37	6570	10615	22235	22235	24260	34870	42450
2037-38	6920	11175	23415	23415	25545	36720	44700
2038-39	7285	11770	24660	24660	26905	38675	47080
2039-40	7675	12400	25980	25980	28340	40740	49600
2040-41	8090	13065	27375	27375	29865	42930	52260
2041-42	8525	13770	28850	28850	31470	45240	55075
2042-43	8985	14515	30410	30410	33175	47690	58055
2043-44	9475	15300	32060	32060	34975	50280	61210
2044-45	9990	16135	33810	33810	36880	53015	64545

1.4 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under

Optimistic, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

1.5 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under all scenarios at each of the toll plaza up to 2044-45 years starting from the year 2024-25 are shown in tables below.

Table 7-12 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Year	TP-1	TP-2	TP-3	Total
2024-25	59.74	114.13	83.70	**257.56**
2025-26	89.02	149.45	124.48	**362.95**
2026-27	97.85	164.85	137.39	**400.09**
2027-28	108.01	183.10	152.36	**443.47**
2028-29	118.83	201.47	166.95	**487.26**
2029-30	130.83	222.34	185.51	**538.67**
2030-31	143.81	245.72	203.70	**593.22**
2031-32	158.67	269.80	225.08	**653.56**
2032-33	173.69	295.39	246.88	**715.97**
2033-34	190.69	325.89	271.54	**788.11**
2034-35	209.16	357.98	299.04	**866.18**
2035-36	230.41	393.45	328.70	**952.56**
2036-37	251.68	431.00	359.85	**1042.52**
2037-38	275.73	474.16	396.19	**1146.08**
2038-39	301.51	521.21	436.17	**1258.88**
2039-40	332.25	574.78	479.84	**1386.88**
2040-41	362.68	629.64	527.84	**1520.16**
2041-42	399.29	692.09	579.21	**1670.59**
2042-43	437.92	763.11	637.80	**1838.82**
2043-44	481.10	841.45	704.32	**2026.88**
2044-45	526.40	922.37	773.32	**2222.09**

Table 7-13 : Toll Revenue Pessimistic Scenario

(Rs. Crores)

Year	TP-1	TP-2	TP-3	Total
2024-25	59.74	114.13	83.70	**257.56**
2025-26	88.97	149.37	124.41	**362.75**
2026-27	97.34	163.96	136.67	**397.97**
2027-28	106.94	181.21	150.82	**438.97**
2028-29	117.10	198.44	164.47	**480.01**
2029-30	128.28	217.93	181.91	**528.11**
2030-31	140.35	239.66	198.72	**578.73**
2031-32	154.11	261.90	218.46	**634.48**
2032-33	167.89	285.35	238.43	**691.67**
2033-34	183.42	313.27	260.97	**757.65**

Year	TP-1	TP-2	TP-3	Total
2034-35	200.25	342.45	286.00	**828.69**
2035-36	219.54	374.60	312.82	**906.96**
2036-37	238.66	408.33	340.82	**987.80**
2037-38	260.20	447.07	373.48	**1080.75**
2038-39	283.17	489.11	409.26	**1181.54**
2039-40	310.53	536.75	448.10	**1295.38**
2040-41	337.30	585.10	490.54	**1412.94**
2041-42	369.51	640.11	535.65	**1545.27**
2042-43	403.34	702.46	586.94	**1692.74**
2043-44	440.94	770.87	645.20	**1857.00**
2044-45	480.09	840.80	705.06	**2025.95**

Table 7-14 : Toll Revenue Most Likely Scenario

(Rs. Crores)

Year	TP-1	TP-2	TP-3	Total
2024-25	59.74	114.13	83.70	**257.56**
2025-26	89.00	149.41	124.44	**362.85**
2026-27	97.59	164.43	137.01	**399.04**
2027-28	107.46	182.17	151.55	**441.18**
2028-29	117.92	199.91	165.64	**483.48**
2029-30	129.50	220.10	183.63	**533.23**
2030-31	142.01	242.63	201.13	**585.76**
2031-32	156.28	265.75	221.66	**643.69**
2032-33	170.66	290.23	242.52	**703.40**
2033-34	186.88	319.44	266.08	**772.40**
2034-35	204.48	350.08	292.34	**846.90**
2035-36	224.71	383.85	320.57	**929.13**
2036-37	244.82	419.49	350.07	**1014.38**
2037-38	267.52	460.40	384.62	**1112.54**
2038-39	291.78	504.91	422.48	**1219.17**
2039-40	320.77	555.45	463.72	**1339.94**
2040-41	349.27	606.97	508.89	**1465.12**
2041-42	383.51	665.58	557.08	**1606.17**
2042-43	419.64	732.01	611.92	**1763.57**
2043-44	459.94	805.15	674.22	**1939.31**
2044-45	502.07	880.39	738.46	**2120.91**

CHAPTER 8

CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Yedeshi to Aurangabad section of NH-211 in state of Maharashtra from km 100.000 to km 290.200 is currently four lane road. The road is in sound condition and serves healthy traffic volumes. Project corridor is a part of the important regional network connecting Maharashtra with Karnataka and other southern states. There are large number of townships, industrial corridors and other business establishment coming up along project corridor. As discussed, dominant portion of traffic is long route traffic, which is more sensitive towards the growth of national economy. As Indian economy is poised to grow at 7%+ post COVID-19, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give positive impact to traffic flow on project. The following can be considered as major outcomes of the study

a) There is good amount of tollable traffic running on project

b) Project corridor has potential to witness traffic growth @ 6-8% annually in near future due to various development in area and overall development of economy

c) Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road

Based on above it can be considered a stable healthy project from traffic and revenue point of view.

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IRB INFRASTRUCTURE TRUST

PALSIT TO DANKUNI SECTION OF NH 19 IN THE STATE OF WEST BENGAL (KM 588.870 TO KM 652.700)









OCTOBER 2024

TTRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

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PALSIT TO DANKUNI SECTION OF NH 19
IN THE STATE OF WEST BENGAL
(KM 588.870 TO KM 652.700)

TRAFIC STUDY & REVENUE
PROJECTION REPORT
(FINAL)

OCTOBER 2024

GMD CONSULTANTS ★ NAVI MUMBAI ★

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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic	**NHAI**	-	National Highway Authority of India
BOT	-	Build Operate Transfer	**NHDP**	-	National Highways Development Project
CAGR	-	Compound Annual Growth Rate	**NSDP**	-	Net State Domestic Product
CTV	-	Classified traffic volume	**O&M**	-	Operation & Maintenance
DBFOT	-	Design, Build, Finance, Operate & Transfer	**PCDP**	-	Per Capita Domestic Product
EME	-	Earth Moving Equipment	**PCI**	-	Per Capita Income
GDP	-	Gross Domestic Product	**PCU**	-	Passenger Car Unit
GSDP	-	Gross State Domestic Product	**PSC**	-	Pre-stressed Concrete
HCM	-	Heavy Construction Machinery	**RCC**	-	Reinforced cement concrete
HCV	-	Heavy Commercial Vehicle	**RHS**	-	Right Hand Side
HTMS	-	Highway Traffic Management System	**SH**	-	State Highway
IRC	-	Indian Road Congress	**TP**	-	Toll Plaza
IRR	-	Internal Rate of Return	**WPI**	-	Wholesale Price Index
LCV	-	Light Commercial Vehicle	**SIR**	-	Special Investment Region
LHS	-	Left Hand Side	**c.**	-	Circa
LGV	-	Light Goods Vehicle	**ROB**	-	Railway Over Bridge
MAV	-	Multi Axle Vehicle	**MDR**	-	Major District Road
MORTH	-	Ministry of Road Transport and Highways	**ODR**	-	Other District Road
NH	-	National Highway	**CA**	-	Concession Agreement
PCC	-	Plain Cement Concrete	**RMT**	-	Running Meter
CR	-	Coarse Rubble			

CHAPTER 1

INTRODUCTION

1.1 Background

The Government of India through National Highway Authority of India (NHAI) embarked upon a program to enhance the traffic capacity and safety for efficient transportation of goods as well as passenger traffic on National Highway Sections under NHDP Phase V. Under Phase V NHAI has planned to convert 6,500 km of existing 4-lane National Highways into 6-lane National Highway. Sections envisaged under 6-laning comprise the Golden Quadrilateral section (5,700 km) and some other sections which are 800 km in length.

The project under consideration, **Palsit** to **Dankuni** section of NH-19 from km 588.870 to km 652.700 is one such road project NHAI intended to implement on a BOT basis in the DBFOT format. *M/s Palsit Dankuni Tollway. Ltd*. (Concessionaire) has been awarded the Project for a concession period of 17 years starting from 2nd April 2022. The Project has been commissioned and is currently under construction for six laning. Six laning of project is underway and expected to complete soon.

Project stretch from Palsit to Dankuni is part of new NH-19 Which was previously referred as Delhi -Kolkata. During renumbering of National Highway, Delhi to Agra route was numbered as NH-44 and Agra to Kolkata has been assigned as NH-19. From a transportation point of view, it is Delhi – Kolkata corridor.

New NH-19 connects industrial cities like Agra, Kanpur, Allahabad, Varanasi, Dhanbad, Durgapur, Bardhman and terminates at Dankuni near Kolkata. Close proximity to Kolkata and Howrah has given impetus to industrial development around project highway at various locations.

Old Delhi Road (GT Road) lies east of project highway from Palsit onwards. Project stretch is developed at new alignment between Palsit and Dankuni and is known as Durgapur Expressway. The following figure shows the alignment of project stretch.

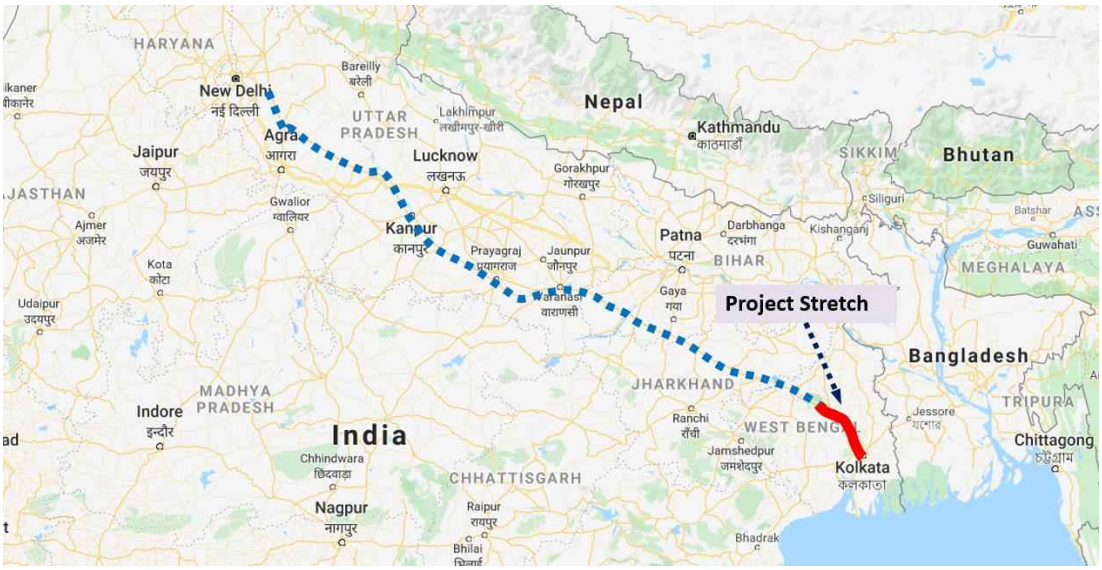


Figure 1-1: Alignment of Project Stretch

1.2 Objective of the Study

M/s IRB INFRASTRUCTURE TRUST has engaged *GMD Consultants* to assess the future traffic and toll potential of project stretch.
This report named as **"Traffic Study &*Toll Revenue Projection Report*"** mainly focuses on traffic and revenue aspects of the project. Other parameters like competing road, area developments etc. have been considered from a traffic development point of view.

1.2.1 Scope of Services

The broad scope of work covered in the assignment is as follows.

a) Analysis of Traffic Growth
b) Toll Rate Growth
c) Revenue Forecasting

The Concessionaire has provided basic traffic data and other project details on the basis of which the above analysis has been carried out.

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

National Highway 2 (NH 2) which is now renumbered as NH-19 is oldest highway in India and connects state of Delhi, Haryana, Uttar Pradesh, Bihar, Jharkhand and West Bengal. It constitutes a major portion of the historical grand truck road.

It connects the national capital Delhi to Kolkata, as well as important cities Mathura, Agra, Kanpur, Allahabad, Varanasi, Dhanbad, Asansol, Durgapur and Bardhman. The highway is part of the Golden Quadrilateral project undertaken by National Highways Authority of India (NHAI).

The project road is the final link on Kolkata side between Palsit and Dankuni in the state of West Bengal. Dankuni is just out the outskirts of Kolkata on the northern side. The main project influence area of the project road consists of Dhanbad, Durgapur and Kolkata.

2.2 Project Stretch Description

Section of NH-19 from Palsit to Dankuni is part of the major transportation link in the area connecting industrial cities of Dhanbad, Asansol, Durgapur and Kolkata. Project stretch is basically and gateway link to Kolkata from northern India. Being just on the outskirts of the major metro city Kolkata, a large number of warehouses and logistic hubs are established on project road. This also contributes to sustainable traffic and growth on project highway.

There is one operative toll plaza at project stretch which is at Dankuni at km 646.005. The following figure shows project alignment and toll plaza location.



Figure 2-1: Project Alignment with Toll Plaza

2.3 Project Corridor Illustration

Four lane project is under operation. Six laning has commenced on corridor. The following photographs illustrate the project section along the corridor.







Figure 2-2: Photographs showing Project Corridor

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from a client for a project.

- Classified traffic volume counts at toll plaza location on Palsit - Dankuni section of NH-19 for Yr. 2022-23, April 2023 to November 2023 and traffic data from April 2024 to July 2024.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project.
- Establish base year traffic.
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	Toll Plaza Dankuni at km 646.005	AADT for Yr. 2022-23, Eight month from April 2023 to November 2023 & Four month from April 2024 to	AADT for Yr. 2022-23, Eight month from April 2023 to November 2023 & Four	AADT for Yr. 2022-23, Eight month from April 2023 to November 2023 & Four	AADT for Yr. 2022-23, Eight month from April 2023 to November 2023 & Four	AADT for Yr. 2022-23, Eight month from April 2023 to November 2023 & Four month

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
		July 2024	month from April 2024 to July 2024	month from April 2024 to July 2024	month from April 2024 to July 2024	from April 2024 to July 2024

3.2 Classified Traffic Volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations based on monthly data shared with NHAI.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in the table below.

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since the project highway is currently under toll operation, the data collected corresponds to the category of tollable vehicles. The following are the types of vehicles as per concession agreement.

- Car / Jeep / van

- Min Bus /LCV
- Bus
- Truck
- 3-Axle
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of the report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data for the years 2019-20 ,2020-21, 2021-22, 2022-23, April 2023 to November 2023 and traffic data from April 2024 to July 2024.
Since the traffic data available for this update is for only four months, from April 2024 to July 2024, it may not represent the whole year traffic. Hence a seasonality factor for balance part of year has been applied to average traffic of current four months to arrive at Annual Average Daily Traffic of base year 2024-25. Same corrected traffic is used for future projections and revenue calculations. The following table shows historical traffic on project stretch and derived Annual Average Daily Traffic (AADT) for year 2024-25.

Table 3-3 : Traffic Data at Dankuni Toll Plaza at Km 646.005

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24	Annual Average Daily Traffic (Nos.)- 2024-25
1	Car	10514	10935	10898
2	LCV	1398	1031	983
3	Bus	789	788	700
4	Truck	3707	2542	2259
5	3-Axle	3061	2018	1637
6	Multi Axle	8974	8799	8551
7	Oversize Vehicle	8	9	9
	Total	**28451**	**26121**	**25037**

3.4 Data Analysis

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in "IRC-64-1990: Guidelines for Capacity of Roads in Rural areas". The adopted passenger car unit values (PCU) are presented in ***Table*** 3-4**.**

Table 3-4 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-5 : Traffic in PCU at Project Stretch Base Year 2022-23

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
2022-2023	Dankuni Km 646.005	28451	75699	2.66
2023-2024	Dankuni Km 646.005	26121	68159	2.61
2024-2025	Dankuni Km 646.005	25037	64680	2.58

It can be observed from above that project traffic has PCU index More than 2.5 at Dankuni which is an indicator of high proportion of commercial traffic in traffic mix.

3.4.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.

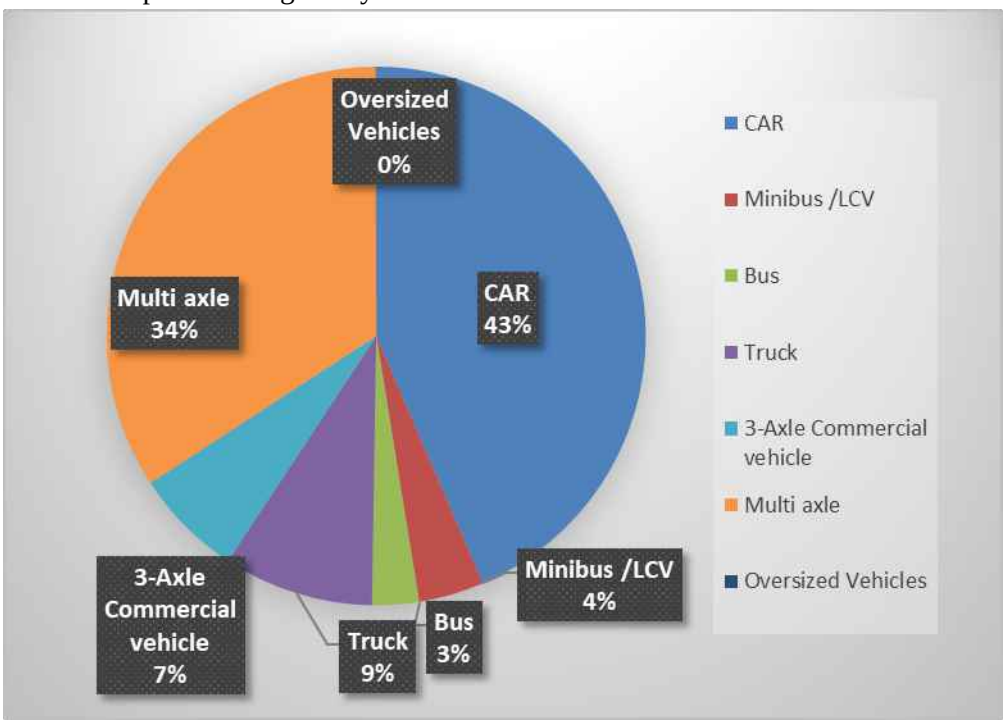


Figure 3-1 :Model Split of Tollable Vehicle-Dankuni Km 646.005

It is observed that car traffic forms about 47% of total traffic at Dankuni toll plaza location while multi axle commercial vehicles and trucks are about 53% of total traffic.

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

The following table provides numbers of vehicles falling in each of above category on base year 2024-25

Table 3-6 : Journey Type Bifurcation of Traffic at Dankuni Toll Plaza KM 646.005

Sr. No	Type	Traffic Volume (Nos.)
		2024-25
1	Single Journey	11824

Sr. No	Type	Traffic Volume (Nos.)
		2024-25
2	Return Journey	13198
3	Local Commercial Single Journey	0
4	Monthly Pass Local	12
5	Monthly Pass	3

Most dominant part of the above is the single journey type followed by return journey at project stretch. Monthly pass commuters are a very low fraction of the total traffic on the project corridor.

The single journey component in total traffic numbers is as high as 47%. Return journey component is 53%. The number of monthly passes is 0% at Dankuni toll plaza. This indicates a higher share of long traffic.

It is observed that the project corridor demonstrates a similar pattern of single journey dominated mix of traffic across the entire stretch which is typical of major national highways.

3.5 Secondary Data Collection

There are several other factors which have a substantial impact on traffic patterns and growth on any project corridor. The following are some of such important factors.

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on the project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data
   a) GDP
   b) NSDP
   c) Population Growth
   d) Per Capita Income growth
   e) Industrial Growth
   f) Special Industry Potential
   g) Regional and National development vision / plan
   h) Any other relevant data
3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

Highway corridors behave like integrated circuit networks and more often than not every road is connected to various networks having different origins and destinations. Traffic running on these networks behaves like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network.

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc.,
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Competing / Alternate route

Project stretch from Palsit to Dankuni is part of Golden Quadrilateral connecting four metros of India which has been widened to four lanes in year 2005. Part of the stretch, from Palsit to Dankuni, known as Durgapur Expressway, was constructed at different alignment to the east of old NH-2. Old NH-2, still known as GT road passes through congested built-up areas like Memari, Boinchi, Saptagram etc. It has a number of level rail crossings as well. Thus, traffic at project stretch is settled and as such has not much scope of diversion.
There are few alternate routes to project stretch. These are discussed in subsequent sections including their potential impact on project traffic.

Old NH-2 (GT Road)

Between Palsit and Dankuni old NH-2 is an available alternate route to project stretch (Durgapur Expressway). The following figure shows both Durgapur Expressway and GT road.

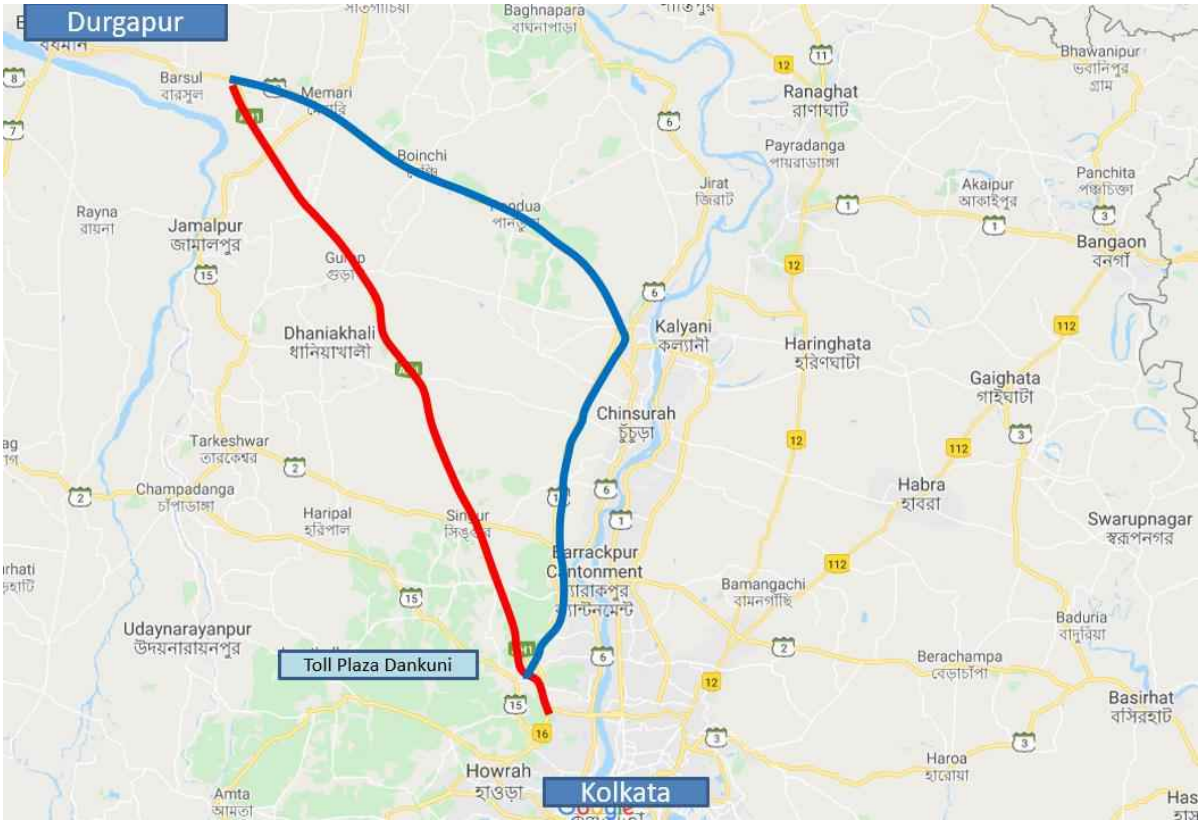


Figure 4-1 Project stretch and alternate GT Road

GT road passes through congested locations and is two lanes currently in most of the stretch.

The following figure shows the typical condition of GT road as compared to project stretch.

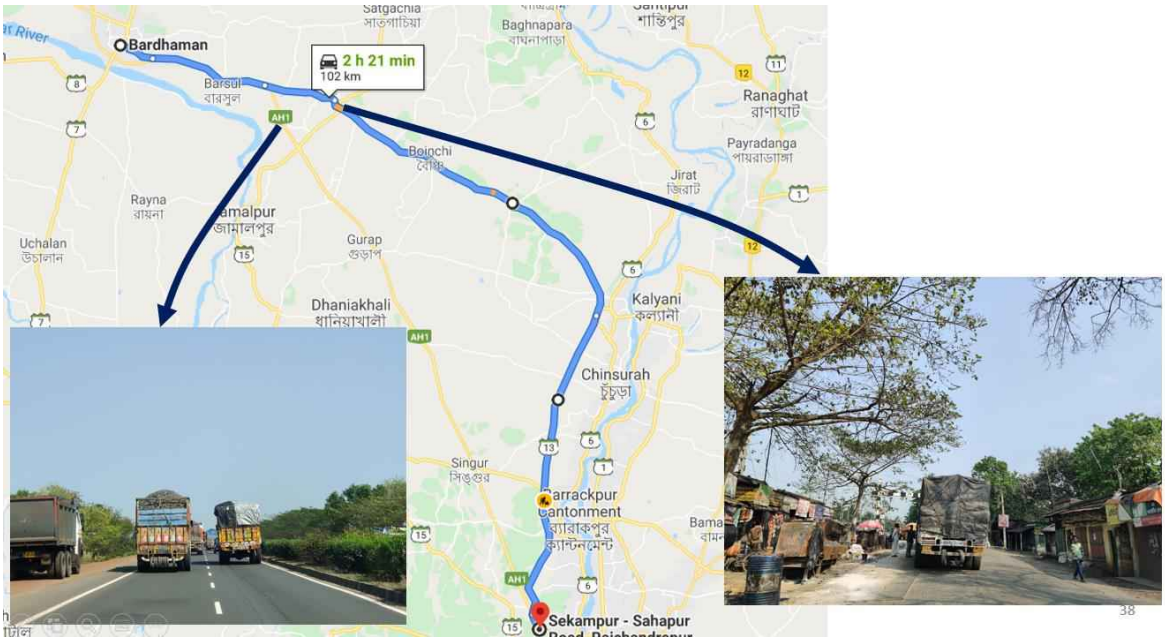


Figure 4-2 Project stretch and alternate GT Road Condition

There are as many as 5 level crossings on GT road which cause traffic congestion. The following figure shows one such typical crossing.



Figure 4-3 Railway level crossing at GT road.

The following table shows comparison of length and travel time via both project stretch and old GT road between Bardhman and Dankuni.

Table 4-1 Project Road and GT road comparison

Route	Distance (Km)	Time (Min)	Remarks
Bardhman -Kolkata Via Old NH-2 GT Road	102	141	Road is two lanes in most places and passes through congested built-up areas (Alikhoja, Memari, Boinchi, Saptagram) and 7 level crossings.
Bardhman -Kolkata Via Project Road	**84**	**79**	**Preferred Route**

Project road is quite short and saves lot of time. It such case any material shift of traffic from project stretch to old GT road is not envisaged.

B. Toll Plaza Local Leakage Roads

As such leakage roads are not there at toll plazas but there can be a longer detour to avoid toll plazas. The following figure shows the location and alignment of these roads at Dankuni Toll plaza.

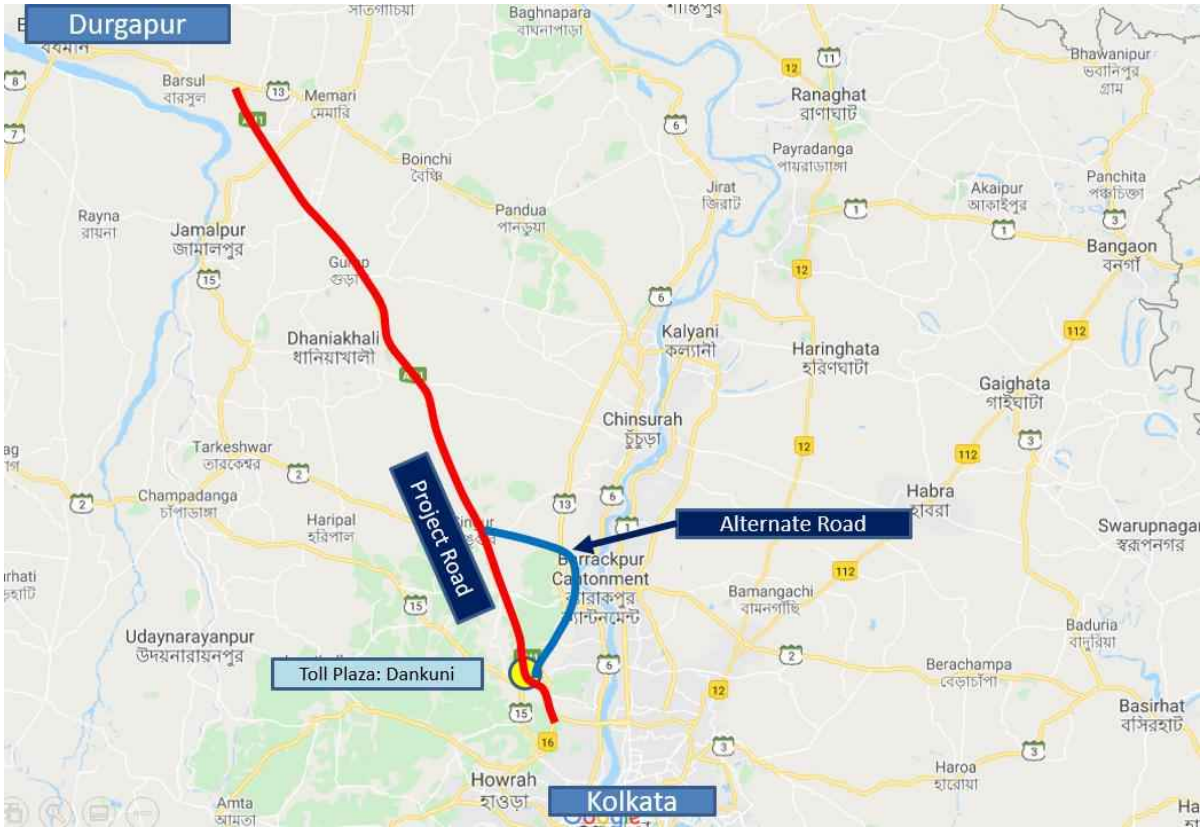


Figure 4-4 Local roads bypassing toll plaza.

At **Dankuni Toll Plaza,** there can be one alternate route via Singur- Baidyavati (Tarkeshwar) – Dankuni. The link from Singur to old Delhi Road is intermediate/ two lane. It's quite congested and geometrically very poor. Moreover, this road is used by pilgrims to reach the famous Tarkeshwar temple of Lord Shiva. Almost all through the year people walk in large groups on the way to Tarkeshwar. The major concentration of this Yatra is in the months of February to March and July- August. The following figure shows the typical condition of this link.



Old GT Road from Tarkeshwar to Dankuni is under widening to four lanes. There is one ROB under construction. Toll plaza is also under construction at GT Road. The following figures show under construction ROB and Toll Plaza at GT Road.




Figure 4-5 ROB & Toll Plaza under construction.

The following table provides comparison between project road and this alternate route around Dankuni toll plaza.

Table 4-2 Length time comparison of alternate route at Dankuni Toll

Route	Distance (Km)	Time (Min)	Remarks
Via Singur - Delhi Road (Old NH02)	27	41	From Singur to NH-2 road is intermediate lane and congested. Delhi road under four laning. Toll plaza under construction
Via Project Road (Dankuni)	**21.4**	**24**	**Preferred Route**

Between Singur and Kolkata- Road from Singur to Old NH-2 is two lane and quite congested. Currently part of NH-2 is under 4 laning and there is no toll as of now. Already passenger vehicles are using. Heavy commercial traffic is not allowed on existing bridge. Hence when ROB will be opened to traffic, certain amount of commercial traffic may divert to alternate route of Singur- NH-2.

Part of alternate route is congested and there is habitation on both sides. Progress on ROB at GT road has been very slow which is further impacted by pandemic COVI-19. As the route is existing since long and traffic is settled on both project stretch and GT road, it is unlikely that any further diversion of passenger traffic would take place. After completion of six laning of project stretch some passenger traffic may also divert to project stretch due to better traffic conditions at project stretch. However same is ignored for current analysis and projections.

At present heavy commercial traffic is not allowed on existing ROB on NH-2 however light commercial traffic is using the same. Hence some part of above diversion has already taken place.

Geometrics and condition of road from Singur to GT road is not good but still some amount of commercial traffic may divert to old GT road after ROB at GT road is competed. Following table shows potential diversion of traffic commercial traffic is taken into consideration for projection of traffic. Considering the above facts following diversion of commercial traffic has been assumed for traffic projections in 2025-26.

- Optimistic Case- 5%
- Most Likely Case- 10%
- Pessimistic Case- 15%

CHAPTER 5

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future patterns of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor Surat- Dahisar section of NH-8has been done taking the above factors into consideration. "**IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**" is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable for projects of short durations say 5-10 years, however for long term projections it would-be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**.

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different types of vehicles. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway typically depends on a number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, in order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

$Log (P) = k \times Log (EI) + A$

Where,

P = *Number of Vehicles (Mode wise)*
EI = *Economic Indicator*
A = *Regression constant*
k = *Elasticity coefficient (Regression coefficient)*

The elasticity for cars and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

As observed in OD analysis, the project stretch has a share of traffic from mainly three states of West Bengal, Jharkhand and Bihar and some traffic from Uttar Pradesh and Delhi. Hence regression of dependent variable and traffic has been done for these three states. The following tables and graphs present a summary of elasticity model of growth for project corridor.

Table 5-1 : Per Capita Income Vs. Car- West Bengal

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2011	31314	610218	4.50	5.79		
2012	32164	695463	4.51	5.84	3%	
2013	34177	791069	4.53	5.90	6%	
2014	36293	829478	4.56	5.92	6%	
2015	38624	916475	4.59	5.96	6%	5.40%

Regression analysis of above is given in following figure.

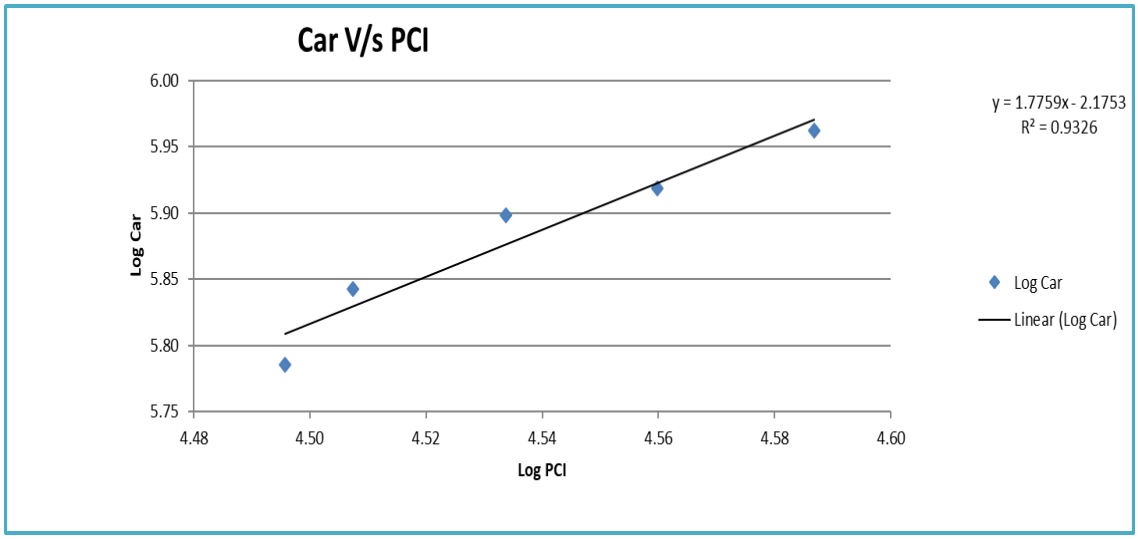


Figure 5-1 : Regression Analysis Car Vs. PCI West Bengal

Table 5-2 : NSDP Vs. Truck- West Bengal

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth (5 Year)
2011	27919100	285733	7.45	5.46		
2012	28943200	318573	7.46	5.50	4%	
2013	31033800	344816	7.49	5.54	7%	
2014	33242500	350565	7.52	5.54	7%	
2015	35684500	377636	7.55	5.58	7%	6.34%

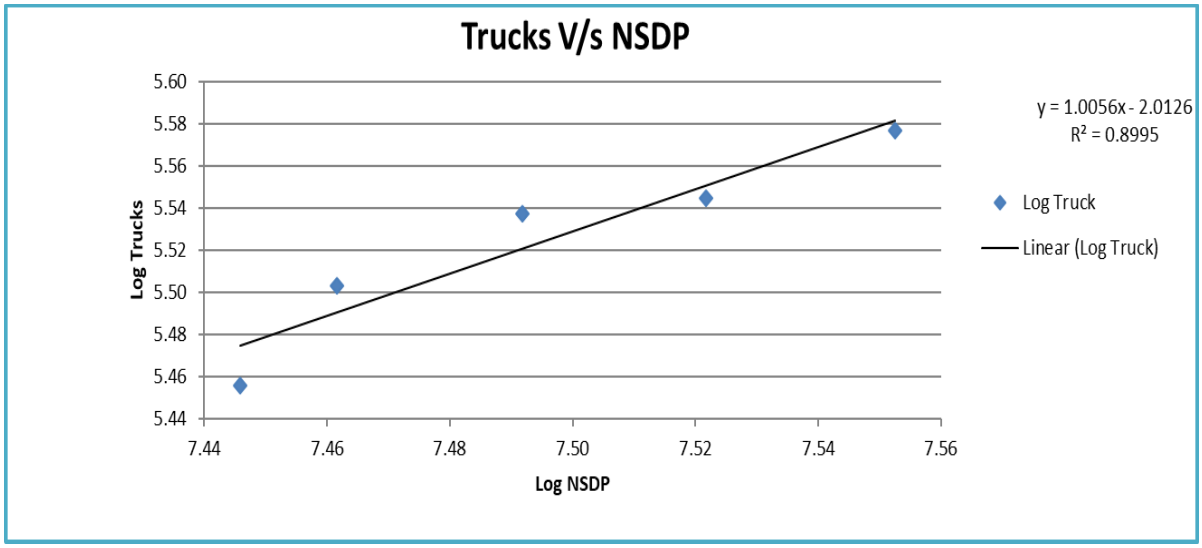


Figure 5-2 : Regression Analysis NSDP Vs. Truck West Bengal

Summary of regression analysis for elasticity and growth estimation for West Bengal are given in following table.

Table 5-3 : Summary Regression Analysis- West Bengal

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
West Bengal	Car/Jeep	PCI	y = 1.7759x - -2.1753	R^2 = 0.9326	1.7759	5.40%	9.58%	Good Regression
	Bus	Population	y = 0.5092x - 0.5636	R^2 = 0.0364	0.5092	0.89%	0.46%	Poor Regression
	Truck	NSDP	y = 1.0056x - -2.0126	R^2 = 0.8995	1.0056	6.34%	6.37%	Good Regression

Similarly, regression tables and graphs of economic model for Jharkhand are given as below.

Table 5-4 : Per Capita Income Vs. Car- Jharkhand

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2011	24330	317931	4.39	5.50		
2012	25265	360662	4.40	5.56	4%	
2013	27010	408016	4.43	5.61	7%	
2014	28882	461587	4.46	5.66	7%	
2015	30950	522192	4.49	5.72	7%	6.2%

Regression analysis of above is given in following figure.

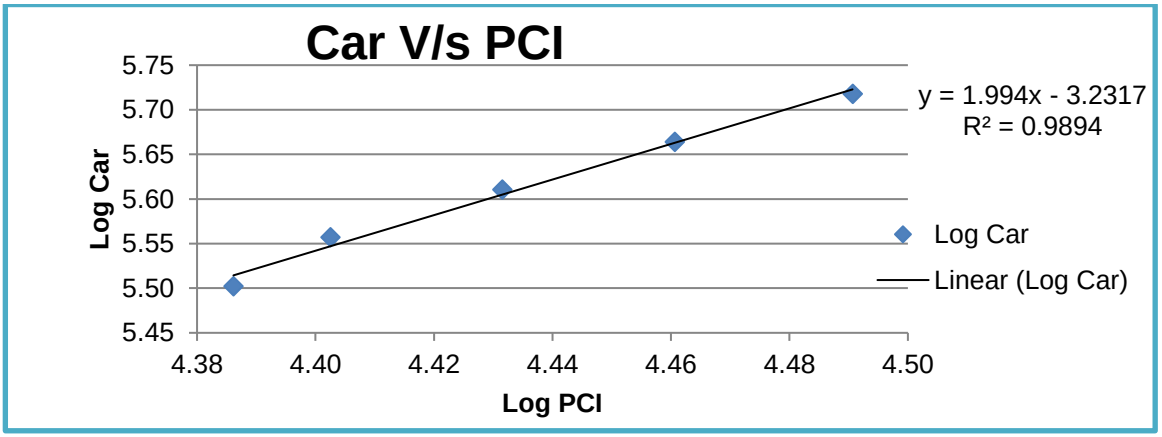


Figure 5-3 : Regression Analysis Car Vs. PCI Jharkhand

Table 5-5 : Population Vs. Bus- Jharkhand

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2011	31292000	12847	7.50	4.11		
2012	31726000	13561	7.50	4.13	1%	

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2013	32159000	14189	7.51	4.15	1%	
2014	32588000	14846	7.51	4.17	1%	
2015	33020000	15534	7.52	4.19	1%	1.35%

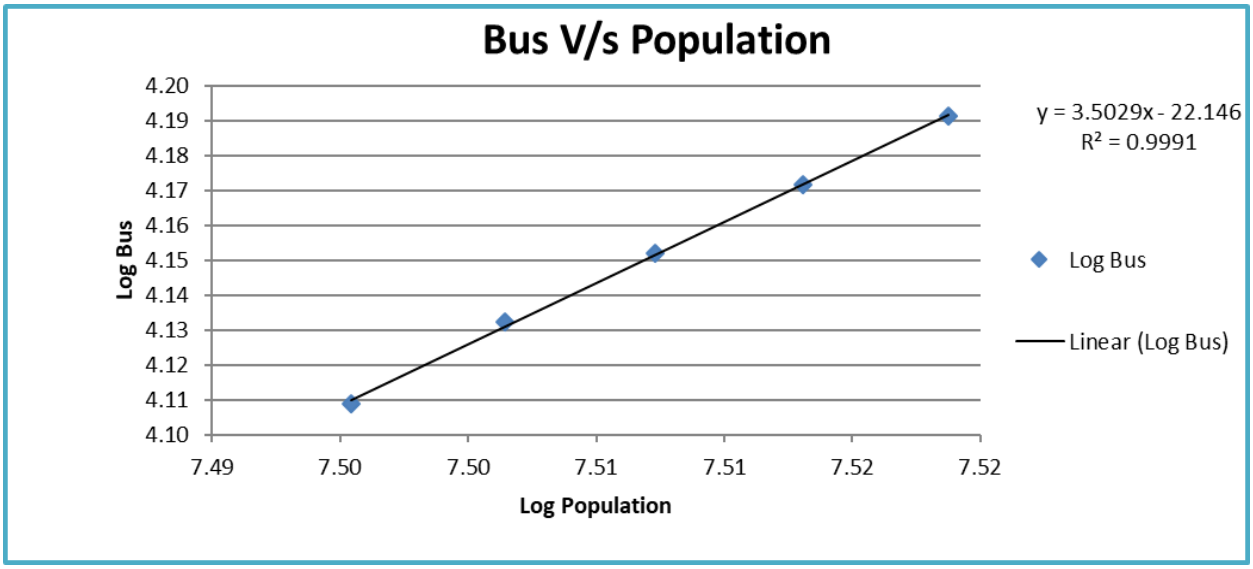


Figure 5-4 : Regression Analysis Population Vs. Bus Jharkhand

Table 5-6 : NSDP Vs. Truck- Jharkhand

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth (5 Year)
2011	76134	100257	4.88	5.00		
2012	80157	107769	4.90	5.03	5%	
2013	86861	114903	4.94	5.06	8%	
2014	94121	121031	4.97	5.08	8%	
2015	102196	127374	5.01	5.11	9%	7.65%

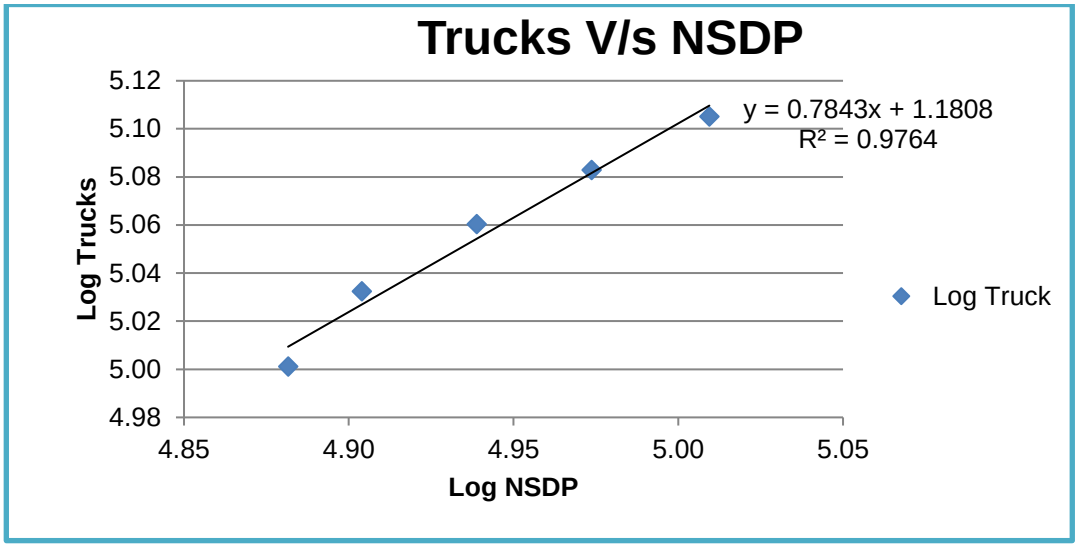


Figure 5-5 : Regression Analysis NSDP Vs. Jharkhand

Summary of regression analysis for elasticity and growth estimation for Jharkhand are given in following table.

Table 5-7 : Summary Regression Analysis- Jharkhand

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
JHARKHAND	Car/Jeep	PCI	y = 1.994x - -3.2317	R^2 = 0.9894	1.9940	6.21%	12.38%	Good Regression
	Bus	Population	y = 3.5029x - -22.1461	R^2 = 0.9991	3.5029	1.35%	4.74%	Good Regression
	Truck	NSDP	y = 0.7843x - 1.1808	R^2 = 0.9764	0.7843	7.65%	6.00%	Good Regression

Similar analysis for the state of Bihar is presented in the table and regression graphs given below.

Table 5-8 : Per Capita Income Vs. Car- Bihar

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2011	12090	136845	4.08	5.14		
2012	13149	160340	4.12	5.21	9%	
2013	14356	184792	4.16	5.27	9%	
2014	15506	208205	4.19	5.32	8%	
2015	16801	235762	4.23	5.37	8%	8.6%

Regression analysis of above is given in following figure.

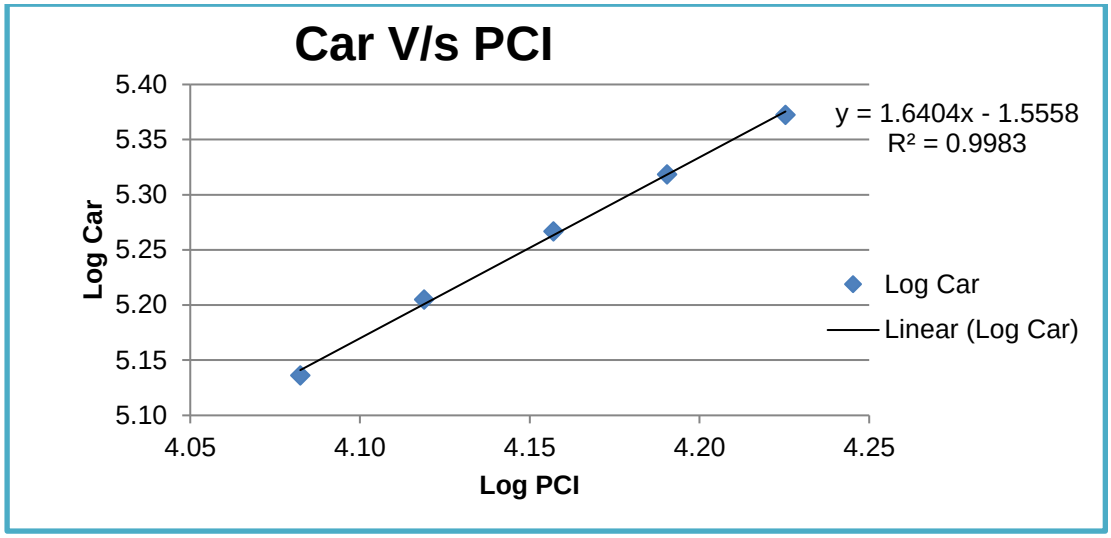


Figure 5-6 : Regression Analysis Car Vs. PCI Bihar

Table 5-9 : Population Vs. Bus- Bihar

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2011	104099452	22703	8.02	4.36		
2012	106763632	24097	8.03	4.38	3%	
2013	109441349	25992	8.04	4.41	3%	
2014	112131327	27638	8.05	4.44	2%	
2015	114832300	29384	8.06	4.47	2%	2%

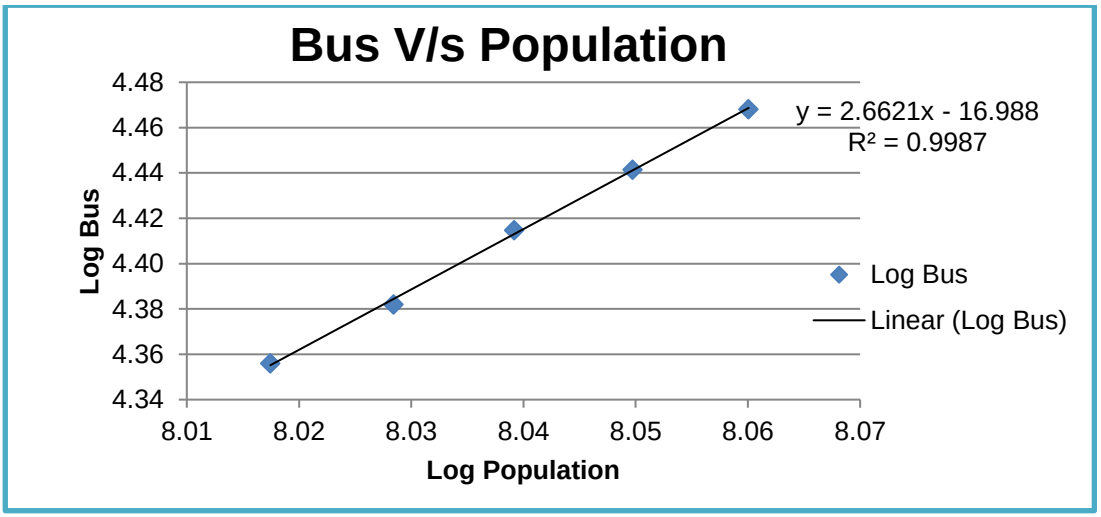


Figure 5-7 : Regression Analysis Population Vs. Bus Bihar

Table 5-10 : NSDP Vs. Truck- Bihar

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth (5 Year)
2011	11750314	73472	7.07	4.87		
2012	12952142	83191	7.11	4.92	10%	
2013	14324962	103211	7.16	5.01	11%	
2014	15667055	109010	7.19	5.04	9%	
2015	17180244	123744	7.24	5.09	10%	10%

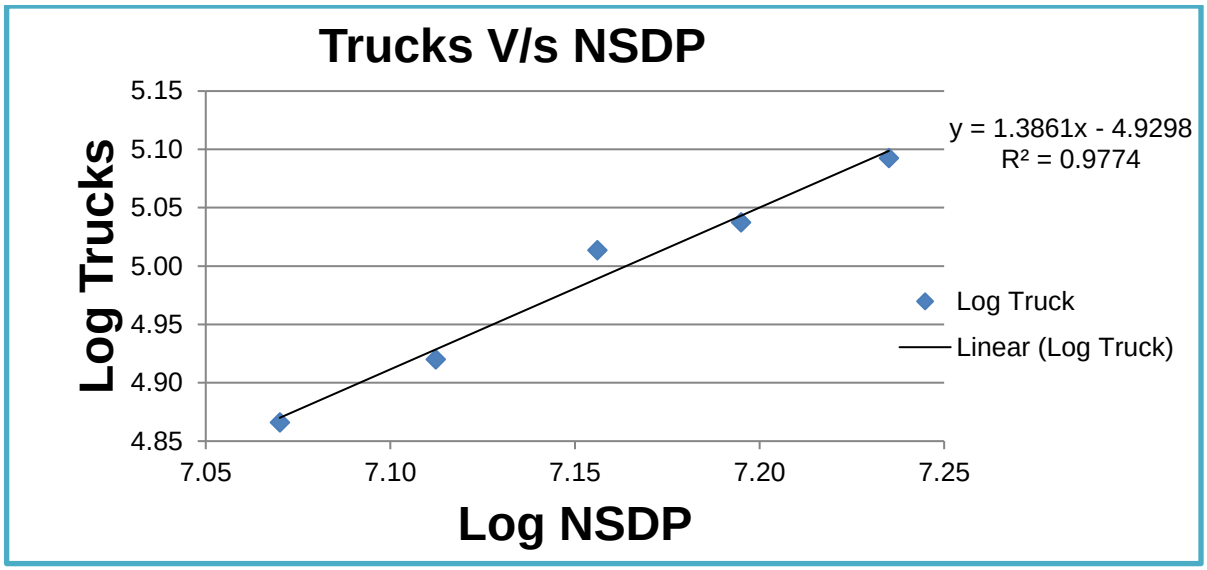


Figure 5-8 : Regression Analysis NSDP Vs. Truck Bihar

Summary of regression analysis for elasticity and growth estimation for Biharis given in following table

Table 5-11 : Summary Regression Analysis- Bihar

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
BIHAR	Car/Jeep	PCI	y = 1.6404x - - 1.5558	R² = 0.9983	1.6404	8.58%	14.07%	Good Regression
	Bus	Population	y = 2.6621x - - 16.988	R² = 0.9987	2.6621	2.48%	6.61%	Good Regression
	Truck	NSDP	y = 1.3861x - - 4.9298	R² = 0.9774	1.3861	9.96%	13.81%	Good Regression

Table 5-12 : Per Capita Income Vs. Car- Uttar Pradesh

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2011	17388	984937	4.24	5.99		
2012	18014	1108100	4.26	6.04	4%	
2013	18635	1205374	4.27	6.08	3%	
2014	19233	1423020	4.28	6.15	3%	
2015	20057	1572217	4.30	6.20	4%	4%

Regression analysis of above is given in following figure.

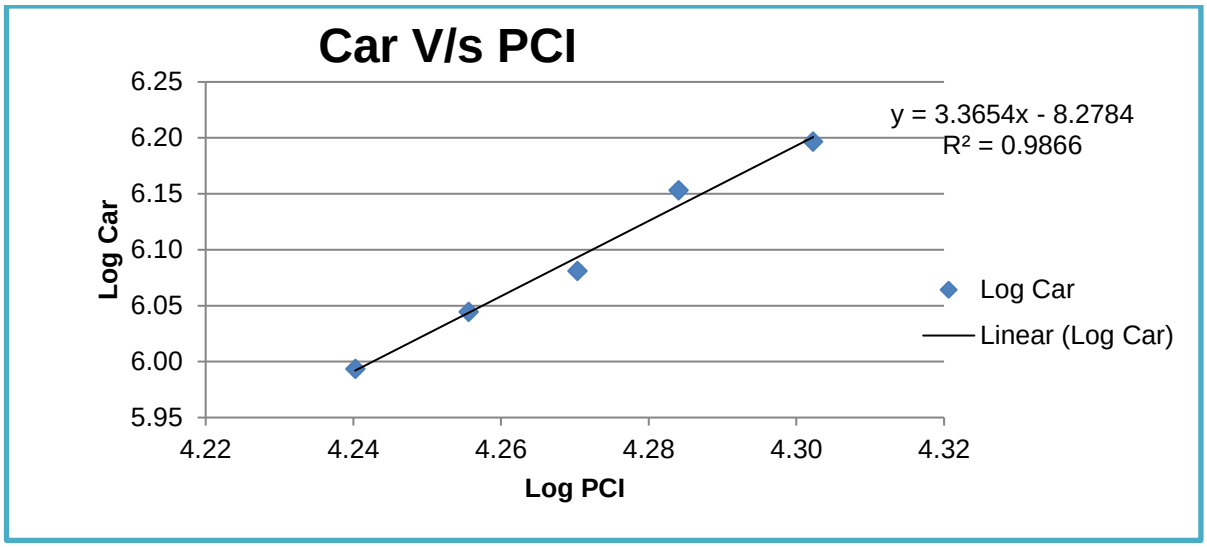


Figure 5-9 : Regression Analysis Car Vs. PCI Uttar Pradesh

Table 5-13 : Population Vs. Bus- Uttar Pradesh

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2011	199812341	31922	8.30	4.50		
2012	203382046	34428	8.31	4.54	2%	
2013	206942855	40501	8.32	4.61	2%	
2014	210493544	45607	8.32	4.66	2%	
2015	214032922	51866	8.33	4.71	2%	2%

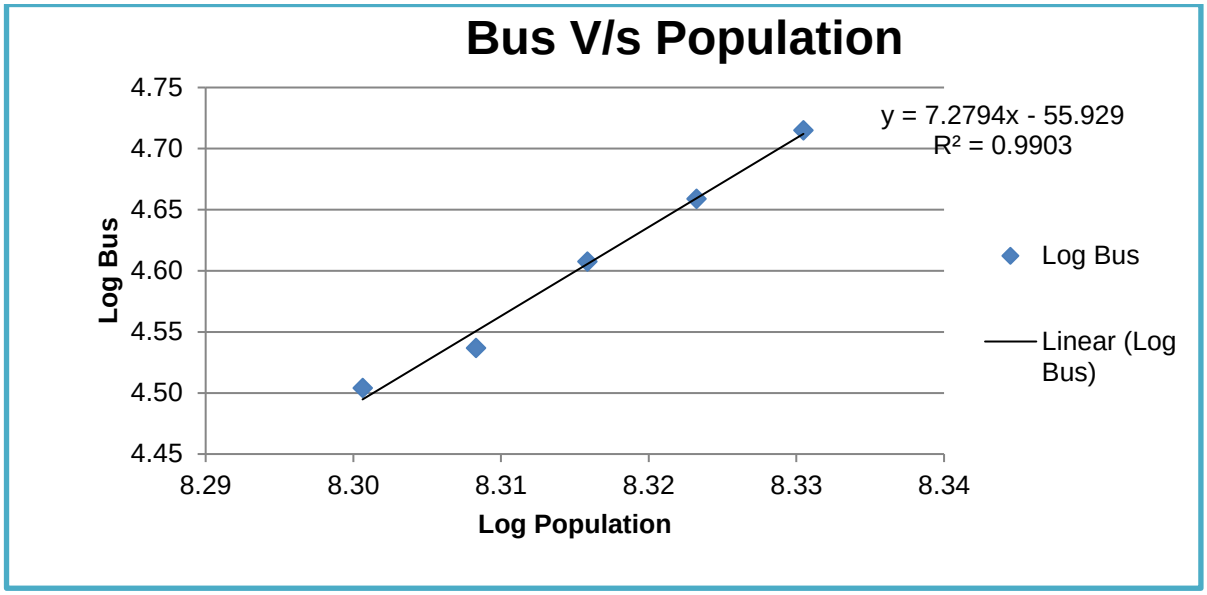


Figure 5-10 : Regression Analysis Population Vs. Bus Uttar Pradesh

Table 5-14 : NSDP Vs. Truck- Uttar Pradesh

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth (5 Year)
2011	34662085	307058	7.54	5.49		
2012	36537453	338977	7.56	5.53	5%	
2013	38445814	400061	7.58	5.60	5%	
2014	40350882	467786	7.61	5.67	5%	
2015	42775892	511631	7.63	5.71	6%	5%

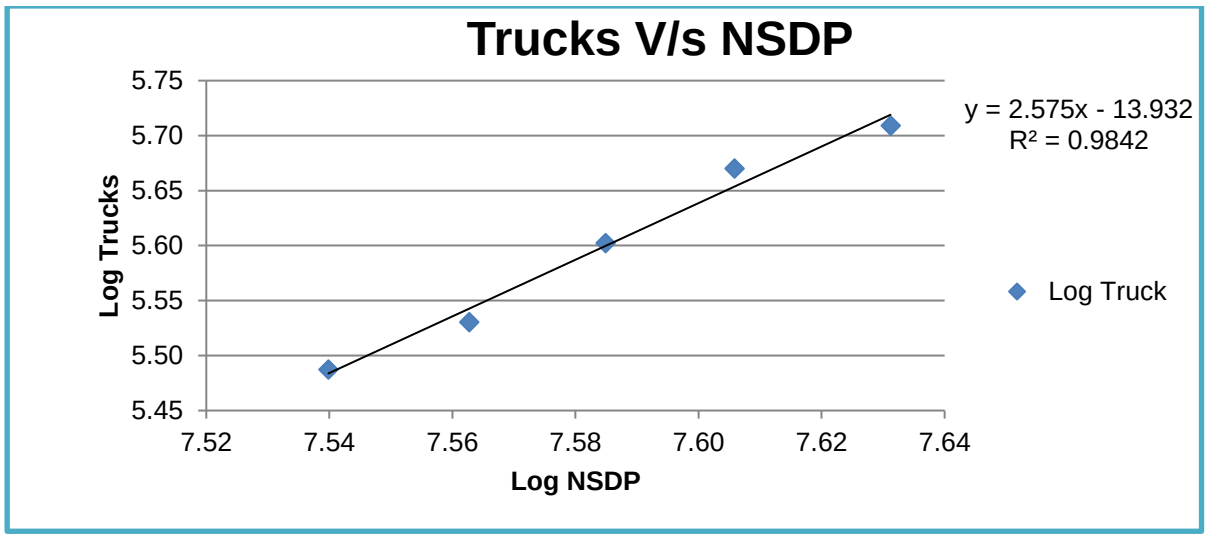


Figure 5-11 : Regression Analysis NSDP Vs. Truck Uttar Pradesh

Summary of regression analysis for elasticity and growth estimation for Uttar Pradesh are given in following table.

Table 5-15 : Summary Regression Analysis- Uttar Pradesh

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Uttar Pradesh	Car/Jeep	PCI	y = 3.3654x - -8.2784	R^2 = 0.9866	3.3654	3.64%	12.23%	Good Regression
	Bus	Population	y = 7.2794x - -55.9289	R^2 = 0.9903	7.2794	1.73%	12.62%	Good Regression
	Truck	NSDP	y = 2.575x - -13.9315	R^2 = 0.9842	2.5750	5.40%	13.90%	Good Regression

Table 5-16 : Per Capita Income Vs. Car- Delhi

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2011	103619	2258434	5.02	6.35		
2012	106677	2303052	5.03	6.36	3%	
2013	112441	2497167	5.05	6.40	5%	
2014	118411	2691282	5.07	6.43	5%	
2015	124698	2859620	5.10	6.46	5%	5%

Regression analysis of above is given in following figure.

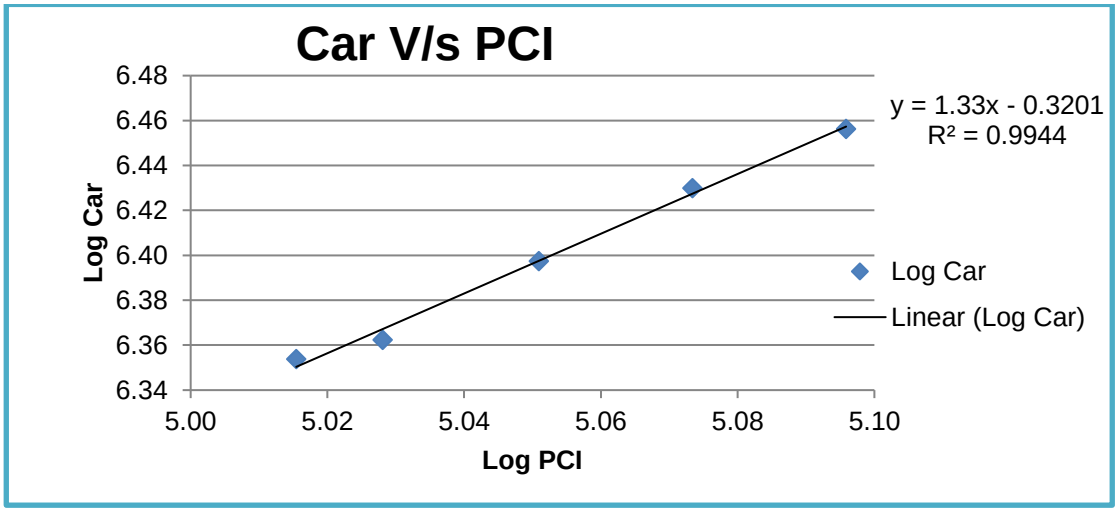


Figure 5-12 : Regression Analysis Car Vs. PCI Delhi

Table 5-17 : Population Vs. Bus- Delhi

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2011	16622000	135125	7.22	5.13		
2012	16941000	137310	7.23	5.14	2%	
2013	17266000	139495	7.24	5.14	2%	
2014	17597000	141680	7.25	5.15	2%	
2015	17934000	143865	7.25	5.16	2%	1.92%

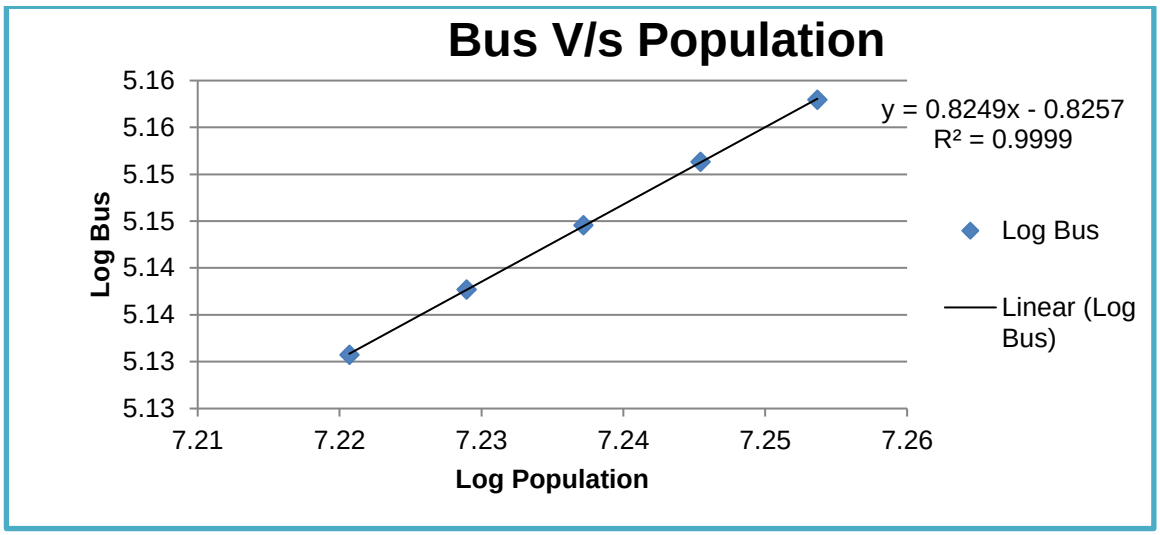


Figure 5-13 : Regression Analysis Population Vs. Bus Delhi

Table 5-18 : NSDP Vs. Truck- Delhi

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth (5 Year)
2011	17223524	86301	7.24	4.94		
2012	18072223	87166	7.26	4.94	5%	
2013	19414032	88031	7.29	4.94	7%	
2014	20836819	88896	7.32	4.95	7%	
2015	22562961	89761	7.35	4.95	8%	7%

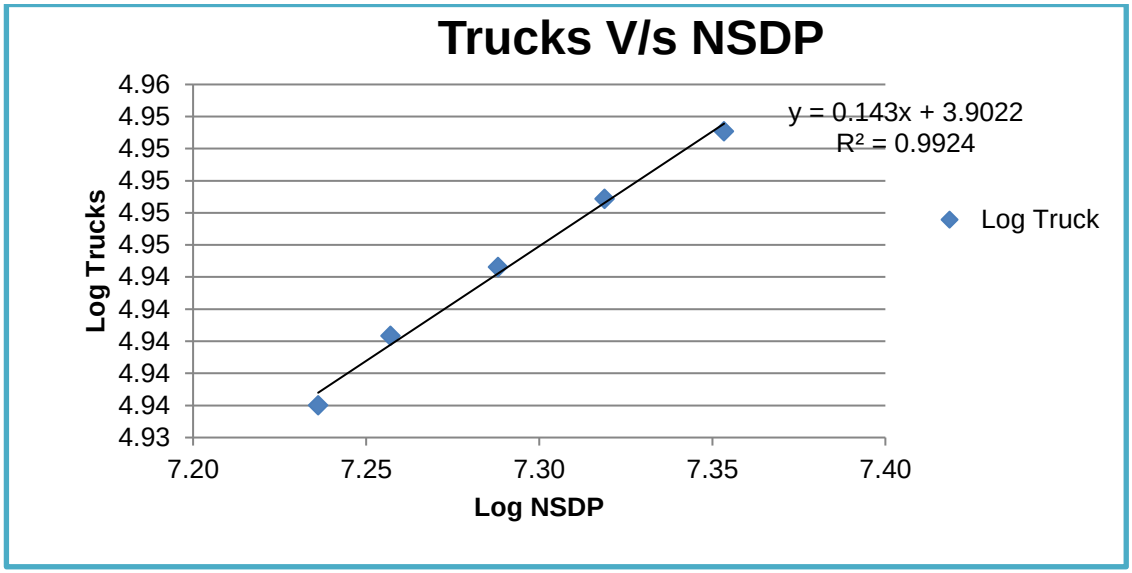


Figure 5-14 : Regression Analysis NSDP Vs. Truck Delhi

Summary of regression analysis for elasticity and growth estimation for Delhi are given in following table.

Table 5-19 : Summary Regression Analysis- Delhi

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Delhi	Car/Jeep	PCI	y = 1.33x - -0.3201	R^2 = 0.9944	1.3300	4.74%	6.31%	Good Regression
	Bus	Population	y = 0.8249x - -0.8257	R^2 = 0.9999	0.8249	1.92%	1.58%	Good Regression
	Truck	NSDP	y = 0.143x - 3.9022	R^2 = 0.9924	0.1430	6.99%	1.00%	Good Regression

Since most of the passenger traffic is from West Bengal and Jharkhand only, growth from economical model is considered only from these states. For commercial traffic weighted impact of these states in ratio of their respective share is considered

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trends of growth. Project stretch of Agra to Etawah has recently been commissioned and is under tolling operation since 2022 with concessionaire. Hence, we do not have sufficient data points to be able to establish a reliable past trend of traffic growth. Moreover, the part two years traffic is affected by COVID-19 impact. A minimum of about 5 -6 years' traffic data is required for establishing a reliable past trend.

5.5 Other Factors Influencing Growth

There are many factors which have an impact on traffic growth. As discussed previously these factors can be economic, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

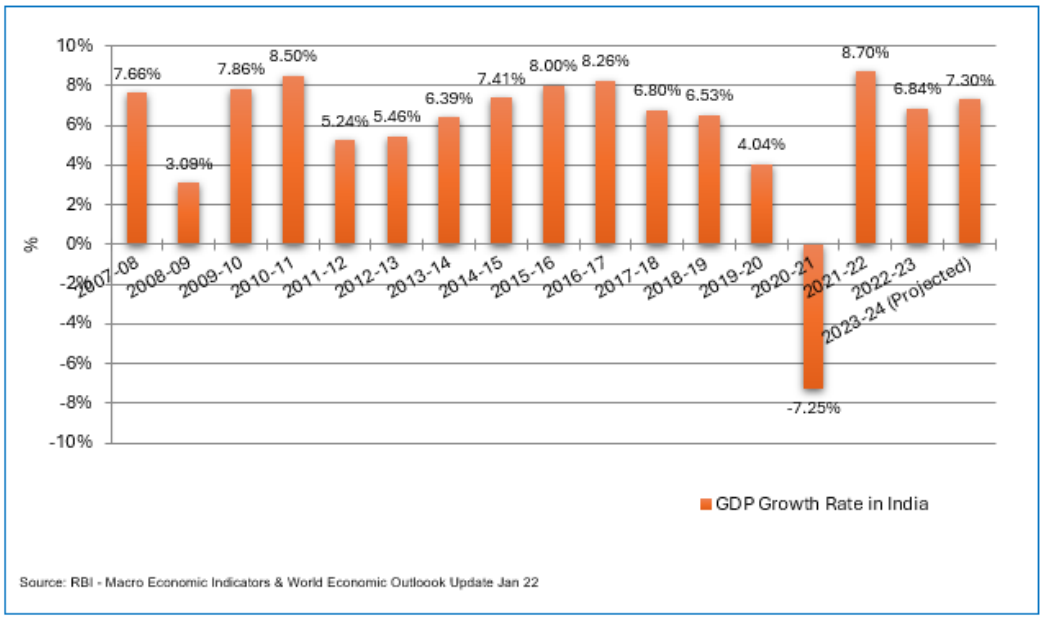


Figure 5-15 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had a slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. The government took major policy decisions including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honorable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into an opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on **Make -In- India** it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. World Economic Outlook update also has predicted a growth rate of about 7.5 % in next year 2022-23

5.6 Developments along and around the Project Corridor & State

Project stretch falls in one of the most mineral rich areas of India. Major Industries are developed for extraction of minerals and related manufacturing. The following are some major industrial establishments and areas in PIA.

Howrah - Often termed as Sheffield of the East, Howrah is known as an engineering hub, mainly in the area of light engineering industry. In 1823, Bishop Reginald Heber described Howrah as the place "chiefly inhabited by shipbuilders". There are small engineering firms

all over Howrah, particularly around Belilios Road area near Howrah station. There are many foundries in Liluah area.



Burn Standard Company, a major company in the heavy engineering industry, has its oldest manufacturing unit located in Howrah. The Howrah plant of Shalimar Paints (established in 1902) was the first large-scale paint manufacturing plant to be set up not only in India but in entire Southeast Asia. The jute industry suffered during the Partition of Bengal (1947), when the larger jute production area became part of East Pakistan (now Bangladesh). The foundry industry saw a decline in demand due to growth in the steel industry. Still Howrah is a major industrial hub in area and Howrah being major terminal on Delhi – Kolkata rail attracts lot of goods movement.

Bardhman - Burdwan was one of the premier districts in India in terms of minerals. The Raniganj coalfield was the birthplace of the Indian coal industry. Besides coal, important minerals found in the district are iron ores, calcium carbonate, abrasives, silica bricks and molding sands, glass sands, building materials, manganese, bauxite, laterite etc. Chittaranjan Locomotives, Bengal Iron Works, IISCO- India Iron and Steel Co are some of major industrial establishments in district.

Dhanbad - Dhanbad has one of the oldest markets of the region and is also a hotbed of large-scale industries. It is famous for its coal mines and industrial establishments; the city is surrounded by about 112 coal mines with a total production of 27.5 million tonnes and an annual income of 7000 million rupees through the coal business. There are a number of coals washeries present there. BCCL, have it headquartered in Dhanbad and SAIL, Tata Steel and Eastern Coalfields (at Mugma) also operates their mines. Om Besco Rail Products.Ltd, a public limited rail wagon manufacturing company at Mugma, Hindustan Zinc Ltd (now Vendanta Resources) had a lead smelting pilot plant at Tundu, MaithonPower.Ltda J.V of Tata Power & DVC (first PPP project of India), HindusthanMalleables& Forgings Ltd, etc. are also operational in and around Dhanbad. Fertilizers Corporation of India (closed), Projects & Development IndiaLtd and ACC.Ltd at Sindri are also available and being one of the 5 divisions of Southeastern Railway zone, Indian Railways is also a big employer in Dhanbad. Also, Kandra Industrial Area at Gobindpur houses some small & middle scale industries



Durgapur- Durgapur is one of the biggest industrial hubs of India and was planned as an integrated industrial town. It lays on the banks of DamodarRiver and coalfields of Raniganj. Durgapur was a dream of former prime minister of India, Jawaharlal Nehru and chief minister of West Bengal, Bidhan Chandra Roy. The first project in Durgapur was Damodar Valley Corporation's Durgapur Barrage which attracted many public sector units. Durgapur Steel Plant was the first PSU established in the region in 1955 with the help of U.K which was later undertook by SAIL.

Durgapur Steel plant

Durgapur Steel Plant set up in late fifties is a leading producer of long products &only producer of Forged Railway Wheels & Axles in the country. Plant started production with an initial crude steel capacity of 1 MPTA (million ton per annum) in 1959, which has been progressively increased to 1.8 MTPA during the modernization in nineties and further to 2.2 MTPA during recently completed Modernization & Expansion Plan (MEP). The present Plant capacity is about 2.12 MTPA saleable steel.

Durgapur is also an emerging I.T and real estate hub has many proposed residential areas like DLF's Durgapur Township.

Kolkata - is the capital of the Indian state of West Bengal. According to the 2011 Indian census, it is the seventh most populous city in India; the city had a population of 4.5 million, while the suburb population brought the total to 14.1 million, making it the third-most populous metropolitan area in India. Kolkata Megalopolis is the area surrounding Kolkata Metropolitan city with additional population. Located on the east bank of the Hooghly River approximately 80 kilometres west of the border with Bangladesh, it is the principal commercial, cultural, and educational centre of East India, while the Port of Kolkata is India's oldest operating port and its sole major riverine port. The city nicknamed the "City of Joy" is widely regarded as the "cultural capital" of India and as of 2019, six Nobel Laureates have been associated with the city. Recent estimates of Kolkata Metropolitan Area's economy have ranged from $60 to $150 billion (GDP adjusted for purchasing power parity) making it the third most-productive metropolitan area in India, after Mumbai and Delhi. One end of project stretch at Dankuni is major gate to city from northern part of India.

Logistics and Warehousing–It is observed that as project stretch is the main connectivity between Kolkata and rest of India (especially north), there are large number of logistic and warehousing establishments on project stretch between Dankuni and Bardhman. Most computer companies have warehouses in Dankuni. As per a recent report an investment of Rs.4300 cr is expected in West Bengal by 2020 (May be delayed now due to COVID-19.)

5.7 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as below. The rate of growth is moderated in light of overall regional trends. Growth of multi-Axle is kept slightly higher as trend of technological advances in logistic industry favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, the rate of growth diminishes. The same growth rate is not sustainable for long. Traffic growth is suitably stepped down for future years.

Growth rates are recommended for three scenarios for sensitivity analysis namely **Optimistic, Pessimistic** and **Most Likely** with a positive and negative variation 0.5% from Most Likely case for corridor in both states.

5.7.1 Recommended Growth Rates of Traffic for Project Stretch

Table 5-20 : Recommended Growth Rates Optimistic

Category / Year	2024-2025	2025-2030	2030-2035	2035-2040	2039-2044	2044-2049
Car/Jeep/Van	9.39%	8.58%	5.99%	6.35%	5.18%	4.05%
Bus	5.69%	5.26%	4.81%	4.53%	4.21%	3.93%
Minibus	5.69%	5.26%	4.81%	4.53%	4.21%	3.93%
LCV	2.32%	2.11%	1.71%	1.32%	0.93%	0.55%
2- Axle	3.69%	3.34%	2.68%	2.03%	1.38%	0.75%
3 - Axle	5.41%	4.89%	3.89%	2.91%	1.95%	0.99%
4 to 6 Axle	6.45%	5.82%	4.62%	3.45%	2.29%	1.14%
7 and Above Axle	6.45%	5.82%	4.62%	3.45%	2.29%	1.14%

Table 5-21 : Recommended Growth Rates Pessimistic

Category / Year	2024-2025	2025-2030	2030-2035	2035-2040	2039-2044	2044-2049
Car/Jeep/Van	8.89%	8.08%	5.49%	5.85%	4.68%	3.55%
Bus	5.19%	4.76%	4.31%	4.03%	3.71%	3.43%
Minibus	5.19%	4.76%	4.31%	4.03%	3.71%	3.43%
LCV	1.82%	1.61%	1.21%	0.82%	0.43%	0.05%
2- Axle	3.19%	2.84%	2.18%	1.53%	0.88%	0.25%
3 - Axle	4.91%	4.39%	3.39%	2.41%	1.45%	0.49%
4 to 6 Axle	5.95%	5.32%	4.12%	2.95%	1.79%	0.64%
7 and Above Axle	5.95%	5.32%	4.12%	2.95%	1.79%	0.64%

Table 5-22 : Recommended Growth Rates Most Likely

Category / Year	2024-2025	2025-2030	2030-2035	2035-2040	2039-2044	2044-2049
Car/Jeep/Van	9.14%	8.33%	5.74%	6.10%	4.93%	3.80%
Bus	5.44%	5.01%	4.56%	4.28%	3.96%	3.68%
Minibus	5.44%	5.01%	4.56%	4.28%	3.96%	3.68%
LCV	2.07%	1.86%	1.46%	1.07%	0.68%	0.30%

Category / Year	2024-2025	2025-2030	2030-2035	2035-2040	2039-2044	2044-2049
2- Axle	3.44%	3.09%	2.43%	1.78%	1.13%	0.50%
3 - Axle	5.16%	4.64%	3.64%	2.66%	1.70%	0.74%
4 to 6 Axle	6.20%	5.57%	4.37%	3.20%	2.04%	0.89%
7 and Above Axle	6.20%	5.57%	4.37%	3.20%	2.04%	0.89%

Traffic and revenue have been worked out on the basis of the above growths and some is presented in subsequent chapter of report.

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in the previous section of the report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for the following three cases of growth up to concession period.

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza Dankuni- Chainage 646.005 KM (Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	10898	983	700	2259	1637	8551	9	25037	64680
2025-26	11834	1004	736	2335	1717	9049	9	26684	68465
2026-27	12849	1025	775	2414	1801	9576	9	28449	72489
2027-28	13951	1047	815	2495	1889	10133	9	30339	76758
2028-29	15147	1069	858	2579	1981	10722	9	32365	81294
2029-30	16446	1092	903	2666	2078	11346	9	34540	86123
2030-31	17431	1111	947	2737	2159	11870	9	36264	90082
2031-32	18475	1130	992	2811	2243	12419	9	38079	94234
2032-33	19581	1149	1040	2887	2331	12994	9	39991	98592
2033-34	20754	1169	1090	2964	2422	13594	9	42002	103149
2034-35	21996	1189	1142	3043	2516	14223	9	44118	107927
2035-36	23393	1205	1194	3104	2589	14713	9	46207	112111
2036-37	24878	1221	1248	3167	2665	15220	9	48408	116480
2037-38	26458	1237	1305	3231	2742	15744	9	50726	121036
2038-39	28139	1253	1364	3297	2822	16286	9	53170	125795

Table 6-2 : Total Tollable Traffic @ Toll Plaza Dankuni- Chainage 646.005 KM (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	10898	983	700	2259	1637	8551	9	25037	64680
2025-26	11779	999	734	2323	1709	9006	9	26559	68143
2026-27	12730	1015	769	2389	1784	9485	9	28181	71802
2027-28	13759	1031	805	2457	1862	9989	9	29912	75669
2028-29	14870	1047	844	2526	1943	10520	9	31759	79760
2029-30	16071	1064	884	2598	2028	11080	9	33734	84098

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2030-31	16953	1077	922	2654	2097	11537	9	35249	87545
2031-32	17884	1090	962	2712	2168	12013	9	36838	91144
2032-33	18866	1103	1003	2771	2241	12508	9	38501	94892
2033-34	19901	1117	1046	2832	2317	13024	9	40246	98810
2034-35	20993	1131	1091	2893	2396	13561	9	42074	102895
2035-36	22221	1141	1135	2937	2453	13961	9	43857	106373
2036-37	23520	1151	1180	2982	2512	14372	9	45726	109983
2037-38	24895	1161	1228	3027	2573	14796	9	47689	113743
2038-39	26351	1171	1277	3073	2635	15232	9	49748	117647

Traffic projections for Most Likely scenario is given as under

Table 6-3 : Total Tollable Traffic @ Toll Plaza Dankuni- Chainage 646.005 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	10898	983	700	2259	1637	8551	9	25037	64680
2025-26	11806	1001	735	2328	1713	9027	9	26619	68298
2026-27	12789	1019	771	2400	1793	9529	9	28310	72131
2027-28	13854	1038	810	2474	1876	10060	9	30121	76202
2028-29	15007	1057	850	2551	1963	10620	9	32057	80515
2029-30	16257	1077	893	2630	2054	11211	9	34131	85094
2030-31	17190	1093	933	2694	2129	11702	9	35750	88797
2031-32	18177	1109	976	2760	2206	12213	9	37450	92666
2032-33	19220	1125	1020	2827	2286	12747	9	39234	96709
2033-34	20323	1141	1067	2896	2370	13305	9	41111	100947
2034-35	21489	1157	1116	2967	2457	13887	9	43082	105377
2035-36	22799	1169	1164	3020	2522	14331	9	45014	109201
2036-37	24190	1181	1213	3073	2589	14789	9	47044	113178
2037-38	25665	1193	1265	3128	2658	15262	9	49180	117327
2038-39	27231	1205	1319	3184	2729	15750	9	51427	121650

6.2 Modification in Concession Period

As per Article 29 of the concession agreement, if actual traffic on the project falls short or exceeds Target Traffic on project highway on defined date, concession period shall be modified subject to calculation stipulated therein. For Palsit - Dankuni project three target traffic have been defined in Article 29.

Target Date - 1st May 2026 Target Traffic 65830

Target Date - 1st May 2031 Target Traffic 100822

Target Date - 1st May 2036 Target Traffic 130452

It was observed that as per traffic projections, average traffic volume exceeds target traffic in the first two target points. Probable shortening of concession period is estimated according to Article 29 of concession agreement for all cases which comes to about 3 years.

Pessimistic

Sr. No	Target Date	Target Traffic	Actual Traffic	Variation in CP as per CA %	Change in CP (Days	Total Variation in CP Years
1	01-May-26	65830	71802	-4.07%	-192	**-0.5**
2	01-May-31	84018	91144	0.00%	0	
3	01-May-36	107270	109983	0.00%	0	

Optimistic

Sr. No	Target Date	Target Traffic	Actual Traffic	Variation in CP as per CA %	Change in CP (Days	Total Variation in CP Years
1	01-May-26	65830	72489	-5.12%	-241	**-0.8**
2	01-May-31	84018	94234	-1.70%	-49	
3	01-May-36	109649	116480	0.00%	0	

Most Likely

Sr. No	Target Date	Target Traffic	Actual Traffic	Variation in CP as per CA %	Change in CP (Days	Total Variation in CP Years
1	01-May-26	65830	72131	-4.57%	-216	**-0.6**
2	01-May-31	84018	92666	-0.47%	-14	
3	01-May-36	108008	113178	0.00%	0	

CHAPTER 7

FORECAST OF TOLL REVENUE

7.1 General

This chapter presents the tolling rate calculations, categories, and toll revenue of the project.

7.2 Discount Categories

The fee schedule in the CA of Surat-Dahisar section of NH-8 is based on the old toll policy. As per the Toll Notification (Schedule -G) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent user's monthly pass would be issued at fee 50 time the single journey fee at 2/3rd Rate.
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travelers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: Local Car Jeep Van -Rs. 275 per month (for locals residing within a radius of 20 kms from toll plaza). Additionally, local commercial vehicles are charged at 50% rate of single journey.

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.

The formula for determining the applicable rate of fee shall be as follows:-

$$\text{Applicable rate of fee} = \text{base rate} + \text{base rate} \times \left\{ \frac{\text{WPI A-WPI B}}{\text{WPI B}} \right\} \times 0.4$$

Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2021-22. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. Following graph provides projection of rate of inflation (WPI) in India. Data has been taken from Office of Economic Advisor web site (www.eaindustry.nic.in). WPI for years 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series.

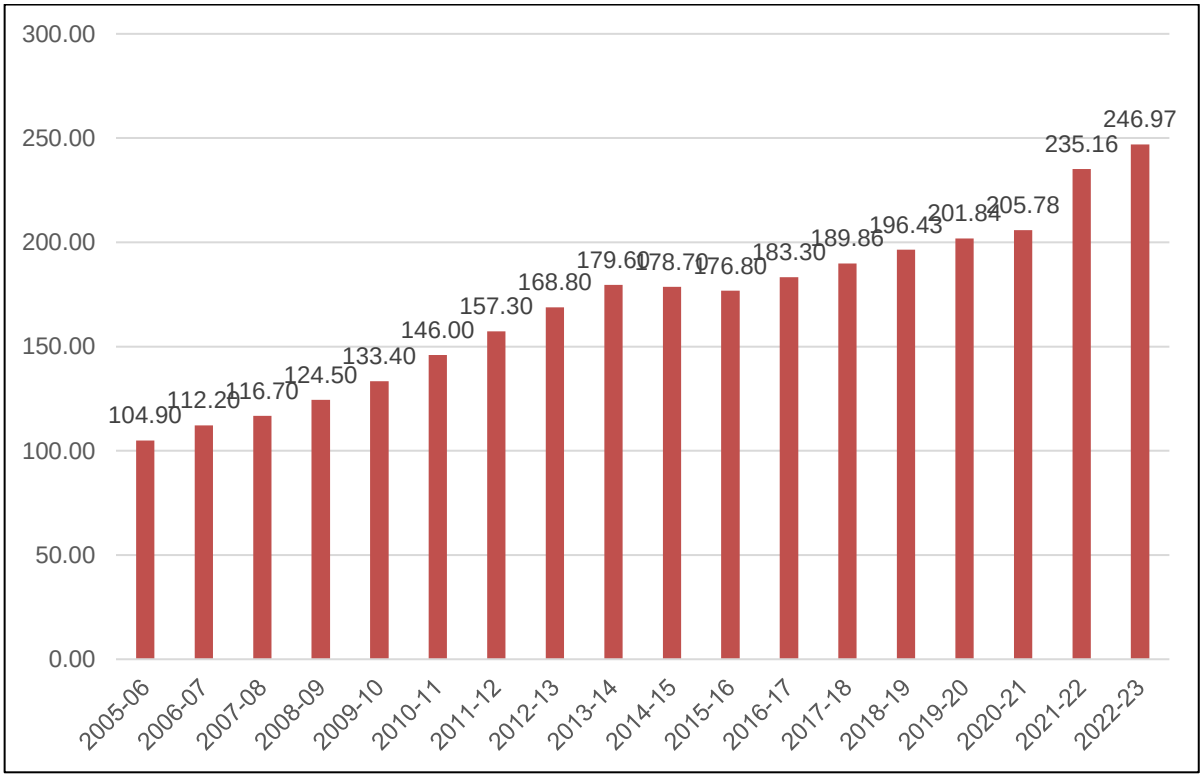


Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in the last few years is steadily growing. It grew by the range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45
Oversized Vehicles (7 or more Axles)	4.20

Toll rates are calculated as per guidelines provided in schedule R (rounded to nearest Rs.) for the concession period and are given below.

Thus, worked out rates for various categories of vehicle and discounts are given as under

Table 7-2 : Toll Rates for Single Journey Dankuni @ Km 646.005

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial Vehicle	Multi Axle	Oversized Vehicle
2024-25	75	120	250	250	270	390	475
2024-25	115	185	380	380	415	600	730
2025-26	120	190	395	395	430	620	750
2026-27	125	200	415	415	455	650	790
2027-28	135	210	435	435	475	685	830
2028-29	140	220	460	460	500	720	875
2029-30	145	235	485	485	525	755	920
2030-31	155	245	510	510	555	795	965
2031-32	160	260	535	535	585	835	1015
2032-33	170	270	560	560	615	880	1070
2033-34	180	285	590	590	645	925	1125
2034-35	190	300	625	625	680	975	1185
2035-36	200	315	655	655	715	1025	1245
2036-37	210	335	690	690	755	1080	1310
2037-38	220	350	725	725	795	1135	1380
2038-39	230	370	765	765	835	1195	1455

Table 7-3: Toll Rates for Return Journey Dankuni @ Km 646.005

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial Vehicle	Multi Axle	Oversized Vehicle
2024-25	110	175	370	370	405	585	710
2024-25	170	275	575	575	625	900	1090
2025-26	180	285	595	595	650	930	1130
2026-27	190	300	625	625	680	975	1185
2027-28	200	315	655	655	715	1025	1245
2028-29	210	335	690	690	750	1075	1310
2029-30	220	350	725	725	790	1135	1375
2030-31	230	370	765	765	830	1190	1450
2031-32	245	385	800	800	875	1255	1525
2032-33	255	405	845	845	920	1320	1605
2033-34	270	430	890	890	970	1385	1685
2034-35	285	450	935	935	1020	1460	1775
2035-36	295	475	985	985	1070	1535	1870
2036-37	315	500	1035	1035	1130	1620	1970
2037-38	330	525	1090	1090	1190	1705	2075
2038-39	345	555	1150	1150	1250	1795	2185

Table 7-4: Toll Rates for Monthly pass Local Dankuni @ Km 646.005

Year	Car	Minibus /LCV
2024-25	315	315
2024-25	340	340
2025-26	350	350
2026-27	365	365
2027-28	385	385
2028-29	405	405
2029-30	425	425
2030-31	445	445
2031-32	470	470
2032-33	495	495
2033-34	520	520
2034-35	550	550
2035-36	580	580
2036-37	610	610
2037-38	640	640
2038-39	675	675

Table 7-5: Toll Rates for Monthly Pass Dankuni @ Km 646.005

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial Vehicle	Multi Axle	Oversized Vehicle
2024-25	2440	3945	8265	8265	9015	12960	15775
2024-25	3820	6125	12745	12745	13900	19950	24270
2025-26	4010	6385	13205	13205	14390	20620	25070
2026-27	4210	6705	13875	13875	15120	21670	26345
2027-28	4425	7045	14580	14580	15890	22775	27690
2028-29	4645	7405	15325	15325	16705	23940	29110
2029-30	4885	7780	16115	16115	17565	25170	30605
2030-31	5135	8180	16945	16945	18470	26470	32185
2031-32	5395	8605	17820	17820	19425	27845	33855
2032-33	5675	9050	18750	18750	20435	29295	35620
2033-34	5970	9520	19730	19730	21505	30825	37485
2034-35	6280	10015	20765	20765	22630	32445	39455
2035-36	6605	10545	21855	21855	23825	34155	41535
2036-37	6955	11100	23015	23015	25085	35965	43735
2037-38	7320	11685	24235	24235	26420	37875	46060
2038-39	7710	12305	25530	25530	27830	39900	48520

7.3 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under ***Optimistic***, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

7.4 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under all scenarios at each of the toll plaza starting from the year 2024-25 are shown in tables below.

Table 7-3 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Year	TP-1	Total
2024-25	198.65	**198.65**
2025-26	295.82	**295.82**
2026-27	328.50	**328.50**
2027-28	367.09	**367.09**
2028-29	406.94	**406.94**
2029-30	452.34	**452.34**
2030-31	497.72	**497.72**
2031-32	548.74	**548.74**
2032-33	601.98	**601.98**
2033-34	662.42	**662.42**
2034-35	730.51	**730.51**
2035-36	797.93	**797.93**
2036-37	871.71	**871.71**
2037-38	951.01	**951.01**
2038-39	1038.32	**1038.32**

Table 7-4 : Toll Revenue Pessimistic Scenario

(Rs. Crores)

Year	TP-1	Total
2024-25	198.65	**198.65**
2025-26	294.43	**294.43**
2026-27	325.34	**325.34**
2027-28	361.88	**361.88**
2028-29	399.25	**399.25**
2029-30	441.75	**441.75**
2030-31	483.80	**483.80**
2031-32	530.81	**530.81**
2032-33	579.51	**579.51**
2033-34	634.69	**634.69**

Year	TP-1	Total
2034-35	696.57	**696.57**
2035-36	757.20	**757.20**
2036-37	823.20	**823.20**
2037-38	893.79	**893.79**
2038-39	971.22	**971.22**

Table 7-5 : Toll Revenue Most Likely Scenario

(Rs. Crores)

Year	TP-1	Total
2024-25	198.65	**198.65**
2025-26	295.12	**295.12**
2026-27	326.92	**326.92**
2027-28	364.47	**364.47**
2028-29	403.06	**403.06**
2029-30	446.97	**446.97**
2030-31	490.66	**490.66**
2031-32	539.62	**539.62**
2032-33	590.56	**590.56**
2033-34	648.35	**648.35**
2034-35	713.30	**713.30**
2035-36	777.28	**777.28**
2036-37	847.05	**847.05**
2037-38	921.88	**921.88**
2038-39	1004.10	**1004.10**

CHAPTER 8

CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Palsit to Dankuni section of NH-19 from km 588.870 to km 652.700 in state of West Bengal is currently four lane road and being upgraded to six lanes. The road is in sound condition and serves healthy traffic volumes. Project corridor is a part of the most busy and prominent national highway NH-19 which connects political and cultural capitals of India. This is one of the most important trunk roads which spreads across many states. There are large number of townships, industrial corridors and other business establishments coming up along the project corridor. As discussed, the dominant portion of traffic is long route traffic, which is more sensitive towards the growth of national economy. As Indian economy is poised to grow at 7%+ post COVID-19, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give a positive impact to traffic flow on the project. The following can be considered as major outcomes of the study.

a) There is a good amount of tollable traffic running on the project.

b) Project corridor has potential to witness traffic growth @ 6-8% annually in near future due to various development in area and overall development of economy.

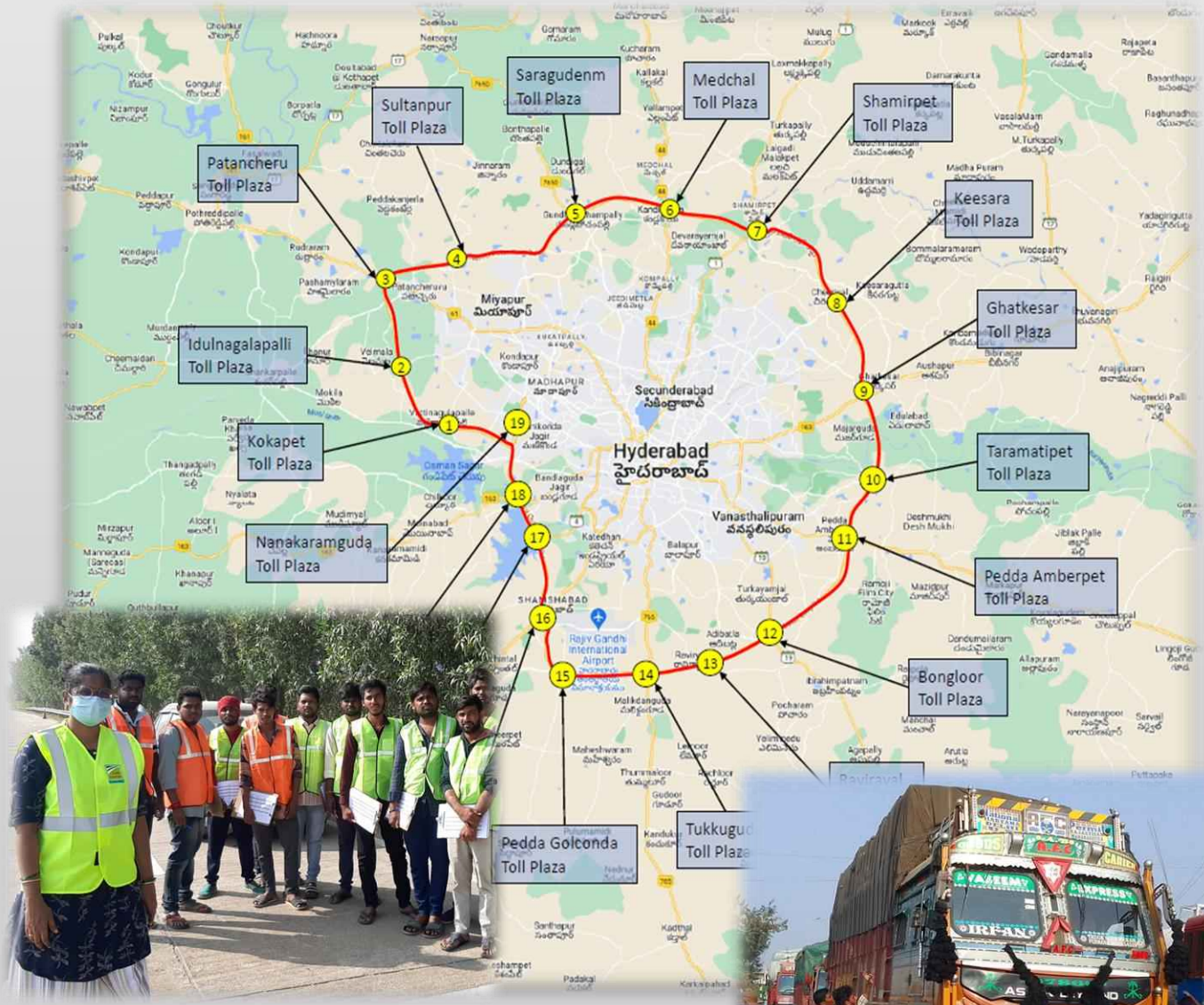
c) The Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road.

Based on the above it can be considered a stable healthy project from the traffic and revenue point of view.

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IRB INFRASTRUCTURE TRUST

Nehru Outer Ring Road in Hyderabad from Km 0.000 to Km 158.000 in State of Telangana on TOT mode





OCTOBER 2024

TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

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GMD CONSULTANTS ★ NAVI MUMBAI ★

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CHAPTER 1

INTRODUCTION

1.1 Background

The Outer Ring Road, officially as, Jawaharlal Nehru Outer Ring Road and abbreviated as, O.R.R., is a 158 kilometer, 8-lanes ring road expressway encircling Hyderabad, capital of the Indian state of Telangana. The expressway is designed for speeds up to 100 km/h. A large part, 124 km (covering urban nodes viz., Hi- Tech city, Nanakramguda Financial District, Rajiv Gandhi International Airport, IKP Knowledge park, Hardware Park, Telangana State Police Academy, Singapore Financial District, and Games village) of the 158-km was opened by December 2012. Rest of the length of Outer Ring Road was opened to traffic in year 2015-16. Hence onward, for ease of reference, Nehru Outer Ring Road will be referred as NORR or ORR.

ORR is one of the most important infrastructural developments which has complimented growth of Hyderabad as major metro of India. On Eastern side it has provided express connectivity to major commercial and upscale residential centres of Gachibowli, Banjara Hills, Jublee Hills, Hitec- City, Manikonda, Nanakramguda. As a result, large number of residential and commercial projects have come up on this north-east part of ORR. Tellapur, Mokila, Kollur, Narsingi can be named as few of these. On north and western side ORR connects to Shamirpet and Genome Valley.

ORR also provides fast connectivity to various radial state and national highways connecting to Mumbai, Nagpur, Karimnagar, Warangal, Suryapet, Vijayawada, Bengaluru. Regional traffic now does not need to go into congested network of Hyderabad.

The Outer Ring Road also helps in reducing the travel time from Rajiv Gandhi International Airport to cities like Nizamabad & Adilabad as it connects to NH44. The expressway is fenced, and 33 radial roads connect it with the Inner Ring Road.

ORR is fully accessing controlled road, and traffic can enter or exit from designated locations only. There is total 19 locations from where ORR can be entered or exited. Toll plaza and or booths have been placed at all such entry / exit points.

ORR has been developed by Hyderabad Metropolitan Development Authority (HMDA). It's maintained by HMDA and special purpose vehicle Hyderabad Growth Corridor Limited (HGCL). The bid for Operation, Maintenance of ORR for a longer concession period of 30 years on TOT model is invited by HMDA and HGCL.

Following figure show alignment of Hyderabad Outer Ring Road in regional context.

.



Figure 1-1: Location & Alignment of ORR in Regional Context

M/s IRB Infrastructure Developers Limited (IRB) intends to participate in bidding for Nehru Outer Ring Road (NORR) on TOT basis.

GMD Consultants have been assigned by M/s IRB for the wok of conducting traffic study and developing revenue model based on traffic projections and forecast.

For making the proper assessment of traffic volume on project stretch, base year traffic and its projection.

CHAPTER 2

PROJECT DETAILS

2.1 Brief Description of the Project Influence Area (PIA)

Nehru Outer Ring Road is a 158 km access-controlled transportation ring around city of Hyderabad and Secundrabad Average radial distance of ORR from city centre is about 20-25 km. Hyderabad is fourth most populous city of India. It is capital of one of the fastest growing states of India, Telangana. Hyderabad if merging and the major global hum in field of IT, IT&ES, Pharmaceutical & Biotechnical Research. As discussed previously it provides fast connectivity to Airport (near Shamsabad) from various parts of city. Following figure show positioning of ORR in city context.

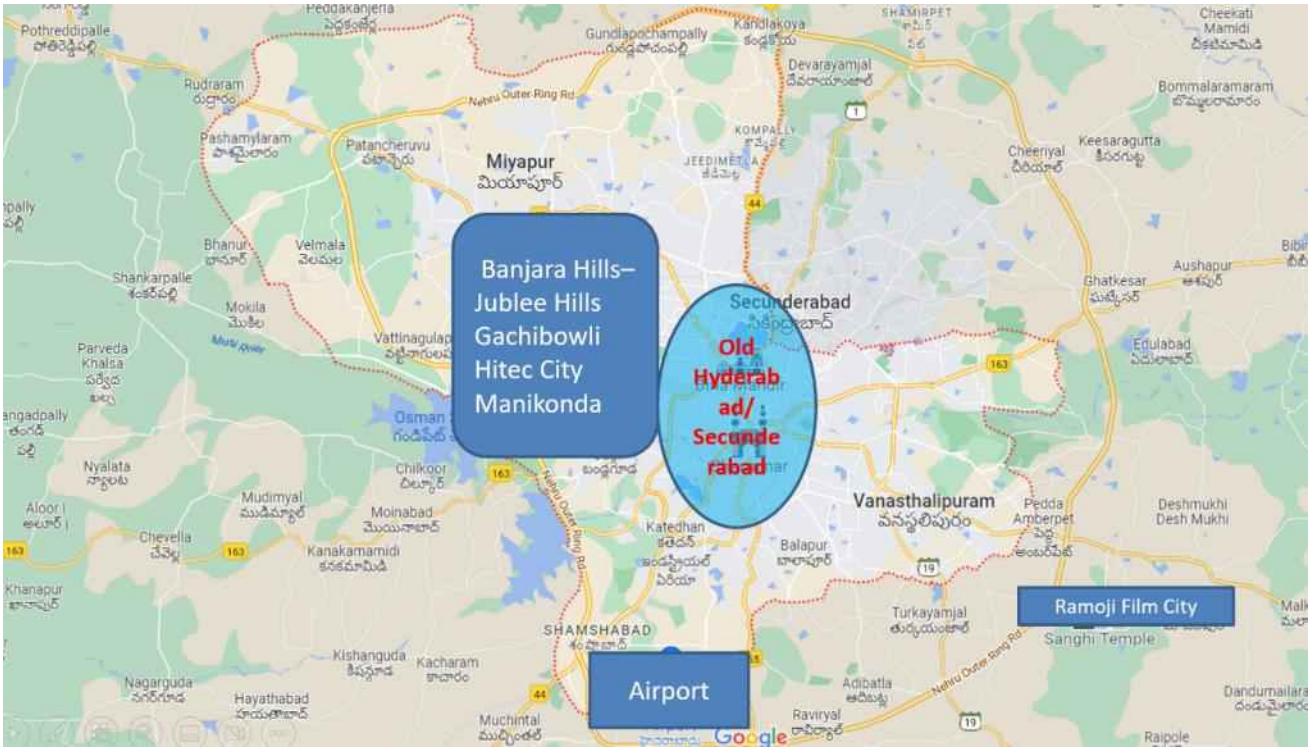


Figure 2-1: Positioning of ORR in city context.

NORR makes a complete circle around city of Hyderabad and Secunderabad. It provides fast connectivity to all part of Hyderabad Metropolitan Area (HMA). Hyderabad Metropolitan Area includes part of following districts.

- **Hyderabad** - Hyderabad district is a most populous district in the state of Telangana in India that contains a part of the metropolitan area of Hyderabad.
- **Rangareddy –** This is basically rural Hyderabad area. It has head quarter in Lakdi ka Pul which is basically part of Hyderabad City only. Ranga Reddy has maximum per capita income in entire state.

- **Nalgonda** – Nalgonda is another district which is part of HMA. This touches southeastern boundary of Hyderabad
- **Mahboob Nagar -** Mahabubnagar district is a district in **Telangana**. Mahabubnagar is the district headquarters which is popularly known as Palamoor. The district shares boundaries with Narayanapet, Vikarabad, Rangareddy, Nagarkurnool, Wanaparthy and Jogulamba Gadwal districts. It is famous for its milk production. It is on southwestern boundary of Hyderabad.
- **Medak –** It was one of the most backward districts of Andhra Pradesh. Now part of this district is in HMA. Geographically it on northwest side of Hyderabad. This is the most developing part of HMA now.

Hence all of HMA fall in immediate influence zone of ORR. In addition to Hyderabad city centre large number of suburban areas which are either developed on are upcoming, are part of PIA. Following figure shows major urban and commercial hubs in relation to ORR.

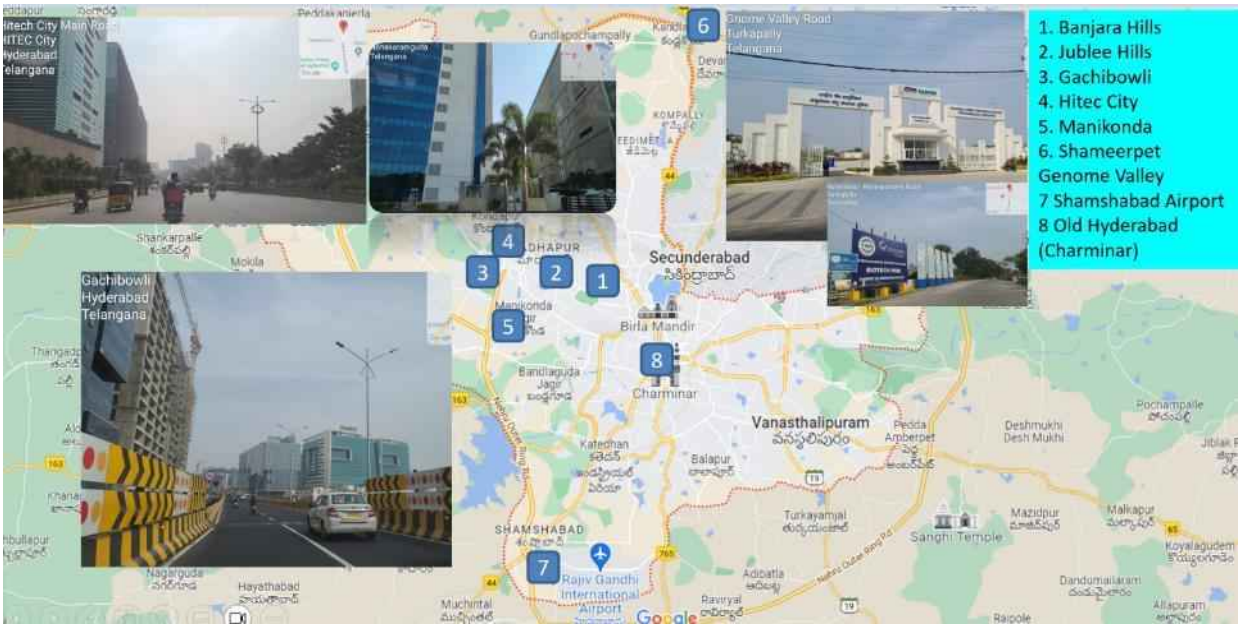


Figure 2-2: Major urban & commercial hubs.

Additionally large number of new commercial and urban centres are in various phase of development around ORR. In fact, ORR has been one of the reasons for developing of these centres. Most of these centres are coming up in northwest corner of Hyderabad in which major commercial and residential centres like Gachibowli. Manikonda, Banjara Hills, Jublee Hills etc have already developed along with Financial District and Hitec City. Following figure shows these locations in context of ORR.



Figure 2-3: Upcoming Development Locations in context of ORR.

Prominent of above are discussed as under.

Tellapur

Being in close proximity to Gachibowli, Kondapur, and Madhapur, Tellapur is an ideal settlement place for IT Professionals. Since it is around 15 km from Hitech city and 9-10 km from Gachibowli, the new investment options in the area are relatively better and easier to settle as well. Tellapur comes in the Medak district.

Narsingi

The western outskirts are home to Narsingi. This area is attracting many potential investors due to the presence of multiple residential options like villas, gated communities, community apartments, and so on. It is the best option for people who are family oriented and would want to settle down there. Housing investment options are available in Narsingi. If you're a modern home buyer, Narsingi is an ideal option.

Adibatla

Adibatla is an area located in Ranga Reddy district and is a fast-upcoming residential area that offers budget-friendly properties starting from 20 lakhs only. The main attraction of the area is ITIR (Information Technology Investment Region) as it is said that there will be many IT Parks as it's SEZ (Special Economic Zone). As a result of IT and aviation companies setting up offices in the area, Adibatla has already transformed into a modern infrastructural hub.

Mokila

Located approximately 35 kilometres away from Hyderabad city, Mokila's biggest advantage is its proximity to HiTech City, IT hubs like Kokapet, and prime neighbourhoods like Gachibowli. Well-connected via the Outer Ring Road (ORR), Mokila has witnessed a consistent increase in prices in recent years. The airport is around 40 kilometres away but takes just under an hour to reach via the ORR while Nagulapalli and Shankarpalli railway stations, and Miyapur metro station are both within a 10-kilometre radius.

Pocharam

The demand for residential real estate in Pocharam soared incredibly after the AP Housing Board set up the Singapore Township in 2005-06, which was a fully integrated and well-planned township comprising 2000 houses. Later, Infosys set up a 440-acre campus and with other IT companies following suit the area has seen increased commercial real estate activity, as well.

In addition to above ORR connects following radial arterial roads which connect Hyderabad to various important parts of state and country. Following figure shows such radial roads in context of ORR.



Figure 2-4: Regional context of ORR.

1. **NH-165 –** This is major highway which connects to Maharashtra / Pune / Solapur on western side and Suryapet, Vijayawada and Machilipatnam on eastern side. Interchange and toll plaza is constructed at Patancheru and Pedda Amberpet at crossing locations of ORR and NH-165
2. **NH-44 –** This north south connecting NH connects Hyderabad with Nagpur on north side and Bengaluru on south side. Medchal and Shamshabad interchange and Toll plazas are built at crossing of NH-44 on north and south side respectively.
3. **SH-163** – This connects Hyderabad to Warangal. Ghatshekar toll plaza and interchange is constructed at crossing of SH-163 with ORR
4. **Karimnagar Road** – This road connects city of Karmnagar and Siddipet to Hyderabad. Shamirpet Toll plaza and interchange are entry and exit point for this road.
5. **NH- 765** – It's a new national highway connects Hyderabad to Tokapelle. This highway crosses from very near to Airport. There are some residential and commercial projects coming up on either side of this road in influence zone area of Hyderabad Airport.

2.2 Project Appreciation

Nehru Outer Ring Road of Hyderabad was built in phases and the complete ring was thrown open to public in year 2016. ORR is 8 lane expressway kind of specification. Pavement is flexible except that at toll plazas where rigid pavement is provided. Condition of pavement is good in general in

entire stretch of 158 Km. ORR is fully access controlled road. There is no leakage point and entry / exit can happen from toll plaza location only. Safety items like crash barriers, lighting, delineators, signage and markings etc are well placed and are in good condition. Following photographs show general condition of road.









ORR has 19 locations at which currently toll is in operation. Toll plaza configuration and arrangement of movement is not same at all such locations. Depending on availability of land and other constraints. Following table presents location of toll plaza and type of interchange at such locations.

Table 2-1: Details of Toll plazas locations

Hyderabad Ring Road				
Sr. No	**Name of Interchange**	**Chainage in Km**	**Type of Interchange**	**Number of Toll booths**
1	Kokapet	2+000	Rotary	4
1A	Neopolis	3+700	Single Trumpet (Under Construction)	
2	Idulnagalapalli	13+900	Rotary	4
3	Patancheru	22+500	Double Trumpet	1
4	Sultanpur	31+000	Rotary	4
4A	Mallampet	37+000	Double Trumpet (Under Construction)	
5	Saragudem	42+700	Double Trumpet	1

Hyderabad Ring Road				
Sr. No	**Name of Interchange**	**Chainage in Km**	**Type of Interchange**	**Number of Toll booths**
6	Medchal	52+200	Double Trumpet	1
7	Shamirpet	61+100	Double Trumpet	1
8	Keesara	73+000	Rotary	4
9	Ghatkesar	81+550	Double Trumpet	1
10	Taramatipet	89+750	Rotary	4
11	Pedda Amberpet	96+650	Double Trumpet	1
12	Bongloor	108+900	Double Trumpet	1
13	Ravirayal	116+000	Diamond	4
14	Tukkuguda	121+500	Diamond	4
15	Pedda Golconda	129+750	Rotary	4
16	Shamshabad	136+100	Partial Clover Leaf with directional Ramps	4
17	Rajandranagar-1&2	142+620	Rotary	2
18	TSPA	147+650	Diamond	4
18A	Narsingi (One Entry + One Exit Ramp	152+000	(Under Construction)	
19	Nanakramguda	154+350	Toll Plaza	1

Configuration and movement pattern of above types of toll plaza is shown in following figures.

1. **Rotary Type interchange – with 4 toll booths**

Kokapet, Idulnagalpalli, Sultanpur, Keesara, Taramatipet, Shamsabad, have such type of arrangement. Following image shows typical location (Kokapet) of toll booths and movement pattern for such type of arrangements. All above locations have similar arrangements.

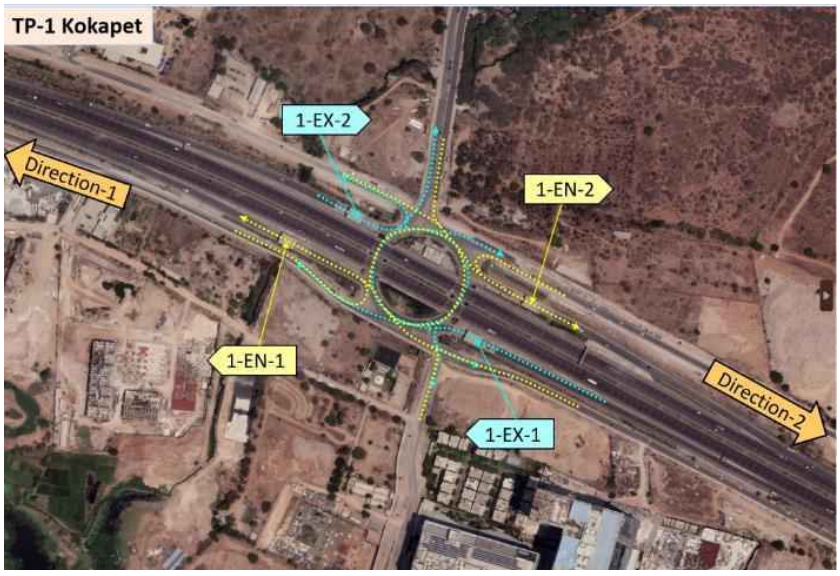


Figure 2-5 : Rotary Type Interchange with 4 toll booths.

2. Diamond Type interchange – with 4 toll booths

Ravirayal, Tukkuguda and TSPA have diamond type interchange with four booth arrangement. Following image shows the general arrangement and movement pattern.

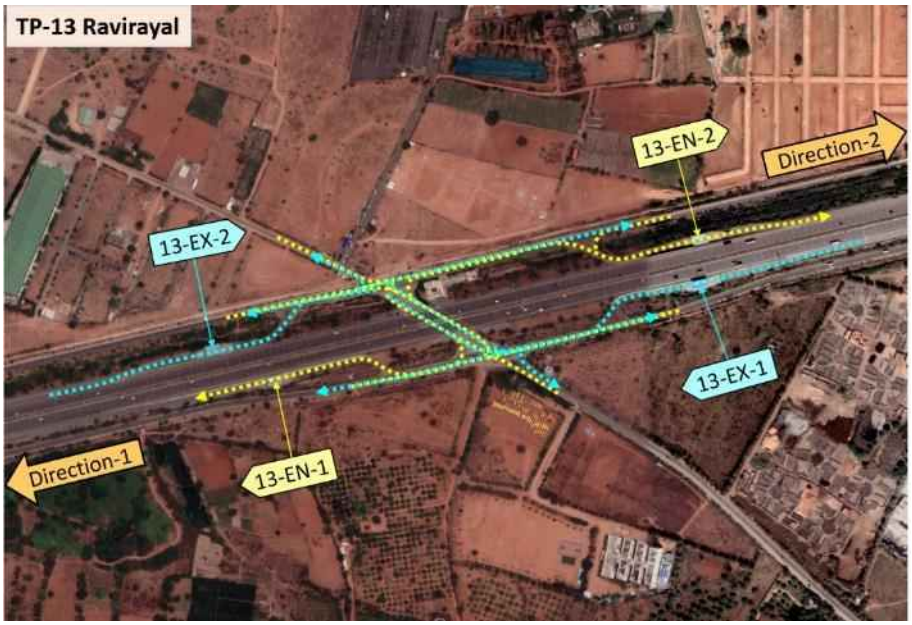


Figure 2-6 : Diamond Type Interchange with 4 toll booths.

3. Double Trumpet Type Interchange with Single Toll Plaza

Patancheru, Saragudam, Medchal, Shamirpet, Ghatkesar, Pedda Amberpet, Bongolor and Nanakramguda locations have double trumpet interchange in which all the movements are brough to one location for toll payment.



Figure 2-7 : Double Trumpet Type Interchange

4. Partial Cloverleaf with directional ramps

Shamshabad interchange is partial cloverleaf type with directional ramps. It also has four tool booths.

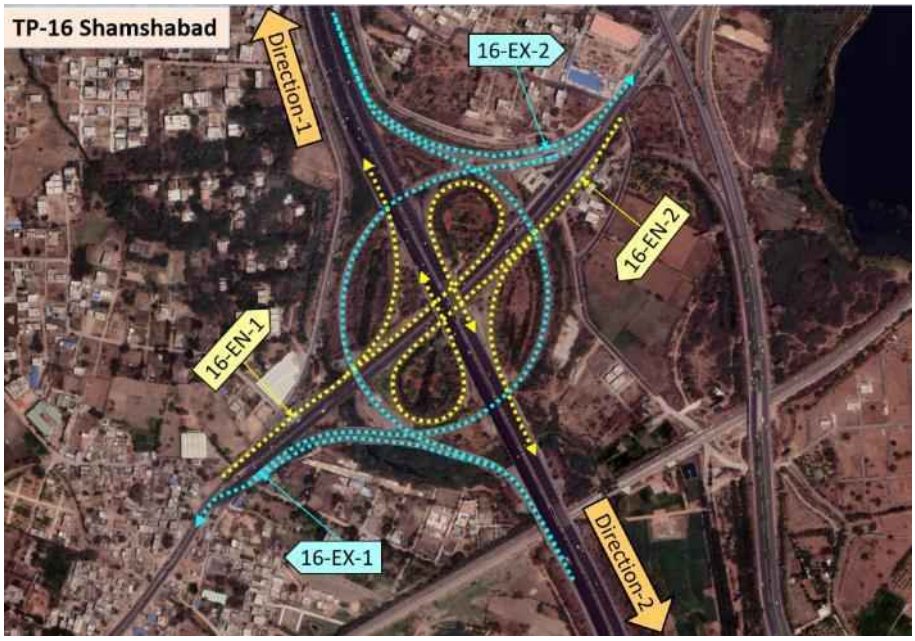


Figure 2-8 : Shamashabad Interchange and Ramps

5. Single Toll Plaza at Nanakramguda

Nanakram Guda has special arrangement. At this location all movement which enter or exit at this location are brough to one side road on which toll plaza is constructed.

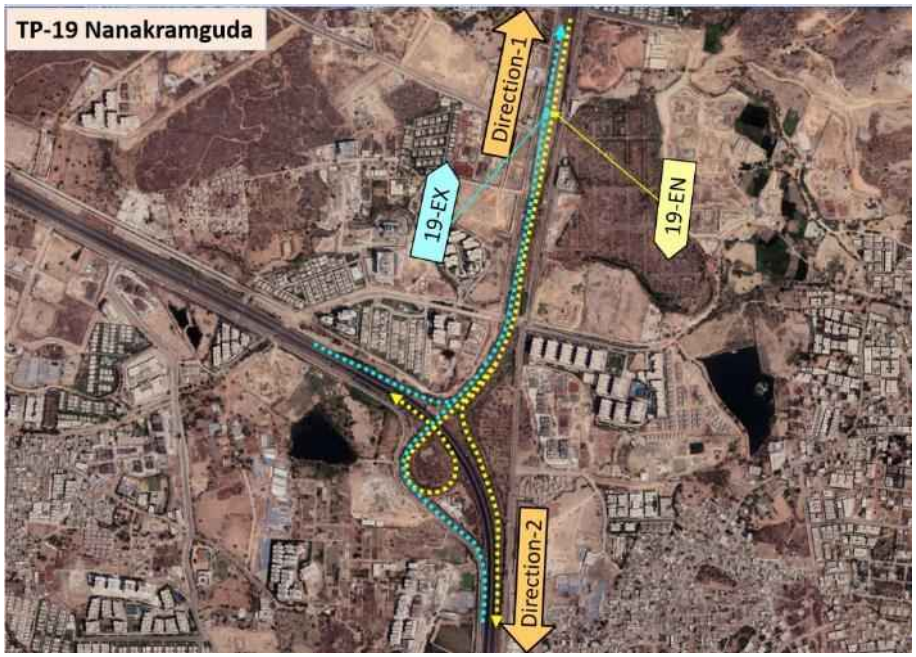


Figure 2-9 : Toll Plaza Nanakramguda and movements.

In addition to above 19 toll plaza locations two are under construction at following locations.

- Neopolis- Single Trumpet
- Narsingi – One Entry and one Exit Ramp

2.3 Project Corridor Illustration

The following photographs illustrate the project section along the corridor.

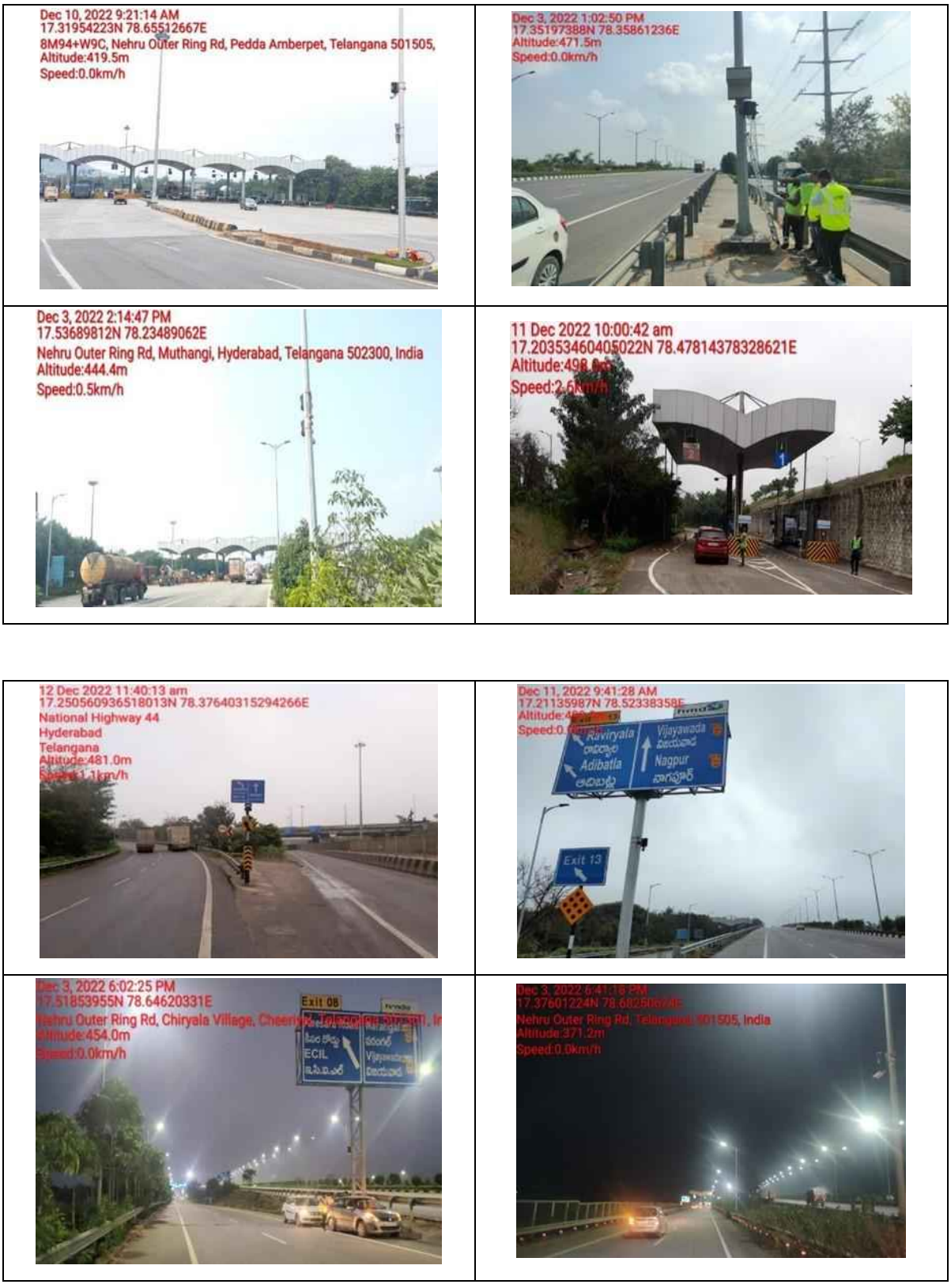


Figure 2-10 : Photographs showing Project Corridor

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have carried out a reconnaissance survey of the project corridor to understand the general traffic and travel characteristics on the corridor.

Traffic data forecast is one of the important inputs required for a TOT/BOT/DBFO highway/roadway project. In order to arrive at a fair estimate of traffic forecast it is necessary to collect data, analyse, model, validate and then forecast. The Consultants have carried out a reconnaissance survey of the project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic studies have been carried out for the project.

- Classified traffic volume counts at toll plaza location on 8-lanes ring road expressway encircling Hyderabad for August 2023 to November 2023 and traffic data from April 2023 to July 2023.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project.
- Establish base year traffic.
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1 below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. No	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	Km 158.000 22 Toll Plaza Nehru Outer Ring Road at Hyderabad	AADT for Four months from August 2023 to November	For Four months from August 2023 to November	For Four months from August 2023 to November	For Four months from August 2023 to November	For Four months from August 2023 to November

SR. No	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
		2023 & Four month from April 2024 to July 2024	2023 & Four month from April 2024 to July 2024	2023 & Four month from April 2024 to July 2024	2023 & Four month from April 2024 to July 2024	2023 & Four month from April 2024 to July 2024

3.2 Classified Traffic Volume

The objective of conducting Classified Traffic Volume Count is to understand the traffic flow pattern on a roadway. The Classified Traffic Volume has been provided by the concessionaire of project road actual traffic data gathered at toll plaza locations.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in the table below.

Table 3-2 : Vehicles classification system

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer, Two-Wheeler, Three-Wheeler

Source - IRC: 64 – 1990

However, since project highway is currently under toll operation, the data collected corresponds to category of tollable vehicles. The following are the types of vehicles as per concession agreement.

- Car / Jeep / van
- Min Bus /LCV
- Truck / Bus
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of the report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data for the years April 2023 to November 2023 and traffic data from April 2024 to July 2024.

Since the traffic data available for this update is for only four months, from April 2024 to July 2024, it may not represent the whole year traffic. Hence a seasonality factor for balance part of year has been applied to average traffic of current four months to arrive at Annual Average Daily Traffic of base year 2024-25. Same corrected traffic is used for future projections and revenue calculations. The following table shows historical traffic on project stretch and derived Annual Average Daily Traffic (AADT) for year 2024-25.

Following tables show base traffic matrix of each category of vehicles for each pair of traffic Base year 2024-25

Table 3-3 : Tollable Annual Average Daily Traffic (AADT) Matrix for Car/Jeep/Van

SINGLE JOURNEY
CLASS – 01

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	0	416	825	97	195	164	279	246	44	93	15	246	169	58	146	56	1781	704	710	2	1105
1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	346	0	0	669	79	113	314	210	185	57	102	5	79	46	23	44	18	309	275	161	0	739
3	725	0	520	5	280	393	656	805	392	217	350	41	281	121	42	156	26	904	1032	633	0	1611
4	129	0	83	285	0	197	382	379	542	127	273	27	177	20	8	24	7	128	50	50	0	130
4A	225	0	145	608	162	0	255	428	644	158	418	31	312	32	8	27	10	200	30	68	0	189
5	163	0	146	791	282	173	0	568	859	233	605	64	542	76	11	43	13	264	60	79	0	140
6	300	0	217	741	325	395	563	0	593	266	669	119	597	131	28	119	31	577	95	128	0	303
7	241	0	179	445	277	544	727	487	0	248	741	174	495	144	29	341	107	154	36	108	1	264
8	62	0	57	252	105	130	235	308	338	0	335	99	416	104	23	210	87	58	6	30	5	59
9	81	0	93	337	214	338	546	612	833	392	0	265	940	318	69	562	262	204	33	176	107	374
10	13	0	5	49	26	37	75	153	257	129	500	0	90	57	13	49	34	21	3	16	12	45
11	213	0	83	264	157	314	536	572	535	395	1097	95	0	249	85	633	261	310	43	247	272	1704
12	137	0	45	124	13	27	68	130	161	195	348	51	276	0	117	999	474	253	41	193	137	697
13	43	0	16	31	5	4	6	16	21	16	346	9	63	76	0	108	97	125	24	69	53	304
14	115	0	43	107	16	20	34	94	246	153	388	88	517	816	103	0	360	449	73	182	146	767
15	47	0	17	32	5	8	9	18	93	74	273	30	705	456	120	243	0	634	62	93	177	300
16	1413	0	245	640	91	125	203	409	139	59	237	26	332	472	157	503	491	0	144	1341	1203	7956
17	783	0	287	1431	49	28	69	114	49	6	32	3	37	29	61	34	28	106	4	1354	564	1806
18	699	0	166	679	40	49	83	122	108	33	229	23	274	230	97	416	113	1724	859	0	245	4348
18A	1	0	0	2	58	0	0	1	2	9	138	16	290	173	68	172	183	1559	409	143	0	4
19	1637	0	685	1431	88	72	124	238	247	48	329	47	1524	695	310	857	325	10628	1774	4135	3	0

Table 3-4 : Tollable Annual Average Daily Traffic (AADT) Matrix for Minibus/LCV

SINGLE JOURNEY
CLASS – 02

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	0	13	31	4	5	5	13	3	1	2	0	2	3	2	2	1	15	15	9	0	11
1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	8	0	0	36	3	2	22	10	2	1	1	0	2	1	1	1	1	10	10	4	0	8
3	33	0	32	0	48	26	139	177	48	31	33	4	102	21	4	19	8	129	72	22	0	21
4	3	0	3	45	0	4	18	16	19	4	4	1	7	1	2	1	1	17	6	1	0	1
4A	1	0	2	23	3	0	11	25	17	6	6	1	11	2	0	1	0	8	1	1	0	0
5	5	0	7	164	23	10	0	64	52	18	25	4	47	10	1	6	2	62	13	6	0	3
6	14	0	13	153	20	35	65	0	34	36	59	9	154	20	3	29	8	200	34	11	0	12
7	4	0	2	34	6	14	26	20	0	14	35	9	61	14	2	25	28	13	3	6	0	2
8	1	0	1	33	7	7	19	40	26	0	10	4	19	5	1	5	9	6	0	1	0	0
9	1	0	1	33	4	5	16	54	35	13	0	20	77	18	4	19	36	14	1	3	1	1
10	0	0	0	6	1	1	3	15	13	5	10	0	3	2	0	3	3	2	0	1	0	1
11	3	0	3	92	5	9	47	158	64	20	67	4	0	16	4	42	51	35	3	10	3	9
12	2	0	2	18	1	1	6	23	19	13	18	1	24	0	2	33	46	11	2	10	3	18
13	3	0	0	3	0	0	0	2	1	0	18	0	2	1	0	2	7	3	0	1	1	10
14	2	0	1	17	1	1	5	25	20	4	20	5	41	26	3	0	31	15	2	6	3	10
15	1	0	1	4	0	0	1	5	17	6	23	2	75	36	7	20	0	7	2	2	2	4
16	19	0	9	99	17	7	50	178	17	5	18	3	36	25	3	16	12	0	6	31	17	137
17	28	0	8	85	7	1	12	31	6	0	1	0	3	2	2	2	2	6	0	43	14	40
18	6	0	2	40	1	1	4	9	3	1	3	1	8	9	3	17	3	32	22	0	3	65
18A	0	0	0	0	4	0	0	0	0	0	1	1	2	2	4	2	12	12	7	2	0	0
19	23	0	6	23	1	0	3	8	2	0	1	0	8	11	16	16	7	136	34	86	0	0

Table 3-5 : Tollable Annual Average Daily Traffic (AADT) Matrix for

***Bus/2-* Axle**

SINGLE JOURNEY

CLASS – 03

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	0	4	10	1	5	4	4	1	0	1	0	3	4	2	1	0	8	9	5	0	9
1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	7	0	0	16	2	2	21	4	1	0	1	0	2	1	0	2	0	4	7	2	0	5
3	19	0	17	0	43	15	140	289	41	39	45	10	301	31	3	35	13	217	107	22	0	46
4	2	0	3	39	0	2	19	12	18	2	2	0	11	1	1	1	1	15	3	1	0	1
4A	1	0	5	19	2	0	9	22	18	2	11	1	17	2	0	0	0	4	1	1	0	0
5	3	0	5	135	16	8	0	69	38	18	19	4	75	8	0	5	2	66	7	3	0	2
6	5	0	7	256	12	23	77	0	21	57	62	7	300	25	3	50	14	528	20	10	0	4
7	1	0	1	40	4	8	21	32	0	12	24	3	51	12	1	17	20	19	1	1	0	1
8	0	0	1	42	3	4	19	62	19	0	12	5	19	3	1	4	9	7	0	0	0	0
9	1	0	1	50	2	7	21	63	32	12	0	15	95	32	3	27	55	19	1	8	1	1
10	0	0	1	8	1	2	4	10	7	6	12	0	8	4	1	3	2	3	1	1	0	1
11	3	0	3	262	7	17	73	322	62	24	79	5	0	23	6	62	73	57	4	10	4	10
12	2	0	1	30	1	1	5	21	10	14	17	2	24	0	2	22	39	16	2	7	2	17
13	2	0	0	3	0	0	0	2	1	0	20	0	4	1	0	2	7	4	1	4	1	10
14	1	0	1	39	1	0	5	32	12	4	15	4	54	26	3	0	18	17	2	6	2	4
15	0	0	1	13	1	0	1	9	16	5	27	2	91	31	11	17	0	16	2	6	2	2
16	14	0	5	197	13	4	56	471	24	7	19	2	68	30	4	20	16	0	7	22	10	231
17	8	0	5	71	3	1	5	15	3	0	1	0	4	4	4	1	4	9	0	22	6	21
18	3	0	1	69	1	0	3	5	1	1	3	0	10	6	5	18	5	19	16	0	2	46
18A	0	0	0	0	5	0	0	0	0	0	1	0	2	2	1	2	15	7	6	1	0	0
19	7	0	1	11	0	0	1	3	1	0	1	0	12	23	16	6	2	220	57	49	0	0

Table 3-6 : Tollable Annual Average Daily Traffic (AADT) Matrix for

3 - Axle

SINGLE JOURNEY

CLASS – 04

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	0	7	18	6	2	1	1	0	0	0	0	1	1	0	2	2	17	22	21	0	7
1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	18	0	0	101	9	1	12	1	0	0	1	0	1	0	0	1	1	2	5	8	0	11
3	33	0	201	0	33	8	80	163	25	19	35	2	148	15	1	19	5	102	57	8	0	24
4	8	0	18	29	0	2	10	7	8	1	1	0	4	0	0	1	0	7	1	1	0	4
4A	0	0	1	8	1	0	4	14	3	5	2	1	5	0	0	1	0	2	0	0	0	0
5	1	0	4	87	15	4	0	57	19	8	11	2	31	1	0	2	1	27	4	2	0	1
6	1	0	2	108	7	18	69	0	9	29	37	3	185	9	2	10	5	365	20	3	0	0
7	0	0	1	27	3	8	23	11	0	4	10	2	23	6	1	6	11	8	1	1	0	0
8	0	0	1	23	2	2	11	34	8	0	16	3	10	2	0	2	3	3	0	0	0	0
9	0	0	1	43	2	2	14	31	13	9	0	5	40	8	1	18	26	18	1	4	0	0
10	0	0	0	3	0	1	1	6	3	3	6	0	5	5	2	3	2	2	0	1	1	0
11	1	0	1	154	2	4	28	196	28	11	46	3	0	18	14	29	43	31	1	5	1	2
12	0	0	0	18	0	0	1	17	3	7	7	1	13	0	1	8	13	6	1	2	0	0
13	0	0	0	1	0	0	0	2	0	0	10	1	3	5	0	5	3	2	0	1	1	0
14	2	0	1	23	0	1	1	8	5	1	10	2	18	10	4	0	10	24	5	3	3	3
15	0	0	0	5	0	0	0	2	4	3	9	1	42	12	2	5	0	9	2	1	2	1
16	8	0	2	88	6	2	28	338	8	7	15	2	52	15	2	17	11	0	4	13	12	50
17	26	0	6	42	2	1	4	10	1	0	1	0	2	1	2	4	4	5	0	33	39	46
18	13	0	3	40	1	0	1	1	0	0	2	0	4	2	1	9	1	6	15	0	3	24
18A	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	2	7	11	18	2	0	0
19	37	0	3	7	9	0	1	0	0	0	0	0	1	2	0	2	1	38	55	25	0	0

Table 3-7 : Tollable Annual Average Daily Traffic (AADT) Matrix for

4 to 6 - Axle

SINGLE JOURNEY

CLASS – 05

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	0	3	52	10	6	3	5	7	0	3	1	25	3	0	3	2	27	9	28	0	5
1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2	0	0	88	11	1	30	6	8	4	6	0	19	2	0	1	3	13	9	3	0	1
3	71	0	172	0	68	14	180	270	103	43	95	14	603	57	4	31	8	263	70	21	0	22
4	19	0	24	42	0	2	17	11	45	2	10	0	21	1	0	1	1	14	2	1	0	7
4A	0	0	0	12	1	0	6	7	23	2	11	0	10	1	0	1	0	3	0	0	0	0
5	1	0	2	143	8	5	0	58	66	17	47	9	80	6	0	3	2	61	5	2	0	0
6	7	0	11	189	7	18	66	0	26	25	99	5	194	16	2	11	13	627	7	8	0	1
7	5	0	10	89	17	37	64	19	0	18	40	5	45	14	2	7	83	73	3	3	0	2
8	1	0	4	27	1	2	34	21	15	0	12	3	21	2	0	2	9	7	0	0	0	3
9	1	0	8	98	15	24	64	89	50	9	0	17	323	31	10	49	103	39	3	14	1	1
10	4	0	0	7	0	0	20	11	13	2	21	0	38	22	6	8	5	14	4	10	5	11
11	38	0	29	512	27	15	124	285	72	24	308	14	0	51	39	78	119	112	15	46	15	26
12	1	0	1	38	1	1	4	14	13	11	21	6	29	0	1	13	34	15	2	6	1	1
13	0	0	0	3	0	0	0	2	1	0	38	1	8	1	0	1	3	4	0	2	0	0
14	10	0	1	23	0	0	2	11	8	2	30	6	45	15	4	0	13	20	23	7	4	8
15	0	0	0	7	0	0	1	5	22	4	53	2	137	25	3	9	0	5	1	1	3	0
16	45	0	26	228	19	4	71	680	96	9	64	14	136	54	4	20	10	0	8	34	21	78
17	6	0	8	29	1	0	2	5	6	0	2	3	9	3	3	7	1	9	0	46	13	8
18	26	0	4	121	1	0	2	6	6	1	14	2	30	11	2	21	1	21	35	0	4	86
18A	0	0	0	0	8	0	0	0	0	0	2	1	6	2	0	4	23	6	5	1	0	0
19	7	0	1	13	0	0	1	1	3	1	2	1	12	2	0	3	1	85	11	57	0	0

Table 3-8 : Tollable Annual Average Daily Traffic (AADT) Matrix for

7 & Above - Axle

SINGLE JOURNEY

CLASS – 06

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 3-9 : Tollable Annual Average Daily Traffic (AADT) Matrix for Car/Jeep/Van

RETURN JOURNEY
CLASS – 01

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	0	90	204	38	104	47	79	46	19	16	3	21	49	8	23	5	260	402	302	0	316
1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	140	0	0	128	19	49	39	59	36	14	14	0	8	11	2	7	1	34	121	42	0	218
3	203	0	274	0	89	258	308	270	123	90	85	12	37	33	5	12	2	188	600	105	0	442
4	28	0	28	50	0	56	94	80	48	29	31	7	11	1	1	2	0	10	20	7	0	26
4A	23	0	31	78	46	0	36	88	110	29	51	7	24	3	0	1	1	10	11	9	0	12
5	47	0	65	174	152	75	0	173	191	82	120	21	67	13	0	4	1	29	27	23	0	37
6	62	0	60	145	124	132	203	0	99	99	156	48	121	30	1	14	1	44	43	23	0	52
7	60	0	59	97	125	213	326	214	0	107	252	92	136	42	1	26	20	9	15	23	0	55
8	7	0	15	45	35	45	70	68	48	0	128	43	80	23	2	14	11	4	1	5	1	8
9	14	0	34	101	100	147	216	221	204	86	0	179	340	112	5	62	73	32	10	58	36	73
10	1	0	1	5	5	6	13	22	29	24	55	0	14	10	0	5	3	3	1	2	2	5
11	24	0	9	61	29	41	89	134	118	105	264	12	0	49	8	110	150	29	12	43	37	189
12	26	0	9	21	3	6	17	31	31	36	92	12	35	0	8	178	92	46	10	48	40	162
13	16	0	7	14	2	2	3	9	8	8	25	2	21	31	0	24	37	32	5	32	24	128
14	41	0	11	27	4	7	10	27	86	57	199	11	206	381	19	0	51	116	13	74	58	339
15	13	0	4	4	1	2	2	3	15	21	49	7	52	148	13	83	0	114	8	35	28	132
16	472	0	81	321	27	42	60	136	19	11	29	3	43	64	15	95	184	3	49	544	436	4101
17	132	0	40	285	8	6	10	15	4	1	2	0	3	4	1	4	2	13	0	216	101	288
18	165	0	42	69	10	19	18	27	17	6	30	3	33	53	11	34	13	325	480	0	13	1612
18A	0	0	0	0	0	0	0	0	0	0	12	1	20	25	6	18	8	142	166	13	0	0
19	365	0	271	477	32	71	33	61	39	12	70	7	190	216	76	167	32	1597	766	1935	0	0

Table 3-10 : Tollable Annual Average Daily Traffic (AADT) Matrix for Minibus/LCV

RETURN JOURNEY
CLASS – 02

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	0	4	16	1	0	2	6	2	0	0	0	0	0	0	0	0	8	16	1	0	9
1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	5	0	0	16	1	1	3	6	1	0	0	0	0	0	0	0	0	1	3	0	0	2
3	9	0	16	0	15	7	61	56	9	10	6	1	15	7	0	4	1	26	38	2	0	6
4	1	0	0	21	0	1	7	6	1	5	1	0	1	0	0	0	0	3	2	0	0	0
4A	0	0	0	6	0	0	2	11	4	2	1	0	2	0	0	0	0	1	0	0	0	0
5	0	0	2	47	3	1	0	19	6	6	3	1	11	1	0	1	0	9	5	1	0	0
6	1	0	2	56	2	7	20	0	3	14	11	5	39	7	0	9	0	26	14	1	0	1
7	0	0	0	22	1	9	30	17	0	13	13	4	20	6	0	9	4	1	1	1	0	0
8	0	0	0	9	0	2	5	12	3	0	4	1	4	2	0	1	1	1	0	0	0	0
9	0	0	0	13	0	3	11	22	12	2	0	3	22	9	0	7	6	2	0	0	0	0
10	0	0	0	1	0	0	1	2	2	1	3	0	1	0	0	0	0	0	0	0	0	0
11	0	0	1	15	1	2	9	29	15	3	18	1	0	4	0	9	13	4	0	1	0	1
12	0	0	1	9	0	0	3	7	5	2	7	0	3	0	0	8	11	2	0	2	0	3
13	0	0	0	1	1	0	0	1	0	0	1	0	1	0	0	0	2	1	0	1	2	7
14	0	0	0	7	0	0	2	7	6	1	8	1	12	13	0	0	3	4	0	3	0	9
15	0	0	0	2	0	0	0	0	4	2	9	0	15	15	1	7	0	2	0	0	0	1
16	3	0	3	31	2	1	14	25	1	1	1	0	11	2	1	3	1	0	2	9	3	34
17	2	0	1	26	0	0	4	9	1	0	0	0	0	0	0	0	0	0	0	4	1	7
18	2	0	2	4	0	0	1	4	2	0	1	0	3	4	0	1	0	9	12	0	0	42
18A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2	2	0	0	0
19	2	0	3	5	0	0	1	4	0	0	0	0	1	3	4	2	1	31	19	21	0	0

Table 3-11 : Tollable Annual Average Daily Traffic (AADT) Matrix for

***Bus/2-* Axle**

RETURN JOURNEY

CLASS – 03

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	0	5	4	1	1	1	1	0	0	0	0	0	0	0	0	0	6	6	1	0	2
1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	1	0	0	6	1	4	2	3	0	0	1	1	0	0	0	0	0	1	2	0	0	0
3	1	0	2	0	11	2	29	43	5	14	10	2	18	4	0	1	1	23	39	1	0	2
4	0	0	0	16	0	1	7	4	1	2	1	0	1	0	0	0	0	2	1	0	0	0
4A	0	0	1	3	0	0	2	5	1	1	2	0	2	0	0	0	0	0	0	0	0	0
5	0	0	0	46	8	1	0	18	5	9	8	1	18	1	0	1	0	9	2	0	0	0
6	0	0	0	60	1	7	15	0	8	33	23	2	35	4	0	3	1	24	5	2	0	0
7	0	0	0	13	1	11	22	7	0	10	14	2	8	3	0	3	3	1	0	0	0	0
8	0	0	0	10	0	0	7	26	4	0	2	1	4	1	0	1	1	1	0	0	0	0
9	0	0	1	10	0	7	7	23	8	1	0	3	33	5	0	4	11	2	0	0	0	0
10	0	0	0	2	0	0	1	1	1	2	3	0	1	0	0	0	1	0	0	0	0	0
11	0	0	0	15	1	3	4	19	9	2	44	1	0	2	0	5	8	3	1	1	0	0
12	0	0	0	5	0	0	3	6	4	0	15	1	7	0	0	12	10	2	1	1	0	5
13	1	0	0	1	0	0	0	0	0	0	1	0	1	0	0	1	6	1	0	1	0	6
14	0	0	1	11	0	0	2	11	6	1	12	2	19	7	0	0	7	3	0	3	0	2
15	0	0	0	2	0	0	0	1	2	1	20	0	16	9	1	4	0	1	0	0	0	0
16	1	0	1	30	1	0	10	25	1	0	1	1	5	3	1	3	4	0	2	3	1	105
17	1	0	1	18	0	0	1	2	0	0	0	0	0	0	0	0	0	1	0	3	1	1
18	1	0	1	3	0	0	1	5	0	0	4	0	2	1	1	1	1	7	6	0	0	29
18A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	2	0	0	0
19	4	0	2	4	0	0	1	1	0	0	0	0	2	4	2	1	0	111	9	23	0	0

Table 3-12 : Tollable Annual Average Daily Traffic (AADT) Matrix for

3- Axle

RETURN JOURNEY

CLASS – 04

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	0	12	20	3	0	0	0	0	0	0	0	0	0	0	1	0	4	12	4	0	2
1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2	0	0	157	11	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0
3	5	0	53	0	9	1	22	13	5	11	10	1	6	8	0	2	0	10	18	1	0	2
4	3	0	3	18	0	0	10	2	1	1	1	0	0	0	0	0	0	1	0	0	0	1
4A	0	0	0	2	0	0	1	5	3	1	1	0	0	0	0	1	0	0	0	0	0	0
5	0	0	0	26	3	0	0	24	6	5	7	0	3	0	0	0	0	3	1	0	0	0
6	0	0	0	31	1	5	19	0	3	18	11	2	11	1	0	0	0	8	6	0	0	0
7	0	0	0	8	0	1	7	2	0	3	4	0	3	0	0	2	0	0	0	0	0	0
8	0	0	0	4	0	1	3	14	1	0	3	1	2	1	0	0	1	0	0	0	0	0
9	0	0	0	15	0	1	2	6	2	8	0	3	21	2	0	4	2	1	0	0	0	0
10	0	0	0	0	0	0	1	0	1	1	1	0	1	0	0	1	0	0	0	0	0	0
11	0	0	0	6	0	0	3	9	4	1	17	1	0	2	1	3	3	2	0	0	0	0
12	0	0	0	2	0	0	0	2	1	0	3	2	4	0	3	4	2	1	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	1	8	0	0	1	1	0	0	0	0	0
14	0	0	0	10	0	0	0	1	1	0	11	1	10	3	3	0	1	3	2	1	1	0
15	1	0	1	1	0	0	0	0	1	0	8	1	7	4	1	4	0	3	3	0	0	1
16	7	0	0	13	1	0	3	7	0	0	0	1	3	1	0	13	3	0	2	1	5	4
17	9	0	1	9	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	1	6	26
18	10	0	5	2	0	0	1	0	0	0	2	0	1	1	0	1	0	5	4	0	0	14
18A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	6	13	0	0	0
19	2	0	6	5	1	0	0	0	0	0	0	0	1	0	0	1	0	23	33	16	0	0

Table 3-13 : Tollable Annual Average Daily Traffic (AADT) Matrix for

4 to 6 - Axle

RETURN JOURNEY

CLASS – 05

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	0	0	48	11	0	0	1	2	0	0	2	15	0	0	8	0	12	3	11	0	1
1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	1	0	0	138	18	0	0	7	6	2	4	0	11	0	0	1	0	6	3	1	0	0
3	18	0	39	0	3	1	15	24	15	5	9	1	35	2	0	2	1	27	24	3	0	5
4	5	0	2	31	0	0	3	1	8	0	7	0	9	0	0	0	0	3	0	0	0	0
4A	0	0	0	3	0	0	1	6	12	1	4	0	3	0	0	0	0	0	0	0	0	0
5	0	0	0	58	2	0	0	23	27	25	26	15	28	0	0	0	0	11	0	0	0	0
6	0	0	1	47	0	0	18	0	5	4	9	5	42	1	0	0	0	12	1	0	0	0
7	0	0	0	15	1	5	14	2	0	2	7	2	14	1	0	0	2	1	1	0	0	0
8	0	0	2	10	0	1	7	4	4	0	2	1	5	0	0	0	1	0	0	0	0	0
9	0	0	2	19	0	2	7	6	8	3	0	3	60	4	0	17	16	3	1	1	1	1
10	0	0	0	2	0	0	6	1	1	0	5	0	6	2	0	0	0	7	1	1	0	0
11	1	0	0	22	1	0	3	7	7	2	91	7	0	3	2	4	7	5	6	1	0	0
12	0	0	0	3	0	0	0	2	2	0	8	12	14	0	0	1	2	1	1	1	0	0
13	0	0	0	0	0	0	0	0	1	0	7	2	24	0	0	3	0	0	0	1	0	0
14	0	0	0	6	0	0	0	1	2	0	28	4	34	3	0	0	3	4	11	2	1	1
15	0	0	0	1	0	0	0	1	2	0	18	2	17	4	1	3	0	1	0	0	0	0
16	1	0	1	23	0	0	3	8	2	0	2	7	18	2	0	7	0	0	3	4	0	2
17	1	0	0	11	0	0	0	0	1	0	1	1	12	0	0	25	0	1	0	5	2	2
18	15	0	0	2	0	0	0	1	1	0	1	2	10	1	0	1	0	9	13	0	0	41
18A	0	0	0	0	0	0	0	0	0	0	0	1	5	0	0	2	0	4	3	0	0	0
19	1	0	0	5	1	0	0	0	1	2	0	5	11	0	0	3	0	14	4	59	0	0

Table 3-14 : Tollable Annual Average Daily Traffic (AADT) Matrix for

7 & Above - Axle

RETURN JOURNEY

CLASS – 06

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

3.4 Traffic Characteristic

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in "IRC-64-1990: Guidelines for Capacity of Roads in Rural areas". The adopted passenger car unit values (PCU) are presented in ***Table 3-1515.***

Table 3-15 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-16 : Traffic in PCU at Project Stretch for Base Year 2024-25

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
2023-24	Hyderabad ORR at all TP	205075	283848	1.38
2024-25	Hyderabad ORR at all TP	224656	312413	1.39

It can be observed from above that project traffic has PCU index less than 1.5 which is an indicator of high proportion of Passenger traffic.

3.4.2 Components of Traffic

As discussed previously, components of total traffic volume play an important role in determining project revenue. Modal spit of total traffic on project corridor is given in table below.

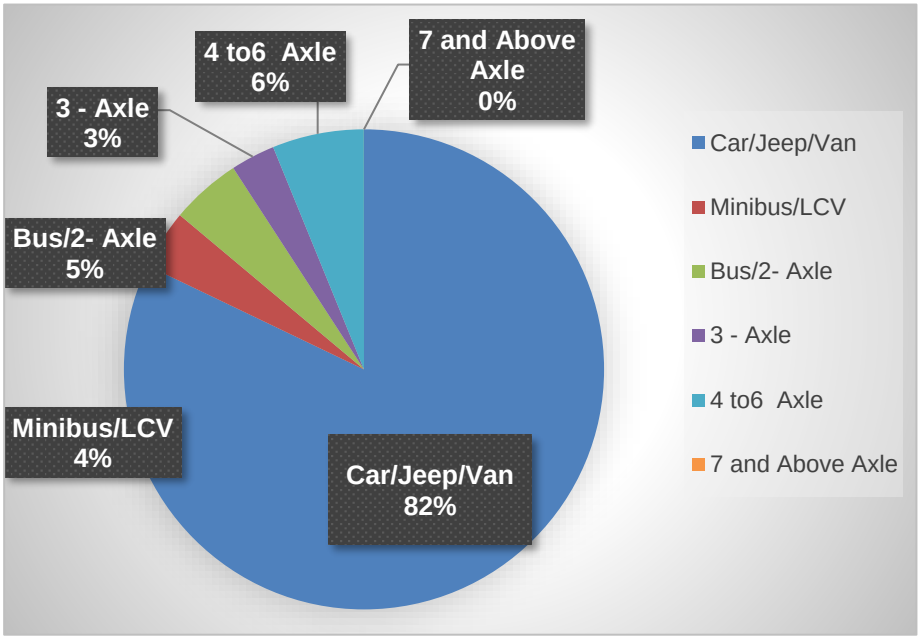


Figure 3-1 : Model Split of Tollable Vehicle

It is observed that car traffic forms about 83% of total traffic at toll plaza locations while multi axle commercial vehicles are about 9% of total traffic. Truck / Bus and LCV share about 4% and 4% of traffic volume respectively.

CHAPTER 4

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

4.1 Introduction

Traffic is generated and grows as a result of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. Further these factors have uncertainties associated with them. Forecasts of traffic have, therefore, to be dependent on the forecasts of factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future pattern of change in these factors can be estimated with only a limited degree of accuracy and hence the forecasting of future traffic levels cannot be precise. The success of any road project with private sector participation hinges on the accuracy and robustness with which the future traffic and revenues are estimated.

Further, future traffic forms the basis of the design of the transportation infrastructure facility and also determines the viability of the project. The following section deals with different methods, techniques, and considerations used in traffic forecast for the project under study.

4.2 Secondary Data Collection

In addition to the above-mentioned traffic surveys, secondary data was also collected from the sources wherever the data available. This data is effectively used to determine and estimate past trends of growth and future pattern. Following secondary data was collected for study:

1. Vehicle registration data of Andhra Pradesh, Telangana, Karnataka and Maharashtra as these are the state which make most of the influence om traffic.
2. Data of Indian national GDP (Gross Domestic Product), NSDP (Net State Domestic Product) of Andhra Pradesh, Telangana, Karnataka and Maharashtra.
3. Estimated population data of Andhra Pradesh, Telangana, Karnataka and Maharashtra.

This data is utilized in the study to estimate the growth factors along the project corridor. Relevant part of secondary data is placed at Annexure.

4.3 Development in the Project Influence Area

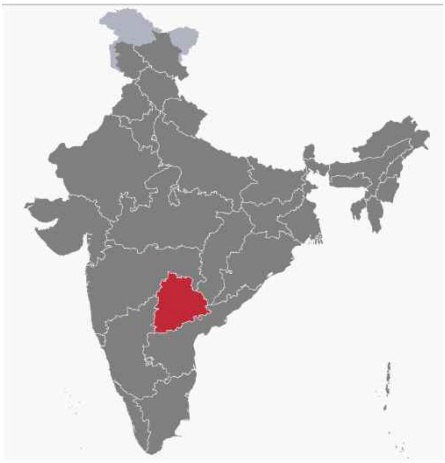
The **Outer Ring Road**, officially as, **Jawaharlal Nehru Outer Ring Road** and abbreviated as, **O.R.R.**, is a 158 kilometre, 8-lanes ring road expressway encircling Hyderabad, capital of the Indian state of Telangana. The expressway is designed for speeds up to 100 km/h. A large part, 124 km (covering urban nodes viz., Hi- Tech city, Nanakramguda Financial District, Rajiv Gandhi International Airport, IKP Knowledge park, Hardware Park, Telangana State Police Academy, Singapore Financial District, and Games village) of the 158-km was opened by December 2012. Rest of the stretch was opened by 2016. Thus from 2016 onwards ORR is under operation and has contributed to great extent not only to ease out traffic flow but also has influenced the development of Hyderabad around ORR. Most of the development which are happening on periphery of Hyderabad take positioning with respect to NORR into account. It

gives an easy connectivity between NH 44, NH 65, NH 161, NH 765 and NH 163 from Hyderabad to Vijayawada and Warangal as well as state highways leading to Vikarabad Nagarjuna Sagar and Karimnagar /Mancherial. The Outer Ring Road also helps in reducing the travel time from Rajiv Gandhi International Airport to cities like Nizamabad & Adilabad as it connects to NH44. The expressway is fenced, and 33 radial roads connect it with the Inner Ring Road.

Telangana State



Telangana is one of the fastest-growing states in India posing average annual growth rate of 13.90% over the last five years. Telangana's nominal gross state domestic product for the year 2020-21 stands at ₹12.05 lakh crore (US$170 billion).



Service sector is the largest contributor to the Telangana's economy with a share of about 65% in the year 2018-19. Growth in services has largely been fuelled by IT services with the State holding leading position in IT & ITeS in the country in terms of production and exports.

Traffic growth on NORR would be synonym with growth of Hyderabad. Hence various aspects of Growth of Hyderabad are relevant and discussed as under.

Hyderabad.

Hyderabad is among the top 10 fastest growing cities in the world, according to the World Economic Forum (WEF). Interestingly, all 10 of the fastest-growing cities in the world are in India. And, going by Gross Domestic Product (GDP) growth, this is likely to be the case till 2035, says research institute Oxford Economics. Hyderabad, with an 8.47% GDP growth, holds the second place among metropolitan cities in India.

By some estimates Hyderabad will be the second-fastest growing city in the world. It is just marginally behind Bengaluru, and should become number one (in India), since the projections are on a time-series trajectory, and Hyderabad's actual growth has been geometrically exponential.

A city with rich history and magnificent olden structures is slowly became host to some of the most modern buildings, a blend of both the bygone kingdoms and the new corporate revolution. To boost Hyderabad's development, the then Chief Minister of Andhra Pradesh Chandrababu Naidu successfully bid for the National Games in 2002 and the Afro Asian games in 2003, along with a strong bid to create a Formula One circuit in the state. These endeavours led to the

development of efficient sports infrastructure in Hyderabad. The Indian School of Business (ISB) and IIT were also established in a similar endeavour to boost modern education.
The resulting urban agglomeration now has an area of over eight hundred square kilometres and consists of Hyderabad and other municipal entities surrounding it. The city population is expected to exceed one hundred and thirty-six lakhs in 2021.



As development picked up pace at the end of the nineties, the old city has declined, and the newer peripheral regions started to gain prominence. By 2001, the city was the sixth largest urban agglomeration in India; and during the last decade it registered a growth of 32%.

Developed land on the outskirts of Hyderabad has been utilised for large scale development just outside the Cybercity. The city itself is on its way to become the leader in e-governance. It has been predicted about Hyderabad that it would become a leading information-based society in the next two decades.

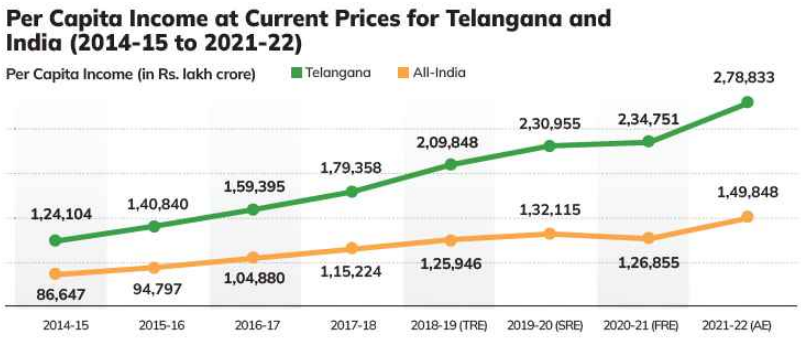
Rapid industrialisation has led to the increase in land prices while simultaneously driving the demand for infrastructure development. Commercial growth, therefore, has been concentrated in the Municipal Corporation of Hyderabad area while the metropolis has experienced pressure in residential growth. As workers prefer proximity to the workplace, their daily commute has resulted in the improvement of the road networks as well.



Growth of IT Sector

Ever since the 1990s, Andhra Pradesh had been promoting itself as a world class IT location and Hyderabad City, as a result, has managed to attract investment from companies such as IBM, Oracle, and Microsoft. The Hyderabad Technology Park has seen hundreds of IT companies registering themselves as soon as spaces are available. The objective of this elaborate promotional program has been to attract the right number of companies which

together would form a critical mass for the city to develop as a high-tech city which would rub shoulders with Silicon Valley and Malaysia's Multimedia Super Corridor. During the nineties, several initiatives were taken up by the state government towards promotion of IT sector. These included setting up of IT training institutes, initiatives in e-governance, development of a Hi-Tech city and promoting the Software Technology Park as a preferred destination for private sector companies. Steps were then taken even further to allow the development of a Hardware Park, creation of a knowledge Park, and establishment of a financial district. The state government started tapping resources to invest in the biotechnology sector and, as a first step towards making the region specialized, a Biotech Park was introduced.



The result of these efforts can be seen in the form of various parks. One called Gnome Valley has been set up to focus on research and training in biomedicine for industrial production. Within this valley are also established the IKP Knowledge Park and Alexandria Knowledge Park with areas of two hundred acres and three hundred acres respectively. These parks cover Ameerpet, Medchal, Uppal, and a number of other parts of the Hyderabad Metropolitan region. The thrust areas of research here include vaccines, bioinformatics, seeds etc. Some of the biggest global pharmaceutical and research firms have setup their offices here. Similarly, a Hardware Park of one thousand seven hundred acres in area is also being developed.

The economic activities particularly related to manufacturing and associated activities, are concentrated in Ramachandrapuram, Patancheru, Balanagar, Uppal, Cherlapalli, Jeedimetla, and Moula Ali. These developments, on one hand, contributed to the economic growth of the city and, on the other hand, are responsible for the spatial growth, particularly the growth of the surrounding areas.

Development of Relevant Infrastructure

With expansion in infrastructure capabilities and progressive state policy framework, Hyderabad is not only providing strong impetus to its leading industries: IT/ITES, pharmaceuticals but also laying strong foundation for its growth sectors: aerospace, automotive and electric vehicle, textiles and emerging technologies. I strongly believe that the metropolis is on an ambitious journey to become one of the most diverse business hubs of the world by 2035.

The city's infrastructure is providing for evolving needs of massive commercial growth. Hyderabad's metro rail is India's second longest operational metro network after the Delhi Metro. In phase 1, 67 kilometers (kms) are operational of planned 72 kms. The route covers three major traffic corridors through 60 stations. The next phase aims to connect airport at Shamshabad with major economic zones of the greater Hyderabad region. Another groundwork

capability worth mentioning is logistics parks. The Hyderabad Metropolitan Development Authority has developed 6 logistics parks in last 5 years and 8 more to come by 2025. The facilities are catering to over 340 logistics companies and 100 major manufacturing firms, making Hyderabad one of the largest logistics hubs of the country. In addition to the above, the metropolitan offers second cheapest office rentals amongst the major cities of India, adding to cost effectiveness of doing business in the city. In 2021, Hyderabad accounted for 36% country's share of office spaces.

It also holds the badge of most liveable city in the country for last five consecutive years as per Mercer's quality of living index. The city attracts talent pool from across the nation as well as from other world economies due to its notable social infrastructure: healthcare, education, housing, recreation, and personal freedom.

Telangana is a state known for its robust economic initiatives and trade friendly policies since its inception in 2014. A key example is state's TS I-pass industrial policy that is best in the country. It provides single window application clearance process capped at 15 days for all capital investment projects. This policy enabled Amazon to get clearance in just 11 days for its largest campus in the world to be built in Hyderabad. The state is poised to keep pace with technological advancements and thus first in India to launch actionable framework for AI and other emerging technologies. It has partnered with NASSCOM to formulate and execute the strategy. Telangana has taken many sectors specific initiatives that has improved ease of doing business and garnered foreign direct investments in the metro. Telangana's Electric vehicle and energy storage policy has aided Fiat Chrysler to set up global digital hub in Hyderabad. With availability of largest commercial land bank in the country, Telangana offers 1.45 lakhs acres of land to investors. This has enabled aerospace companies to set up production facilities in the city. Boeing and Safran have announced new manufacturing lines in Hyderabad. Airbus is setting up helicopter manufacturing plant in Shamshabad and committed to investment of INR 2500 Crores. The city ranked first in the Aerospace cities of the future in 2020-21.

The city's primary sectors, IT and pharma, continue to grow and bring in public and private investments. Google is investing INR 1000 Crores in its biggest facility outside US. This commercial space is set to be functional in Hyderabad by early 2023 and will be home to 13000 employees. The metro's Genome Valley is witnessing Biopharma scale-up facility, a public-private partnership between the state and Cytiva life sciences. The state is also developing 800-acre new pharma park in Rangareddy district.

Though Hyderabad faced the heat in 2020, the pandemic and subsequent lockdown compelled considerable layoffs in IT and SME sectors. Office space absorption rate declined, strongly

indicating many firms shutting shops or reducing operations in the city. Few economic experts questioned Hyderabad's potential as a growing business hub. However, I find the argument short sighted and reactive. The city strongly stood the test of time, India's first ICMR approved RT-PCR kits and first indigenously developed vaccine for COVID-19 came from Hyderabad. In 2021, the city's economy started showing green shoots. It contributed to 30% of the pharmaceutical production of the country. It also gained momentum as the "Vaccine capital of the world" with 4 out of 5 leading vaccine manufacturers in India already present in Genome Valley. The same year, the city also had the highest net office absorption rate (of existing stock) at 20% and highest office completion rate in the country. It also witnessed lowest office space vacancies: 7.1% in comparison to its other metro counterparts.

Hyderabad's strong economic fundamentals with respect to infrastructure, social capital and economic policies, equip it to meet future challenges of global economies. It is poised for long-term growth and on a progressive path to become world's prominent commercial hub. With current GDP of $74 billion, it is projected to move forward with 8.47% CAGR and set to deliver as $201.4 billion economy by 2035.



IT INCUBATION CENTERS – HYDERABAD

Hyderabad has witnessed a very growth of IT incubation centers. Some are summarized below.

- Hyderabad is recognised as the leading IT hubs globally; the city houses more than 1500 IT and ITES companies.
- IT SEZs -53
- State contributes 11.6% of India's IT exports in 2019-20
- Accounts for 23.5% of India's IT export growth 2019-20
- T-HUB Phase-II, Hyderabad Built-up Area: 3.72 L sft; India's Largest start-up Incubator
- Plug & play facility in E city Built-up Area: 1.8 lakh sft with an integrated testing & training facility.
- T-Works, Hyderabad Built-up Area: 78,000 sft – Phase 1; India's largest prototyping facility
- Image Tower, Hyderabad Built-up Area: 460,000 sft A one of its kind plugs & Play Facility for Animation and Gaming companies. Expected completion: March 2023
- Incubation Centre, Warangal(U) Built-up Area: 15000 sft Plug & Play Facility for startups.

LIFE SCIENCES - HYDERABAD

Life Sciences sector continues to continue to consolidate the position of the State as one of the most important life sciences hubs in the world.

International Companies including **Sandoz Research and Development Laboratories**, **Chemo India Formulations**, **Jamp India Pharmaceutical**, **Ferring Laboratories** and **Tokyo Chemical Industry**, among others have established their footprint in the State.

Telangana is the leading contributor of Pharma Exports from the Country since 2015-16 (28% share in FY 2020-21)

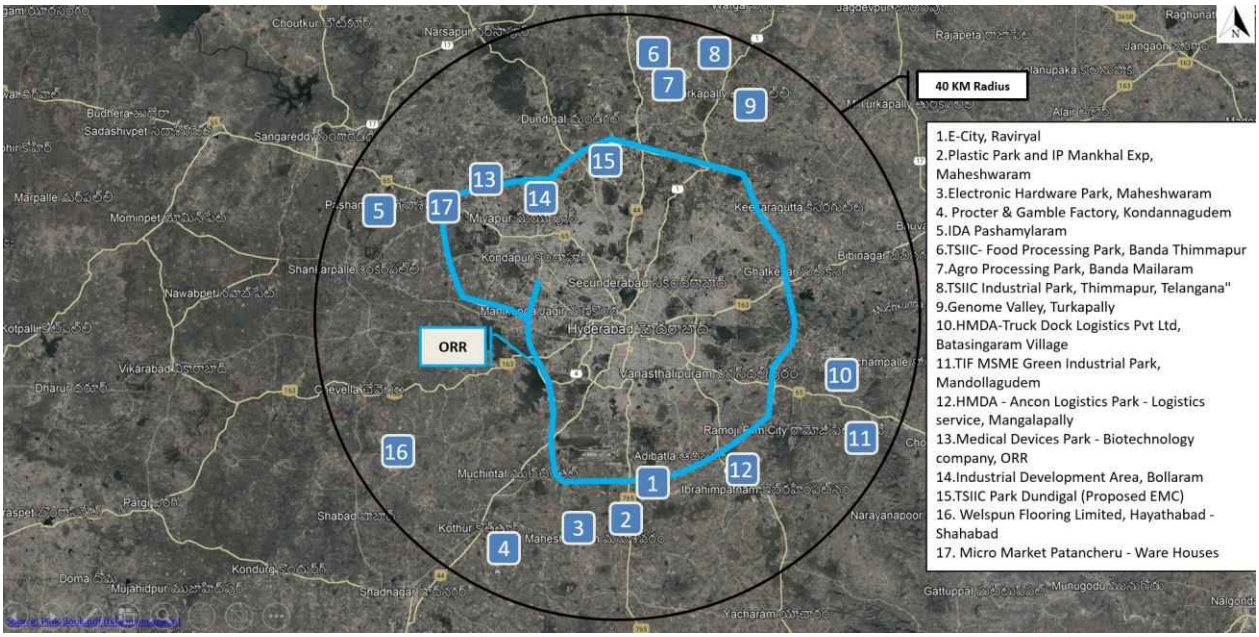


Hyderabad Pharma City: world's largest integrated pharma cluster spread over approx 19,333 acres. The cluster has been recognized as National Investment and Manufacturing Zone (NIMZ) by Government of India, given its national and international importance.

Genome Valley: Built over 1200 acres in three phases, more land is being added to the cluster along with more ready built labspace (more than 2 million square foot) Genome Valley houses more than 200 companies with a scientific workforce of about 15,000 professionals.

Medical Devices Park: Spread across 302 acres, 105 acres have already been allotted (more than 60 percent of the allottable land) to 40 companies. The park will house Asia's largest Stent manufacturing facility established by Sahajanand Medical Technologies

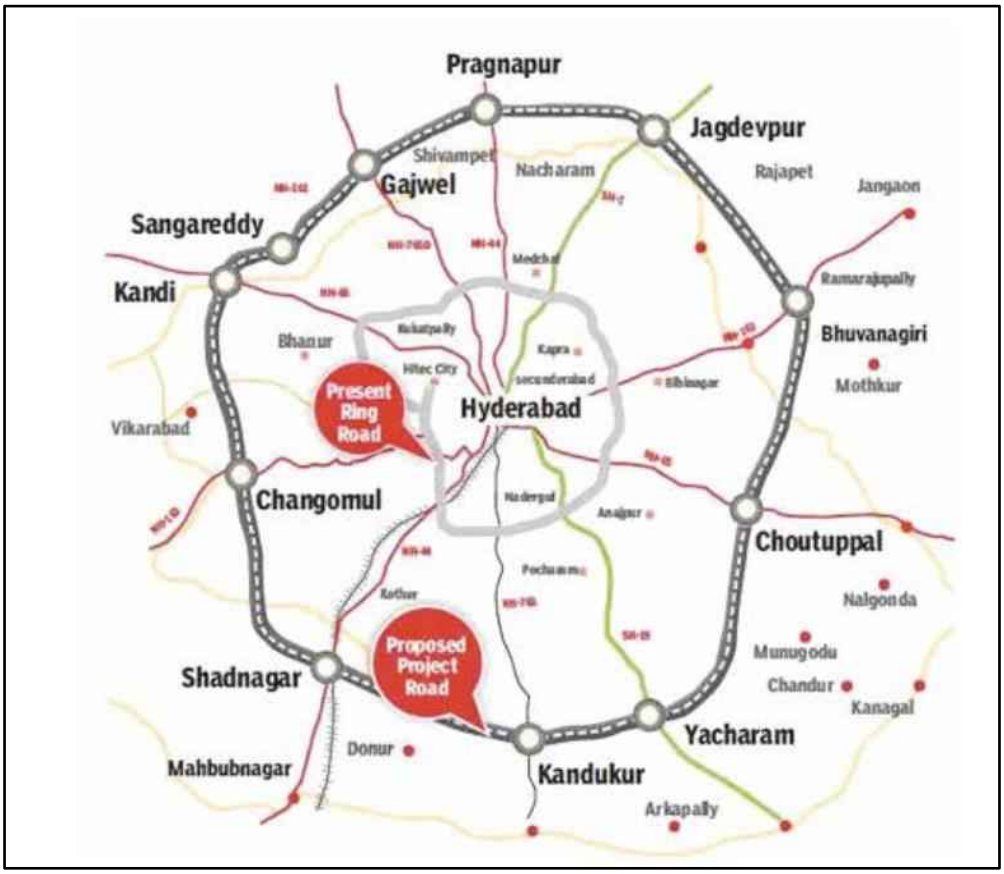
There is considerable industrial development on peripheries of Hyderabad as well. ORR being a fast connectivity has provided boost to such development. Following figure marks such developments on periphery of Hyderabad.



All above discussion indicates that Hyderabad is going to witness a good growth in near decade and would sustain on that.

Proposed Regional Ring Road (RRR)- Hyderabad

- An 8-lane expressway stretched over 340 km of length with a project cost Rs 17,000 crore is proposed to strengthen the existing roads connecting major national highways passing through Telangana, easing the regional road connectivity.
- The road will be developed at par with international standards over a stretch from Sangareddy to Kandi via Narsapur, Toopran, Gajwel, Jagdevpur, Bhongir, Choutuppal, Ibrahimpatnam, Chevella and Shankarapalli
- The RRR will have amenities such as parking, food courts, toilets, parks, children play area, malls, and drinking water facilities.
- The RRR will connect the surrounding districts with Hyderabad and to the Industrial Clusters, covering 40 of the region's population and will link 20 towns with National Highways.



Source: Pink-Book.pdf (telangana.gov.in)

As Proposed Regional Ring Road (RRR) would have faster connectivity to all important urban/commercial establishment, development of RRR has potential to alter focus of growth around Hyderabad Metropolitan Region.

4.4 Trend Analysis

Time series data of vehicle Registered in state of concerned states is taken from respective authorized websites and the same is used as the base data for analysis of growth.

Growth of vehicle traffic depends on type of vehicle. Traffic growth on any highway typically depends on number of economic parameters like

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. Same is recommended in IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways.

Following can be pair of vehicle type and independent variable for elasticity modelling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

Same is used in analysis below.

Vehicle Registered at the end of financial year in the state of Delhi, Haryana and Uttar Pradesh is given in tables below and also compared with the growth rate achieved in terms of vehicle registered on all India bases.

4.5 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to change in the corresponding indicator selected. Hence, in order to estimate the elasticity of traffic demand, it is necessary to establish the relationship between the growth in number of given categories of vehicle with one of the economic variables considered, such as NSDP, per capita income and population growth.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is as given below:

$$Log\ (P) = k \times Log\ (EI) + A$$

Where,

P = *Number of Vehicles (Mode wise)*

EI = *Economic Indicator*

A = *Regression constant*

k = *Elasticity coefficient (Regression coefficient)*

The elasticity for car and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP). The graphical presentation of the elasticity is presented in figures below:

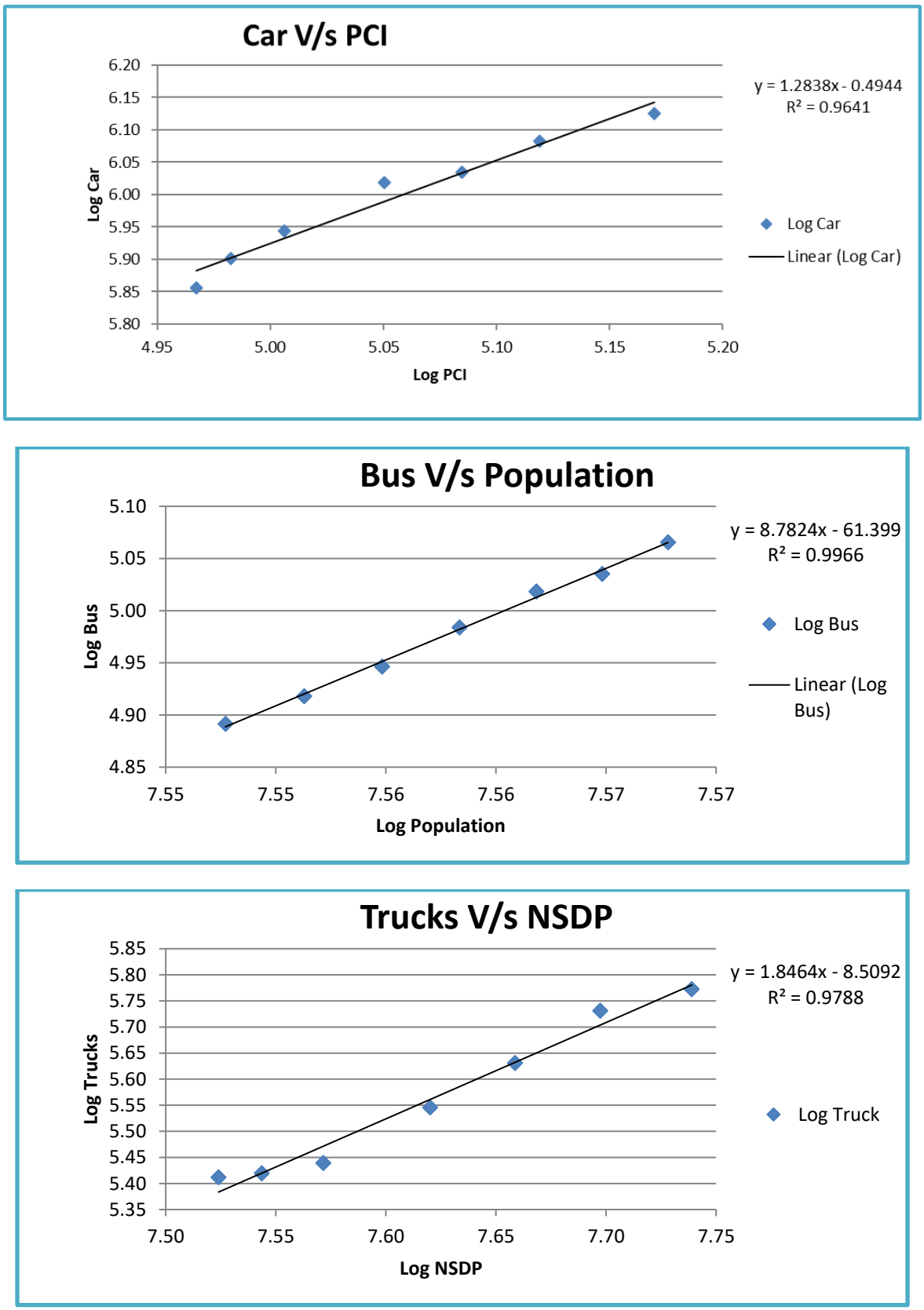


Figure 4-1: Elasticity by Graphical Extrapolation for Telangana

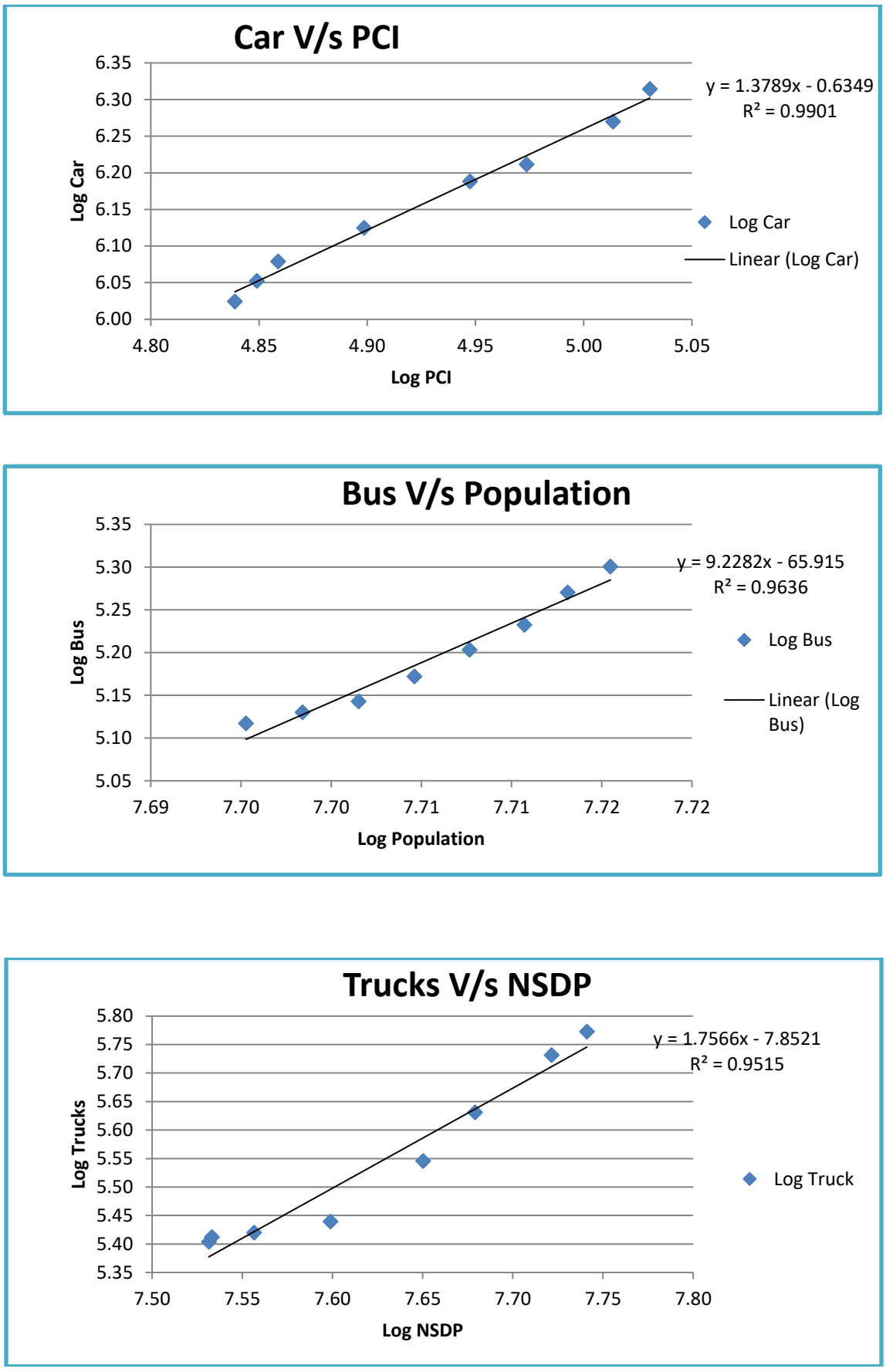
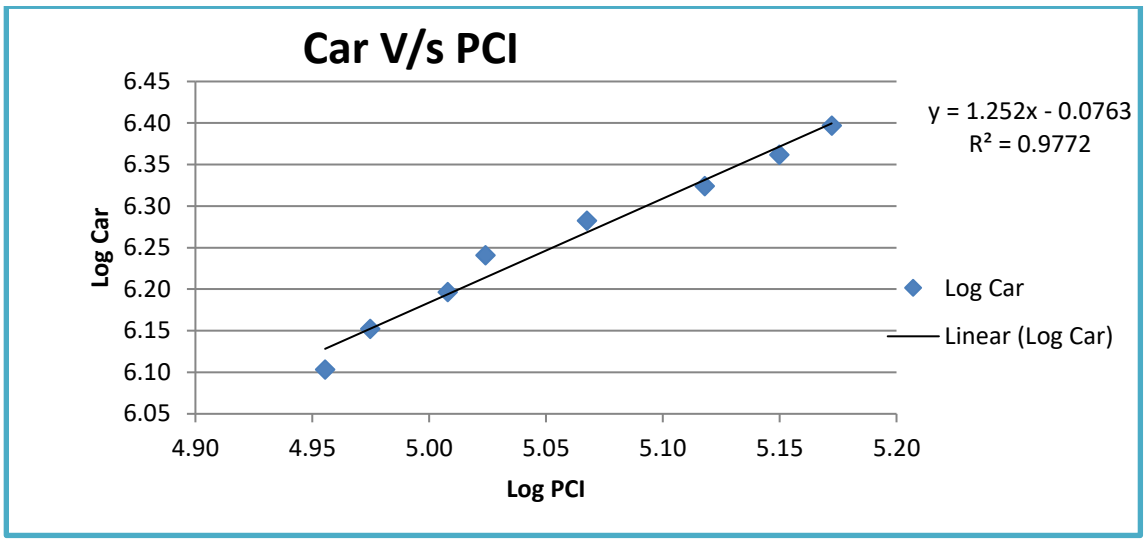
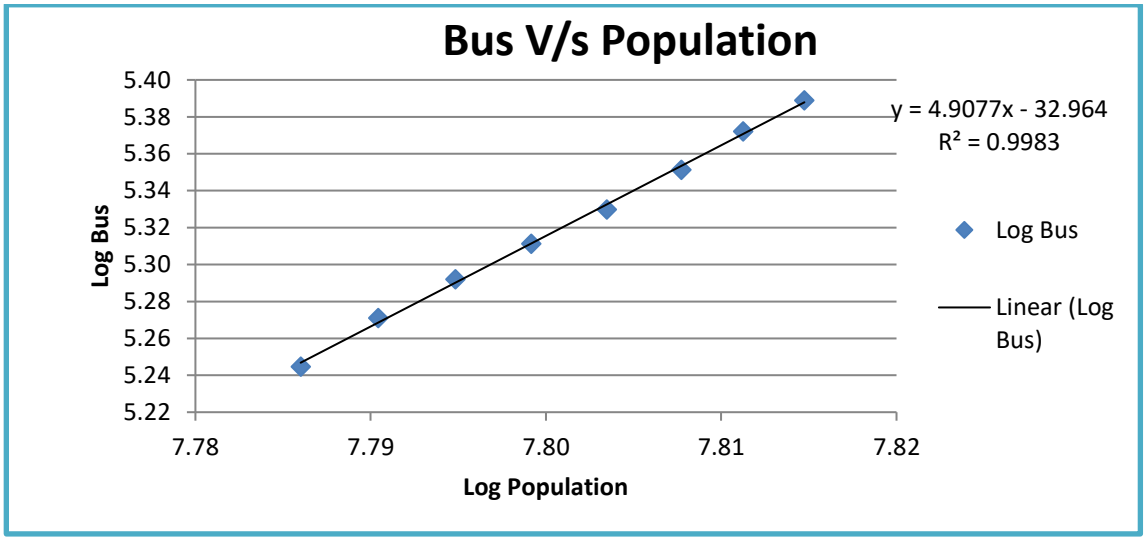


Figure 4-2: Elasticity by Graphical Extrapolation for Andra Pradesh





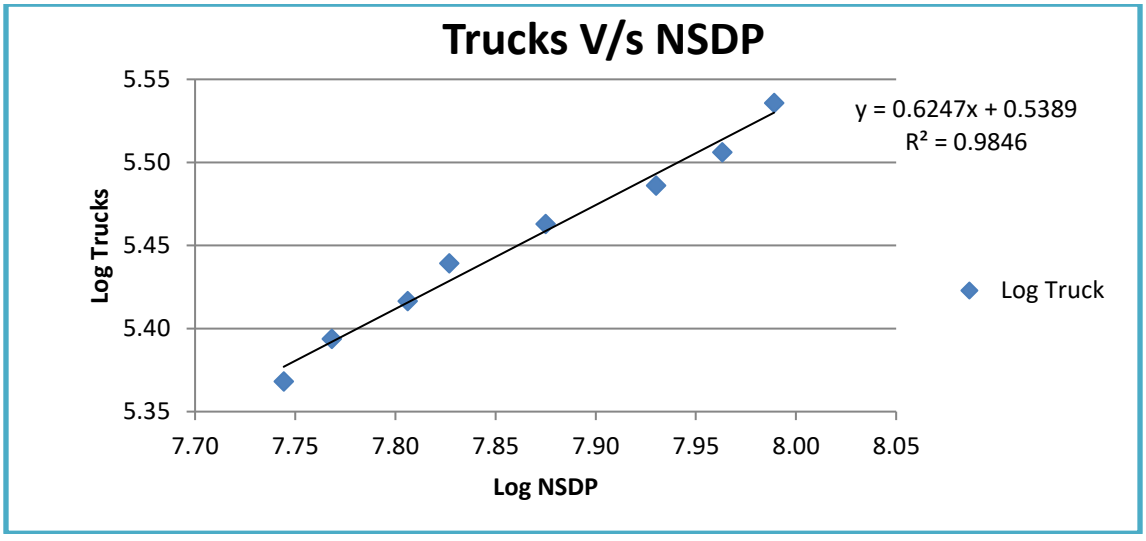


Figure 4-3: Elasticity by Graphical Extrapolation for Karnataka

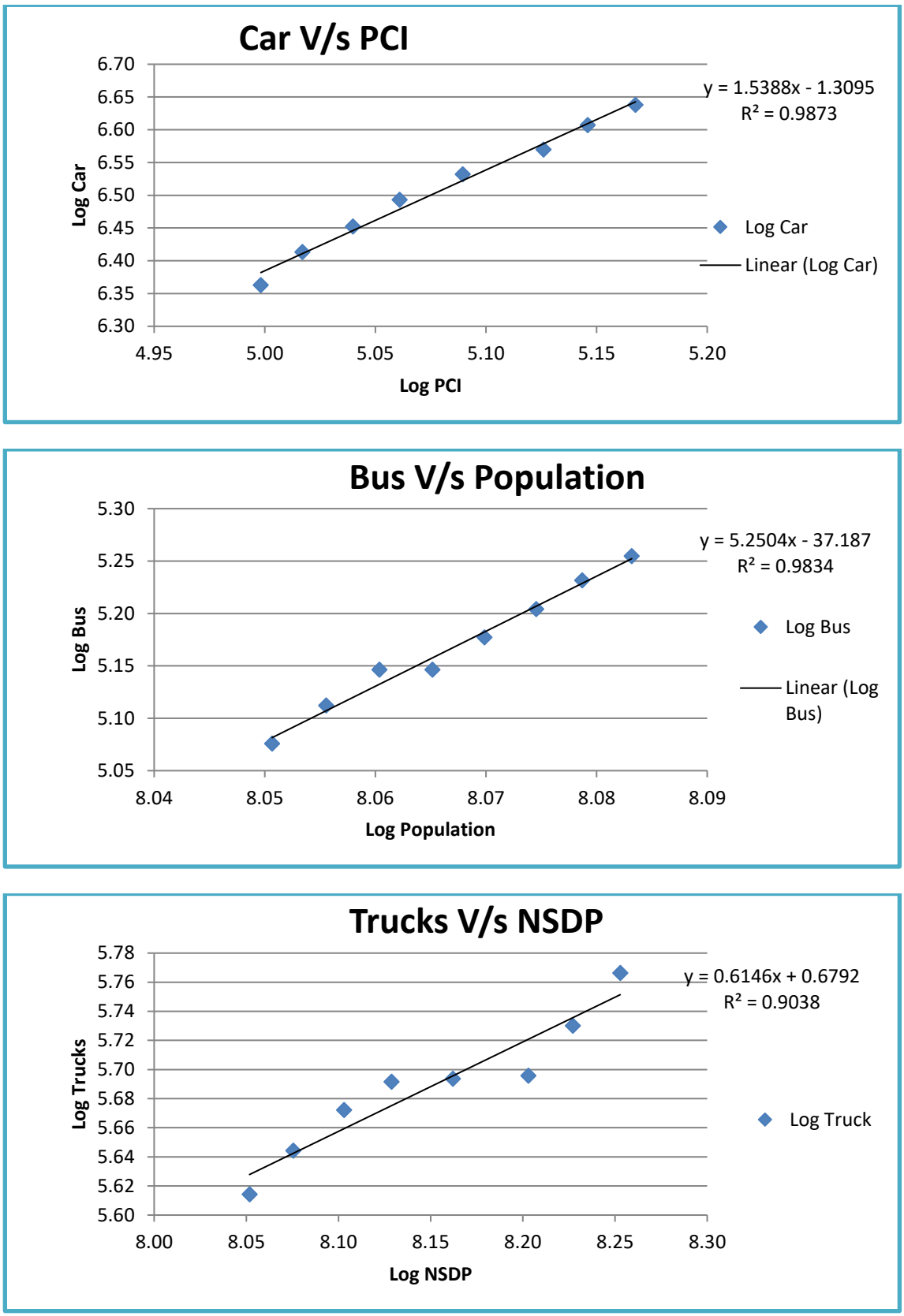


Figure 4-4: Elasticity by Graphical Extrapolation for Maharashtra

It shall be noted that the growth rates for various modes are not same as they are influenced by different parameters. In other words, whilst the growth of the passenger vehicles (cars, Jeeps, two wheelers and even buses) could be attributed to the growth in the per capita income,

population growth and vehicle registration growth, the growth of the LCV, Trucks, Multi Axle Trucks are found to be influenced with factors including the industrial production and growth of the National or state Domestic products.

For establishing the elasticity equations, details regarding NSDP/GDP, per capita income, population growth and registered vehicles in the state have been collected for the past few years and are presented in the Annexure. Based on this data, Log-Log regression curve fits have been developed for each type of vehicle with the most suitable parameters and the elasticity values obtained.

The results of these analyses for the good fit as reflected by R^2 values are presented in the table below.

Table 4-1 : Results of Regression analysis

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient
TELANGANA	Car/Jeep	PCI	y = 1.2838x - - 0.4944	R² = 0.9641	1.2838
	Bus	Population	y = 8.7824x - - 61.3985	R² = 0.9966	8.7824
	Truck	NSDP	y = 1.8464x - - 8.5092	R² = 0.9788	1.8464
ANDRAPRADESH	Car/Jeep	PCI	y = 1.3789x - - 0.6349	R² = 0.9901	1.3789
	Bus	Population	y = 9.2282x - - 65.9151	R² = 0.9636	9.2282
	Truck	NSDP	y = 1.7566x - - 7.8521	R² = 0.9515	1.7566
KARNATAKA	Car/Jeep	PCI	y = 1.252x - - 0.0763	R² = 0.9772	1.252
	Bus	Population	y = 4.9077x - - 32.9642	R² = 0.9983	4.9077
	Truck	NSDP	y = 0.6247x - 0.5389	R² = 0.9846	0.6247
MAHARASHTRA	Car/Jeep	PCI	y = 1.5388x - - 1.3095	R² = 0.9873	1.5388
	Bus	Population	y = 5.2504x - - 37.1874	R² = 0.9834	5.2504
	Truck	NSDP	y = 0.6146x - 0.6792	R² = 0.9038	0.6146

However, considering factors such as proposed developments and other influencing economic factors moderated growth factors as listed below are considered. Change all tables.

4.6 Basis for arriving at growth rates.

Arriving at growth rates for each mode on particular road stretch is always a complex issue. Transportation planners before arriving at such growth rates have to have a comprehensive understanding of the various disciplines such as land use, economy, automobile industry, anticipated changes in the region, traffic, and other related issues.

Giving due consideration to all the factors elaborated in the previous sections, three growth scenarios are suggested with a wide range of growth rates which are resilient and ready to respond to the changes in socio-economic conditions which are likely to influence the project corridor.

4.7 Growth of Economy and Projection of GDP in India and States

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

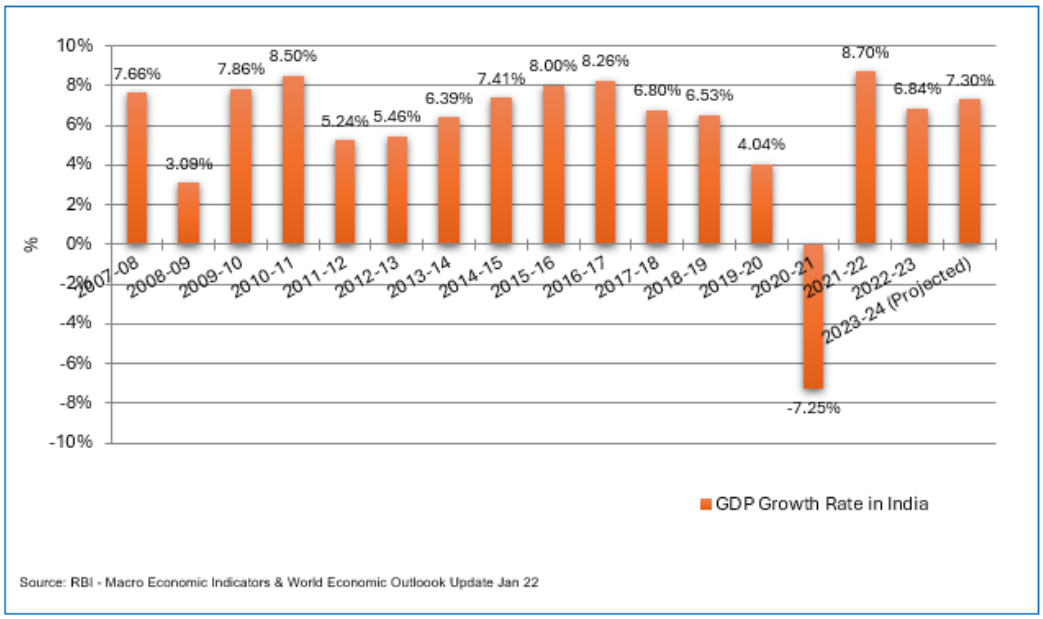


Figure 4-5 : Growth of GDP in India

After witnessing a slowdown during previous years, the economy is expected to firm up further in coming years. The growth outlook for the Indian economy in the medium and long term remains upbeat and positive. Therefore, in this study, in base case scenario, it is assumed that a GDP growth rate of around 8% will be sustained up to the year 2028 and thereafter for every five-year period the GDP growth rate is reduced. Similarly other independent variables of Per Capita Income (PCI) and Population is growth is assumed. Following table shows summary of such assumption.

Table 4-2 : Growth of Independent Variables

Assumed Growth Rate of Independent Indicators							
Indicator	**2024-2028**	**2028-2033**	**2033-2038**	**2038-2043**	**2043-2048**	**2048-2053**	**2053-2058**
PCI	7.71%	6.71%	5.00%	4.50%	4.00%	3.50%	3.50%
Population	0.76%	0.71%	0.66%	0.61%	0.56%	0.51%	0.51%
NSDP	8.15%	6.15%	4.15%	3.15%	2.15%	1.15%	1.15%

4.7.1 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle are as under.

Table 4-3: Recommended Growth Rates Pessimistic case

Category / Year	2024-2028	2028-2033	2033-2038	2038-2043	2043-2048	2048-2053	2053-2058
Car/Jeep/Van	6.81%	5.43%	3.63%	2.77%	2.01%	1.36%	1.36%
Bus	4.67%	4.26%	3.87%	3.49%	3.12%	2.76%	2.76%
Minibus	4.67%	4.26%	3.87%	3.49%	3.12%	2.76%	2.76%
LCV	3.02%	2.03%	1.16%	0.73%	0.35%	0.04%	0.04%
2- Axle	3.02%	2.03%	1.16%	0.73%	0.35%	0.04%	0.04%
3 - Axle	4.10%	2.79%	1.64%	1.05%	0.55%	0.13%	0.13%
4 to6 Axle	4.10%	2.79%	1.64%	1.05%	0.55%	0.13%	0.13%
7 and Above Axle	4.10%	2.79%	1.64%	1.05%	0.55%	0.13%	0.13%

Table 4-4: Recommended Growth Rates Most likely case

Category / Year	2024-2028	2028-2033	2033-2038	2038-2043	2043-2048	2048-2053	2053-2058
Car/Jeep/Van	7.06%	5.68%	3.88%	3.02%	2.26%	1.61%	1.61%
Bus	4.92%	4.51%	4.12%	3.74%	3.37%	3.01%	3.01%
Minibus	4.92%	4.51%	4.12%	3.74%	3.37%	3.01%	3.01%
LCV	3.27%	2.28%	1.41%	0.98%	0.60%	0.29%	0.29%
2- Axle	3.27%	2.28%	1.41%	0.98%	0.60%	0.29%	0.29%
3 - Axle	4.35%	3.04%	1.89%	1.30%	0.80%	0.38%	0.38%
4 to6 Axle	4.35%	3.04%	1.89%	1.30%	0.80%	0.38%	0.38%
7 and Above Axle	4.35%	3.04%	1.89%	1.30%	0.80%	0.38%	0.38%

Table 4-5: Recommended Growth Rates Optimistic case

Category / Year	2024-2028	2028-2033	2033-2038	2038-2043	2043-2048	2048-2053	2053-2058
Car/Jeep/Van	7.31%	5.93%	4.13%	3.27%	2.51%	1.86%	1.86%
Bus	5.17%	4.76%	4.37%	3.99%	3.62%	3.26%	3.26%
Minibus	5.17%	4.76%	4.37%	3.99%	3.62%	3.26%	3.26%
LCV	3.52%	2.53%	1.66%	1.23%	0.85%	0.54%	0.54%
2- Axle	3.52%	2.53%	1.66%	1.23%	0.85%	0.54%	0.54%
3 - Axle	4.60%	3.29%	2.14%	1.55%	1.05%	0.63%	0.63%
4 to6 Axle	4.60%	3.29%	2.14%	1.55%	1.05%	0.63%	0.63%
7 and Above Axle	4.60%	3.29%	2.14%	1.55%	1.05%	0.63%	0.63%

CHAPTER 5

FORECAST OF TOLL REVENUE

5.1 General

This chapter presents the estimates of traffic forecast, tolling categories, tolling rate calculations and toll revenue of the project.

5.2 Toll Rate Guidelines

Toll rates at NORR are governed by "Nehru Outer Ring Road Hyderabad (Toll) Rules -2012 issued by Municipal Administration and Urban Development Department / Hyderabad Metropolitan Area Development Authority and Hyderabad Growth Corridor Limited. This policy was recently amended by circular dated 12th January 2023.

The policy is similar to NHAI toll rate policy. Basic rate and rate revision policy same as NHAI Policy. The basic per km rate however have been enhanced for categories as under.

Sl. No.	Vehicle types	Enhancement factor
1.	Cars/ Jeep/ Van/ LMV/ SUV/ MPV	50%
2.	LCV/ Mini Bus	50%
3.	Bus/ 2-axle Truck	27%
4.	3-axle commercial vehicles	50%
5.	Heavy Construction Machinery/ Earth Moving Equipment/ 4/5/6 axle trucks	50%
6.	Oversized vehicles (7 or more axles)	50%

Figure 5-1: Base Rate (Per Km) enhancement as per NORR amendment Policy.

In amendment of policy provision of penalty for entering to fast tag lane without having valid fast tag and also for overloading of vehicles has been added. Penalty for fast tag lane violation is double the normal fee and overloaded vehicles would have to pay 10 times the toll rate for category. These are similar to NHAI policy.

5.4 Discounts

As per the Fee Notification (Schedule-R) fee discounts shall be provided to project users as under

- Local discount for non-commercial vehicle owner with in 20 km of toll plaza is not included in schedule M.

5.4 Travel Passes

As per the Fee Notification (Schedule-R) fee discounts shall be provided to project users as under

1. Monthly Pass: For frequent user's monthly pass would have not more than 50 trips per month at 2/3rd rate
2. Daily Pass (for Return Trip): A 75% discount will be offered on the return trip.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travellers or whose frequency does not yield any discount from the above categories.

5.2 Segmentation of traffic

Journet type traffic segmentation has been provided by Concessionaire for all toll plazas. Same has been used for future revenue working as well.

5.2 Estimation of Toll Rates

As per the notification issued for toll policy the following Base rate of fee for the categories mentioned are applicable as base rate.

Table 5-1 : Base Toll Rates 2007 - 08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (2 Axle)	2.2
Three Axle commercial vehicles	2.4
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4-6 axles)	3.45
Oversized Vehicle (seven or more axles)	4.2

These rates are then modified for as per procedure provided in guidelines of notification taking into account factors listed below.

- These base rates have been enhanced by factors as mentioned in amendment to NORR Toll Policy dated 12th January 2023.

- Annual revision of fee rate - @3%
- Application of WPI
- a growth rate of 5% is assumed for WPI of future years.
- As fee for structures is included in equivalent length at each toll plaza same shall not be considered separately

Applicable length for journey type at each toll plaza as per schedule M is given as under

Table 5-2 : Tollable Length

Name of IC		Kokapet	Neopolis	Edula nagulapally	Patancheru	Sultanpur	Mallampet	Dindigal/ Saragudem	Medchal	Shamirpet	Keesara	Ghatkesar	Taramptipet	Pedda Amberpet	Bonguluru	Raviryal	Tukkuguda	Pedda Golconda	Shamshabad	Rajendra Nagar	TSPA	Narsingi	Nanakramguda
	F/T	**1**	**1A**	**2**	**3**	**4**	**4A**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**18A**	**19**
Kokapet	**1**	0.000	1.700	11.900	20.500	29.000	35.000	40.700	50.200	59.100	71.000	74.112	65.862	58.962	46.712	39.612	34.112	25.862	19.512	11.262	7.962	3.612	7.252
Neopolis	**1A**	1.700	0.000	10.200	18.800	27.300	33.300	39.000	48.500	57.400	69.300	75.760	67.562	60.662	48.412	41.312	35.812	27.562	21.212	12.962	9.662	5.312	8.952
Edula nagulapally	**2**	11.900	10.200	0.000	8.600	17.100	23.100	28.800	38.300	47.200	59.100	67.650	75.850	70.862	58.612	51.512	46.012	37.762	31.412	23.162	19.862	15.512	19.152
Patancheru	**3**	20.500	18.800	8.600	0.000	8.500	14.500	20.200	29.700	38.600	50.500	59.050	67.250	74.150	67.212	60.112	54.612	46.362	40.012	31.762	28.462	24.112	27.752
Sultanpur	**4**	29.000	27.300	17.100	8.500	0.000	6.000	11.700	21.200	30.100	42.000	50.550	58.750	65.650	75.712	68.612	63.112	54.862	48.512	40.262	36.962	32.612	36.252
Mallampet	**4A**	35.000	33.300	23.100	14.500	6.000	0.000	5.700	15.200	24.100	36.000	44.550	52.750	59.650	71.900	74.612	69.112	60.862	54.512	46.262	42.962	38.612	42.252
Dindigal/ Saragudem	**5**	40.700	39.000	28.800	20.200	11.700	5.700	0.000	9.500	18.400	30.300	38.850	47.050	53.950	66.200	73.300	74.812	66.562	60.212	51.962	48.662	44.312	47.952
Medchal	**6**	50.200	48.500	38.300	29.700	21.200	15.200	9.500	0.000	8.900	20.800	29.350	37.550	44.450	56.700	63.800	69.300	76.062	69.712	61.462	58.162	53.812	57.452
Shamirpet	**7**	59.100	57.400	47.200	38.600	30.100	24.100	18.400	8.900	0.000	11.900	20.450	28.650	35.550	47.800	54.900	60.400	68.650	75.000	70.362	67.062	62.712	66.352
Keesara	**8**	71.000	69.300	59.100	50.500	42.000	36.000	30.300	20.800	11.900	0.000	8.550	16.750	23.650	35.900	43.000	48.500	56.750	63.100	71.350	74.650	74.612	78.252
Ghatkesar	**9**	74.112	75.760	67.650	59.050	50.550	44.550	38.850	29.350	20.450	8.550	0.000	8.200	15.100	27.350	34.450	39.950	48.200	54.550	62.800	66.100	70.450	76.610
Taramptipet	**10**	65.862	67.562	75.850	67.250	58.750	52.750	47.050	37.550	28.650	16.750	8.200	0.000	6.900	19.150	26.250	31.750	40.000	46.350	54.600	57.900	62.250	68.410
Pedda Amberpet	**11**	58.962	60.662	70.862	74.150	65.650	59.650	53.950	44.450	35.550	23.650	15.100	6.900	0.000	12.250	19.350	24.850	33.100	39.450	47.700	51.000	55.350	61.510
Bonguluru	**12**	46.712	48.412	58.612	67.212	75.712	71.900	66.200	56.700	47.800	35.900	27.350	19.150	12.250	0.000	7.100	12.600	20.850	27.200	35.450	38.750	43.100	49.260
Raviryal	**13**	39.612	41.312	51.512	60.112	68.612	74.612	73.300	63.800	54.900	43.000	34.450	26.250	19.350	7.100	0.000	5.500	13.750	20.100	28.350	31.650	36.000	42.160
Tukkuguda	**14**	34.112	35.812	46.012	54.612	63.112	69.112	74.812	69.300	60.400	48.500	39.950	31.750	24.850	12.600	5.500	0.000	8.250	14.600	22.850	26.150	30.500	36.660
Pedda Golconda	**15**	25.862	27.562	37.762	46.362	54.862	60.862	66.562	76.062	68.650	56.750	48.200	40.000	33.100	20.850	13.750	8.250	0.000	6.350	14.600	17.900	22.250	28.410
Shamshabad	**16**	19.512	21.212	31.412	40.012	48.512	54.512	60.212	69.712	75.000	63.100	54.550	46.350	39.450	27.200	20.100	14.600	6.350	0.000	8.250	11.550	15.900	22.060
Rajendra Nagar	**17**	11.262	12.962	23.162	31.762	40.262	46.262	51.962	61.462	70.362	71.350	62.800	54.600	47.700	35.450	28.350	22.850	14.600	8.250	0.000	3.300	7.650	13.810
TSPA	**18**	7.962	9.662	19.862	28.462	36.962	42.962	48.662	58.162	67.062	74.650	66.100	57.900	51.000	38.750	31.650	26.150	17.900	11.550	3.300	0.000	4.350	10.510
Narsingi	**18A**	3.612	5.312	15.512	24.112	32.612	38.612	44.312	53.812	62.712	74.612	70.450	62.250	55.350	43.100	36.000	30.500	22.250	15.900	7.650	4.350	0.000	6.160
Nanakramguda	**19**	7.252	8.952	19.152	27.752	36.252	42.252	47.952	57.452	66.352	78.252	76.610	68.410	61.510	49.260	42.160	36.660	28.410	22.060	13.810	10.510	6.160	0.000

Accordingly on the basis of above tollable lengths, toll rates of various categories of vehicle at different toll plaza locations are calculated. The adopted Toll Rates for all categories of vehicles for base year are given tables below.

Single Journey

Table 5-3: Car/Jeep/Van Toll Rates for Year 2024-2025 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	10	30	50	70	80	100	120	140	170	170	150	140	110	90	80	60	50	30	20	10	20
1A	10	0	20	40	60	80	90	110	130	160	180	160	140	110	100	80	60	50	30	20	10	20
2	30	20	0	20	40	50	70	90	110	140	160	180	170	140	120	110	90	70	50	50	40	40
3	50	40	20	0	20	30	50	70	90	120	140	160	170	160	140	130	110	90	70	70	60	60
4	70	60	40	20	0	10	30	50	70	100	120	140	150	180	160	150	130	110	90	90	80	80
4A	80	80	50	30	10	0	10	40	60	80	100	120	140	170	170	160	140	130	110	100	90	100
5	100	90	70	50	30	10	0	20	40	70	90	110	130	150	170	170	160	140	120	110	100	110
6	120	110	90	70	50	40	20	0	20	50	70	90	100	130	150	160	180	160	140	140	130	130
7	140	130	110	90	70	60	40	20	0	30	50	70	80	110	130	140	160	180	160	160	150	150
8	170	160	140	120	100	80	70	50	30	0	20	40	60	80	100	110	130	150	170	170	170	180
9	170	180	160	140	120	100	90	70	50	20	0	20	40	60	80	90	110	130	150	150	160	180
10	150	160	180	160	140	120	110	90	70	40	20	0	20	40	60	70	90	110	130	140	150	160
11	140	140	170	170	150	140	130	100	80	60	40	20	0	30	50	60	80	90	110	120	130	140
12	110	110	140	160	180	170	150	130	110	80	60	40	30	0	20	30	50	60	80	90	100	120
13	90	100	120	140	160	170	170	150	130	100	80	60	50	20	0	10	30	50	70	70	80	100
14	80	80	110	130	150	160	170	160	140	110	90	70	60	30	10	0	20	30	50	60	70	90
15	60	60	90	110	130	140	160	180	160	130	110	90	80	50	30	20	0	10	30	40	50	70
16	50	50	70	90	110	130	140	160	180	150	130	110	90	60	50	30	10	0	20	30	40	50
17	30	30	50	70	90	110	120	140	160	170	150	130	110	80	70	50	30	20	0	10	20	30
18	20	20	50	70	90	100	110	140	160	170	150	140	120	90	70	60	40	30	10	0	10	20
18A	10	10	40	60	80	90	100	130	150	170	160	150	130	100	80	70	50	40	20	10	0	10
19	20	20	40	60	80	100	110	130	150	180	180	160	140	120	100	90	70	50	30	20	10	0

Table 5-4: Minibus/LCV Toll Rates for Year 2024-2025 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	10	40	80	110	130	150	190	220	270	280	250	220	180	150	130	100	70	40	30	10	30
1A	10	0	40	70	100	130	150	180	220	260	290	250	230	180	160	140	100	80	50	40	20	30
2	40	40	0	30	60	90	110	140	180	220	260	290	270	220	190	170	140	120	90	70	60	70
3	80	70	30	0	30	50	80	110	150	190	220	250	280	250	230	210	170	150	120	110	90	100
4	110	100	60	30	0	20	40	80	110	160	190	220	250	290	260	240	210	180	150	140	120	140
4A	130	130	90	50	20	0	20	60	90	140	170	200	230	270	280	260	230	210	170	160	150	160
5	150	150	110	80	40	20	0	40	70	110	150	180	200	250	280	280	250	230	200	180	170	180
6	190	180	140	110	80	60	40	0	30	80	110	140	170	210	240	260	290	260	230	220	200	220
7	220	220	180	150	110	90	70	30	0	40	80	110	130	180	210	230	260	280	270	250	240	250
8	270	260	220	190	160	140	110	80	40	0	30	60	90	140	160	180	210	240	270	280	280	300
9	280	290	260	220	190	170	150	110	80	30	0	30	60	100	130	150	180	210	240	250	270	290
10	250	250	290	250	220	200	180	140	110	60	30	0	30	70	100	120	150	170	210	220	230	260
11	220	230	270	280	250	230	200	170	130	90	60	30	0	50	70	90	120	150	180	190	210	230
12	180	180	220	250	290	270	250	210	180	140	100	70	50	0	30	50	80	100	130	150	160	190
13	150	160	190	230	260	280	280	240	210	160	130	100	70	30	0	20	50	80	110	120	140	160
14	130	140	170	210	240	260	280	260	230	180	150	120	90	50	20	0	30	60	90	100	120	140
15	100	100	140	170	210	230	250	290	260	210	180	150	120	80	50	30	0	20	60	70	80	110
16	70	80	120	150	180	210	230	260	280	240	210	170	150	100	80	60	20	0	30	40	60	80
17	40	50	90	120	150	170	200	230	270	270	240	210	180	130	110	90	60	30	0	10	30	50
18	30	40	70	110	140	160	180	220	250	280	250	220	190	150	120	100	70	40	10	0	20	40
18A	10	20	60	90	120	150	170	200	240	280	270	230	210	160	140	120	80	60	30	20	0	20
19	30	30	70	100	140	160	180	220	250	300	290	260	230	190	160	140	110	80	50	40	20	0

Table 5-5: Bus/2-Axle Toll Rates for Year 2024-2025 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	10	80	140	190	230	270	340	400	480	500	440	390	310	270	230	170	130	80	50	20	50
1A	10	0	70	130	180	220	260	320	380	460	510	450	410	320	280	240	180	140	90	60	40	60
2	80	70	0	60	110	150	190	260	320	400	450	510	470	390	340	310	250	210	160	130	100	130
3	140	130	60	0	60	100	140	200	260	340	400	450	500	450	400	370	310	270	210	190	160	190
4	190	180	110	60	0	40	80	140	200	280	340	390	440	510	460	420	370	320	270	250	220	240
4A	230	220	150	100	40	0	40	100	160	240	300	350	400	480	500	460	410	360	310	290	260	280
5	270	260	190	140	80	40	0	60	120	200	260	310	360	440	490	500	450	400	350	330	300	320
6	340	320	260	200	140	100	60	0	60	140	200	250	300	380	430	460	510	470	410	390	360	380
7	400	380	320	260	200	160	120	60	0	80	140	190	240	320	370	400	460	500	470	450	420	440
8	480	460	400	340	280	240	200	140	80	0	60	110	160	240	290	320	380	420	480	500	500	520
9	500	510	450	400	340	300	260	200	140	60	0	50	100	180	230	270	320	370	420	440	470	510
10	440	450	510	450	390	350	310	250	190	110	50	0	50	130	180	210	270	310	370	390	420	460
11	390	410	470	500	440	400	360	300	240	160	100	50	0	80	130	170	220	260	320	340	370	410
12	310	320	390	450	510	480	440	380	320	240	180	130	80	0	50	80	140	180	240	260	290	330
13	270	280	340	400	460	500	490	430	370	290	230	180	130	50	0	40	90	130	190	210	240	280
14	230	240	310	370	420	460	500	460	400	320	270	210	170	80	40	0	60	100	150	180	200	250
15	170	180	250	310	370	410	450	510	460	380	320	270	220	140	90	60	0	40	100	120	150	190
16	130	140	210	270	320	360	400	470	500	420	370	310	260	180	130	100	40	0	60	80	110	150
17	80	90	160	210	270	310	350	410	470	480	420	370	320	240	190	150	100	60	0	20	50	90
18	50	60	130	190	250	290	330	390	450	500	440	390	340	260	210	180	120	80	20	0	30	70
18A	20	40	100	160	220	260	300	360	420	500	470	420	370	290	240	200	150	110	50	30	0	40
19	50	60	130	190	240	280	320	380	440	520	510	460	410	330	280	250	190	150	90	70	40	0

Table 5-6: 3-Axle Toll Rates for Year 2024-2025 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	10	100	180	250	300	350	430	510	610	640	570	510	400	340	290	220	170	100	70	30	60
1A	10	0	90	160	240	290	340	420	500	600	650	580	520	420	360	310	240	180	110	80	50	80
2	100	90	0	70	150	200	250	330	410	510	580	650	610	510	440	400	330	270	200	170	130	170
3	180	160	70	0	70	130	170	260	330	440	510	580	640	580	520	470	400	350	270	250	210	240
4	250	240	150	70	0	50	100	180	260	360	440	510	570	650	590	540	470	420	350	320	280	310
4A	300	290	200	130	50	0	50	130	210	310	380	450	510	620	640	600	520	470	400	370	330	360
5	350	340	250	170	100	50	0	80	160	260	340	410	470	570	630	650	570	520	450	420	380	410
6	430	420	330	260	180	130	80	0	80	180	250	320	380	490	550	600	660	600	530	500	460	500
7	510	500	410	330	260	210	160	80	0	100	180	250	310	410	470	520	590	650	610	580	540	570
8	610	600	510	440	360	310	260	180	100	0	70	140	200	310	370	420	490	540	620	640	640	670
9	640	650	580	510	440	380	340	250	180	70	0	70	130	240	300	340	420	470	540	570	610	660
10	570	580	650	580	510	450	410	320	250	140	70	0	60	170	230	270	350	400	470	500	540	590
11	510	520	610	640	570	510	470	380	310	200	130	60	0	110	170	210	290	340	410	440	480	530
12	400	420	510	580	650	620	570	490	410	310	240	170	110	0	60	110	180	230	310	330	370	420
13	340	360	440	520	590	640	630	550	470	370	300	230	170	60	0	50	120	170	240	270	310	360
14	290	310	400	470	540	600	650	600	520	420	340	270	210	110	50	0	70	130	200	230	260	320
15	220	240	330	400	470	520	570	660	590	490	420	350	290	180	120	70	0	50	130	150	190	250
16	170	180	270	350	420	470	520	600	650	540	470	400	340	230	170	130	50	0	70	100	140	190
17	100	110	200	270	350	400	450	530	610	620	540	470	410	310	240	200	130	70	0	30	70	120
18	70	80	170	250	320	370	420	500	580	640	570	500	440	330	270	230	150	100	30	0	40	90
18A	30	50	130	210	280	330	380	460	540	640	610	540	480	370	310	260	190	140	70	40	0	50
19	60	80	170	240	310	360	410	500	570	670	660	590	530	420	360	320	250	190	120	90	50	0

Table 5-7: 4 to 6 Axle Toll Rates for Year 2024-2025 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	20	150	250	360	430	500	620	730	880	920	820	730	580	490	420	320	240	140	100	40	90
1A	20	0	130	230	340	410	480	600	710	860	940	840	750	600	510	440	340	260	160	120	70	110
2	150	130	0	110	210	290	360	470	590	730	840	940	880	730	640	570	470	390	290	250	190	240
3	250	230	110	0	110	180	250	370	480	630	730	830	920	830	750	680	570	500	390	350	300	340
4	360	340	210	110	0	70	150	260	370	520	630	730	810	940	850	780	680	600	500	460	400	450
4A	430	410	290	180	70	0	70	190	300	450	550	650	740	890	930	860	750	680	570	530	480	520
5	500	480	360	250	150	70	0	120	230	380	480	580	670	820	910	930	830	750	640	600	550	590
6	620	600	470	370	260	190	120	0	110	260	360	470	550	700	790	860	940	860	760	720	670	710
7	730	710	590	480	370	300	230	110	0	150	250	360	440	590	680	750	850	930	870	830	780	820
8	880	860	730	630	520	450	380	260	150	0	110	210	290	450	530	600	700	780	880	930	930	970
9	920	940	840	730	630	550	480	360	250	110	0	100	190	340	430	500	600	680	780	820	870	950
10	820	840	940	830	730	650	580	470	360	210	100	0	90	240	330	390	500	570	680	720	770	850
11	730	750	880	920	810	740	670	550	440	290	190	90	0	150	240	310	410	490	590	630	690	760
12	580	600	730	830	940	890	820	700	590	450	340	240	150	0	90	160	260	340	440	480	530	610
13	490	510	640	750	850	930	910	790	680	530	430	330	240	90	0	70	170	250	350	390	450	520
14	420	440	570	680	780	860	930	860	750	600	500	390	310	160	70	0	100	180	280	320	380	450
15	320	340	470	570	680	750	830	940	850	700	600	500	410	260	170	100	0	80	180	220	280	350
16	240	260	390	500	600	680	750	860	930	780	680	570	490	340	250	180	80	0	100	140	200	270
17	140	160	290	390	500	570	640	760	870	880	780	680	590	440	350	280	180	100	0	40	90	170
18	100	120	250	350	460	530	600	720	830	930	820	720	630	480	390	320	220	140	40	0	50	130
18A	40	70	190	300	400	480	550	670	780	930	870	770	690	530	450	380	280	200	90	50	0	80
19	90	110	240	340	450	520	590	710	820	970	950	850	760	610	520	450	350	270	170	130	80	0

Table 5-8: 7 & above Axle Toll Rates for Year 2024-2025 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	30	180	310	440	530	610	760	890	1070	1120	990	890	710	600	510	390	290	170	120	50	110
1A	30	0	150	280	410	500	590	730	870	1050	1140	1020	920	730	620	540	420	320	200	150	80	140
2	180	150	0	130	260	350	430	580	710	890	1020	1140	1070	880	780	690	570	470	350	300	230	290
3	310	280	130	0	130	220	300	450	580	760	890	1020	1120	1010	910	820	700	600	480	430	360	420
4	440	410	260	130	0	90	180	320	450	630	760	890	990	1140	1040	950	830	730	610	560	490	550
4A	530	500	350	220	90	0	90	230	360	540	670	800	900	1090	1130	1040	920	820	700	650	580	640
5	610	590	430	300	180	90	0	140	280	460	590	710	810	1000	1110	1130	1000	910	780	730	670	720
6	760	730	580	450	320	230	140	0	130	310	440	570	670	860	960	1050	1150	1050	930	880	810	870
7	890	870	710	580	450	360	280	130	0	180	310	430	540	720	830	910	1040	1130	1060	1010	950	1000
8	1070	1050	890	760	630	540	460	310	180	0	130	250	360	540	650	730	860	950	1080	1130	1130	1180
9	1120	1140	1020	890	760	670	590	440	310	130	0	120	230	410	520	600	730	820	950	1000	1060	1160
10	990	1020	1140	1020	890	800	710	570	430	250	120	0	100	290	400	480	600	700	820	870	940	1030
11	890	920	1070	1120	990	900	810	670	540	360	230	100	0	180	290	380	500	600	720	770	840	930
12	710	730	880	1010	1140	1090	1000	860	720	540	410	290	180	0	110	190	310	410	540	580	650	740
13	600	620	780	910	1040	1130	1110	960	830	650	520	400	290	110	0	80	210	300	430	480	540	640
14	510	540	690	820	950	1040	1130	1050	910	730	600	480	380	190	80	0	120	220	340	390	460	550
15	390	420	570	700	830	920	1000	1150	1040	860	730	600	500	310	210	120	0	100	220	270	340	430
16	290	320	470	600	730	820	910	1050	1130	950	820	700	600	410	300	220	100	0	120	170	240	330
17	170	200	350	480	610	700	780	930	1060	1080	950	820	720	540	430	340	220	120	0	50	120	210
18	120	150	300	430	560	650	730	880	1010	1130	1000	870	770	580	480	390	270	170	50	0	70	160
18A	50	80	230	360	490	580	670	810	950	1130	1060	940	840	650	540	460	340	240	120	70	0	90
19	110	140	290	420	550	640	720	870	1000	1180	1160	1030	930	740	640	550	430	330	210	160	90	0

Return Journey

Table 5-9: Car/Jeep/Van Toll Rates for Year 2024-2025 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	5	15	25	35	40	50	60	70	85	85	75	70	55	45	40	30	25	15	10	5	10
1A	5	0	10	20	30	40	45	55	65	80	90	80	70	55	50	40	30	25	15	10	5	10
2	15	10	0	10	20	25	35	45	55	70	80	90	85	70	60	55	45	35	25	25	20	20
3	25	20	10	0	10	15	25	35	45	60	70	80	85	80	70	65	55	45	35	35	30	30
4	35	30	20	10	0	5	15	25	35	50	60	70	75	90	80	75	65	55	45	45	40	40
4A	40	40	25	15	5	0	5	20	30	40	50	60	70	85	85	80	70	65	55	50	45	50
5	50	45	35	25	15	5	0	10	20	35	45	55	65	75	85	85	80	70	60	55	50	55
6	60	55	45	35	25	20	10	0	10	25	35	45	50	65	75	80	90	80	70	70	65	65
7	70	65	55	45	35	30	20	10	0	15	25	35	40	55	65	70	80	90	80	80	75	75
8	85	80	70	60	50	40	35	25	15	0	10	20	30	40	50	55	65	75	85	85	85	90
9	85	90	80	70	60	50	45	35	25	10	0	10	20	30	40	45	55	65	75	75	80	90
10	75	80	90	80	70	60	55	45	35	20	10	0	10	20	30	35	45	55	65	70	75	80
11	70	70	85	85	75	70	65	50	40	30	20	10	0	15	25	30	40	45	55	60	65	70
12	55	55	70	80	90	85	75	65	55	40	30	20	15	0	10	15	25	30	40	45	50	60
13	45	50	60	70	80	85	85	75	65	50	40	30	25	10	0	5	15	25	35	35	40	50
14	40	40	55	65	75	80	85	80	70	55	45	35	30	15	5	0	10	15	25	30	35	45
15	30	30	45	55	65	70	80	90	80	65	55	45	40	25	15	10	0	5	15	20	25	35
16	25	25	35	45	55	65	70	80	90	75	65	55	45	30	25	15	5	0	10	15	20	25
17	15	15	25	35	45	55	60	70	80	85	75	65	55	40	35	25	15	10	0	5	10	15
18	10	10	25	35	45	50	55	70	80	85	75	70	60	45	35	30	20	15	5	0	5	10
18A	5	5	20	30	40	45	50	65	75	85	80	75	65	50	40	35	25	20	10	5	0	5
19	10	10	20	30	40	50	55	65	75	90	90	80	70	60	50	45	35	25	15	10	5	0

Table 5-10: Minibus/LCV Toll Rates for Year 2024-2025 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	5	20	40	55	65	75	95	110	135	140	125	110	90	75	65	50	35	20	15	5	15
1A	5	0	20	35	50	65	75	90	110	130	145	125	115	90	80	70	50	40	25	20	10	15
2	20	20	0	15	30	45	55	70	90	110	130	145	135	110	95	85	70	60	45	35	30	35
3	40	35	15	0	15	25	40	55	75	95	110	125	140	125	115	105	85	75	60	55	45	50
4	55	50	30	15	0	10	20	40	55	80	95	110	125	145	130	120	105	90	75	70	60	70
4A	65	65	45	25	10	0	10	30	45	70	85	100	115	135	140	130	115	105	85	80	75	80
5	75	75	55	40	20	10	0	20	35	55	75	90	100	125	140	140	125	115	100	90	85	90
6	95	90	70	55	40	30	20	0	15	40	55	70	85	105	120	130	145	130	115	110	100	110
7	110	110	90	75	55	45	35	15	0	20	40	55	65	90	105	115	130	140	135	125	120	125
8	135	130	110	95	80	70	55	40	20	0	15	30	45	70	80	90	105	120	135	140	140	150
9	140	145	130	110	95	85	75	55	40	15	0	15	30	50	65	75	90	105	120	125	135	145
10	125	125	145	125	110	100	90	70	55	30	15	0	15	35	50	60	75	85	105	110	115	130
11	110	115	135	140	125	115	100	85	65	45	30	15	0	25	35	45	60	75	90	95	105	115
12	90	90	110	125	145	135	125	105	90	70	50	35	25	0	15	25	40	50	65	75	80	95
13	75	80	95	115	130	140	140	120	105	80	65	50	35	15	0	10	25	40	55	60	70	80
14	65	70	85	105	120	130	140	130	115	90	75	60	45	25	10	0	15	30	45	50	60	70
15	50	50	70	85	105	115	125	145	130	105	90	75	60	40	25	15	0	10	30	35	40	55
16	35	40	60	75	90	105	115	130	140	120	105	85	75	50	40	30	10	0	15	20	30	40
17	20	25	45	60	75	85	100	115	135	135	120	105	90	65	55	45	30	15	0	5	15	25
18	15	20	35	55	70	80	90	110	125	140	125	110	95	75	60	50	35	20	5	0	10	20
18A	5	10	30	45	60	75	85	100	120	140	135	115	105	80	70	60	40	30	15	10	0	10
19	15	15	35	50	70	80	90	110	125	150	145	130	115	95	80	70	55	40	25	20	10	0

Table 5-11: Bus/2-Axle Toll Rates for Year 2024-2025 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	5	40	70	95	115	135	170	200	240	250	220	195	155	135	115	85	65	40	25	10	25
1A	5	0	35	65	90	110	130	160	190	230	255	225	205	160	140	120	90	70	45	30	20	30
2	40	35	0	30	55	75	95	130	160	200	225	255	235	195	170	155	125	105	80	65	50	65
3	70	65	30	0	30	50	70	100	130	170	200	225	250	225	200	185	155	135	105	95	80	95
4	95	90	55	30	0	20	40	70	100	140	170	195	220	255	230	210	185	160	135	125	110	120
4A	115	110	75	50	20	0	20	50	80	120	150	175	200	240	250	230	205	180	155	145	130	140
5	135	130	95	70	40	20	0	30	60	100	130	155	180	220	245	250	225	200	175	165	150	160
6	170	160	130	100	70	50	30	0	30	70	100	125	150	190	215	230	255	235	205	195	180	190
7	200	190	160	130	100	80	60	30	0	40	70	95	120	160	185	200	230	250	235	225	210	220
8	240	230	200	170	140	120	100	70	40	0	30	55	80	120	145	160	190	210	240	250	250	260
9	250	255	225	200	170	150	130	100	70	30	0	25	50	90	115	135	160	185	210	220	235	255
10	220	225	255	225	195	175	155	125	95	55	25	0	25	65	90	105	135	155	185	195	210	230
11	195	205	235	250	220	200	180	150	120	80	50	25	0	40	65	85	110	130	160	170	185	205
12	155	160	195	225	255	240	220	190	160	120	90	65	40	0	25	40	70	90	120	130	145	165
13	135	140	170	200	230	250	245	215	185	145	115	90	65	25	0	20	45	65	95	105	120	140
14	115	120	155	185	210	230	250	230	200	160	135	105	85	40	20	0	30	50	75	90	100	125
15	85	90	125	155	185	205	225	255	230	190	160	135	110	70	45	30	0	20	50	60	75	95
16	65	70	105	135	160	180	200	235	250	210	185	155	130	90	65	50	20	0	30	40	55	75
17	40	45	80	105	135	155	175	205	235	240	210	185	160	120	95	75	50	30	0	10	25	45
18	25	30	65	95	125	145	165	195	225	250	220	195	170	130	105	90	60	40	10	0	15	35
18A	10	20	50	80	110	130	150	180	210	250	235	210	185	145	120	100	75	55	25	15	0	20
19	25	30	65	95	120	140	160	190	220	260	255	230	205	165	140	125	95	75	45	35	20	0

Table 5-12: 3-Axle Toll Rates for Year 2024-2025 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	5	50	90	125	150	175	215	255	305	320	285	255	200	170	145	110	85	50	35	15	30
1A	5	0	45	80	120	145	170	210	250	300	325	290	260	210	180	155	120	90	55	40	25	40
2	50	45	0	35	75	100	125	165	205	255	290	325	305	255	220	200	165	135	100	85	65	85
3	90	80	35	0	35	65	85	130	165	220	255	290	320	290	260	235	200	175	135	125	105	120
4	125	120	75	35	0	25	50	90	130	180	220	255	285	325	295	270	235	210	175	160	140	155
4A	150	145	100	65	25	0	25	65	105	155	190	225	255	310	320	300	260	235	200	185	165	180
5	175	170	125	85	50	25	0	40	80	130	170	205	235	285	315	325	285	260	225	210	190	205
6	215	210	165	130	90	65	40	0	40	90	125	160	190	245	275	300	330	300	265	250	230	250
7	255	250	205	165	130	105	80	40	0	50	90	125	155	205	235	260	295	325	305	290	270	285
8	305	300	255	220	180	155	130	90	50	0	35	70	100	155	185	210	245	270	310	320	320	335
9	320	325	290	255	220	190	170	125	90	35	0	35	65	120	150	170	210	235	270	285	305	330
10	285	290	325	290	255	225	205	160	125	70	35	0	30	85	115	135	175	200	235	250	270	295
11	255	260	305	320	285	255	235	190	155	100	65	30	0	55	85	105	145	170	205	220	240	265
12	200	210	255	290	325	310	285	245	205	155	120	85	55	0	30	55	90	115	155	165	185	210
13	170	180	220	260	295	320	315	275	235	185	150	115	85	30	0	25	60	85	120	135	155	180
14	145	155	200	235	270	300	325	300	260	210	170	135	105	55	25	0	35	65	100	115	130	160
15	110	120	165	200	235	260	285	330	295	245	210	175	145	90	60	35	0	25	65	75	95	125
16	85	90	135	175	210	235	260	300	325	270	235	200	170	115	85	65	25	0	35	50	70	95
17	50	55	100	135	175	200	225	265	305	310	270	235	205	155	120	100	65	35	0	15	35	60
18	35	40	85	125	160	185	210	250	290	320	285	250	220	165	135	115	75	50	15	0	20	45
18A	15	25	65	105	140	165	190	230	270	320	305	270	240	185	155	130	95	70	35	20	0	25
19	30	40	85	120	155	180	205	250	285	335	330	295	265	210	180	160	125	95	60	45	25	0

Table 5-13: 4 to 6 Axle Toll Rates for Year 2024-2025 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	10	75	125	180	215	250	310	365	440	460	410	365	290	245	210	160	120	70	50	20	45
1A	10	0	65	115	170	205	240	300	355	430	470	420	375	300	255	220	170	130	80	60	35	55
2	75	65	0	55	105	145	180	235	295	365	420	470	440	365	320	285	235	195	145	125	95	120
3	125	115	55	0	55	90	125	185	240	315	365	415	460	415	375	340	285	250	195	175	150	170
4	180	170	105	55	0	35	75	130	185	260	315	365	405	470	425	390	340	300	250	230	200	225
4A	215	205	145	90	35	0	35	95	150	225	275	325	370	445	465	430	375	340	285	265	240	260
5	250	240	180	125	75	35	0	60	115	190	240	290	335	410	455	465	415	375	320	300	275	295
6	310	300	235	185	130	95	60	0	55	130	180	235	275	350	395	430	470	430	380	360	335	355
7	365	355	295	240	185	150	115	55	0	75	125	180	220	295	340	375	425	465	435	415	390	410
8	440	430	365	315	260	225	190	130	75	0	55	105	145	225	265	300	350	390	440	465	465	485
9	460	470	420	365	315	275	240	180	125	55	0	50	95	170	215	250	300	340	390	410	435	475
10	410	420	470	415	365	325	290	235	180	105	50	0	45	120	165	195	250	285	340	360	385	425
11	365	375	440	460	405	370	335	275	220	145	95	45	0	75	120	155	205	245	295	315	345	380
12	290	300	365	415	470	445	410	350	295	225	170	120	75	0	45	80	130	170	220	240	265	305
13	245	255	320	375	425	465	455	395	340	265	215	165	120	45	0	35	85	125	175	195	225	260
14	210	220	285	340	390	430	465	430	375	300	250	195	155	80	35	0	50	90	140	160	190	225
15	160	170	235	285	340	375	415	470	425	350	300	250	205	130	85	50	0	40	90	110	140	175
16	120	130	195	250	300	340	375	430	465	390	340	285	245	170	125	90	40	0	50	70	100	135
17	70	80	145	195	250	285	320	380	435	440	390	340	295	220	175	140	90	50	0	20	45	85
18	50	60	125	175	230	265	300	360	415	465	410	360	315	240	195	160	110	70	20	0	25	65
18A	20	35	95	150	200	240	275	335	390	465	435	385	345	265	225	190	140	100	45	25	0	40
19	45	55	120	170	225	260	295	355	410	485	475	425	380	305	260	225	175	135	85	65	40	0

Table 5-14: 7 & above Axle Toll Rates for Year 2024-2025 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	15	90	155	220	265	305	380	445	535	560	495	445	355	300	255	195	145	85	60	25	55
1A	15	0	75	140	205	250	295	365	435	525	570	510	460	365	310	270	210	160	100	75	40	70
2	90	75	0	65	130	175	215	290	355	445	510	570	535	440	390	345	285	235	175	150	115	145
3	155	140	65	0	65	110	150	225	290	380	445	510	560	505	455	410	350	300	240	215	180	210
4	220	205	130	65	0	45	90	160	225	315	380	445	495	570	520	475	415	365	305	280	245	275
4A	265	250	175	110	45	0	45	115	180	270	335	400	450	545	565	520	460	410	350	325	290	320
5	305	295	215	150	90	45	0	70	140	230	295	355	405	500	555	565	500	455	390	365	335	360
6	380	365	290	225	160	115	70	0	65	155	220	285	335	430	480	525	575	525	465	440	405	435
7	445	435	355	290	225	180	140	65	0	90	155	215	270	360	415	455	520	565	530	505	475	500
8	535	525	445	380	315	270	230	155	90	0	65	125	180	270	325	365	430	475	540	565	565	590
9	560	570	510	445	380	335	295	220	155	65	0	60	115	205	260	300	365	410	475	500	530	580
10	495	510	570	510	445	400	355	285	215	125	60	0	50	145	200	240	300	350	410	435	470	515
11	445	460	535	560	495	450	405	335	270	180	115	50	0	90	145	190	250	300	360	385	420	465
12	355	365	440	505	570	545	500	430	360	270	205	145	90	0	55	95	155	205	270	290	325	370
13	300	310	390	455	520	565	555	480	415	325	260	200	145	55	0	40	105	150	215	240	270	320
14	255	270	345	410	475	520	565	525	455	365	300	240	190	95	40	0	60	110	170	195	230	275
15	195	210	285	350	415	460	500	575	520	430	365	300	250	155	105	60	0	50	110	135	170	215
16	145	160	235	300	365	410	455	525	565	475	410	350	300	205	150	110	50	0	60	85	120	165
17	85	100	175	240	305	350	390	465	530	540	475	410	360	270	215	170	110	60	0	25	60	105
18	60	75	150	215	280	325	365	440	505	565	500	435	385	290	240	195	135	85	25	0	35	80
18A	25	40	115	180	245	290	335	405	475	565	530	470	420	325	270	230	170	120	60	35	0	45
19	55	70	145	210	275	320	360	435	500	590	580	515	465	370	320	275	215	165	105	80	45	0

Single Journey

Table 5-15: Car/Jeep/Van Toll Rates for Year 2025-2026 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	10	30	50	70	90	100	120	150	180	180	160	150	120	100	80	60	50	30	20	10	20
1A	10	0	30	50	70	80	100	120	140	170	190	170	150	120	100	90	70	50	30	20	10	20
2	30	30	0	20	40	60	70	90	120	150	170	190	180	150	130	110	90	80	60	50	40	50
3	50	50	20	0	20	40	50	70	100	130	150	170	180	170	150	140	110	100	80	70	60	70
4	70	70	40	20	0	10	30	50	70	100	130	150	160	190	170	160	140	120	100	90	80	90
4A	90	80	60	40	10	0	10	40	60	90	110	130	150	180	180	170	150	140	110	110	100	100
5	100	100	70	50	30	10	0	20	50	80	100	120	130	160	180	190	160	150	130	120	110	120
6	120	120	90	70	50	40	20	0	20	50	70	90	110	140	160	170	190	170	150	140	130	140
7	150	140	120	100	70	60	50	20	0	30	50	70	90	120	140	150	170	190	170	170	160	160
8	180	170	150	130	100	90	80	50	30	0	20	40	60	90	110	120	140	160	180	180	180	190
9	180	190	170	150	130	110	100	70	50	20	0	20	40	70	90	100	120	140	160	160	170	190
10	160	170	190	170	150	130	120	90	70	40	20	0	20	50	70	80	100	110	140	140	150	170
11	150	150	180	180	160	150	130	110	90	60	40	20	0	30	50	60	80	100	120	130	140	150
12	120	120	150	170	190	180	160	140	120	90	70	50	30	0	20	30	50	70	90	100	110	120
13	100	100	130	150	170	180	180	160	140	110	90	70	50	20	0	10	30	50	70	80	90	100
14	80	90	110	140	160	170	190	170	150	120	100	80	60	30	10	0	20	40	60	60	80	90
15	60	70	90	110	140	150	160	190	170	140	120	100	80	50	30	20	0	20	40	40	60	70
16	50	50	80	100	120	140	150	170	190	160	140	110	100	70	50	40	20	0	20	30	40	50
17	30	30	60	80	100	110	130	150	170	180	160	140	120	90	70	60	40	20	0	10	20	30
18	20	20	50	70	90	110	120	140	170	180	160	140	130	100	80	60	40	30	10	0	10	30
18A	10	10	40	60	80	100	110	130	160	180	170	150	140	110	90	80	60	40	20	10	0	20
19	20	20	50	70	90	100	120	140	160	190	190	170	150	120	100	90	70	50	30	30	20	0

Table 5-16: Minibus/LCV Toll Rates for Year 2025-2026 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	10	50	80	120	140	160	200	240	280	300	260	240	190	160	140	100	80	50	30	10	30
1A	10	0	40	80	110	130	160	190	230	280	300	270	240	190	170	140	110	80	50	40	20	40
2	50	40	0	30	70	90	120	150	190	240	270	300	280	230	210	180	150	130	90	80	60	80
3	80	80	30	0	30	60	80	120	150	200	240	270	300	270	240	220	190	160	130	110	100	110
4	120	110	70	30	0	20	50	80	120	170	200	240	260	300	270	250	220	190	160	150	130	150
4A	140	130	90	60	20	0	20	60	100	140	180	210	240	290	300	280	240	220	190	170	150	170
5	160	160	120	80	50	20	0	40	70	120	160	190	220	260	290	300	270	240	210	190	180	190
6	200	190	150	120	80	60	40	0	40	80	120	150	180	230	260	280	300	280	250	230	220	230
7	240	230	190	150	120	100	70	40	0	50	80	110	140	190	220	240	270	300	280	270	250	270
8	280	280	240	200	170	140	120	80	50	0	30	70	90	140	170	190	230	250	290	300	300	310
9	300	300	270	240	200	180	160	120	80	30	0	30	60	110	140	160	190	220	250	260	280	310
10	260	270	300	270	240	210	190	150	110	70	30	0	30	80	110	130	160	190	220	230	250	270
11	240	240	280	300	260	240	220	180	140	90	60	30	0	50	80	100	130	160	190	200	220	250
12	190	190	230	270	300	290	260	230	190	140	110	80	50	0	30	50	80	110	140	160	170	200
13	160	170	210	240	270	300	290	260	220	170	140	110	80	30	0	20	60	80	110	130	140	170
14	140	140	180	220	250	280	300	280	240	190	160	130	100	50	20	0	30	60	90	100	120	150
15	100	110	150	190	220	240	270	300	270	230	190	160	130	80	60	30	0	30	60	70	90	110
16	80	80	130	160	190	220	240	280	300	250	220	190	160	110	80	60	30	0	30	50	60	90
17	50	50	90	130	160	190	210	250	280	290	250	220	190	140	110	90	60	30	0	10	30	60
18	30	40	80	110	150	170	190	230	270	300	260	230	200	160	130	100	70	50	10	0	20	40
18A	10	20	60	100	130	150	180	220	250	300	280	250	220	170	140	120	90	60	30	20	0	20
19	30	40	80	110	150	170	190	230	270	310	310	270	250	200	170	150	110	90	60	40	20	0

Table 5-17: Bus/2-Axle Toll Rates for Year 2025-2026 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	10	80	150	210	250	290	360	420	500	530	470	420	330	280	240	180	140	80	60	30	50
1A	10	0	70	130	190	240	280	340	410	490	540	480	430	340	290	250	200	150	90	70	40	60
2	80	70	0	60	120	160	200	270	330	420	480	540	500	420	370	330	270	220	160	140	110	140
3	150	130	60	0	60	100	140	210	270	360	420	480	530	480	430	390	330	280	230	200	170	200
4	210	190	120	60	0	40	80	150	210	300	360	420	470	540	490	450	390	340	290	260	230	260
4A	250	240	160	100	40	0	40	110	170	260	320	370	420	510	530	490	430	390	330	300	270	300
5	290	280	200	140	80	40	0	70	130	220	280	330	380	470	520	530	470	430	370	350	310	340
6	360	340	270	210	150	110	70	0	60	150	210	270	320	400	450	490	540	490	440	410	380	410
7	420	410	330	270	210	170	130	60	0	80	150	200	250	340	390	430	490	530	500	480	450	470
8	500	490	420	360	300	260	220	150	80	0	60	120	170	250	310	340	400	450	510	530	530	560
9	530	540	480	420	360	320	280	210	150	60	0	60	110	190	240	280	340	390	450	470	500	540
10	470	480	540	480	420	370	330	270	200	120	60	0	50	140	190	230	280	330	390	410	440	490
11	420	430	500	530	470	420	380	320	250	170	110	50	0	90	140	180	230	280	340	360	390	440
12	330	340	420	480	540	510	470	400	340	250	190	140	90	0	50	90	150	190	250	280	310	350
13	280	290	370	430	490	530	520	450	390	310	240	190	140	50	0	40	100	140	200	220	260	300
14	240	250	330	390	450	490	530	490	430	340	280	230	180	90	40	0	60	100	160	190	220	260
15	180	200	270	330	390	430	470	540	490	400	340	280	230	150	100	60	0	50	100	130	160	200
16	140	150	220	280	340	390	430	490	530	450	390	330	280	190	140	100	50	0	60	80	110	160
17	80	90	160	230	290	330	370	440	500	510	450	390	340	250	200	160	100	60	0	20	50	100
18	60	70	140	200	260	300	350	410	480	530	470	410	360	280	220	190	130	80	20	0	30	70
18A	30	40	110	170	230	270	310	380	450	530	500	440	390	310	260	220	160	110	50	30	0	40
19	50	60	140	200	260	300	340	410	470	560	540	490	440	350	300	260	200	160	100	70	40	0

Table 5-18: 3-Axle Toll Rates for Year 2025-2026 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	20	110	190	270	320	370	460	540	650	680	600	540	430	360	310	240	180	100	70	30	70
1A	20	0	90	170	250	300	360	440	520	630	690	620	550	440	380	330	250	190	120	90	50	80
2	110	90	0	80	160	210	260	350	430	540	620	690	650	540	470	420	350	290	210	180	140	180
3	190	170	80	0	80	130	180	270	350	460	540	610	680	610	550	500	420	370	290	260	220	250
4	270	250	160	80	0	50	110	190	280	380	460	540	600	690	630	580	500	440	370	340	300	330
4A	320	300	210	130	50	0	50	140	220	330	410	480	550	660	680	630	560	500	420	390	350	390
5	370	360	260	180	110	50	0	90	170	280	360	430	490	610	670	680	610	550	480	440	410	440
6	460	440	350	270	190	140	90	0	80	190	270	340	410	520	580	630	700	640	560	530	490	530
7	540	520	430	350	280	220	170	80	0	110	190	260	330	440	500	550	630	690	640	610	570	610
8	650	630	540	460	380	330	280	190	110	0	80	150	220	330	390	440	520	580	650	680	680	720
9	680	690	620	540	460	410	360	270	190	80	0	70	140	250	320	370	440	500	570	600	640	700
10	600	620	690	610	540	480	430	340	260	150	70	0	60	180	240	290	370	420	500	530	570	630
11	540	550	650	680	600	550	490	410	330	220	140	60	0	110	180	230	300	360	440	470	510	560
12	430	440	540	610	690	660	610	520	440	330	250	180	110	0	60	120	190	250	320	350	390	450
13	360	380	470	550	630	680	670	580	500	390	320	240	180	60	0	50	130	180	260	290	330	390
14	310	330	420	500	580	630	680	630	550	440	370	290	230	120	50	0	80	130	210	240	280	340
15	240	250	350	420	500	560	610	700	630	520	440	370	300	190	130	80	0	60	130	160	200	260
16	180	190	290	370	440	500	550	640	690	580	500	420	360	250	180	130	60	0	80	110	150	200
17	100	120	210	290	370	420	480	560	640	650	570	500	440	320	260	210	130	80	0	30	70	130
18	70	90	180	260	340	390	440	530	610	680	600	530	470	350	290	240	160	110	30	0	40	100
18A	30	50	140	220	300	350	410	490	570	680	640	570	510	390	330	280	200	150	70	40	0	60
19	70	80	180	250	330	390	440	530	610	720	700	630	560	450	390	340	260	200	130	100	60	0

Table 5-19: 4 to 6 Axle Toll Rates for Year 2025-2026 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	20	160	270	380	460	530	660	780	930	970	870	780	610	520	450	340	260	150	100	50	100
1A	20	0	130	250	360	440	510	640	750	910	1000	890	800	640	540	470	360	280	170	130	70	120
2	160	130	0	110	220	300	380	500	620	780	890	1000	930	770	680	600	500	410	300	260	200	250
3	270	250	110	0	110	190	270	390	510	660	780	880	970	880	790	720	610	530	420	370	320	360
4	380	360	220	110	0	80	150	280	400	550	660	770	860	1000	900	830	720	640	530	490	430	480
4A	460	440	300	190	80	0	70	200	320	470	590	690	780	950	980	910	800	720	610	560	510	560
5	530	510	380	270	150	70	0	120	240	400	510	620	710	870	960	980	870	790	680	640	580	630
6	660	640	500	390	280	200	120	0	120	270	390	490	580	750	840	910	1000	920	810	760	710	760
7	780	750	620	510	400	320	240	120	0	160	270	380	470	630	720	790	900	990	920	880	820	870
8	930	910	780	660	550	470	400	270	160	0	110	220	310	470	570	640	750	830	940	980	980	1030
9	970	1000	890	780	660	590	510	390	270	110	0	110	200	360	450	530	630	720	830	870	930	1010
10	870	890	1000	880	770	690	620	490	380	220	110	0	90	250	350	420	530	610	720	760	820	900
11	780	800	930	970	860	780	710	580	470	310	200	90	0	160	250	330	440	520	630	670	730	810
12	610	640	770	880	1000	950	870	750	630	470	360	250	160	0	90	170	270	360	470	510	570	650
13	520	540	680	790	900	980	960	840	720	570	450	350	250	90	0	70	180	260	370	420	470	550
14	450	470	600	720	830	910	980	910	790	640	530	420	330	170	70	0	110	190	300	340	400	480
15	340	360	500	610	720	800	870	1000	900	750	630	530	440	270	180	110	0	80	190	240	290	370
16	260	280	410	530	640	720	790	920	990	830	720	610	520	360	260	190	80	0	110	150	210	290
17	150	170	300	420	530	610	680	810	920	940	830	720	630	470	370	300	190	110	0	40	100	180
18	100	130	260	370	490	560	640	760	880	980	870	760	670	510	420	340	240	150	40	0	60	140
18A	50	70	200	320	430	510	580	710	820	980	930	820	730	570	470	400	290	210	100	60	0	80
19	100	120	250	360	480	560	630	760	870	1030	1010	900	810	650	550	480	370	290	180	140	80	0

Table 5-20: 7 & above Axle Toll Rates for Year 2025-2026 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	30	190	330	460	560	650	800	950	1140	1190	1050	940	750	630	550	410	310	180	130	60	120
1A	30	0	160	300	440	530	620	780	920	1110	1210	1080	970	770	660	570	440	340	210	150	90	140
2	190	160	0	140	270	370	460	610	760	950	1080	1210	1130	940	820	740	600	500	370	320	250	310
3	330	300	140	0	140	230	320	480	620	810	940	1080	1190	1080	960	870	740	640	510	460	390	440
4	460	440	270	140	0	100	190	340	480	670	810	940	1050	1210	1100	1010	880	780	640	590	520	580
4A	560	530	370	230	100	0	90	240	390	580	710	840	950	1150	1190	1110	970	870	740	690	620	680
5	650	620	460	320	190	90	0	150	290	480	620	750	860	1060	1170	1200	1070	960	830	780	710	770
6	800	780	610	480	340	240	150	0	140	330	470	600	710	910	1020	1110	1220	1120	980	930	860	920
7	950	920	760	620	480	390	290	140	0	190	330	460	570	760	880	970	1100	1200	1130	1070	1000	1060
8	1140	1110	950	810	670	580	480	330	190	0	140	270	380	570	690	780	910	1010	1140	1190	1190	1250
9	1190	1210	1080	940	810	710	620	470	330	140	0	130	240	440	550	640	770	870	1000	1060	1130	1230
10	1050	1080	1210	1080	940	840	750	600	460	270	130	0	110	310	420	510	640	740	870	930	1000	1090
11	940	970	1130	1190	1050	950	860	710	570	380	240	110	0	200	310	400	530	630	760	820	890	980
12	750	770	940	1080	1210	1150	1060	910	760	570	440	310	200	0	110	200	330	440	570	620	690	790
13	630	660	820	960	1100	1190	1170	1020	880	690	550	420	310	110	0	90	220	320	450	510	580	670
14	550	570	740	870	1010	1110	1200	1110	970	780	640	510	400	200	90	0	130	230	370	420	490	590
15	410	440	600	740	880	970	1070	1220	1100	910	770	640	530	330	220	130	0	100	230	290	360	450
16	310	340	500	640	780	870	960	1120	1200	1010	870	740	630	440	320	230	100	0	130	180	250	350
17	180	210	370	510	640	740	830	980	1130	1140	1000	870	760	570	450	370	230	130	0	50	120	220
18	130	150	320	460	590	690	780	930	1070	1190	1060	930	820	620	510	420	290	180	50	0	70	170
18A	60	90	250	390	520	620	710	860	1000	1190	1130	1000	890	690	580	490	360	250	120	70	0	100
19	120	140	310	440	580	680	770	920	1060	1250	1230	1090	980	790	670	590	450	350	220	170	100	0

Return Journey

Table 5-21: Car/Jeep/Van Toll Rates for Year 2025-2026 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	5	15	25	35	45	50	60	75	90	90	80	75	60	50	40	30	25	15	10	5	10
1A	5	0	15	25	35	40	50	60	70	85	95	85	75	60	50	45	35	25	15	10	5	10
2	15	15	0	10	20	30	35	45	60	75	85	95	90	75	65	55	45	40	30	25	20	25
3	25	25	10	0	10	20	25	35	50	65	75	85	90	85	75	70	55	50	40	35	30	35
4	35	35	20	10	0	5	15	25	35	50	65	75	80	95	85	80	70	60	50	45	40	45
4A	45	40	30	20	5	0	5	20	30	45	55	65	75	90	90	85	75	70	55	55	50	50
5	50	50	35	25	15	5	0	10	25	40	50	60	65	80	90	95	80	75	65	60	55	60
6	60	60	45	35	25	20	10	0	10	25	35	45	55	70	80	85	95	85	75	70	65	70
7	75	70	60	50	35	30	25	10	0	15	25	35	45	60	70	75	85	95	85	85	80	80
8	90	85	75	65	50	45	40	25	15	0	10	20	30	45	55	60	70	80	90	90	90	95
9	90	95	85	75	65	55	50	35	25	10	0	10	20	35	45	50	60	70	80	80	85	95
10	80	85	95	85	75	65	60	45	35	20	10	0	10	25	35	40	50	55	70	70	75	85
11	75	75	90	90	80	75	65	55	45	30	20	10	0	15	25	30	40	50	60	65	70	75
12	60	60	75	85	95	90	80	70	60	45	35	25	15	0	10	15	25	35	45	50	55	60
13	50	50	65	75	85	90	90	80	70	55	45	35	25	10	0	5	15	25	35	40	45	50
14	40	45	55	70	80	85	95	85	75	60	50	40	30	15	5	0	10	20	30	30	40	45
15	30	35	45	55	70	75	80	95	85	70	60	50	40	25	15	10	0	10	20	20	30	35
16	25	25	40	50	60	70	75	85	95	80	70	55	50	35	25	20	10	0	10	15	20	25
17	15	15	30	40	50	55	65	75	85	90	80	70	60	45	35	30	20	10	0	5	10	15
18	10	10	25	35	45	55	60	70	85	90	80	70	65	50	40	30	20	15	5	0	5	15
18A	5	5	20	30	40	50	55	65	80	90	85	75	70	55	45	40	30	20	10	5	0	10
19	10	10	25	35	45	50	60	70	80	95	95	85	75	60	50	45	35	25	15	15	10	0

Table 5-22: Minibus/LCV Toll Rates for Year 2025-2026 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	5	25	40	60	70	80	100	120	140	150	130	120	95	80	70	50	40	25	15	5	15
1A	5	0	20	40	55	65	80	95	115	140	150	135	120	95	85	70	55	40	25	20	10	20
2	25	20	0	15	35	45	60	75	95	120	135	150	140	115	105	90	75	65	45	40	30	40
3	40	40	15	0	15	30	40	60	75	100	120	135	150	135	120	110	95	80	65	55	50	55
4	60	55	35	15	0	10	25	40	60	85	100	120	130	150	135	125	110	95	80	75	65	75
4A	70	65	45	30	10	0	10	30	50	70	90	105	120	145	150	140	120	110	95	85	75	85
5	80	80	60	40	25	10	0	20	35	60	80	95	110	130	145	150	135	120	105	95	90	95
6	100	95	75	60	40	30	20	0	20	40	60	75	90	115	130	140	150	140	125	115	110	115
7	120	115	95	75	60	50	35	20	0	25	40	55	70	95	110	120	135	150	140	135	125	135
8	140	140	120	100	85	70	60	40	25	0	15	35	45	70	85	95	115	125	145	150	150	155
9	150	150	135	120	100	90	80	60	40	15	0	15	30	55	70	80	95	110	125	130	140	155
10	130	135	150	135	120	105	95	75	55	35	15	0	15	40	55	65	80	95	110	115	125	135
11	120	120	140	150	130	120	110	90	70	45	30	15	0	25	40	50	65	80	95	100	110	125
12	95	95	115	135	150	145	130	115	95	70	55	40	25	0	15	25	40	55	70	80	85	100
13	80	85	105	120	135	150	145	130	110	85	70	55	40	15	0	10	30	40	55	65	70	85
14	70	70	90	110	125	140	150	140	120	95	80	65	50	25	10	0	15	30	45	50	60	75
15	50	55	75	95	110	120	135	150	135	115	95	80	65	40	30	15	0	15	30	35	45	55
16	40	40	65	80	95	110	120	140	150	125	110	95	80	55	40	30	15	0	15	25	30	45
17	25	25	45	65	80	95	105	125	140	145	125	110	95	70	55	45	30	15	0	5	15	30
18	15	20	40	55	75	85	95	115	135	150	130	115	100	80	65	50	35	25	5	0	10	20
18A	5	10	30	50	65	75	90	110	125	150	140	125	110	85	70	60	45	30	15	10	0	10
19	15	20	40	55	75	85	95	115	135	155	155	135	125	100	85	75	55	45	30	20	10	0

Table 5-23: Bus/2-Axle Toll Rates for Year 2025-2026 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	5	40	75	105	125	145	180	210	250	265	235	210	165	140	120	90	70	40	30	15	25
1A	5	0	35	65	95	120	140	170	205	245	270	240	215	170	145	125	100	75	45	35	20	30
2	40	35	0	30	60	80	100	135	165	210	240	270	250	210	185	165	135	110	80	70	55	70
3	75	65	30	0	30	50	70	105	135	180	210	240	265	240	215	195	165	140	115	100	85	100
4	105	95	60	30	0	20	40	75	105	150	180	210	235	270	245	225	195	170	145	130	115	130
4A	125	120	80	50	20	0	20	55	85	130	160	185	210	255	265	245	215	195	165	150	135	150
5	145	140	100	70	40	20	0	35	65	110	140	165	190	235	260	265	235	215	185	175	155	170
6	180	170	135	105	75	55	35	0	30	75	105	135	160	200	225	245	270	245	220	205	190	205
7	210	205	165	135	105	85	65	30	0	40	75	100	125	170	195	215	245	265	250	240	225	235
8	250	245	210	180	150	130	110	75	40	0	30	60	85	125	155	170	200	225	255	265	265	280
9	265	270	240	210	180	160	140	105	75	30	0	30	55	95	120	140	170	195	225	235	250	270
10	235	240	270	240	210	185	165	135	100	60	30	0	25	70	95	115	140	165	195	205	220	245
11	210	215	250	265	235	210	190	160	125	85	55	25	0	45	70	90	115	140	170	180	195	220
12	165	170	210	240	270	255	235	200	170	125	95	70	45	0	25	45	75	95	125	140	155	175
13	140	145	185	215	245	265	260	225	195	155	120	95	70	25	0	20	50	70	100	110	130	150
14	120	125	165	195	225	245	265	245	215	170	140	115	90	45	20	0	30	50	80	95	110	130
15	90	100	135	165	195	215	235	270	245	200	170	140	115	75	50	30	0	25	50	65	80	100
16	70	75	110	140	170	195	215	245	265	225	195	165	140	95	70	50	25	0	30	40	55	80
17	40	45	80	115	145	165	185	220	250	255	225	195	170	125	100	80	50	30	0	10	25	50
18	30	35	70	100	130	150	175	205	240	265	235	205	180	140	110	95	65	40	10	0	15	35
18A	15	20	55	85	115	135	155	190	225	265	250	220	195	155	130	110	80	55	25	15	0	20
19	25	30	70	100	130	150	170	205	235	280	270	245	220	175	150	130	100	80	50	35	20	0

Table 5-24: 3-Axle Toll Rates for Year 2025-2026 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	10	55	95	135	160	185	230	270	325	340	300	270	215	180	155	120	90	50	35	15	35
1A	10	0	45	85	125	150	180	220	260	315	345	310	275	220	190	165	125	95	60	45	25	40
2	55	45	0	40	80	105	130	175	215	270	310	345	325	270	235	210	175	145	105	90	70	90
3	95	85	40	0	40	65	90	135	175	230	270	305	340	305	275	250	210	185	145	130	110	125
4	135	125	80	40	0	25	55	95	140	190	230	270	300	345	315	290	250	220	185	170	150	165
4A	160	150	105	65	25	0	25	70	110	165	205	240	275	330	340	315	280	250	210	195	175	195
5	185	180	130	90	55	25	0	45	85	140	180	215	245	305	335	340	305	275	240	220	205	220
6	230	220	175	135	95	70	45	0	40	95	135	170	205	260	290	315	350	320	280	265	245	265
7	270	260	215	175	140	110	85	40	0	55	95	130	165	220	250	275	315	345	320	305	285	305
8	325	315	270	230	190	165	140	95	55	0	40	75	110	165	195	220	260	290	325	340	340	360
9	340	345	310	270	230	205	180	135	95	40	0	35	70	125	160	185	220	250	285	300	320	350
10	300	310	345	305	270	240	215	170	130	75	35	0	30	90	120	145	185	210	250	265	285	315
11	270	275	325	340	300	275	245	205	165	110	70	30	0	55	90	115	150	180	220	235	255	280
12	215	220	270	305	345	330	305	260	220	165	125	90	55	0	30	60	95	125	160	175	195	225
13	180	190	235	275	315	340	335	290	250	195	160	120	90	30	0	25	65	90	130	145	165	195
14	155	165	210	250	290	315	340	315	275	220	185	145	115	60	25	0	40	65	105	120	140	170
15	120	125	175	210	250	280	305	350	315	260	220	185	150	95	65	40	0	30	65	80	100	130
16	90	95	145	185	220	250	275	320	345	290	250	210	180	125	90	65	30	0	40	55	75	100
17	50	60	105	145	185	210	240	280	320	325	285	250	220	160	130	105	65	40	0	15	35	65
18	35	45	90	130	170	195	220	265	305	340	300	265	235	175	145	120	80	55	15	0	20	50
18A	15	25	70	110	150	175	205	245	285	340	320	285	255	195	165	140	100	75	35	20	0	30
19	35	40	90	125	165	195	220	265	305	360	350	315	280	225	195	170	130	100	65	50	30	0

Table 5-25: 4 to 6 Axle Toll Rates for Year 2025-2026 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	10	80	135	190	230	265	330	390	465	485	435	390	305	260	225	170	130	75	50	25	50
1A	10	0	65	125	180	220	255	320	375	455	500	445	400	320	270	235	180	140	85	65	35	60
2	80	65	0	55	110	150	190	250	310	390	445	500	465	385	340	300	250	205	150	130	100	125
3	135	125	55	0	55	95	135	195	255	330	390	440	485	440	395	360	305	265	210	185	160	180
4	190	180	110	55	0	40	75	140	200	275	330	385	430	500	450	415	360	320	265	245	215	240
4A	230	220	150	95	40	0	35	100	160	235	295	345	390	475	490	455	400	360	305	280	255	280
5	265	255	190	135	75	35	0	60	120	200	255	310	355	435	480	490	435	395	340	320	290	315
6	330	320	250	195	140	100	60	0	60	135	195	245	290	375	420	455	500	460	405	380	355	380
7	390	375	310	255	200	160	120	60	0	80	135	190	235	315	360	395	450	495	460	440	410	435
8	465	455	390	330	275	235	200	135	80	0	55	110	155	235	285	320	375	415	470	490	490	515
9	485	500	445	390	330	295	255	195	135	55	0	55	100	180	225	265	315	360	415	435	465	505
10	435	445	500	440	385	345	310	245	190	110	55	0	45	125	175	210	265	305	360	380	410	450
11	390	400	465	485	430	390	355	290	235	155	100	45	0	80	125	165	220	260	315	335	365	405
12	305	320	385	440	500	475	435	375	315	235	180	125	80	0	45	85	135	180	235	255	285	325
13	260	270	340	395	450	490	480	420	360	285	225	175	125	45	0	35	90	130	185	210	235	275
14	225	235	300	360	415	455	490	455	395	320	265	210	165	85	35	0	55	95	150	170	200	240
15	170	180	250	305	360	400	435	500	450	375	315	265	220	135	90	55	0	40	95	120	145	185
16	130	140	205	265	320	360	395	460	495	415	360	305	260	180	130	95	40	0	55	75	105	145
17	75	85	150	210	265	305	340	405	460	470	415	360	315	235	185	150	95	55	0	20	50	90
18	50	65	130	185	245	280	320	380	440	490	435	380	335	255	210	170	120	75	20	0	30	70
18A	25	35	100	160	215	255	290	355	410	490	465	410	365	285	235	200	145	105	50	30	0	40
19	50	60	125	180	240	280	315	380	435	515	505	450	405	325	275	240	185	145	90	70	40	0

Table 5-26: 7 & above Axle Toll Rates for Year 2025-2026 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	15	95	165	230	280	325	400	475	570	595	525	470	375	315	275	205	155	90	65	30	60
1A	15	0	80	150	220	265	310	390	460	555	605	540	485	385	330	285	220	170	105	75	45	70
2	95	80	0	70	135	185	230	305	380	475	540	605	565	470	410	370	300	250	185	160	125	155
3	165	150	70	0	70	115	160	240	310	405	470	540	595	540	480	435	370	320	255	230	195	220
4	230	220	135	70	0	50	95	170	240	335	405	470	525	605	550	505	440	390	320	295	260	290
4A	280	265	185	115	50	0	45	120	195	290	355	420	475	575	595	555	485	435	370	345	310	340
5	325	310	230	160	95	45	0	75	145	240	310	375	430	530	585	600	535	480	415	390	355	385
6	400	390	305	240	170	120	75	0	70	165	235	300	355	455	510	555	610	560	490	465	430	460
7	475	460	380	310	240	195	145	70	0	95	165	230	285	380	440	485	550	600	565	535	500	530
8	570	555	475	405	335	290	240	165	95	0	70	135	190	285	345	390	455	505	570	595	595	625
9	595	605	540	470	405	355	310	235	165	70	0	65	120	220	275	320	385	435	500	530	565	615
10	525	540	605	540	470	420	375	300	230	135	65	0	55	155	210	255	320	370	435	465	500	545
11	470	485	565	595	525	475	430	355	285	190	120	55	0	100	155	200	265	315	380	410	445	490
12	375	385	470	540	605	575	530	455	380	285	220	155	100	0	55	100	165	220	285	310	345	395
13	315	330	410	480	550	595	585	510	440	345	275	210	155	55	0	45	110	160	225	255	290	335
14	275	285	370	435	505	555	600	555	485	390	320	255	200	100	45	0	65	115	185	210	245	295
15	205	220	300	370	440	485	535	610	550	455	385	320	265	165	110	65	0	50	115	145	180	225
16	155	170	250	320	390	435	480	560	600	505	435	370	315	220	160	115	50	0	65	90	125	175
17	90	105	185	255	320	370	415	490	565	570	500	435	380	285	225	185	115	65	0	25	60	110
18	65	75	160	230	295	345	390	465	535	595	530	465	410	310	255	210	145	90	25	0	35	85
18A	30	45	125	195	260	310	355	430	500	595	565	500	445	345	290	245	180	125	60	35	0	50
19	60	70	155	220	290	340	385	460	530	625	615	545	490	395	335	295	225	175	110	85	50	0

Above rates are applicable for year 2025-26. Toll rates for future years have been worked out as per applicable rate revision policy. These rates have been used for calculating revenue of future years.

5.2 Traffic Forecast

Growth rates recommended in the previous section of the report are used to arrive at traffic projections for future years.

These projections have been done for the following three cases of growth up to concession period.

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Traffic of horizon years has been worked out on the basis of growth as discussed previously. Traffic forecast of total volume (all category) is given in tables below.

Table 5-27: Total Tollable Traffic (Pessimistic Growth Scenario)

Year/ Types of vehicles	Car/Jeep/Van	Minibus /LCV	Bus/ 2- Axle	3 - Axle	4 to 6 Axle	7 and Above Axle	Total Tollable Traffic (No.)	PCU (Including Exempted)
2024-25	184471	8952	10645	6711	13867	10	**224656**	**312413**
2025-26	197038	9361	10971	6979	14423	0	**238772**	**329833**
2026-27	210447	9763	11280	7237	14987	0	**253714**	**348084**
2027-28	224769	10182	11598	7502	15572	0	**269623**	**367416**
2028-29	236971	10584	11809	7692	15987	0	**283043**	**383292**
2029-30	249828	11003	12024	7885	16415	0	**297155**	**399927**
2030-31	263362	11427	12244	8081	16850	0	**311964**	**417303**
2031-32	277658	11873	12468	8283	17294	0	**327576**	**435544**
2032-33	292708	12334	12694	8488	17745	0	**343969**	**454608**
2033-34	303336	12776	12811	8602	18014	0	**355539**	**467802**
2034-35	314347	13234	12930	8717	18291	0	**367519**	**481449**
2035-36	325770	13697	13050	8835	18571	0	**379923**	**495540**
2036-37	337601	14177	13170	8957	18854	0	**392759**	**510091**
2037-38	349860	14686	13291	9079	19142	0	**406058**	**525138**

Year/ Types of vehicles	Car/Jeep/Van	Minibus /LCV	Bus/ 2- Axle	3 - Axle	4 to 6 Axle	7 and Above Axle	Total Tollable Traffic (No.)	PCU (Including Exempted)
2038-39	359562	15158	13366	9151	19312	0	**416549**	**536754**
2039-40	369519	15640	13441	9223	19487	0	**427310**	**548663**
2040-41	379758	16149	13516	9296	19662	0	**438381**	**560897**
2041-42	390279	16667	13591	9369	19838	0	**449744**	**573431**
2042-43	401083	17209	13666	9442	20015	0	**461415**	**586288**
2043-44	409169	17717	13693	9470	20101	0	**470150**	**595688**
2044-45	417414	18231	13720	9498	20187	0	**479050**	**605256**
2045-46	425828	18756	13747	9526	20273	0	**488130**	**615010**
2046-47	434406	19298	13774	9554	20359	0	**497391**	**624953**
2047-48	443159	19857	13801	9582	20445	0	**506844**	**635096**
2048-49	449203	20372	13801	9586	20455	0	**513417**	**641970**
2049-50	455331	20897	13801	9590	20465	0	**520084**	**648942**
2050-51	461530	21437	13801	9594	20475	0	**526837**	**656008**
2051-52	467818	21987	13801	9598	20485	0	**533689**	**663178**
2052-53	474186	22554	13801	9602	20495	0	**540638**	**670454**
2053-54	480331	23127	13801	9606	20505	0	**547370**	**677515**

Table 5-28: Total Tollable Traffic (Most likely Growth Scenario)

Year/ Types of vehicles	Car/Jeep/Van	Minibus /LCV	Bus/ 2- Axle	3 - Axle	4 to 6 Axle	7 and Above Axle	Total Tollable Traffic (No.)	PCU (Including Exempted)
2024-25	184471	8952	10645	6711	13867	10	**224656**	**312413**
2025-26	197488	9381	10996	6996	14460	0	**239321**	**330606**
2026-27	211427	9807	11329	7274	15066	0	**254903**	**349744**
2027-28	226355	10247	11671	7560	15695	0	**271528**	**370046**
2028-29	239207	10674	11918	7771	16149	0	**285719**	**386956**

Year/ Types of vehicles	Car/Jeep/Van	Minibus /LCV	Bus/ 2- Axle	3 - Axle	4 to 6 Axle	7 and Above Axle	Total Tollable Traffic (No.)	PCU (Including Exempted)
2029-30	252779	11116	12172	7983	16617	0	**300667**	**404695**
2030-31	267114	11575	12426	8201	17101	0	**316417**	**423312**
2031-32	282258	12047	12683	8424	17598	0	**333010**	**442841**
2032-33	298266	12546	12945	8649	18113	0	**350519**	**463376**
2033-34	309842	13017	13094	8795	18438	0	**363186**	**478006**
2034-35	321866	13516	13246	8944	18764	0	**376336**	**493148**
2035-36	334357	14029	13399	9096	19097	0	**389978**	**508822**
2036-37	347328	14563	13553	9249	19438	0	**404131**	**525050**
2037-38	360809	15122	13707	9402	19779	0	**418819**	**541825**
2038-39	371708	15650	13811	9509	20018	0	**430696**	**555224**
2039-40	382937	16194	13915	9616	20261	0	**442923**	**568996**
2040-41	394503	16754	14020	9723	20504	0	**455504**	**583131**
2041-42	406412	17327	14126	9830	20751	0	**468446**	**597650**
2042-43	418693	17925	14233	9938	21001	0	**481790**	**612598**
2043-44	428180	18487	14300	9993	21143	0	**492103**	**623933**
2044-45	437882	19060	14367	10048	21286	0	**502643**	**635504**
2045-46	447793	19655	14434	10103	21429	0	**513414**	**647317**
2046-47	457935	20267	14501	10158	21572	0	**524433**	**659387**
2047-48	468304	20909	14568	10214	21716	0	**535711**	**671736**
2048-49	475872	21501	14587	10235	21776	0	**543971**	**680582**
2049-50	483559	22105	14606	10256	21836	0	**552362**	**689565**
2050-51	491365	22724	14625	10277	21896	0	**560887**	**698689**
2051-52	499293	23367	14644	10298	21957	0	**569559**	**707976**
2052-53	507355	24021	14663	10319	22018	0	**578376**	**717414**
2053-54	515144	24697	14682	10340	22079	0	**586942**	**726611**

Table 5-29: Total Tollable Traffic (Optimistic Growth Scenario)

Year/ Types of vehicles	Car/Jeep/Van	Minibus /LCV	Bus/ 2- Axle	3 - Axle	4 to 6 Axle	7 and Above Axle	Total Tollable Traffic (No.)	PCU (Including Exempted)
2024-25	184471	8952	10645	6711	13867	10	**224656**	**312413**
2025-26	197961	9405	11024	7009	14499	0	**239898**	**331413**
2026-27	212440	9855	11387	7309	15151	0	**256142**	**351490**
2027-28	227975	10330	11760	7623	15829	0	**273517**	**372850**
2028-29	241480	10796	12040	7849	16336	0	**288501**	**390853**
2029-30	255795	11274	12329	8078	16859	0	**304335**	**409793**
2030-31	270947	11769	12624	8312	17391	0	**321043**	**429668**
2031-32	286997	12290	12923	8557	17932	0	**338699**	**450566**
2032-33	303989	12835	13225	8807	18488	0	**357344**	**472534**
2033-34	316554	13359	13426	8979	18860	0	**371178**	**488678**
2034-35	329638	13905	13630	9155	19242	0	**385570**	**505440**
2035-36	343253	14469	13834	9332	19632	0	**400520**	**522799**
2036-37	357428	15054	14038	9511	20027	0	**416058**	**540778**
2037-38	372188	15665	14243	9693	20425	0	**432214**	**559406**
2038-39	384372	16248	14387	9830	20733	0	**445570**	**574694**
2039-40	396948	16859	14532	9967	21046	0	**459352**	**590441**
2040-41	409942	17487	14679	10105	21361	0	**473574**	**606649**
2041-42	423344	18139	14828	10243	21678	0	**488232**	**623317**
2042-43	437192	18816	14980	10382	21998	0	**503368**	**640493**
2043-44	448190	19456	15081	10472	22206	0	**515405**	**653960**
2044-45	459466	20114	15182	10563	22415	0	**527740**	**667740**
2045-46	471019	20793	15283	10655	22625	0	**540375**	**681835**
2046-47	482864	21504	15385	10750	22835	0	**553338**	**696283**
2047-48	495027	22243	15487	10845	23045	0	**566647**	**711090**
2048-49	504257	22922	15549	10890	23158	0	**576776**	**722168**
2049-50	513662	23633	15612	10935	23271	0	**587113**	**733472**

Year/ Types of vehicles	Car/Jeep/Van	Minibus /LCV	Bus/ 2- Axle	3 - Axle	4 to 6 Axle	7 and Above Axle	Total Tollable Traffic (No.)	PCU (Including Exempted)
2050-51	523239	24367	15675	10980	23385	0	**597646**	**744987**
2051-52	532994	25122	15738	11025	23499	0	**608378**	**756712**
2052-53	542929	25901	15801	11070	23613	0	**619314**	**768652**
2053-54	552559	26706	15864	11116	23727	0	**629972**	**780330**

5.2 Toll Revenue at all toll plazas

Toll revenue has been worked out for concession period as per projected traffic and worked out rates.

5.4 Revenue Forecast

Revenue forecast with traffic numbers as per above analysis and rates worked out is given in following table.

Table 5-30: Total Toll Revenue – Rs. Cr (Pessimistic)

Year /TP no.	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19	Total
2024-25	20.94	0.00	13.76	96.56	11.76	13.18	34.35	90.79	37.17	15.89	47.46	7.01	101.21	24.23	6.08	26.34	21.62	112.75	18.59	21.31	7.92	65.25	**794.19**
2025-26	22.99	0.00	15.68	106.98	12.98	14.98	38.21	99.47	41.77	17.70	53.20	7.68	111.54	27.12	6.70	29.47	24.10	123.85	21.08	25.29	8.84	74.28	**883.92**
2026-27	25.20	0.00	17.18	117.77	14.72	16.59	42.20	110.39	46.18	19.40	58.60	8.51	123.63	29.86	7.45	33.01	26.76	140.30	23.70	27.61	9.71	86.82	**985.56**
2027-28	28.11	0.00	19.15	132.36	16.24	18.80	47.49	122.63	51.90	21.95	65.55	9.40	137.79	34.29	8.53	37.09	29.72	154.31	26.41	30.68	10.69	96.32	**1,099.41**
2028-29	31.61	0.00	21.80	144.44	17.94	20.81	52.23	134.89	57.28	24.32	72.66	10.20	151.43	37.68	9.21	40.78	32.44	174.05	28.53	33.12	12.34	109.35	**1,217.11**
2029-30	34.36	0.00	23.71	159.67	20.02	23.34	57.56	147.54	63.24	26.76	80.60	11.40	166.50	41.61	10.14	45.66	35.85	188.28	31.33	36.65	13.43	117.87	**1,335.54**
2030-31	38.72	0.00	26.50	176.00	22.09	25.64	63.51	162.04	70.01	29.54	89.33	12.53	184.40	45.54	11.34	49.45	39.33	204.73	35.85	42.69	14.99	131.99	**1,476.21**
2031-32	42.88	0.00	29.08	193.48	24.58	28.41	70.14	178.24	78.04	32.52	98.23	13.56	203.03	51.16	12.60	54.94	43.02	230.11	38.60	46.40	17.37	151.21	**1,637.61**
2032-33	47.30	0.00	32.42	213.14	26.85	31.59	77.45	195.30	85.59	36.17	109.13	14.89	222.92	56.87	13.98	61.62	47.40	249.01	42.48	50.53	18.87	164.43	**1,797.92**
2033-34	52.34	0.00	35.44	231.64	29.67	34.75	84.42	212.64	93.68	39.54	118.95	16.29	243.56	61.85	15.30	67.39	51.50	276.60	47.60	55.05	20.13	183.58	**1,971.91**
2034-35	56.64	0.00	38.75	254.21	32.53	37.97	92.51	232.08	102.72	43.28	130.74	17.74	264.52	67.57	16.68	73.65	56.60	297.32	51.58	62.25	22.79	199.88	**2,152.02**
2035-36	62.56	0.00	43.00	277.83	35.65	41.95	101.16	252.18	112.13	47.55	143.17	19.43	289.77	74.86	18.25	81.39	61.70	328.50	56.97	68.36	24.84	222.68	**2,363.93**

Year /TP no.	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19	Total
2036-37	70.79	0.00	46.60	303.35	39.04	46.01	110.89	274.63	123.05	52.44	156.33	20.99	315.71	80.81	20.20	88.93	67.27	363.40	63.15	74.35	27.72	247.18	2,592.83
2037-38	76.42	0.00	51.26	329.78	42.47	50.71	121.56	298.58	136.13	56.95	171.44	23.07	345.77	89.22	22.10	97.78	73.28	389.52	68.37	79.80	29.93	265.28	2,819.42
2038-39	83.05	0.00	56.48	357.10	46.70	54.68	131.92	324.52	146.71	62.35	186.86	25.10	374.88	96.94	24.10	106.08	80.14	426.09	74.89	89.03	32.97	294.52	3,075.12
2039-40	91.70	0.00	61.23	389.45	50.90	60.17	144.12	352.87	160.31	67.73	204.11	27.22	409.29	105.13	26.42	116.18	87.00	467.48	81.39	97.06	36.06	323.30	3,359.13
2040-41	99.92	0.00	66.74	422.06	54.81	65.89	156.75	381.69	175.54	73.97	222.91	29.44	443.83	115.03	28.97	125.89	93.99	506.66	88.47	107.12	39.48	358.04	3,657.20
2041-42	109.21	0.00	73.08	459.66	59.95	71.72	170.61	413.49	189.70	80.53	242.76	32.18	482.17	125.68	31.66	138.59	102.24	553.78	96.42	115.25	43.55	390.51	3,982.76
2042-43	119.43	0.00	79.71	500.21	65.31	78.54	186.01	449.81	207.95	87.97	265.20	35.10	525.54	137.65	34.74	150.95	111.60	604.23	105.21	128.04	48.04	431.11	4,352.39
2043-44	131.13	0.00	86.87	542.96	71.31	86.14	202.14	488.21	226.96	96.01	288.78	37.99	571.26	149.46	37.98	163.37	120.77	654.11	116.23	138.38	51.42	468.49	4,729.98
2044-45	141.66	0.00	93.84	584.74	77.49	93.55	219.21	527.24	245.51	103.96	312.88	41.34	616.80	161.97	41.00	177.01	130.43	706.46	123.05	152.82	55.97	507.26	5,114.19
2045-46	153.46	0.00	102.93	634.00	84.03	101.67	237.79	570.47	266.97	113.04	339.80	44.54	667.10	176.11	44.32	193.61	141.87	773.37	134.90	162.07	61.35	558.08	5,561.47
2046-47	169.69	0.00	110.62	685.62	91.48	110.33	258.36	616.36	290.32	122.82	367.93	48.64	724.16	191.73	48.39	210.70	153.85	835.96	146.96	178.69	66.64	606.54	6,035.79
2047-48	183.26	0.00	121.81	746.27	100.17	121.49	282.68	671.42	317.36	134.14	402.06	52.73	786.14	209.30	53.07	229.74	166.73	916.05	159.72	195.95	72.96	669.16	6,592.22
2048-49	198.53	0.00	131.11	802.95	107.71	130.74	304.25	722.38	341.92	144.47	435.41	57.11	847.60	226.00	57.23	248.44	180.25	980.63	173.86	210.08	78.62	715.15	7,094.43
2049-50	216.53	0.00	141.69	869.02	116.63	141.59	330.22	779.52	370.81	156.82	470.96	62.06	915.33	244.84	61.75	269.46	194.44	1064.95	187.82	227.89	86.67	781.42	7,690.43
2050-51	234.70	0.00	154.05	938.50	127.06	153.44	355.87	842.06	401.58	169.95	509.57	66.90	988.85	265.06	67.08	291.33	210.43	1153.44	203.70	248.03	93.64	848.57	8,323.83
2051-52	255.47	0.00	167.93	1017.53	137.55	168.27	387.09	914.47	438.36	184.89	553.66	72.98	1073.01	289.16	73.12	317.26	228.33	1249.92	222.35	269.71	101.11	926.58	9,048.74
2052-53	277.11	0.00	181.47	1096.70	148.71	181.34	417.90	984.38	473.79	199.23	599.59	78.72	1155.96	311.47	78.88	343.03	245.85	1347.44	240.52	292.95	109.95	1002.40	9,767.37
2053-54	299.53	0.00	196.87	1186.08	161.00	196.91	453.14	1062.95	512.84	216.71	648.94	85.42	1250.98	339.38	85.76	373.67	266.11	1455.66	260.13	316.08	120.40	1086.12	10574.70

Table 5-31: Total Toll Revenue – Rs. Cr (Most Likely)

Year /TP no.	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19	Total
2024-25	20.94	0.00	13.76	96.56	11.76	13.18	34.35	90.79	37.17	15.89	47.46	7.01	101.21	24.23	6.08	26.34	21.62	112.75	18.59	21.31	7.92	65.25	794.19
2025-26	23.04	0.00	15.72	107.20	13.00	15.03	38.35	99.70	41.89	17.75	53.32	7.69	111.86	27.15	6.71	29.53	24.15	124.20	21.12	25.39	8.88	74.47	886.16
2026-27	25.31	0.00	17.27	118.25	14.77	16.65	42.48	110.88	46.41	19.52	58.89	8.53	124.31	29.98	7.47	33.16	26.90	141.03	23.81	27.77	9.77	87.25	990.41
2027-28	28.28	0.00	19.33	133.21	16.33	18.92	47.95	123.47	52.26	22.14	66.02	9.44	138.84	34.51	8.57	37.35	29.98	155.45	26.61	30.93	10.78	97.03	1,107.39
2028-29	31.88	0.00	22.05	145.64	18.07	20.98	52.86	136.18	57.81	24.57	73.39	10.33	152.86	38.00	9.26	41.17	32.79	175.87	28.84	33.52	12.49	110.42	1,228.98
2029-30	34.73	0.00	24.02	161.35	20.22	23.57	58.38	149.32	64.03	27.09	81.62	11.65	168.46	42.08	10.21	46.19	36.31	190.88	31.79	37.24	13.66	119.31	1,352.09
2030-31	39.24	0.00	26.87	178.27	22.33	25.92	64.67	164.43	71.12	29.99	90.70	12.91	187.03	46.15	11.42	50.13	39.93	208.23	36.50	43.52	15.30	133.94	1,498.60
2031-32	43.56	0.00	29.56	196.52	24.89	28.79	71.67	181.25	79.51	33.11	100.03	14.07	206.42	51.97	12.72	55.80	43.78	234.78	39.45	47.44	17.80	153.79	1,666.89
2032-33	48.15	0.00	32.99	217.09	27.24	32.07	79.37	199.04	87.42	36.90	111.47	15.56	227.17	57.89	14.13	62.70	48.37	254.69	43.56	51.79	19.41	167.58	1,834.60

Year /TP no.	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19	Total
2033-34	53.43	0.00	36.14	236.43	30.20	35.35	86.76	217.21	95.94	40.45	121.75	17.03	248.82	63.15	15.50	68.72	52.64	283.62	48.97	56.56	20.76	187.56	**2,016.98**
2034-35	57.97	0.00	39.57	260.12	33.22	38.71	95.34	237.67	105.45	44.36	134.11	18.56	270.89	69.17	16.95	75.27	57.96	305.61	53.19	64.07	23.57	204.69	**2,206.45**
2035-36	64.16	0.00	44.00	285.03	36.52	42.84	104.49	258.84	115.40	48.85	147.14	20.35	297.55	76.84	18.59	83.34	63.29	338.39	58.90	70.52	25.75	228.57	**2,429.35**
2036-37	72.77	0.00	47.75	312.04	40.08	47.09	114.79	282.57	126.98	53.96	161.01	22.00	325.05	83.12	20.61	91.25	69.06	375.19	65.40	76.87	28.80	254.33	**2,670.73**
2037-38	78.73	0.00	52.62	340.16	43.75	52.02	126.11	307.99	140.93	58.73	176.96	24.20	357.04	92.12	22.58	100.55	75.34	403.17	70.98	82.70	31.19	273.58	**2,911.47**
2038-39	85.80	0.00	58.24	369.46	48.26	56.20	137.17	335.61	152.28	64.44	193.43	26.37	388.12	100.29	24.67	109.46	82.59	442.17	77.89	92.43	34.40	304.52	**3,183.81**
2039-40	95.00	0.00	63.40	404.14	52.78	61.99	150.18	365.86	166.80	70.13	211.81	28.65	424.83	108.98	27.11	120.35	89.86	486.35	84.83	101.00	37.69	335.20	**3,486.95**
2040-41	103.78	0.00	69.36	439.27	57.01	68.02	163.74	396.83	183.04	76.79	231.93	31.01	461.77	119.48	29.80	130.83	97.35	528.32	92.38	111.72	41.33	372.19	**3,805.93**
2041-42	113.68	0.00	76.24	479.80	62.55	74.21	178.65	430.98	198.29	83.82	253.23	33.93	502.94	130.79	32.63	144.48	106.20	578.77	100.87	120.48	45.69	407.05	**4,155.28**
2042-43	124.59	0.00	83.43	523.66	68.36	81.45	195.31	469.99	217.91	91.77	277.41	37.05	549.65	143.54	35.92	157.85	116.26	632.90	110.28	134.17	50.51	450.55	**4,552.56**
2043-44	137.04	0.00	91.09	569.76	74.77	89.50	212.71	511.20	238.31	100.38	302.79	40.14	598.93	156.30	39.33	171.21	125.99	686.76	122.08	145.40	54.16	490.79	**4,958.63**
2044-45	148.35	0.00	98.55	615.08	81.36	97.39	231.19	553.24	258.31	108.95	328.77	43.74	648.26	169.91	42.51	185.91	136.34	743.50	129.54	161.01	59.05	532.69	**5,373.63**
2045-46	161.00	0.00	108.27	668.52	88.37	106.08	251.37	599.80	281.49	118.77	357.94	47.20	702.97	185.27	46.03	203.72	148.56	815.86	142.37	171.23	64.86	587.40	**5,857.05**
2046-47	178.37	0.00	116.58	724.73	96.37	115.37	273.65	649.47	306.79	129.37	388.55	51.65	765.19	202.28	50.37	222.20	161.41	883.94	155.49	189.33	70.60	639.96	**6,371.67**
2047-48	193.07	0.00	128.59	790.79	105.72	127.36	299.92	709.30	336.01	141.67	425.64	56.14	833.01	221.45	55.34	242.80	175.25	970.93	169.38	208.18	77.46	707.72	**6,975.71**
2048-49	209.64	0.00	138.71	852.99	113.90	137.36	323.58	764.93	362.83	152.85	461.88	60.92	900.39	239.51	59.92	263.06	190.03	1041.88	184.75	223.59	83.64	758.12	**7,524.48**
2049-50	229.14	0.00	150.22	925.56	123.59	149.12	352.00	827.40	394.36	166.23	500.70	66.31	974.83	259.89	64.92	285.85	205.62	1134.13	200.09	243.01	92.38	830.33	**8,175.69**
2050-51	248.95	0.00	163.70	1002.10	134.92	161.96	380.26	895.92	428.07	180.48	542.98	71.61	1055.73	281.80	70.81	309.66	223.24	1231.29	217.52	264.98	100.03	903.85	**8,869.88**
2051-52	271.59	0.00	178.85	1089.26	146.39	177.97	414.54	975.36	468.42	196.80	591.35	78.24	1148.42	307.92	77.48	337.89	242.97	1337.45	238.00	288.73	108.30	989.28	**9,665.22**
2052-53	295.33	0.00	193.73	1177.03	158.65	192.21	448.49	1052.43	507.41	212.55	641.91	84.56	1240.38	332.21	83.92	366.01	262.42	1445.25	258.04	314.27	118.09	1072.66	**10,457.55**
2053-54	319.96	0.00	210.68	1276.31	172.15	209.18	487.43	1139.09	550.39	231.72	696.29	91.93	1345.52	362.58	91.61	399.48	284.92	1565.00	279.72	339.83	129.62	1164.97	**11348.37**

Table 5-32: Total Toll Revenue –Rs. Cr (Optimistic)

Year /TP no.	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19	Total
2024-25	20.94	0.00	13.76	96.56	11.76	13.18	34.35	90.79	37.17	15.89	47.46	7.01	101.21	24.23	6.08	26.34	21.62	112.75	18.59	21.31	7.92	65.25	**794.19**
2025-26	23.08	0.00	15.76	107.57	13.03	15.06	38.44	99.93	41.99	17.78	53.41	7.70	112.08	27.21	6.72	29.62	24.23	124.51	21.19	25.46	8.89	74.63	**888.29**
2026-27	25.42	0.00	17.37	118.95	14.84	16.75	42.69	111.48	46.61	19.59	59.18	8.57	124.92	30.14	7.49	33.35	27.08	141.71	23.92	27.93	9.80	87.67	**995.46**
2027-28	28.47	0.00	19.51	134.29	16.45	19.08	48.30	124.51	52.62	22.26	66.56	9.51	139.88	34.77	8.61	37.70	30.26	156.61	26.77	31.21	10.82	97.75	**1,115.96**
2028-29	32.18	0.00	22.28	147.23	18.24	21.22	53.42	137.62	58.42	24.78	74.15	10.43	154.41	38.38	9.32	41.64	33.22	177.62	29.07	33.90	12.58	111.49	**1,241.63**
2029-30	35.17	0.00	24.32	163.55	20.43	23.91	59.20	151.26	64.90	27.39	82.65	11.80	170.58	42.56	10.31	46.80	36.95	193.22	32.13	37.76	13.78	120.78	**1,369.43**
2030-31	39.82	0.00	27.29	181.14	22.61	26.38	65.72	167.03	72.22	30.40	92.07	13.10	189.79	46.76	11.58	50.89	40.79	211.33	36.95	44.22	15.48	135.90	**1,521.48**
2031-32	44.33	0.00	30.09	200.13	25.25	29.39	72.98	184.59	80.89	33.60	101.80	14.31	209.98	52.74	12.94	56.80	44.87	238.89	39.99	48.30	18.05	156.38	**1,696.28**
2032-33	49.16	0.00	33.65	221.62	27.66	32.86	80.99	203.26	89.13	37.53	113.70	15.87	231.58	58.84	14.42	63.97	49.72	259.84	44.24	52.87	19.73	170.82	**1,871.46**
2033-34	54.66	0.00	36.95	241.85	30.74	36.33	88.73	222.37	98.06	41.21	124.52	17.43	254.20	64.39	15.85	70.32	54.19	290.06	49.83	57.88	21.14	191.61	**2,062.32**
2034-35	59.42	0.00	40.55	266.72	33.90	39.90	97.70	244.01	108.03	45.30	137.50	19.05	277.36	70.77	17.35	77.24	59.75	313.28	54.27	65.73	24.07	209.57	**2,261.44**
2035-36	65.91	0.00	45.18	292.94	37.35	44.30	107.29	266.46	118.49	49.98	151.27	20.95	305.36	78.92	19.05	85.77	65.36	347.64	60.23	72.51	26.36	234.50	**2,495.81**
2036-37	74.93	0.00	49.13	321.43	41.12	48.84	118.15	291.58	130.65	55.39	165.96	22.72	334.44	85.70	21.14	94.16	71.51	386.35	67.05	79.21	29.54	261.56	**2,750.57**
2037-38	81.21	0.00	54.28	351.28	44.98	54.10	130.09	318.67	145.28	60.46	182.86	25.04	368.26	95.20	23.19	104.03	78.26	416.03	72.94	85.41	32.05	281.99	**3,005.62**
2038-39	88.68	0.00	60.20	382.51	49.72	58.64	141.92	348.14	157.40	66.52	200.21	27.36	401.29	103.90	25.40	113.51	85.95	457.31	80.29	95.72	35.46	314.68	**3,294.78**
2039-40	98.38	0.00	65.67	419.44	54.47	64.85	155.87	380.46	172.88	72.59	219.67	29.80	440.34	113.25	27.96	125.03	93.69	504.25	87.73	104.84	38.94	347.24	**3,617.37**
2040-41	107.72	0.00	72.01	457.08	58.94	71.37	170.51	413.73	190.24	79.63	241.04	32.36	479.86	124.46	30.78	136.20	101.67	549.11	95.88	116.26	42.82	386.48	**3,958.13**
2041-42	118.26	0.00	79.33	500.54	64.80	78.09	186.64	450.43	206.65	87.14	263.72	35.49	523.89	136.60	33.76	150.74	111.06	602.96	105.07	125.74	47.48	423.69	**4,332.07**
2042-43	129.91	0.00	86.99	547.56	70.94	85.96	204.60	492.50	227.65	95.64	289.46	38.83	574.02	150.34	37.19	165.09	121.86	660.89	115.25	140.39	52.60	470.12	**4,757.79**
2043-44	143.38	0.00	95.33	597.44	77.74	94.72	223.31	537.08	249.52	104.78	316.97	42.21	627.11	164.04	40.82	179.55	132.45	718.96	127.87	152.50	56.53	513.27	**5,195.58**
2044-45	155.72	0.00	103.52	646.81	84.79	103.34	243.20	582.90	271.07	113.93	345.26	46.12	680.49	178.64	44.29	195.54	143.64	780.30	135.98	169.30	61.77	558.41	**5,645.03**
2045-46	169.55	0.00	114.14	705.03	92.30	112.87	264.96	633.82	296.04	124.46	377.00	49.92	739.64	195.23	48.12	214.94	156.90	858.36	149.74	180.52	67.99	617.27	**6,168.81**
2046-47	188.45	0.00	123.31	766.41	100.88	123.08	289.02	688.18	323.36	135.84	410.35	54.78	806.89	213.57	52.81	235.10	170.93	932.29	163.84	200.08	74.16	674.08	**6,727.40**
2047-48	204.60	0.00	136.48	838.48	110.91	136.20	317.44	753.35	354.98	149.03	450.79	59.70	880.51	234.28	58.20	257.60	186.09	1026.42	178.81	220.55	81.56	747.23	**7,383.21**
2048-49	222.63	0.00	147.55	906.35	119.74	147.28	343.34	814.46	384.07	161.12	490.27	64.87	953.71	254.16	63.08	279.74	202.05	1104.14	195.56	237.47	88.29	802.42	**7,982.29**
2049-50	243.86	0.00	160.14	985.48	130.17	160.27	374.45	883.14	418.31	175.60	532.72	70.73	1034.74	276.58	68.41	304.72	218.96	1204.92	212.29	258.72	97.74	881.03	**8,692.98**
2050-51	265.53	0.00	174.90	1069.21	142.42	174.51	405.61	958.64	455.09	191.10	578.96	76.54	1123.08	300.80	74.71	330.92	238.16	1311.45	231.33	282.84	106.05	961.44	**9,453.30**
2051-52	290.28	0.00	191.46	1164.80	154.85	192.24	443.43	1046.09	499.07	208.76	631.87	83.80	1224.63	329.64	81.84	361.95	259.71	1428.02	253.73	308.95	115.03	1054.91	**10,325.05**

Year /TP no.	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19	Total
2052-53	316.28	0.00	207.79	1261.43	168.16	208.09	481.15	1131.36	541.92	225.86	687.52	90.76	1325.73	356.69	88.74	393.01	281.02	1546.91	275.81	337.10	125.69	1146.67	**11,197.69**
2053-54	343.39	0.00	226.42	1370.81	182.87	226.98	524.38	1226.98	589.21	246.68	747.64	98.94	1441.68	390.44	97.04	429.98	305.66	1679.17	299.73	365.38	138.28	1248.30	**12179.97**

5.4 Modification in concession period.

Modification in concession period is analysed as per provisions of DCA and same is summarised in table below for all scenarios.

Pessimistic Case

Target Point 1- April 2033									
Target Month - March 2029	**Target Revenue (Rs. Crores)**	**Calculated Revenue (Rs. Crores)**	**Difference %**	**If qualifies for Modification in Concession Period**	**Qualifying increment or shortfall**	**Change in Concession period %**	**Original Concession Period**	**Change in Concession period**	**Modified Concession Period**
NORR	173.18	164.50	-5.01%	No	-	0.00%	30.00	0.00	

Target Point 2- April 2043											
Target Month - March 2036	**Target Revenue (Rs. Crores)**	**Calculated Revenue (Rs. Crores)**	**Difference %**	**If qualifies for Modification in Concession Period**	**Qualifying increment or shortfall**	**Change in Concession period %**	**Original Concession Period**	**Change in Concession period**	**Total Change in Concession period**	**Calculated Modified Concession Period**	**Final Concession Period subject to Cap**
NORR	448.25	394.35	-12.02%	No	-	0.00%	30.00	0.00	0.00	30.00	

Most Likely Case

Target Point 1- April 2033									
Target Month - March 2029	**Target Revenue (Rs. Crores)**	**Calculated Revenue (Rs. Crores)**	**Difference %**	**If qualifies for Modification in Concession Period**	**Qualifying increment or shortfall**	**Change in Concession period %**	**Original Concession Period**	**Change in Concession period**	**Modified Concession Period**
NORR	173.18	168.28	-2.83%	No	-	0.00%	30.00	0.00	

Target Point 2- April 2043											
Target Month - March 2036	**Target Revenue (Rs. Crores)**	**Calculated Revenue (Rs. Crores)**	**Difference %**	**If qualifies for Modification in Concession Period**	**Qualifying increment or shortfall**	**Change in Concession period %**	**Original Concession Period**	**Change in Concession period**	**Total Change in Concession period**	**Calculated Modified Concession Period**	**Final Concession Period subject to Cap**
NORR	448.25	413.47	-7.76%	No	-	0.00%	30.00	0.00	0.00	30.00	

Optimistic Case

Target Point 1- April 2033									
Target Month - March 2029	**Target Revenue (Rs. Crores)**	**Calculated Revenue (Rs. Crores)**	**Difference %**	**If qualifies for Modification in Concession Period**	**Qualifying increment or shortfall**	**Change in Concession period %**	**Original Concession Period**	**Change in Concession period**	**Modified Concession Period**
NORR	173.18	172.09	-0.63%	No	-	0.00%	30.00	0.00	

Target Point 2- April 2043											
Target Month - March 2036	Target Revenue (Rs. Crores)	Calculated Revenue (Rs. Crores)	Difference %	If qualifies for Modification in Concession Period	Qualifying increment or shortfall	Change in Concession period %	Original Concession Period	Change in Concession period	Total Change in Concession period	Calculated Modified Concession Period	Final Concession Period subject to Cap
NORR	448.25	420.80	-6.12%	No	-	0.00%	30.00	0.00	0.00	30.00	

Hyderabad NORR-Modification in Concession Period						
Types of Scenarios	Pessimistic Case		Most likely Case		Optimistic Case	
Target Month	April 2033	April 2043	April 2033	April 2043	April 2033	April 2043
Target Revenue (Rs. Crores)	173.18	448.25	173.18	448.25	173.18	448.25
Calculated Revenue (Rs. Crores)	164.50	394.35	168.28	413.47	172.09	420.80
Difference %	-5.01%	-12.02%	-2.83%	-7.76%	-0.63%	-6.12%
If qualifies for Modification in Concession Period	No	No	No	No	No	No
Qualifying Increment or shortfall	-	-	-	-	-	-
Change in Concession period %	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Original Concession Period	30.00	30.00	30.00	30.00	30.00	30.00
Change in Concession period	0.00	0.00	0.00	0.00	0.00	0.00
Total Change in Concession period	0.00		0.00		0.00	
Calculated Modified Concession Period	30.00		30.00		30.00	
Final Concession Period subject to Cap	0.00		0.00		0.00	

Thus, there is no modification expected in concession period due to variation in revenue as per above estimates in all scenarios.

CHAPTER 6

CONCLUSION & RECOMMENDATIONS

6.1 Conclusion & Recommendations

The Outer Ring Road, officially as, Jawaharlal Nehru Outer Ring Road and abbreviated as, O.R.R., is a 158 kilometer, 8-lanes ring road expressway encircling Hyderabad, capital of the Indian state of Telangana. ORR is one of the most important infrastructural developments which has complimented growth of Hyderabad as major metro of India. On Eastern side it has provided express connectivity to major commercial and upscale residential centres of Gachibowli, Banjara Hills, Jublee Hills, Hitec- City, Manikonda, Nanakramguda. As a result, large number of residential and commercial projects have come up on this north-east part of ORR. Tellapur, Mokila, Kollur, Narsingi can be named as few of these. On north and western side ORR connects to Shamirpet and Genome Valley.

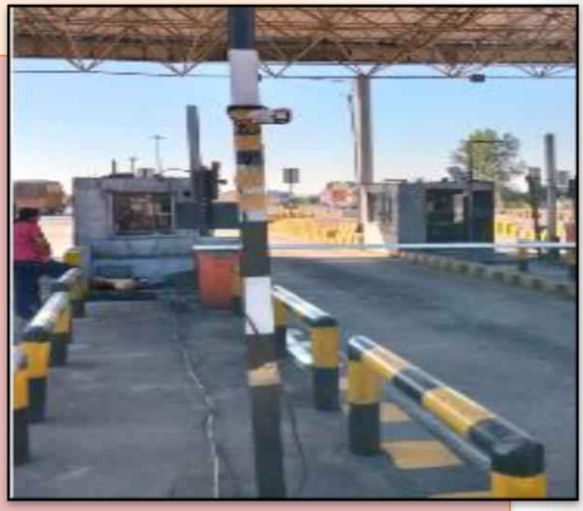
ORR also provides fast connectivity to various radial state and national highways connecting to Mumbai, Nagpur, Karimnagar, Warangal, Suryapet, Vijayawada, Bengaluru. Regional traffic now does not need to go into congested network of Hyderabad.
All above indicates that Hyderabad Ring Road or Nehru Outer Ring Road (NORR) has potential of good traffic growth on sustainable basis, and it can be considered as a stable healthy project from the traffic and revenue point of view.

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FOUR LANE LALITPUR- SAGAR- LAKHNADON SECTION (FROM KM 99+005 TO KM 415+089) OF NH-44 (OLD NH-26) IN THE STATES OF UTTAR PRADESH & MADHYA PRADESH

(TOT BUNDLE-12)









OCTOBER 2024

TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

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GMD CONSULTANTS ★ NAVI MUMBAI ★

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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic	**NHAI**	-	National Highway Authority of India
BOT	-	Build Operate Transfer	**NHDP**	-	National Highways Development Project
CAGR	-	Compound Annual Growth Rate	**NSDP**	-	Net State Domestic Product
CTV	-	Classified traffic volume	**O&M**	-	Operation & Maintenance
DBFOT	-	Design, Build, Finance, Operate & Transfer	**PCDP**	-	Per Capita Domestic Product
EME	-	Earth Moving Equipment	**PCI**	-	Per Capita Income
GDP	-	Gross Domestic Product	**PCU**	-	Passenger Car Unit
GSDP	-	Gross State Domestic Product	**PSC**	-	Pre-stressed Concrete
HCM	-	Heavy Construction Machinery	**RCC**	-	Reinforced cement concrete
HCV	-	Heavy Commercial Vehicle	**RHS**	-	Right Hand Side
HTMS	-	Highway Traffic Management System	**SH**	-	State Highway
IRC	-	Indian Road Congress	**TP**	-	Toll Plaza
IRR	-	Internal Rate of Return	**WPI**	-	Wholesale Price Index
LCV	-	Light Commercial Vehicle	**SIR**	-	Special Investment Region
LHS	-	Left Hand Side	**c.**	-	Circa
LGV	-	Light Goods Vehicle	**ROB**	-	Railway Over Bridge
MAV	-	Multi Axle Vehicle	**MDR**	-	Major District Road
MORTH	-	Ministry of Road Transport and Highways	**ODR**	-	Other District Road
NH	-	National Highway	**CA**	-	Concession Agreement
PCC	-	Plain Cement Concrete	**RMT**	-	Running Meter
CR	-	Coarse Rubble			

CHAPTER 1

INTRODUCTION

1.1 Background

The National Highways Authority of India (NHAI) introduced the Toll, Operate and Transfer (TOT) model for partnership with private developers in the road sector. Under this model, NHAI passes on the toll collection rights and operation and maintenance obligations for 20 years to the private developer against payment of upfront, one-time, lump sum concession fees quoted by the private developer as part of the comprehensive bidding process. Projects under this model are awarded as a bundle of operational national highways, which allows the investor to offset the risks of one project against another. Since existing and operational roads are auctioned under the TOT model.

Under the Toll Operate and Transfer (ToT) 12 bundle, NHAI had invited tenders for selection of concessionaire for maintenance of the National Highway stretch Lalitpur-Sagar-Lakhnadon from Km 99.00 to Km 415.089 section of NH-44 (old NH26).

M/s. IRB Infrastructure Developers Limited., has been declared as the selected bidder for the project. This report is for ToT bundle 12 "Lalitpur-Sagar- Lakhnadon from Km 99.00 to Km 415.089 section of NH-44 spanning in the states of Uttar Pradesh and Madhya Pradesh. Project Highway alignment is depicted in the following figure.

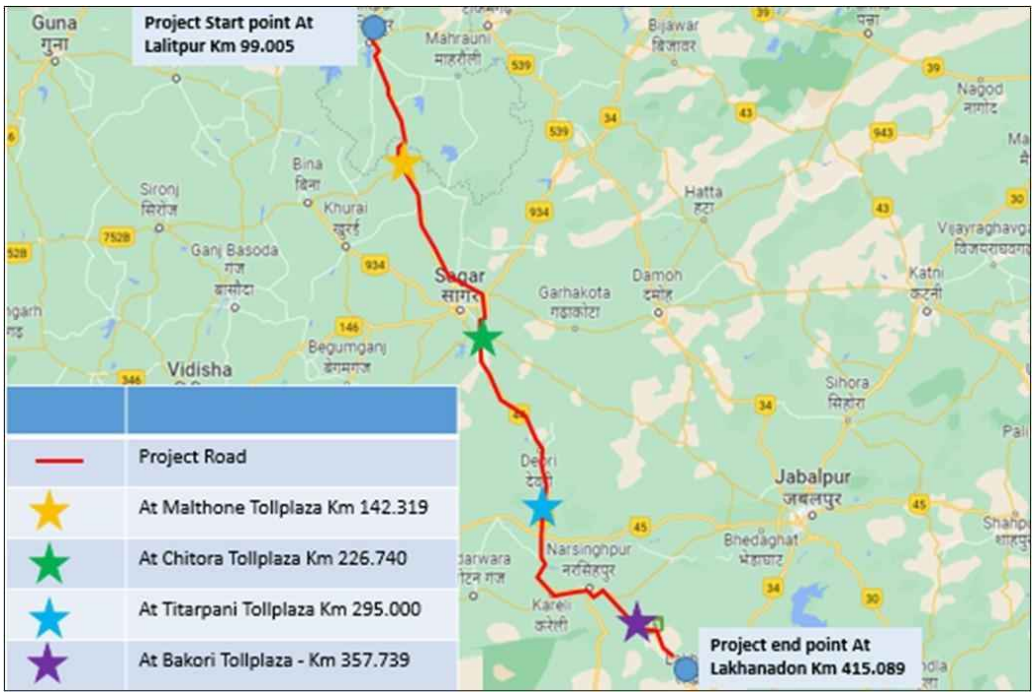


Figure 1-1: Project Stretch of TOT Bundle 12

1.2 Objective of the Study

M/s IRB Infrastructure Developers Limited (IRB) intends to develop a traffic study report for Four Laning of Lalitpur-Sagar- Lakhnadon from Km 99.00 to Km 415.089 section of NH-44 on BOT basis. GMD Consultants have been assigned the work of conducting traffic study and developing revenue model based on traffic projections and forecast.

The year 2024-25 has been taken as the base year for projections and forecasting of traffic in the horizon year. This report fulfils part of the requirement of the assignment.

1.3 Scope of Services

The following may be referred to as broad scope of Traffic Study of Four Laning of Lalitpur-Sagar- Lakhnadon from Km 99.00 to Km 415.089 section of NH-44.

- Classified Traffic Volume Count at main toll plaza location at Toll Plaza locations. This data was supplied by the Concessionaire.
- Establishment of traffic pattern
- Working our traffic demand elasticity and growth
- Traffic forecast up to concession period.
- Preparation of revenue model up to concession period
- Any other analysis relevant to scope

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

The project stretch is a section of NH-44, which is the longest National Highway in the country, running through North, Central and South India. It starts from Jammu & Kashmir and passes through the states of Punjab, Haryana, Delhi, Uttar Pradesh, Rajasthan, Madhya Pradesh, Maharashtra, Telangana, Andhra Pradesh, Karnataka and Tamil Nadu.

Project Stretch Description

The project stretch under this study starts from km 99.005 of NH-44 at Lalitpur in the state of Uttar Pradesh and ends at km 415.089 of NH-44 at Lakhnadon in the state of Madhya Pradesh. The length of project stretch is 316.084 km and has 4-lane configuration with four number of Toll Plazas (Malthone at ch.142+319, Chitora at Ch. 226+740, Titarpani at 295+000 and Bakori (Bachai at ch.357+739).

The following figure shows this the alignment of the project highway in the above context.

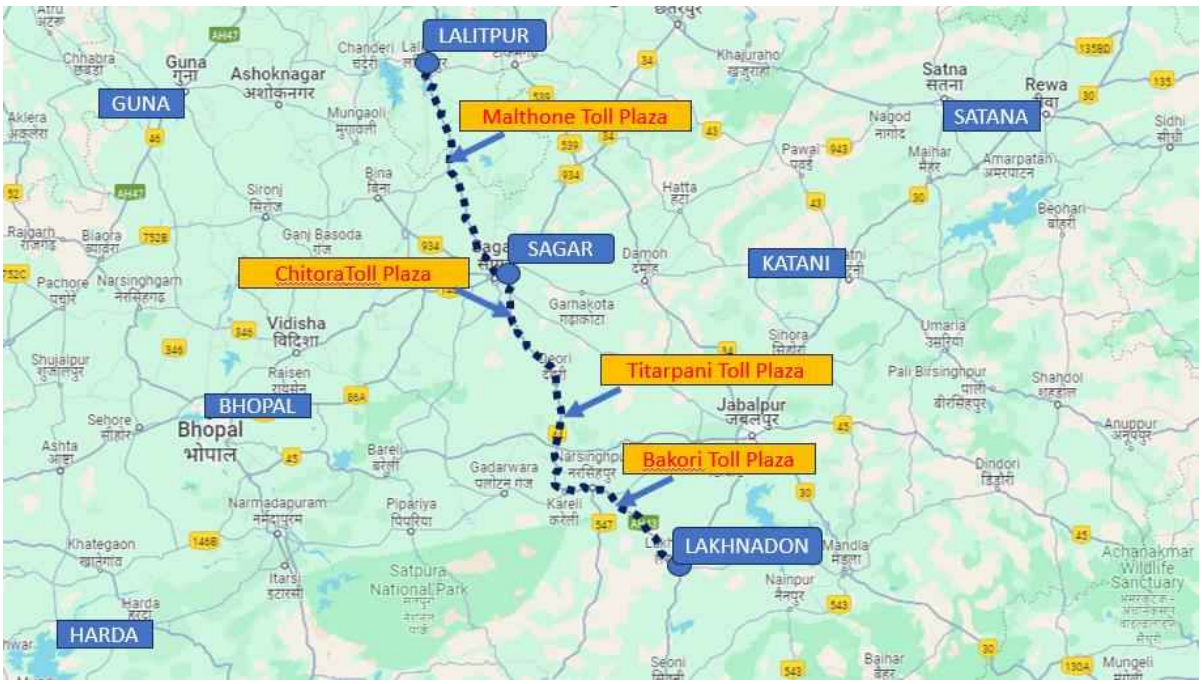


Figure 2-1 : Project Alignment with Toll Plaza

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from a client for a project.

- Classified traffic volume counts at toll plaza locations on Lalitpur – Sagar - Lakhnadon section of NH-44- Provided by Concessionaire for base year 2024-25 (traffic data from April 2024 to July 2024).
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project
- Establish base year traffic
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1 below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	**Km 142.319 Toll Plaza at Malthone**	AADT from previous traffic study report for year 2024-25 (Four month from April 2024 to July 2024)	AADT from previous traffic study report for year 2024-25 (Four month from April 2024 to July 2024)	AADT from previous traffic study report for year 2024-25 (Four month from April 2024 to July 2024)	AADT from previous traffic study report for year 2024-25 (Four month from April 2024 to July 2024)	AADT from previous traffic study report for year 2024-25 (Four month from April 2024 to July 2024)
2	**Km 226.740 Toll Plaza at Chitora**	AADT from previous traffic study report for year 2024-25 (Four month from April 2024 to July 2024)	AADT from previous traffic study report for year 2024-25 (Four month from April 2024 to July 2024)	AADT from previous traffic study report for year 2024-25 (Four month from April 2024 to July 2024)	AADT from previous traffic study report for year 2024-25 (Four month from April 2024 to July 2024)	AADT from previous traffic study report for year 2024-25 (Four month from April 2024 to July 2024)
3	**Km 295.000 Toll Plaza at Titarpani**	AADT from previous traffic study report for year 2024-25 (Four month from April 2024 to July 2024)	AADT from previous traffic study report for year 2024-25 (Four month from April 2024 to July 2024)	AADT from previous traffic study report for year 2024-25 (Four month from April 2024 to July 2024)	AADT from previous traffic study report for year 2024-25 (Four month from April 2024 to July 2024)	AADT from previous traffic study report for year 2024-25 (Four month from April 2024 to July 2024)
4	**Km 357.739 Toll Plaza at Bakori**	AADT from previous traffic study report for year 2024-25	AADT from previous traffic study report for year	AADT from previous traffic study report for	AADT from previous traffic study report for year	AADT from previous traffic study report for year

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
		(Four month from April 2024 to July 2024)	2024-25 (Four month from April 2024 to July 2024)	year 2024-25 (Four month from April 2024 to July 2024)	2024-25 (Four month from April 2024 to July 2024)	2024-25 (Four month from April 2024 to July 2024)

All toll plazas are located in Madhya Pradesh.

3.2 Classified Traffic Volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations-based traffic survey done at project stretch.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in table below .

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since the project highway is currently under toll operation, the data collected corresponds to the category of tollable vehicles. The following are the types of vehicles as per concession agreement.

- Car / Jeep / van
- Minibus /LCV
- Bus
- Truck /
- 3 Axle commercial vehicle
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data as per traffic survey conducted at toll plaza locations. It may not represent the whole year traffic as this pertains to specific period only. Hence a seasonality factor has been applied to average traffic of current period to arrive at Annual Average Daily Traffic of base year 2024-25. Same corrected traffic is used for future projections and revenue calculations.
Following table shows Annual Average Daily Traffic (AADT) for Base year 2024-25 as considered.

Table 3-3 : Traffic Data at Malthone Toll Plaza at Km 142.319

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.) 2024-25
1	Car	1439
2	Minibus /LCV	266
3	Bus	115
4	Truck	1262
5	3-Axle Commercial vehicle	1322
6	Multi axle	1573

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.) 2024-25
7	Oversize Vehicle	4
	Total	**5981**

Table 3-4 : Traffic Data at Chitora Toll Plaza at Km 226.740

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.) 2024-25
1	Car	1631
2	Minibus /LCV	426
3	Bus	100
4	Truck	1456
5	3-Axle Commercial vehicle	1433
6	Multi axle	1867
7	Oversize Vehicle	5
	Total	**6918**

Table 3-5 : Traffic Data at Titarpani Toll Plaza at Km 295.000

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.) 2024-25
1	Car	1715
2	Minibus /LCV	384
3	Bus	104

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.) 2024-25
4	Truck	1503
5	3-Axle Commercial vehicle	1532
6	Multi axle	2293
7	Oversize Vehicle	6
	Total	**7537**

Table 3-6 : Traffic Data at Bakori Toll Plaza at Km 357.739

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.) 2024-25
1	Car	973
2	Minibus /LCV	331
3	Bus	87
4	Truck	1302
5	3-Axle Commercial vehicle	1284
6	Multi axle	1649
7	Oversize Vehicle	5
	Total	**5631**

3.4 Data Analysis

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in "IRC-64-1990: Guidelines for Capacity of Roads in Rural areas". The adopted passenger car unit values (PCU) are presented in Table 3-7.

Table 3-7 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-8 : Traffic in PCU at Project Stretch

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
	Km 142.319 Toll Plaza at Malthone	5981	17032	2.85

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
2024 – 2025 (Base Year)	Km 226.740 Toll Plaza at Chitora	6918	19661	2.84
	Km 295.000 Toll Plaza at Titarpani	7537	22054	2.93
	Km 357.739 Toll Plaza at Bakori	5631	16932	3.01

It can be observed from above that project traffic has PCU index 2.5 to 3.5 which is an indicator of high proportion of commercial traffic in traffic mix in project corridor. The following figure illustrates variation of PCU index at four toll plaza locations.

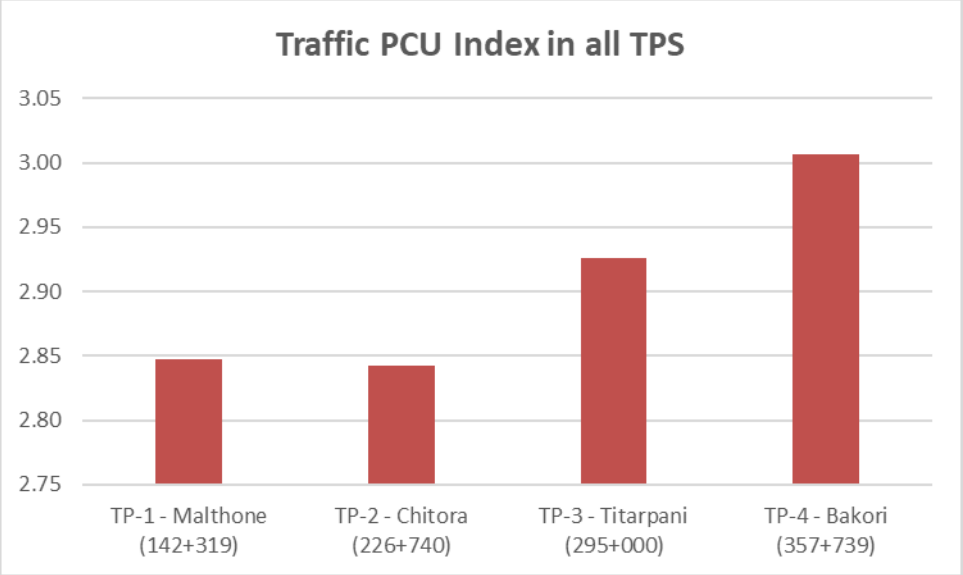


Figure 3-1 : Comparison of PCU Index

It can be observed that PCU index is consistent at all four toll plaza locations.

3.4.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds

to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.

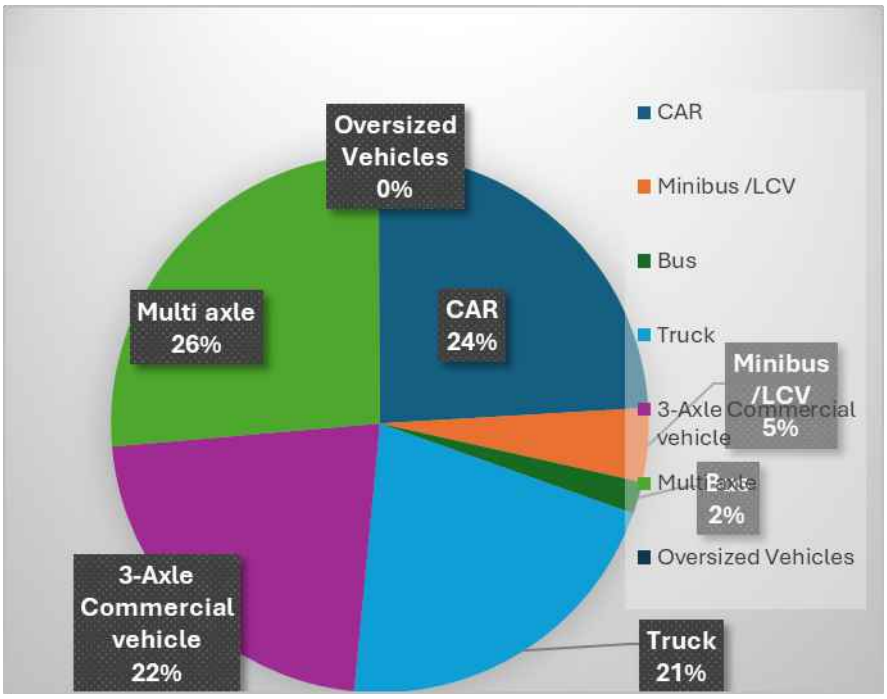


Figure 3-2: Model split of tollable vehicle @ Km 142.319

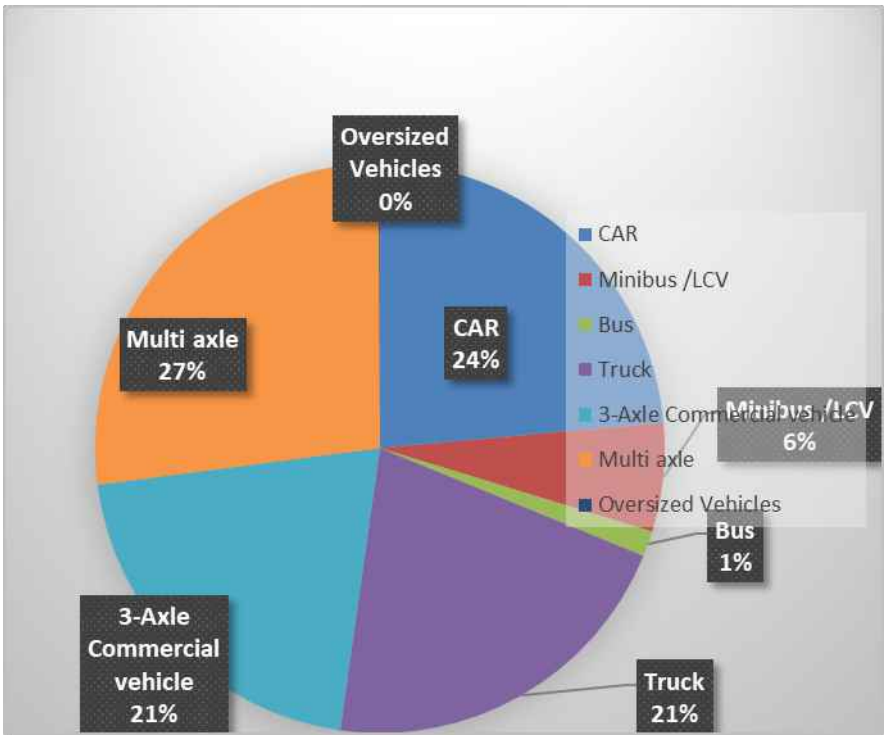


Figure 3-3: Model split of tollable vehicle @ Km 226.740

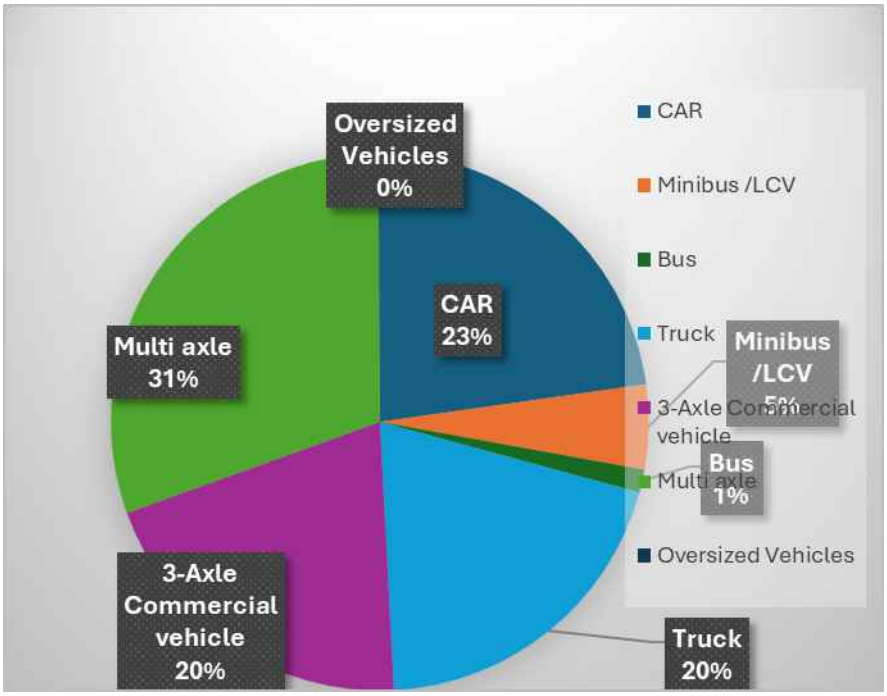


Figure 3-4: Model split of tollable vehicle @ Km 295.000

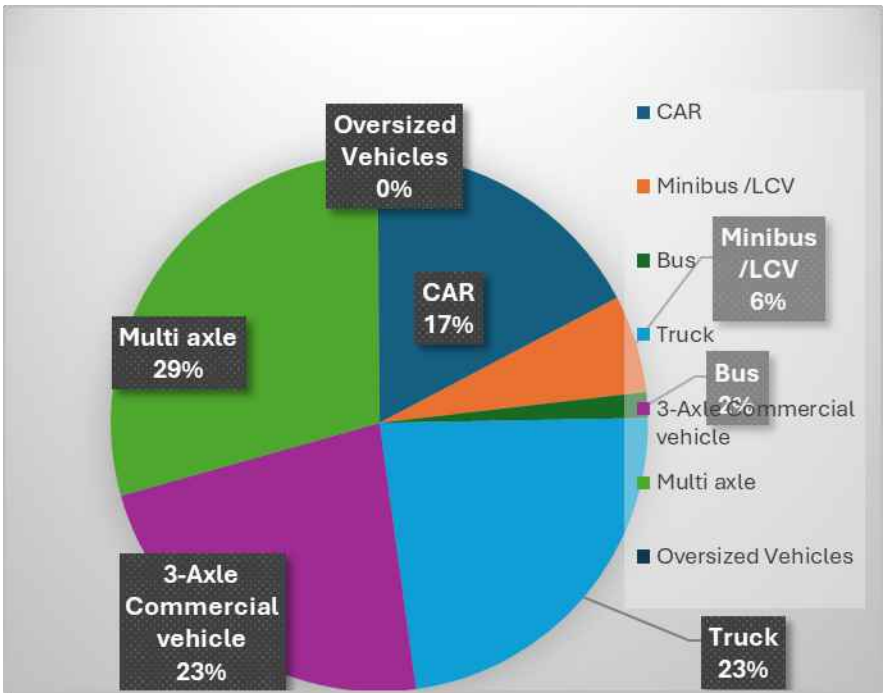


Figure 3-5: Model split of tollable vehicle @ Km 357+739

It is observed that car traffic forms about 24% of total traffic at toll plaza location KM 142.319 while multi axle commercial vehicles are about 48% of total traffic. Truck / Bus and LCV share about 23% and 5% of traffic volume respectively.

It is observed that car traffic forms about 24% of total traffic at toll plaza location KM 226.740 while multi axle commercial vehicles are about 48% of total traffic. Truck / Bus and LCV share about 22% and 6% of traffic volume respectively.

It is observed that car traffic forms about 23% of total traffic at toll plaza location KM 295.000 while multi axle commercial vehicles are about 51% of total traffic. Truck / Bus and LCV share about 21% and 5% of traffic volume respectively.

It is observed that car traffic forms about 17% of total traffic at toll plaza location KM 357.739 while multi axle commercial vehicles are about 52% of total traffic. Truck / Bus and LCV share about 25% and 6% of traffic volume respectively.

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

The following table provides numbers of vehicles falling in each of above category on base year 2024-25

Table 3-9 : Journey Type Bifurcation of Traffic at Malthone Toll Plaza KM 142.319

Sr. No	Type	Traffic Volume (Nos.)
		2024-25
1	Single Journey	5325
2	Return Journey	630
3	Local Commercial Single Journey	23
4	Monthly Pass Local	3
5	Monthly Pass	0

Table 3-10 : Journey Type Bifurcation of Traffic at Chitora Toll Plaza KM 226.740

Sr. No	Type	Traffic Volume (Nos.)
		2024-25
1	Single Journey	5738
2	Return Journey	962
3	Local Commercial Single Journey	198
4	Monthly Pass Local	20
5	Monthly Pass	0

Table 3-11 : Journey Type Bifurcation of Traffic at Titarpani Toll Plaza KM 295.000

Sr. No	Type	Traffic Volume (Nos.)
		2024-25
1	Single Journey	6199
2	Return Journey	1158
3	Local Commercial Single Journey	175
4	Monthly Pass Local	5
5	Monthly Pass	0

Table 3-12 : Journey Type Bifurcation of Traffic at Bakori Toll Plaza KM 357.739

Sr. No	Type	Traffic Volume (Nos.)
		2024-25
1	Single Journey	5114
2	Return Journey	440

Sr. No	Type	Traffic Volume (Nos.)
		2024-25
3	Local Commercial Single Journey	69
4	Monthly Pass Local	8
5	Monthly Pass	0

3.5 Secondary Data Collection

There are several other factors which have a substantial impact on traffic patterns and growth on any project corridor. The following are some of such important factors.

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on the project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data
   a) GDP
   b) NSDP
   c) Population Growth
   d) Per Capita Income growth
   e) Industrial Growth
   f) Special Industry Potential
   g) Regional and National development vision / plan
   h) Any other relevant data
3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor. Same is discussed in subsequent chapter.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

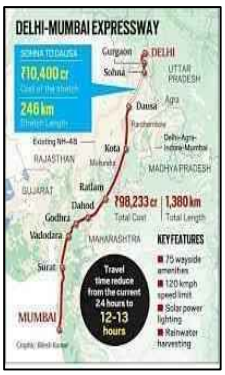
4.1 Introduction

Highway corridors behave like integrated circuit networks and more often than not every road is connected to various networks having different origins and destinations. Traffic running on these networks behaves like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network.

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc.
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Regional Network



Project road is in existence for long and traffic is almost settled. However, there are a few upcoming corridors which may have interest in project road catchments. These are discussed below.

Delhi – Mumbai Expressway - The access controlled greenfield expressway connects Delhi and Mumbai (up to Jawaharlal Nehru Port Trust) and passes through states of Haryana, Rajasthan, Madhya Pradesh, Gujarat and Maharashtra. DME alignment will largely cater to traffic between North of India and Gujarat/Western Maharashtra and is not likely to affect traffic on the project road which caters to traffic on NH-44 which is north south highway. Hence it is not likely to impact project road traffic.

Surat – Chennai Expressway - The alignment will largely cater to traffic between states of Gujarat and Central Maharashtra /Andhra Pradesh/ Telangana/Karnataka/Tamilnadu and is not parallel to Project Road. Therefore, it is not likely to affect traffic on the project road.

Pune – **Bangalore Expressway** – Entire catchment of this proposed expressway falls south of project road. It is not likely to affect the project road traffic.

All other major highways in the region exist and traffic is settled in the region. On the local level also, there is no formidable competing route network. Hence it is not envisaged that there

will be any major impact on project road traffic in the near future due to regional or local network developments.

CHAPTER 5

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future patterns of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor of Lalitpur-Sagar- Lakhnadon from Km 99.00 to Km 415.089 section of NH-44 has been done taking the above factors into consideration. "**IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**" is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable for projects of short durations say 5-10 years, however for long term projections it would be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-12015-Guidelines for Traffic Prediction on Rural Highways**.

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different types of vehicles. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway typically depends on a number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, In order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

$Log (P) = k \times Log (EI) + A$

Where,

P = *Number of Vehicles (Mode wise)*

EI = *Economic Indicator*

A = *Regression constant*

k = *Elasticity coefficient (Regression coefficient)*

The elasticity for car and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

The project corridor spreads across state of Madhya Pradesh & Uttar Pradesh. Toll plazas at Malthone, Chitora, Titarpani and Bakori are in the state of Madhya Pradesh. Project traffic has share of majorly states like Madhya Pradesh, Uttar Pradesh and Rajasthan. For elasticity calculations, working data from these states also has been analysed.

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Maharashtra State.

Table 5-1 : Per Capita Income Vs Car Madhya Pradesh

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth (8 Year)
2011	38497	424644	4.59	5.63		
2012	41142	493412	4.61	5.69	7%	
2013	42548	555461	4.63	5.74	3%	
2014	44027	637626	4.64	5.80	3%	
2015	47351	820391	4.68	5.91	8%	
2016	52782	869777	4.72	5.94	11%	
2017	54829	982124	4.74	5.99	4%	
2018	57401	1087124	4.76	6.04	5%	5.9%

Regression analysis of same is given in figure below

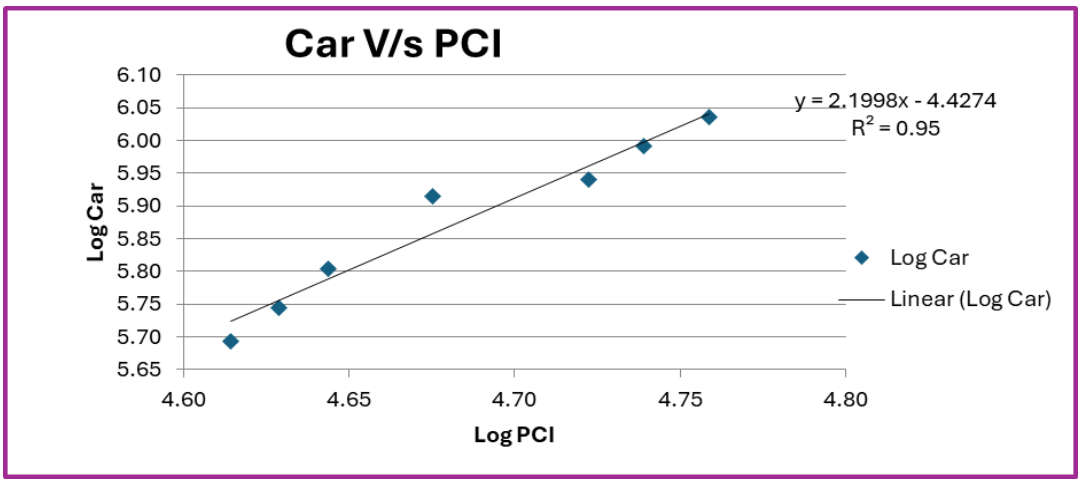


Figure 5-1 : Regression and Elasticity PCI vs. Car – Extrapolation Madhya Pradesh

Table 5-2 : Population Vs Bus Madhya Pradesh

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth (8 Year)
2011	72627000	181770	7.86	5.26		
2012	73863000	208530	7.87	5.32	2%	
2013	75099000	233569	7.88	5.37	2%	
2014	76334000	277898	7.88	5.44	2%	
2015	77570000	322227	7.89	5.51	2%	
2016	78806000	347227	7.90	5.54	2%	
2017	79948000	382227	7.90	5.58	1%	
2018	81090000	402227	7.91	5.60	1%	1.6%

Regression analysis of same is given in figure below

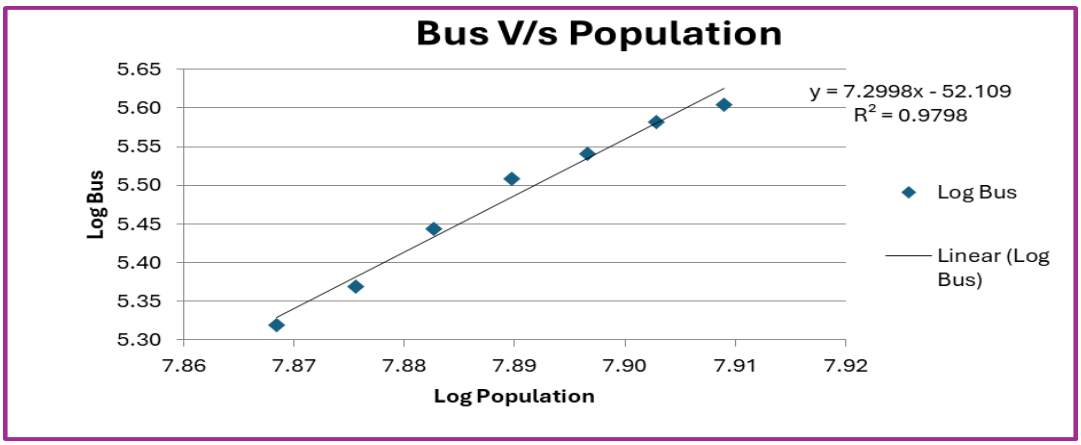


Figure 5-2 : Regression and Elasticity Population vs. Bus – Extrapolation Madhya Pradesh

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-3 : Trucks Traffic Vs NSDP Madhya Pradesh

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (8 Year)
2011	28237104	121916	7.45	5.09		
2012	30685334	131098	7.49	5.12	9%	
2013	32259760	137815	7.51	5.14	5%	
2014	33924690	150921	7.53	5.18	5%	
2015	37071567	177352	7.57	5.25	9%	
2016	41946525	233553	7.62	5.37	13%	
2017	44200243	289754	7.65	5.46	5%	
2018	46928896	326291	7.67	5.51	6%	7.6%

Following figure depict regression analysis and extrapolation.

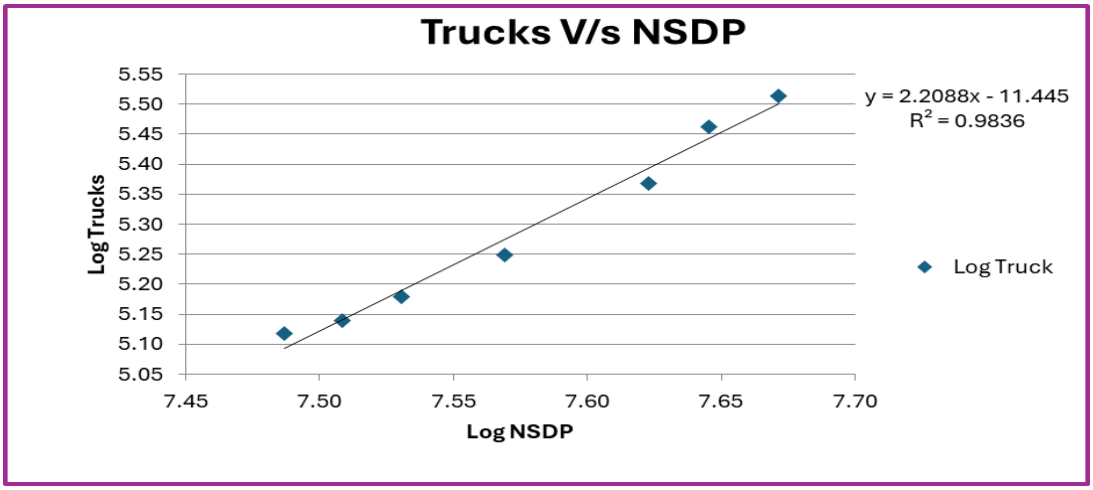


Figure 5-3 : Regression and Elasticity Trucks vs. NSDP – Extrapolation Madhya Pradesh

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-4 : Summary Regression Analysis Madhya Pradesh

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth (8yrs)	Growth Elastic Model	Remarks
MADHYA PRADESH	**Car/Jeep**	PCI	y = 2.2965x - - 4.8829	R^2 = 0.9634	2.3	6%	13.57%	Good Regression
	Bus	Population	y = 7.4978x - - 53.6722	R^2 = 0.9862	7.5	2%	11.90%	Good Regression
	Truck	NSDP	y = 2.2088x - - 11.4451	R^2 = 0.9694	2.2	8%	16.70%	Good Regression

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Uttar Pradesh State.

Table 5-5 : Per Capita Income Vs Car Uttar Pradesh

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth (8 Year)
2011	32002	1108100	4.51	6.04		
2012	32908	1205374	4.52	6.08	3%	
2013	34044	1423020	4.53	6.15	3%	
2014	34583	1572217	4.54	6.20	2%	
2015	36973	1746117	4.57	6.24	7%	
2016	40847	2027972	4.61	6.31	10%	
2017	41832	2195783	4.62	6.34	2%	
2018	43670	2439845	4.64	6.39	4%	4.6%

Regression analysis of same is given in figure below

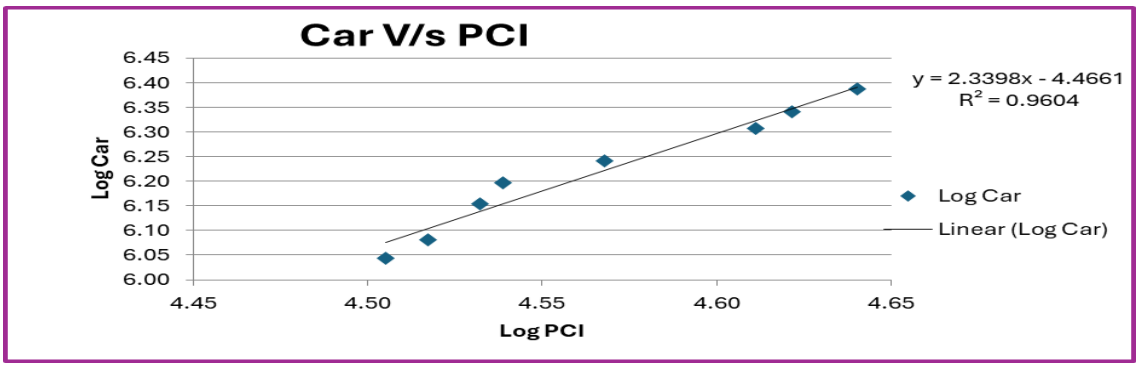


Figure 5-4 : Regression and Elasticity PCI vs. Car – Extrapolation Uttar Pradesh

Table 5-6 : Population Vs Bus Uttar Pradesh

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth (8 Year)
2011	199812000	57901	8.30	4.76		
2012	203670000	64147	8.31	4.81	2%	
2013	206322000	74389	8.31	4.87	1%	
2014	209577000	80460	8.32	4.91	2%	
2015	212832000	89127	8.33	4.95	2%	
2016	216870000	112020	8.34	5.05	2%	
2017	219510000	112766	8.34	5.05	1%	
2018	222150000	121975	8.35	5.09	1%	1.5%

Regression analysis of same is given in figure below

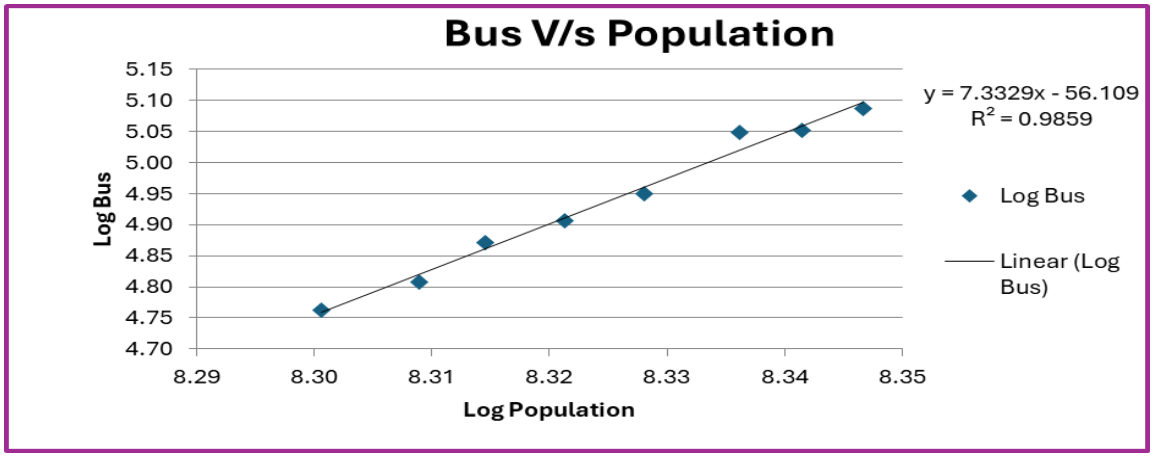


Figure 5-5 : Regression and Elasticity Population vs. Bus – Extrapolation Uttar Pradesh

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-7 : Trucks Traffic Vs NSDP Uttar Pradesh

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (8 Year)
2011	64513155	162813	7.81	5.21		
2012	67355218	186404	7.83	5.27	4%	
2013	70746910	202761	7.85	5.31	5%	
2014	72968630	217609	7.86	5.34	3%	
2015	79204874	245688	7.90	5.39	9%	
2016	88845325	265167	7.95	5.42	12%	

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (8 Year)
2017	92380571	307096	7.97	5.49	4%	
2018	97915937	356828	7.99	5.55	6%	6.2%

Following figure depict regression analysis and extrapolation.

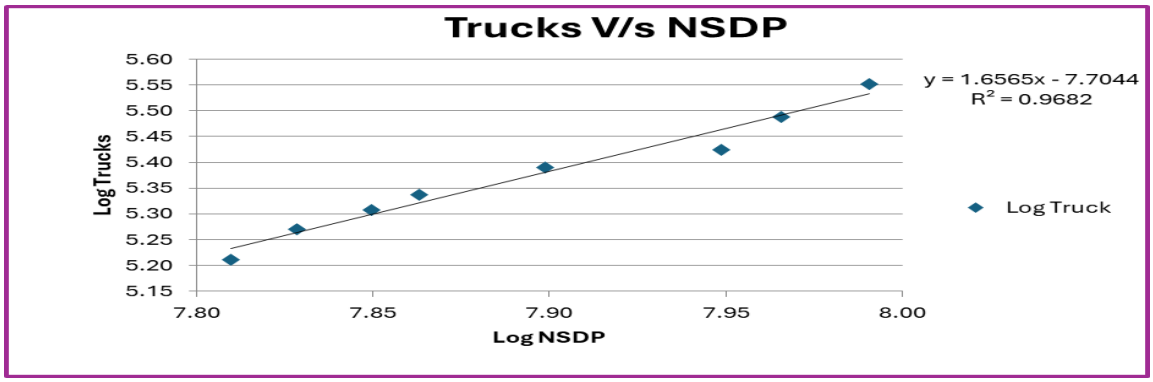


Figure 5-6 : Regression and Elasticity NSDP vs. Truck Traffic - extrapolation Uttar Pradesh.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below

Table 5-8 : Summary Regression Analysis Uttar Pradesh

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth (8yrs)	Growth Elastic Model	Remarks
UTTAR PRADESH	**Car/Jeep**	PCI	y = 2.3398x - -4.4661	R² = 0.9604	2.3398	4.58%	10.72%	Good Regression
	Bus	Population	y = 7.3329x - -56.1092	R² = 0.9859	7.3329	1.53%	11.19%	Good Regression
	Truck	NSDP	y = 1.6565x - -7.7044	R² = 0.9682	1.6565	6.18%	10.24%	Good Regression

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Rajasthan State.

Table 5-9 : Per Capita Income Vs Car Rajasthan

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth (8 Year)
2011	57192	591069	4.76	5.77		
2012	58441	659542	4.77	5.82	2%	
2013	61053	733916	4.79	5.87	4%	
2014	64496	814079	4.81	5.91	6%	
2015	68565	899307	4.84	5.95	6%	
2016	71324	988391	4.85	5.99	4%	
2017	73109	1095526	4.86	6.04	3%	
2018	75555	1204005	4.88	6.08	3%	4.1%

Regression analysis of same is given in figure below

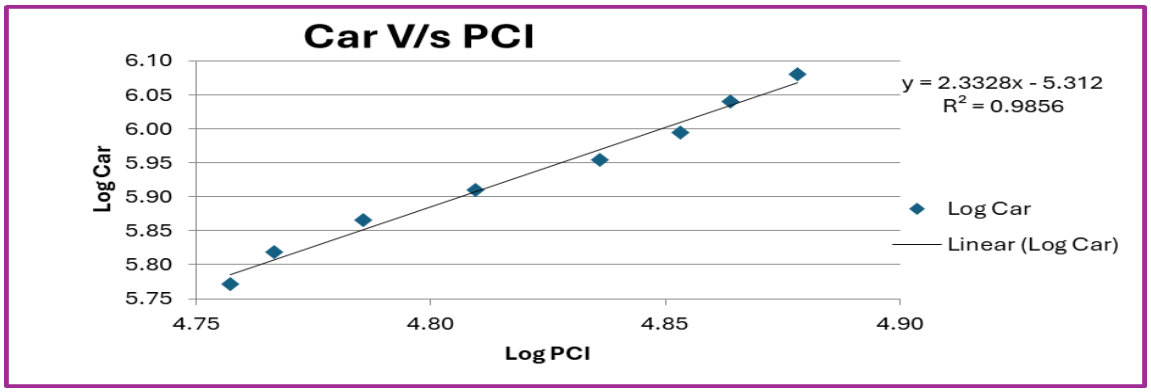


Figure 5-7 : Regression and Elasticity PCI vs. Car – Extrapolation Rajasthan

Table 5-10 : Population Vs Bus Rajasthan

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth (8 Year)
2011	68548000	83345	7.84	4.92		
2012	69687000	88616	7.84	4.95	2%	
2013	70825000	93892	7.85	4.97	2%	
2014	71963000	97650	7.86	4.99	2%	
2015	73102000	102818	7.86	5.01	2%	
2016	74240000	108680	7.87	5.04	2%	
2017	75248000	113964	7.88	5.06	1%	
2018	76256000	118301	7.88	5.07	1%	1.5%

Regression analysis of same is given in figure below

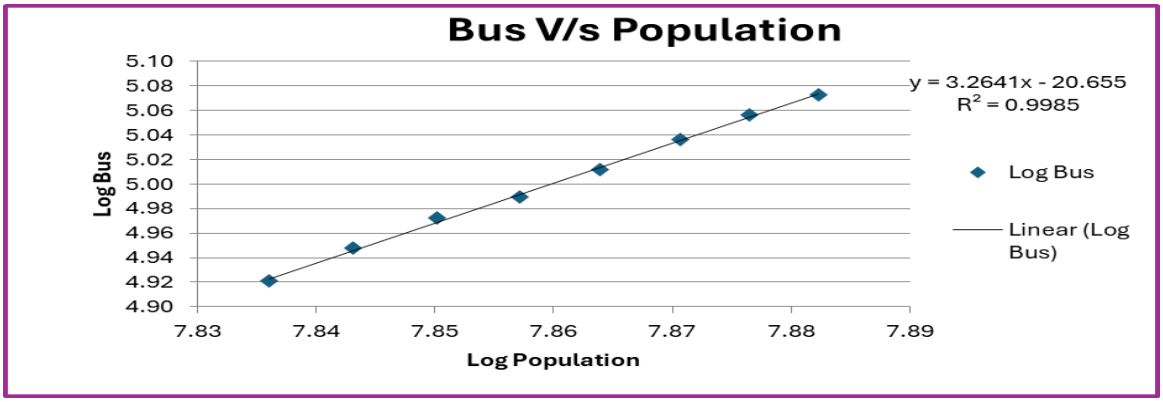


Figure 5-8 : Regression and Elasticity Population vs. Bus – Extrapolation Rajasthan

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-11 : Trucks Traffic Vs NSDP Rajasthan

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (8 Year)
2011	39533093	362028	7.60	5.56		
2012	40980249	401983	7.61	5.60	4%	
2013	43429222	434379	7.64	5.64	6%	
2014	46540773	472365	7.67	5.67	7%	
2015	50192151	517604	7.70	5.71	8%	
2016	52965038	561158	7.72	5.75	6%	
2017	55442912	613055	7.74	5.79	5%	
2018	58059438	665926	7.76	5.82	5%	5.7%

Following figure depict regression analysis and extrapolation.

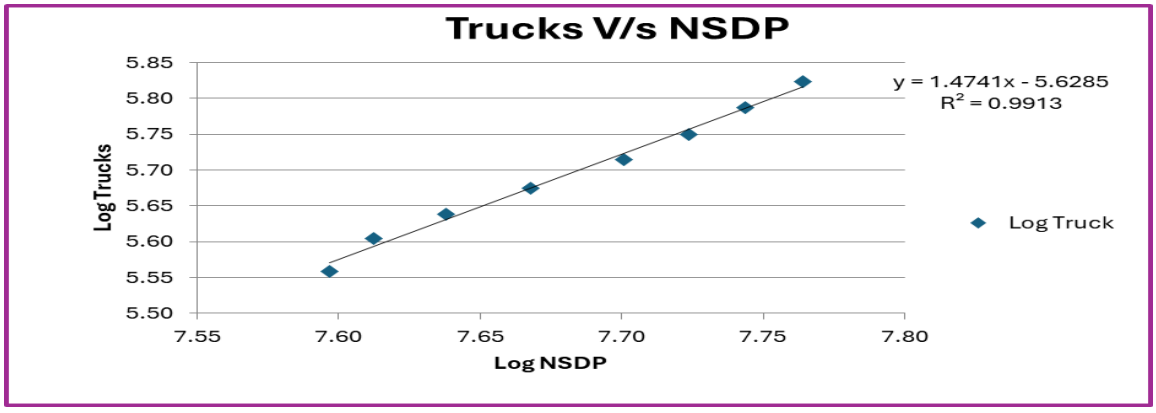


Figure 5-9 : Regression and Elasticity NSDP vs. Trucks – Extrapolation Rajasthan

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below

Table 5-12 : Summary Regression Analysis Rajasthan

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth (8yrs)	Growth Elastic Model	Remarks
RAJASTHAN	**Car/Jeep**	PCI	y = 2.3328x - -5.312	R^2 = 0.9856	2.3328	4.07%	9.49%	Good Regression
	Bus	Population	y = 3.2641x - -20.6548	R^2 = 0.9985	3.2641	1.53%	5.01%	Good Regression
	Truck	NSDP	y = 1.4741x - -5.6285	R^2 = 0.9913	1.4741	5.65%	8.33%	Good Regression

Economical model for predicting growth is good tool, however other local, regional, national factors should also be considered before finalizing growth factors. Considering factors such as proposed developments and other influencing economic factors, moderated growth should be considered. These factors are discussed in subsequent sections.

5.4 Other Factors Influencing Growth

There are many factors which have an impact on traffic growth. As discussed previously these factors can be economical, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

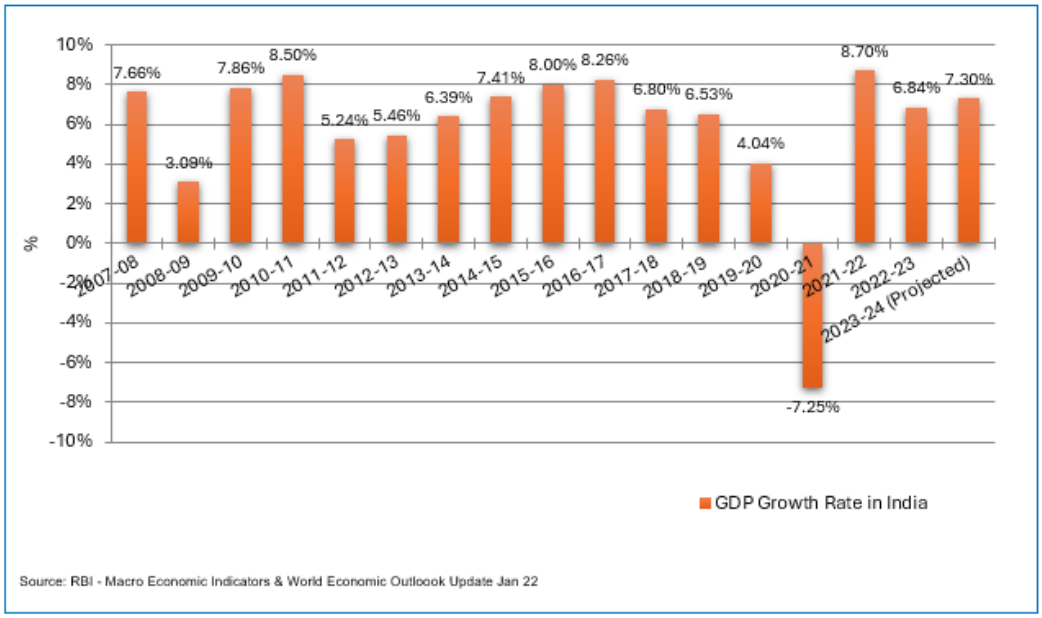


Figure 5-10 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had a slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. The government took major policy decisions including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honorable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into an opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on **Make -In- India** it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. Leading banking and financial institutions have estimated that India would keep on registering good growth in coming years and the growth in year 2023-24 is expected to be around 7.3%.

5.5 Developments along and around the Project Corridor & State

MADHYA PRADESH: Madhya Pradesh state, which is located in central India is bound on the north by Uttar Pradesh, on the east by Chhattisgarh, on the south by Maharashtra, and on the west by Gujarat and Rajasthan. It is the second largest Indian state and one of the fastest growing states in the country. At current prices, the Gross State Domestic Product (GSDP) of Madhya Pradesh is estimated at Rs.1,151,049 crore trillion (US$ 150.74 billion) in 2022-23, registering an annual growth of 10% over FY21. Between 2015-16 and 2021-22, The GSDP increased at a CAGR (in Rs.) of 13.09% from 2015-16 to 2021-22. Net State Domestic Product (NSDP) of Madhya Pradesh was about Rs. 8.27 trillion (US$ 113.94 billion) in 2020-21. Between 2015-16 and 2020-21, state's NSDP grew at a CAGR of around 11.22%

UTTAR PRADESH: The state has an area of 240,928 sq kms and is the most populous state in India, with population of 199.8 million as per 2011 census with an average population density of 828 persons per sq. km. The economy of Uttar Pradesh is the third largest of all the states in India. Nominal GDP of the state for the year 2022-23 is Rs. 21.74 trillion.

It is reported that the economy of Uttar Pradesh is growing at a faster rate than the national economy at about 9%. In terms of traffic and transportation as well Uttar Pradesh is one of the leader states in India now.

- Air Connectivity: Major national & international airports connecting the rest of India, Middle East & Southeast Asian countries; Only state to have 05 International Airports (03 existing & 02 upcoming at Jewar (G. Noida & Ayodhya)
- Railway Network: Largest railway network in the country spanning over 8,949 km; 05 Railway Zones
- Inland Waterway: India's 1st Inland Waterway is operational in UP (1100 km Haldia - Varanasi tract
- Expressways: Uttar Pradesh boasts state of art expressways ensuring seamless connectivity; 13 Expressways (existing & upcoming)
- Road Network: Largest Road Network in India; 4 Lakh Km Total Road Length 11,737 Km Total National Highway

Logistics hubs emerging across UP: MMLH Dadri, MMTH Boraki, MMT Varanasi etc.

From the above it can be expected that the project corridor would serve as one of the important transportation links in the area and would contribute to the growth of the region.

5.6 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as under. Rate of growth is moderated in light of overall regional trend. Growth of Multi-Axle is kept slightly higher as trend of technological advances in logistic industry Favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, rate of growth diminishes. Same growth rate is not sustainable for long. Traffic growth has been suitably stepped down for future years.

Growth rates are recommended for three scenarios for sensitivity analysis namely **Optimistic, Pessimistic** and **Most Likely** with a positive and negative variation 0.25% from Most Likely case for corridor in both states.

5.6.1 Recommended Growth Rates of Traffic for Madhya Pradesh Part of Stretch

Table 5-13 : Recommended Growth Rates Optimistic

Category / Year	FY 25-29	FY 30-34	FY 35-39	FY 40-44	FY 45-49
Car/Jeep/Van	6.64%	5.57%	5.25%	5.03%	4.41%
LCV	4.92%	4.05%	2.38%	2.01%	2.86%
Minibus	4.18%	3.53%	2.95%	2.68%	2.43%
Bus	4.18%	3.53%	2.95%	2.68%	2.43%
2- Axle	4.92%	4.64%	3.27%	2.75%	2.47%
3 - Axle	4.92%	4.64%	3.27%	2.75%	2.47%
4 to 6 Axle	4.53%	4.34%	3.09%	2.60%	2.34%
7 and Above Axle	4.53%	4.34%	3.09%	2.60%	2.34%

Table 5-14 : Recommended Growth Rates Pessimistic

Category / Year	FY 25-29	FY 30-34	FY 35-39	FY 40-44	FY 45-49
Car/Jeep/Van	6.14%	5.07%	4.75%	4.53%	3.91%
LCV	4.42%	3.55%	1.88%	1.51%	2.36%
Minibus	3.68%	3.03%	2.45%	2.18%	1.93%
Bus	3.68%	3.03%	2.45%	2.18%	1.93%
2- Axle	4.42%	4.14%	2.77%	2.25%	1.97%
3 - Axle	4.42%	4.14%	2.77%	2.25%	1.97%
4 to 6 Axle	4.03%	3.84%	2.59%	2.10%	1.84%
7 and Above Axle	4.03%	3.84%	2.59%	2.10%	1.84%

Table 5-15 : Recommended Growth Rates Most Likely

Category / Year	FY 25-29	FY 30-34	FY 35-39	FY 40-44	FY 45-49
Car/Jeep/Van	6.39%	5.32%	5.00%	4.78%	4.16%
LCV	4.67%	3.80%	2.13%	1.76%	2.61%
Minibus	3.93%	3.28%	2.70%	2.43%	2.18%
Bus	3.93%	3.28%	2.70%	2.43%	2.18%
2- Axle	4.67%	4.39%	3.02%	2.50%	2.22%
3 - Axle	4.67%	4.39%	3.02%	2.50%	2.22%
4 to 6 Axle	4.28%	4.09%	2.84%	2.35%	2.09%
7 and Above Axle	4.28%	4.09%	2.84%	2.35%	2.09%

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in the previous section of the report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for the following three cases of growth up to concession period.

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza 1- Chainage 142.319 KM

(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	1439	266	115	1262	1322	1573	4	5981	17032
2025-26	1535	279	120	1324	1387	1644	4	6293	17863
2026-27	1637	292	125	1389	1455	1718	4	6620	18731
2027-28	1746	306	130	1457	1526	1795	4	6964	19640
2028-29	1862	321	135	1529	1601	1876	4	7328	20599
2029-30	1965	334	140	1600	1675	1957	4	7675	21536
2030-31	2074	347	145	1674	1752	2041	4	8037	22510
2031-32	2190	361	150	1752	1833	2130	4	8420	23540
2032-33	2312	375	155	1833	1918	2223	4	8820	24614
2033-34	2440	390	160	1918	2007	2319	4	9238	25734
2034-35	2568	399	165	1981	2072	2390	4	9579	26594
2035-36	2703	408	170	2046	2140	2464	4	9935	27489
2036-37	2845	417	175	2113	2210	2540	4	10304	28413
2037-38	2994	427	180	2182	2282	2618	4	10687	29366
2038-39	3151	437	185	2253	2356	2698	4	11084	30348
2039-40	3309	446	190	2315	2421	2768	4	11453	31230
2040-41	3475	455	195	2379	2487	2840	4	11835	32139

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2041-42	3649	464	200	2444	2555	2914	4	12230	33073
2042-43	3832	473	205	2511	2625	2989	4	12639	34033
2043-44	4024	482	210	2580	2697	3066	4	13063	35023

Table 6-2 : Total Tollable Traffic @ Toll Plaza 2- Chainage 226.740 KM

(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	1631	426	100	1456	1433	1867	5	6918	19661
2025-26	1739	447	105	1528	1504	1951	5	7279	20623
2026-27	1855	469	110	1604	1578	2040	5	7661	21637
2027-28	1977	493	115	1683	1656	2133	5	8062	22700
2028-29	2108	517	120	1766	1738	2230	5	8484	23813
2029-30	2225	538	125	1848	1819	2327	5	8887	24902
2030-31	2349	560	130	1934	1903	2428	5	9309	26039
2031-32	2480	582	135	2024	1991	2533	5	9750	27224
2032-33	2619	606	140	2118	2083	2643	5	10214	28467
2033-34	2765	631	145	2216	2179	2757	5	10698	29761
2034-35	2911	646	150	2289	2251	2842	5	11094	30762
2035-36	3063	661	155	2364	2325	2930	5	11503	31794
2036-37	3223	677	160	2442	2401	3021	5	11929	32865
2037-38	3392	693	165	2522	2480	3115	5	12372	33973
2038-39	3570	709	170	2605	2561	3211	5	12831	35114
2039-40	3749	724	175	2677	2632	3294	5	13256	36133
2040-41	3937	739	180	2751	2705	3379	5	13696	37182
2041-42	4135	754	185	2827	2780	3467	5	14153	38266
2042-43	4343	769	190	2905	2857	3558	5	14627	39386
2043-44	4562	784	195	2985	2936	3651	5	15118	40538

Table 6-3 : Total Tollable Traffic @ Toll Plaza 3- Chainage 295.000 KM

(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	1715	384	104	1503	1532	2293	6	7537	22054
2025-26	1829	403	108	1577	1608	2396	6	7927	23122
2026-27	1950	423	112	1655	1688	2505	6	8339	24249
2027-28	2079	443	116	1736	1771	2618	6	8769	25421
2028-29	2217	464	120	1821	1858	2737	6	9223	26654
2029-30	2340	483	124	1905	1944	2856	6	9658	27863
2030-31	2470	503	128	1993	2034	2980	6	10114	29127
2031-32	2607	523	132	2085	2128	3110	6	10591	30449
2032-33	2751	544	136	2182	2226	3245	6	11090	31829
2033-34	2904	565	140	2283	2329	3386	6	11613	33272
2034-35	3057	579	144	2358	2406	3490	6	12040	34382
2035-36	3217	593	148	2435	2485	3598	6	12482	35529
2036-37	3386	608	152	2515	2567	3709	6	12943	36718
2037-38	3563	623	156	2597	2651	3823	6	13419	37940
2038-39	3750	638	160	2682	2738	3941	6	13915	39209
2039-40	3938	652	164	2756	2814	4043	6	14373	40339
2040-41	4136	666	168	2832	2892	4147	6	14847	41500
2041-42	4343	680	172	2910	2972	4255	6	15338	42700
2042-43	4561	694	176	2990	3054	4366	6	15847	43936
2043-44	4790	708	180	3072	3138	4479	6	16373	45205

Table 6-4 : Total Tollable Traffic @ Toll Plaza 4- Chainage 357.739 KM

(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	973	331	87	1302	1284	1649	5	5631	16932
2025-26	1038	347	91	1366	1346	1723	5	5916	17744
2026-27	1108	364	95	1433	1412	1801	5	6218	18601
2027-28	1182	382	99	1503	1481	1882	5	6534	19496
2028-29	1261	400	103	1577	1553	1967	5	6866	20434
2029-30	1331	416	107	1650	1624	2052	5	7185	21355
2030-31	1406	433	111	1726	1699	2141	5	7521	22321
2031-32	1484	450	115	1806	1777	2233	5	7870	23324
2032-33	1567	468	119	1890	1859	2330	5	8238	24381
2033-34	1654	487	123	1977	1945	2431	5	8622	25482
2034-35	1741	498	127	2042	2008	2506	5	8927	26319
2035-36	1833	510	131	2109	2073	2583	5	9244	27183
2036-37	1929	522	135	2178	2140	2662	5	9571	28073
2037-38	2030	535	139	2249	2209	2744	5	9911	28994
2038-39	2136	548	143	2322	2281	2828	5	10263	29945
2039-40	2243	559	147	2386	2343	2901	5	10584	30787
2040-41	2355	570	151	2452	2407	2976	5	10916	31655
2041-42	2472	581	155	2519	2473	3053	5	11258	32546
2042-43	2595	593	159	2588	2541	3132	5	11613	33465
2043-44	2726	605	163	2659	2610	3213	5	11981	34411

Table 6-5 : Total Tollable Traffic @ Toll Plaza 1- Chainage 142.319 KM (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	1439	266	115	1262	1322	1573	4	5981	17032
2025-26	1529	277	119	1318	1380	1636	4	6263	17776
2026-27	1623	289	123	1376	1441	1702	4	6558	18554
2027-28	1723	301	127	1437	1504	1770	4	6866	19362
2028-29	1829	314	131	1501	1570	1841	4	7190	20209
2029-30	1921	325	135	1563	1635	1911	4	7494	21025
2030-31	2018	336	139	1628	1702	1984	4	7811	21875
2031-32	2120	348	143	1695	1772	2060	4	8142	22760
2032-33	2228	360	147	1765	1845	2139	4	8488	23683
2033-34	2341	372	151	1838	1921	2221	4	8848	24642
2034-35	2452	379	154	1889	1974	2279	4	9131	25345
2035-36	2568	386	158	1942	2028	2338	4	9424	26070
2036-37	2690	393	162	1996	2084	2399	4	9728	26819
2037-38	2818	400	166	2051	2142	2461	4	10042	27588
2038-39	2951	407	170	2108	2201	2525	4	10366	28379
2039-40	3084	413	174	2156	2250	2578	4	10659	29063
2040-41	3223	419	178	2205	2300	2632	4	10961	29763
2041-42	3369	425	182	2255	2352	2688	4	11275	30488
2042-43	3521	431	186	2306	2405	2745	4	11598	31229
2043-44	3680	437	190	2358	2459	2803	4	11931	31988

Table 6-6 : Total Tollable Traffic @ Toll Plaza 2- Chainage 226.740 KM (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	1631	426	100	1456	1433	1867	5	6918	19661
2025-26	1731	445	104	1520	1497	1942	5	7244	20523
2026-27	1836	464	108	1587	1564	2020	5	7584	21422
2027-28	1949	485	112	1657	1634	2101	5	7943	22363
2028-29	2069	506	116	1730	1707	2185	5	8318	23342
2029-30	2173	524	119	1801	1778	2269	5	8669	24286
2030-31	2283	543	123	1875	1852	2356	5	9037	25272
2031-32	2399	562	127	1952	1929	2447	5	9421	26300
2032-33	2520	581	131	2032	2009	2541	5	9819	27365
2033-34	2647	602	135	2115	2092	2639	5	10235	28474
2034-35	2772	613	138	2173	2151	2708	5	10560	29286
2035-36	2903	624	141	2233	2211	2778	5	10895	30118
2036-37	3040	635	144	2295	2273	2850	5	11242	30976
2037-38	3185	646	147	2359	2336	2924	5	11602	31861
2038-39	3337	657	151	2424	2401	3000	5	11975	32773
2039-40	3489	667	154	2478	2456	3063	5	12312	33560

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2040-41	3647	677	157	2533	2512	3128	5	12659	34367
2041-42	3812	687	160	2589	2569	3194	5	13016	35192
2042-43	3985	697	163	2646	2627	3261	5	13384	36036
2043-44	4166	707	167	2706	2687	3330	5	13768	36914

Table 6-7 : Total Tollable Traffic @ Toll Plaza 3- Chainage 295.000 KM (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	1715	384	104	1503	1532	2293	6	7537	22054
2025-26	1821	401	108	1570	1599	2386	6	7891	23018
2026-27	1933	418	112	1640	1669	2482	6	8260	24019
2027-28	2051	437	116	1713	1744	2582	6	8649	25072
2028-29	2176	456	120	1789	1822	2685	6	9054	26163
2029-30	2286	472	124	1863	1898	2788	6	9437	27222
2030-31	2402	488	128	1940	1977	2895	6	9836	28324
2031-32	2523	505	132	2020	2059	3006	6	10251	29468
2032-33	2650	522	136	2103	2145	3121	6	10683	30657
2033-34	2784	541	140	2190	2234	3241	6	11136	31899
2034-35	2916	552	143	2251	2295	3326	6	11489	32805
2035-36	3054	563	146	2314	2358	3413	6	11854	33738
2036-37	3198	574	149	2379	2422	3502	6	12230	34695
2037-38	3350	585	153	2445	2488	3593	6	12620	35681
2038-39	3510	596	157	2513	2556	3686	6	13024	36696
2039-40	3669	606	160	2570	2613	3763	6	13387	37568
2040-41	3835	616	163	2629	2671	3841	6	13761	38460
2041-42	4008	626	166	2689	2731	3921	6	14147	39377
2042-43	4189	636	170	2750	2792	4003	6	14546	40320
2043-44	4378	646	174	2812	2854	4088	6	14958	41290

Table 6-8 : Total Tollable Traffic @ Toll Plaza 4- Chainage 357.739 KM (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	973	331	87	1302	1284	1649	5	5631	16932
2025-26	1034	346	90	1360	1340	1715	5	5890	17663
2026-27	1098	361	93	1420	1399	1784	5	6160	18426
2027-28	1166	377	97	1483	1460	1856	5	6444	19226
2028-29	1238	394	101	1549	1524	1930	5	6741	20059
2029-30	1302	408	104	1613	1586	2004	5	7022	20864
2030-31	1369	423	107	1680	1651	2081	5	7316	21705
2031-32	1439	438	110	1749	1719	2161	5	7621	22577
2032-33	1512	454	113	1821	1790	2244	5	7939	23486

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2033-34	1589	470	117	1896	1863	2330	5	8270	24430
2034-35	1665	479	120	1949	1914	2390	5	8522	25110
2035-36	1744	488	123	2003	1967	2452	5	8782	25812
2036-37	1827	497	126	2059	2021	2515	5	9050	26531
2037-38	1914	507	129	2116	2077	2580	5	9328	27273
2038-39	2005	517	132	2175	2134	2647	5	9615	28038
2039-40	2096	524	135	2224	2182	2703	5	9869	28691
2040-41	2191	531	138	2274	2231	2760	5	10130	29359
2041-42	2290	539	141	2325	2281	2818	5	10399	30043
2042-43	2393	547	144	2377	2332	2877	5	10675	30742
2043-44	2501	555	147	2431	2384	2937	5	10960	31459

Traffic projections for Most Likely scenario is given as under

Table 6-9 : Total Tollable Traffic @ Toll Plaza 1- Chainage 142.319 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	1439	266	115	1262	1322	1573	4	5981	17032
2025-26	1532	278	119	1321	1383	1640	4	6277	17816
2026-27	1630	291	123	1383	1447	1710	4	6588	18639
2027-28	1734	304	127	1448	1514	1783	4	6914	19499
2028-29	1845	318	132	1516	1584	1859	4	7258	20402
2029-30	1943	330	136	1583	1653	1935	4	7584	21280
2030-31	2046	342	140	1652	1725	2014	4	7923	22191
2031-32	2155	355	144	1724	1800	2096	4	8278	23142
2032-33	2269	368	148	1800	1879	2181	4	8649	24135
2033-34	2389	382	152	1879	1961	2270	4	9037	25171
2034-35	2508	390	156	1936	2020	2334	4	9348	25950
2035-36	2633	398	160	1995	2081	2400	4	9671	26756
2036-37	2764	406	164	2055	2144	2468	4	10005	27586
2037-38	2902	414	168	2117	2209	2538	4	10352	28444
2038-39	3047	423	172	2181	2275	2610	4	10712	29329
2039-40	3192	430	176	2236	2332	2671	4	11041	30107
2040-41	3344	437	180	2292	2390	2734	4	11381	30907
2041-42	3503	445	184	2349	2450	2798	4	11733	31729
2042-43	3670	453	188	2408	2511	2864	4	12098	32577
2043-44	3845	461	192	2468	2574	2931	4	12475	33446

Table 6-10 : Total Tollable Traffic @ Toll Plaza 2- Chainage 226.740 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	1631	426	100	1456	1433	1867	5	6918	19661
2025-26	1734	446	104	1525	1500	1947	5	7261	20574
2026-27	1845	467	108	1597	1570	2030	5	7622	21528
2027-28	1963	489	112	1672	1644	2116	5	8001	22525
2028-29	2088	512	116	1750	1721	2207	5	8399	23571
2029-30	2199	532	120	1827	1797	2298	5	8778	24593
2030-31	2316	553	124	1907	1876	2392	5	9173	25653
2031-32	2439	574	128	1991	1958	2490	5	9585	26759
2032-33	2568	596	132	2078	2044	2592	5	10015	27911
2033-34	2704	618	136	2169	2134	2698	5	10464	29112
2034-35	2838	632	140	2235	2199	2775	5	10824	30018
2035-36	2980	646	144	2303	2266	2854	5	11198	30954
2036-37	3130	660	148	2373	2335	2935	5	11586	31918
2037-38	3286	674	152	2445	2406	3018	5	11986	32910
2038-39	3450	689	156	2519	2479	3103	5	12401	33932
2039-40	3614	701	160	2583	2541	3176	5	12780	34832
2040-41	3787	713	164	2648	2605	3251	5	13173	35760
2041-42	3968	725	168	2715	2671	3327	5	13579	36712
2042-43	4157	739	172	2783	2738	3405	5	13999	37690
2043-44	4354	753	176	2853	2807	3485	5	14433	38697

Table 6-11 : Total Tollable Traffic @ Toll Plaza 3- Chainage 295.000 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	1715	384	104	1503	1532	2293	6	7537	22054
2025-26	1825	401	108	1574	1602	2391	6	7907	23065
2026-27	1941	420	112	1648	1678	2493	6	8298	24131
2027-28	2064	440	116	1725	1757	2600	6	8708	25245
2028-29	2195	460	120	1806	1840	2711	6	9138	26410
2029-30	2311	477	124	1885	1921	2822	6	9546	27543
2030-31	2434	495	128	1968	2006	2937	6	9974	28726
2031-32	2563	514	132	2054	2094	3057	6	10420	29958
2032-33	2699	534	136	2144	2186	3182	6	10887	31244
2033-34	2841	554	140	2238	2282	3313	6	11374	32588
2034-35	2983	566	144	2306	2350	3407	6	11762	33591
2035-36	3131	578	148	2376	2422	3504	6	12165	34631
2036-37	3288	590	152	2448	2496	3603	6	12583	35702
2037-38	3452	602	156	2522	2572	3705	6	13015	36805
2038-39	3624	615	160	2598	2650	3810	6	13463	37943
2039-40	3797	626	164	2663	2715	3900	6	13871	38939
2040-41	3978	637	168	2730	2782	3992	6	14293	39965
2041-42	4168	648	172	2799	2850	4086	6	14729	41017
2042-43	4366	660	176	2869	2922	4182	6	15181	42103

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2043-44	4574	672	180	2941	2996	4280	6	15649	43220

Table 6-12 : Total Tollable Traffic @ Toll Plaza 4- Chainage 357.739 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	973	331	87	1302	1284	1649	5	5631	16932
2025-26	1036	347	91	1363	1343	1719	5	5904	17706
2026-27	1103	363	95	1427	1405	1792	5	6190	18515
2027-28	1174	380	99	1494	1470	1868	5	6490	19362
2028-29	1249	397	103	1564	1538	1947	5	6803	20244
2029-30	1316	412	107	1633	1605	2026	5	7104	21109
2030-31	1386	428	111	1705	1675	2108	5	7418	22010
2031-32	1460	444	115	1780	1748	2194	5	7746	22951
2032-33	1538	461	119	1858	1824	2283	5	8088	23929
2033-34	1620	478	123	1939	1903	2376	5	8444	24947
2034-35	1701	488	126	1998	1960	2443	5	8721	25701
2035-36	1786	498	130	2058	2019	2512	5	9008	26481
2036-37	1875	509	134	2120	2080	2583	5	9306	27287
2037-38	1969	520	138	2184	2142	2656	5	9614	28116
2038-39	2067	531	142	2250	2206	2731	5	9932	28970
2039-40	2165	541	146	2306	2261	2795	5	10219	29716
2040-41	2268	551	150	2364	2317	2861	5	10516	30485
2041-42	2376	561	154	2423	2375	2928	5	10822	31272
2042-43	2489	571	158	2484	2434	2997	5	11138	32083
2043-44	2608	581	162	2546	2494	3067	5	11463	32910

CHAPTER 7
FORECAST OF TOLL REVENUE

7.1 General

This chapter presents the tolling rate calculations, categories and toll revenue of the project.

7.2 Discount Categories

As per the Toll Notification (Schedule - G) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent users monthly pass would be issued at fee at 2/3rd rate for 50 single journey trips.
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travellers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: There are several categories of local discounts.
    a) Local Car Jeep Van - Rs. 275 per month (for locals residing within a radius of 20 kms from toll plaza)

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.

The formula for determining the applicable rate of fee shall be as follows:-

$$\text{Applicable rate of fee} = \text{base rate} + \text{base rate} \times \left\{ \frac{\text{WPI A-WPI B}}{\text{WPI B}} \right\} \times 0.4$$

Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2022-23. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. The following graph provides historical rate of inflation (WPI) in India. Data has been sourced from the Office of Economic Advisor web site (www.eaindustry.nic.in) WPI for year 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series.

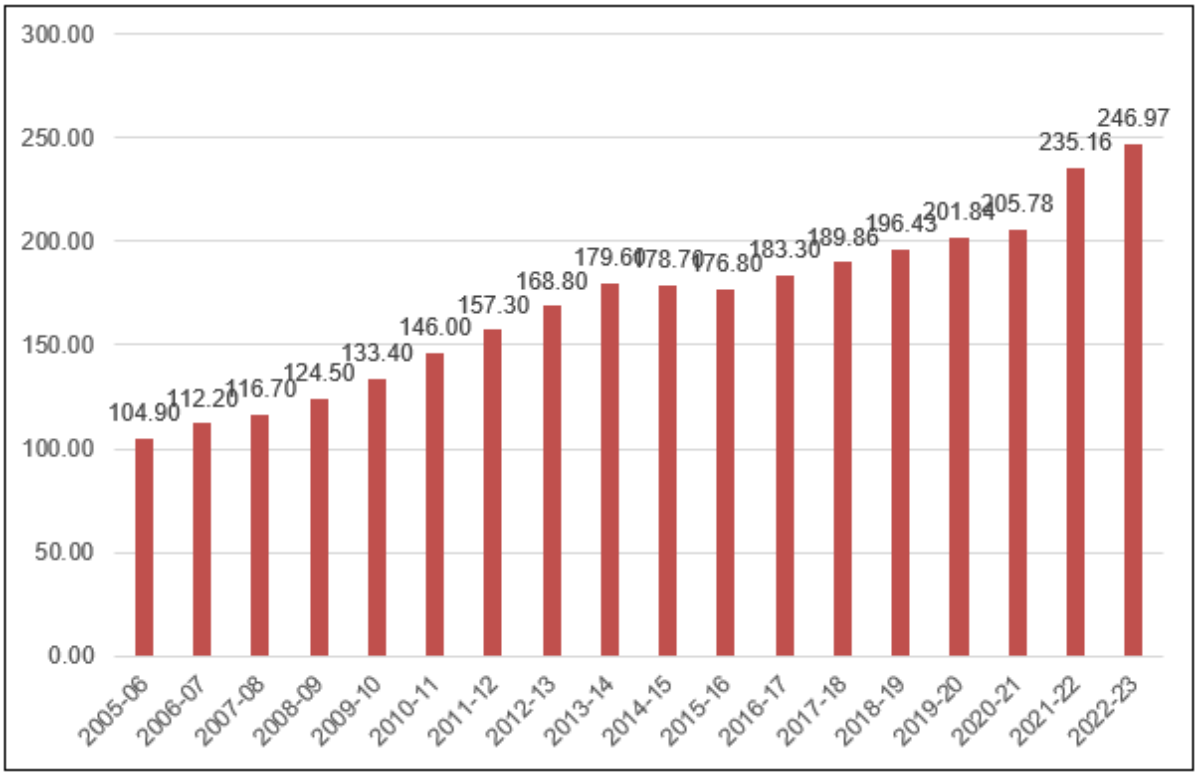


Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in the last few years is steadily growing. It grew by the range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

7.3 Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Oversized Vehicles (7 or more Axles)	4.20

These rates are then modified for as per procedure provided in guidelines of notification considering factors listed below.

- Annual revision of fee rate - @3%
- Application of WPI

Base rates have been worked out to map the current rates.

Table 7-2 : Toll Rates for Forecasting Year Single Journey @ Km 142.319

Year	Car	Minibus /LCV	Bus	Truck	3 axles	Multi axle	Oversized Vehicles
2024-25	125	200	420	420	460	660	805
2025-26	130	210	440	440	480	695	845
2026-27	135	220	465	465	505	730	885
2027-28	145	235	490	490	530	765	930
2028-29	150	245	515	515	560	805	980
2029-30	160	255	540	540	590	845	1030
2030-31	165	270	565	565	620	890	1080
2031-32	175	285	595	595	650	935	1140
2032-33	185	300	625	625	685	985	1195
2033-34	195	315	660	660	720	1035	1260
2034-35	205	330	695	695	755	1090	1325
2035-36	215	350	730	730	795	1145	1395
2036-37	225	365	770	770	840	1205	1470
2037-38	240	385	810	810	885	1270	1545
2038-39	250	405	855	855	930	1340	1630
2039-40	265	430	900	900	980	1410	1715
2040-41	280	450	945	945	1035	1485	1810
2041-42	295	475	1000	1000	1090	1565	1905
2042-43	310	500	1050	1050	1150	1650	2010
2043-44	330	530	1110	1110	1210	1740	2115

Table 7-3 : Toll Rates for Forecasting Year Single Journey (Rs. Rupees) @ Km 226.740

Year	Car	Minibus /LCV	Bus	Truck	3 axle	Multi axle	Oversized Vehicles

Year	Car	Minibus /LCV	Bus	Truck	3 axle	Multi axle	Oversized Vehicles
2024-25	155	250	525	525	575	825	1005
2025-26	170	275	580	580	630	905	1105
2026-27	180	290	605	605	660	950	1160
2027-28	190	305	640	640	695	1000	1220
2028-29	200	320	670	670	730	1050	1280
2029-30	210	335	705	705	770	1105	1345
2030-31	220	355	740	740	810	1160	1415
2031-32	230	370	780	780	850	1220	1485
2032-33	240	390	820	820	895	1285	1565
2033-34	255	410	860	860	940	1350	1645
2034-35	270	435	905	905	990	1425	1730
2035-36	280	455	955	955	1040	1500	1825
2036-37	295	480	1005	1005	1095	1575	1920
2037-38	315	505	1060	1060	1155	1660	2020
2038-39	330	530	1115	1115	1215	1750	2130
2039-40	345	560	1175	1175	1280	1840	2245
2040-41	365	590	1240	1240	1350	1940	2365
2041-42	385	625	1305	1305	1425	2045	2490
2042-43	405	655	1375	1375	1500	2155	2625
2043-44	430	690	1450	1450	1580	2275	2770

Table 7-4 : Toll Rates for Forecasting Year Single Journey (Rs. Rupees) @ Km 295.000

Year	Car	Minibus /LCV	Bus	Truck	3 axle	Multi axle	Oversized Vehicles
2024-25	125	200	415	415	455	655	795
2025-26	130	210	440	440	475	685	835
2026-27	135	220	460	460	500	720	880
2027-28	145	230	485	485	525	760	920
2028-29	150	240	510	510	555	795	970
2029-30	160	255	535	535	580	835	1020
2030-31	165	270	560	560	610	880	1070
2031-32	175	280	590	590	645	925	1125
2032-33	185	295	620	620	675	975	1185
2033-34	195	310	655	655	710	1025	1245
2034-35	205	330	685	685	750	1080	1310
2035-36	215	345	725	725	790	1135	1380
2036-37	225	365	760	760	830	1195	1455
2037-38	235	385	800	800	875	1260	1530

Year	Car	Minibus /LCV	Bus	Truck	3 axle	Multi axle	Oversized Vehicles
2038-39	250	405	845	845	920	1325	1610
2039-40	265	425	890	890	970	1395	1700
2040-41	275	445	940	940	1025	1470	1790
2041-42	290	470	990	990	1080	1550	1885
2042-43	310	495	1040	1040	1135	1635	1990
2043-44	325	525	1100	1100	1200	1720	2095

Table 7-5 : Toll Rates for Forecasting Year Single Journey (Rs. Rupees) @ Km 357.739

Year	Car	Minibus /LCV	Bus	Truck	3 axle	Multi axle	Oversized Vehicles
2024-25	155	245	515	515	565	810	985
2025-26	160	260	540	540	590	850	1035
2026-27	170	270	570	570	620	895	1090
2027-28	175	285	600	600	655	940	1145
2028-29	185	300	630	630	685	985	1200
2029-30	195	315	660	660	720	1035	1265
2030-31	205	330	695	695	760	1090	1330
2031-32	215	350	730	730	800	1145	1395
2032-33	225	365	770	770	840	1205	1470
2033-34	240	385	810	810	885	1270	1545
2034-35	250	405	850	850	930	1335	1625
2035-36	265	430	895	895	980	1405	1710
2036-37	280	450	945	945	1030	1480	1800
2037-38	295	475	995	995	1085	1560	1895
2038-39	310	500	1045	1045	1140	1640	2000
2039-40	325	525	1105	1105	1205	1730	2105
2040-41	345	555	1160	1160	1265	1820	2220
2041-42	360	585	1225	1225	1335	1920	2340
2042-43	380	615	1290	1290	1410	2025	2465
2043-44	400	650	1360	1360	1485	2135	2600

Table 7-6 : Toll Rates for Forecasting Year Return Journey @ Km 142.319

Year	Car	Minibus /LCV	Bus	Truck	3 axle	Multi axle	Oversized Vehicles
2024-25	185	300	630	630	690	990	1205

Year	Car	Minibus /LCV	Bus	Truck	3 axle	Multi axle	Oversized Vehicles
2025-26	195	315	665	665	725	1040	1265
2026-27	205	330	695	695	760	1090	1330
2027-28	215	350	730	730	800	1150	1395
2028-29	225	365	770	770	840	1205	1470
2029-30	240	385	810	810	880	1270	1545
2030-31	250	405	850	850	925	1335	1625
2031-32	265	425	895	895	975	1400	1705
2032-33	280	450	940	940	1025	1475	1795
2033-34	290	470	990	990	1080	1550	1890
2034-35	310	495	1040	1040	1135	1635	1990
2035-36	325	525	1095	1095	1195	1720	2090
2036-37	340	550	1155	1155	1260	1810	2205
2037-38	360	580	1215	1215	1325	1905	2320
2038-39	380	610	1280	1280	1395	2005	2445
2039-40	400	645	1350	1350	1470	2115	2575
2040-41	420	680	1420	1420	1550	2230	2710
2041-42	440	715	1495	1495	1635	2350	2860
2042-43	465	755	1580	1580	1720	2475	3015
2043-44	490	795	1665	1665	1815	2610	3175

Table 7-7 : Toll Rates for Forecasting Year Return Journey (Rs. Rupees) @ Km 226.740

Year	Car	Minibus /LCV	Bus	Truck	3 axle	Multi axle	Oversized Vehicles
2024-25	235	375	790	790	860	1240	1510
2025-26	255	415	865	865	945	1360	1655
2026-27	270	435	910	910	995	1430	1740
2027-28	285	455	955	955	1045	1500	1825
2028-29	295	480	1005	1005	1095	1575	1920
2029-30	310	505	1055	1055	1155	1660	2020
2030-31	330	530	1110	1110	1210	1745	2120
2031-32	345	560	1170	1170	1275	1835	2230
2032-33	365	585	1230	1230	1340	1930	2345
2033-34	380	615	1295	1295	1410	2030	2470
2034-35	400	650	1360	1360	1485	2135	2600
2035-36	425	685	1435	1435	1565	2245	2735
2036-37	445	720	1510	1510	1645	2365	2880
2037-38	470	760	1590	1590	1735	2490	3030
2038-39	495	800	1675	1675	1825	2625	3195

Year	Car	Minibus /LCV	Bus	Truck	3 axle	Multi axle	Oversized Vehicles
2039-40	520	840	1760	1760	1920	2765	3365
2040-41	550	885	1855	1855	2025	2910	3545
2041-42	580	935	1955	1955	2135	3070	3735
2042-43	610	985	2065	2065	2250	3235	3940
2043-44	645	1040	2175	2175	2370	3410	4150

Table 7-8 : Toll Rates for Forecasting Year Return Journey (Rs. Rupees) @ Km 295.000

Year	Car	Minibus /LCV	Bus	Truck	3 axle	Multi axle	Oversized Vehicles
2024-25	185	300	625	625	680	980	1195
2025-26	195	315	655	655	715	1030	1255
2026-27	205	330	690	690	750	1080	1315
2027-28	215	345	725	725	790	1135	1385
2028-29	225	365	760	760	830	1195	1455
2029-30	235	380	800	800	875	1255	1530
2030-31	250	400	840	840	920	1320	1605
2031-32	260	420	885	885	965	1390	1690
2032-33	275	445	930	930	1015	1460	1780
2033-34	290	470	980	980	1070	1535	1870
2034-35	305	490	1030	1030	1125	1615	1970
2035-36	320	520	1085	1085	1185	1700	2070
2036-37	340	545	1140	1140	1245	1790	2180
2037-38	355	575	1205	1205	1310	1885	2295
2038-39	375	605	1265	1265	1380	1985	2420
2039-40	395	635	1335	1335	1455	2095	2550
2040-41	415	670	1405	1405	1535	2205	2685
2041-42	440	705	1480	1480	1615	2325	2830
2042-43	460	745	1560	1560	1705	2450	2980
2043-44	485	785	1645	1645	1795	2585	3145

Table 7-9 : Toll Rates for Forecasting Year Return Journey (Rs. Rupees) @ Km 357.739

Year	Car	Minibus /LCV	Bus	Truck	3 axle	Multi axle	Oversized Vehicles
2024-25	230	370	775	775	845	1215	1480
2025-26	240	390	815	815	885	1275	1555

Year	Car	Minibus /LCV	Bus	Truck	3 axle	Multi axle	Oversized Vehicles
2026-27	250	410	855	855	930	1340	1630
2027-28	265	430	900	900	980	1410	1715
2028-29	280	450	945	945	1030	1480	1800
2029-30	295	475	990	990	1080	1555	1895
2030-31	310	500	1045	1045	1140	1635	1990
2031-32	325	525	1095	1095	1195	1720	2095
2032-33	340	550	1155	1155	1260	1810	2205
2033-34	360	580	1215	1215	1325	1905	2320
2034-35	375	610	1280	1280	1395	2005	2440
2035-36	395	640	1345	1345	1465	2110	2565
2036-37	420	675	1415	1415	1545	2220	2705
2037-38	440	710	1490	1490	1625	2340	2845
2038-39	465	750	1570	1570	1715	2460	2995
2039-40	490	790	1655	1655	1805	2595	3160
2040-41	515	830	1745	1745	1900	2735	3325
2041-42	545	875	1835	1835	2005	2880	3505
2042-43	570	925	1935	1935	2110	3035	3695
2043-44	605	975	2040	2040	2225	3200	3895

Table 7-10 : Toll Rates for Monthly Pass Local@ Km 142.319

Year	Car	Minibus /LCV
2024-25	355	355
2025-26	375	375
2026-27	390	390
2027-28	410	410
2028-29	435	435
2029-30	455	455
2030-31	480	480
2031-32	505	505
2032-33	530	530
2033-34	560	560
2034-35	585	585
2035-36	620	620
2036-37	650	650
2037-38	685	685
2038-39	720	720
2039-40	760	760
2040-41	800	800
2041-42	845	845

Year	Car	Minibus /LCV
2042-43	890	890
2043-44	940	940

Table 7-11 : Toll Rates for Monthly Pass Local@ Km 226.740

Year	Car	Minibus /LCV
2024-25	340	340
2025-26	355	355
2026-27	375	375
2027-28	390	390
2028-29	410	410
2029-30	435	435
2030-31	455	455
2031-32	480	480
2032-33	505	505
2033-34	530	530
2034-35	560	560
2035-36	585	585
2036-37	620	620
2037-38	650	650
2038-39	685	685
2039-40	720	720
2040-41	760	760
2041-42	800	800
2042-43	845	845
2043-44	890	890

Table 7-12 : Toll Rates for Monthly Pass Local@ Km 295.000

Year	Car	Minibus /LCV
2024-25	340	340
2025-26	355	355
2026-27	375	375
2027-28	390	390
2028-29	410	410
2029-30	435	435
2030-31	455	455
2031-32	480	480
2032-33	505	505
2033-34	530	530
2034-35	560	560
2035-36	585	585
2036-37	620	620

Year	Car	Minibus /LCV
2037-38	650	650
2038-39	685	685
2039-40	720	720
2040-41	760	760
2041-42	800	800
2042-43	845	845
2043-44	890	890

Table 7-13 : Toll Rates for Monthly Pass Local@ Km 357.739

Year	Car	Minibus /LCV
2024-25	340	340
2025-26	355	355
2026-27	375	375
2027-28	390	390
2028-29	410	410
2029-30	435	435
2030-31	455	455
2031-32	480	480
2032-33	505	505
2033-34	530	530
2034-35	560	560
2035-36	585	585
2036-37	620	620
2037-38	650	650
2038-39	685	685
2039-40	720	720
2040-41	760	760
2041-42	800	800
2042-43	845	845
2043-44	890	890

Table 7-14 : Toll Rates for Monthly Pass @ Km 142.319

Year	Car	Minibus /LCV	Bus	Truck	3 -Axle	Multi axle	Oversized Vehicles
2024-25	4145	6695	14030	14030	15305	22000	26780
2025-26	4355	7030	14735	14735	16075	23105	28130
2026-27	4575	7390	15480	15480	16885	24275	29550
2027-28	4805	7765	16265	16265	17745	25505	31050
2028-29	5050	8160	17095	17095	18650	26805	32635
2029-30	5310	8575	17970	17970	19605	28180	34305
2030-31	5580	9015	18895	18895	20610	29630	36070
2031-32	5870	9485	19870	19870	21675	31160	37930

Year	Car	Minibus /LCV	Bus	Truck	3 -Axle	Multi axle	Oversized Vehicles
2032-33	6175	9975	20900	20900	22800	32775	39900
2033-34	6495	10495	21990	21990	23990	34480	41980
2034-35	6835	11045	23140	23140	25245	36285	44175
2035-36	7195	11625	24355	24355	26570	38195	46495
2036-37	7575	12240	25640	25640	27970	40210	48950
2037-38	7980	12885	27000	27000	29455	42340	51545
2038-39	8400	13575	28440	28440	31025	44595	54290
2039-40	8850	14300	29960	29960	32680	46980	57195
2040-41	9325	15065	31565	31565	34435	49500	60265
2041-42	9830	15880	33265	33265	36290	52170	63510
2042-43	10360	16735	35065	35065	38255	54990	66945
2043-44	10925	17645	36970	36970	40330	57975	70580

Table 7-15 : Toll Rates for Monthly Pass @ Km 226.740

Year	Car	Minibus /LCV	Bus	Truck	3 -Axle	Multi axle	Oversized Vehicles
2024-25	4145	6695	14030	14030	15305	22000	26780
2025-26	4355	7030	14735	14735	16075	23105	28130
2026-27	4575	7390	15480	15480	16885	24275	29550
2027-28	4805	7765	16265	16265	17745	25505	31050
2028-29	5050	8160	17095	17095	18650	26805	32635
2029-30	5310	8575	17970	17970	19605	28180	34305
2030-31	5580	9015	18895	18895	20610	29630	36070
2031-32	5870	9485	19870	19870	21675	31160	37930
2032-33	6175	9975	20900	20900	22800	32775	39900
2033-34	6495	10495	21990	21990	23990	34480	41980
2034-35	6835	11045	23140	23140	25245	36285	44175
2035-36	7195	11625	24355	24355	26570	38195	46495
2036-37	7575	12240	25640	25640	27970	40210	48950
2037-38	7980	12885	27000	27000	29455	42340	51545
2038-39	8400	13575	28440	28440	31025	44595	54290
2039-40	8850	14300	29960	29960	32680	46980	57195
2040-41	9325	15065	31565	31565	34435	49500	60265
2041-42	9830	15880	33265	33265	36290	52170	63510
2042-43	10360	16735	35065	35065	38255	54990	66945
2043-44	10925	17645	36970	36970	40330	57975	70580

Table 7-16 : Toll Rates for Monthly Pass @ Km 295.000

Year	Car	Minibus /LCV	Bus	Truck	3 -Axle	Multi axle	Oversized Vehicles
2024-25	4105	6630	13885	13885	15150	21780	26510
2025-26	4310	6960	14585	14585	15915	22875	27850

Year	Car	Minibus /LCV	Bus	Truck	3 -Axle	Multi axle	Oversized Vehicles
2026-27	4530	7315	15325	15325	16720	24030	29255
2027-28	4760	7685	16100	16100	17565	25250	30740
2028-29	5000	8075	16925	16925	18460	26540	32310
2029-30	5255	8490	17790	17790	19405	27900	33965
2030-31	5525	8925	18705	18705	20405	29330	35710
2031-32	5810	9390	19670	19670	21460	30845	37555
2032-33	6115	9875	20690	20690	22570	32445	39500
2033-34	6430	10390	21770	21770	23750	34140	41560
2034-35	6770	10935	22910	22910	24990	35925	43735
2035-36	7125	11510	24110	24110	26305	37815	46035
2036-37	7500	12115	25385	25385	27695	39810	48465
2037-38	7900	12760	26730	26730	29160	41920	51030
2038-39	8320	13435	28155	28155	30715	44150	53750
2039-40	8765	14155	29660	29660	32355	46510	56620
2040-41	9235	14915	31250	31250	34090	49005	59660
2041-42	9730	15720	32935	32935	35930	51650	62875
2042-43	10255	16570	34715	34715	37875	54440	66275
2043-44	10815	17470	36600	36600	39930	57400	69875

Table 7-17 : Toll Rates for Monthly Pass @ Km 357.739

Year	Car	Minibus /LCV	Bus	Truck	3 -Axle	Multi axle	Oversized Vehicles
2024-25	5085	8215	17210	17210	18775	26990	32855
2025-26	5340	8630	18075	18075	19720	28350	34510
2026-27	5610	9065	18990	18990	20720	29780	36255
2027-28	5895	9525	19955	19955	21770	31295	38095
2028-29	6195	10010	20975	20975	22880	32890	40040
2029-30	6515	10520	22045	22045	24050	34575	42090
2030-31	6850	11065	23180	23180	25290	36350	44255
2031-32	7200	11635	24375	24375	26595	38230	46540
2032-33	7575	12240	25640	25640	27975	40210	48955
2033-34	7970	12875	26980	26980	29430	42305	51505
2034-35	8390	13550	28390	28390	30970	44520	54200
2035-36	8830	14260	29880	29880	32600	46860	57045
2036-37	9295	15015	31460	31460	34320	49335	60060
2037-38	9790	15810	33125	33125	36140	51950	63245
2038-39	10310	16650	34890	34890	38065	54715	66610
2039-40	10860	17545	36755	36755	40095	57640	70170
2040-41	11445	18485	38730	38730	42250	60735	73935
2041-42	12060	19480	40815	40815	44525	64005	77920
2042-43	12710	20535	43025	43025	46935	67470	82135
2043-44	13400	21650	45360	45360	49485	71130	86595

7.4 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under ***Optimistic***, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

7.5 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under all scenarios at each of the toll plaza up to 2043-44 years starting from the year 2024-25 are shown in tables below.

Table 7-18 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Location / Year	TP-1 - Malthone (142+319)	TP-2 - Chitora (226+740)	TP-3 - Titarpani (295+000)	TP-4 - Bakori (357+739)	Total
2024-25	88.54	126.12	111.81	108.59	**435.06**
2025-26	97.34	145.17	122.92	119.18	**484.60**
2026-27	107.29	159.54	135.26	131.50	**533.58**
2027-28	118.57	176.74	149.82	145.34	**590.47**
2028-29	130.40	193.83	164.33	159.23	**647.80**
2029-30	143.33	213.27	180.24	174.75	**711.58**
2030-31	157.24	234.20	198.11	192.38	**781.94**
2031-32	173.29	257.97	218.62	211.86	**861.75**
2032-33	190.24	283.00	239.68	232.25	**945.16**
2033-34	209.14	310.69	263.71	255.75	**1039.30**
2034-35	227.31	338.42	286.75	277.35	**1129.83**
2035-36	247.56	368.84	312.68	302.48	**1231.56**
2036-37	268.69	399.53	338.72	328.10	**1335.04**
2037-38	292.63	435.41	368.48	356.90	**1453.42**
2038-39	318.39	473.47	400.84	387.31	**1580.02**
2039-40	345.93	513.77	435.49	421.36	**1716.55**
2040-41	373.72	555.84	470.70	454.11	**1854.37**
2041-42	405.35	602.64	510.27	492.34	**2010.60**
2042-43	439.15	652.86	552.72	533.66	**2178.38**
2043-44	477.96	710.42	600.96	579.80	**2369.14**

Table 7-19 : Toll Revenue Pessimistic Scenario

(Rs. Crores)

Location / Year	TP-1 - Malthone (142+319)	TP-2 - Chitora (226+740)	TP-3 - Titarpani (295+000)	TP-4 - Bakori (357+739)	Total
2024-25	88.54	126.12	111.81	108.59	**435.06**
2025-26	96.87	144.49	122.36	118.63	**482.35**
2026-27	106.30	158.03	133.99	130.25	**528.57**
2027-28	116.93	174.25	147.77	143.31	**582.26**
2028-29	127.98	190.19	161.32	156.27	**635.76**

Location / Year	TP-1 - Malthone (142+319)	TP-2 - Chitora (226+740)	TP-3 - Titarpani (295+000)	TP-4 - Bakori (357+739)	Total
2029-30	140.00	208.24	176.12	170.68	**695.04**
2030-31	152.89	227.64	192.60	187.01	**760.14**
2031-32	167.69	249.58	211.47	204.99	**833.73**
2032-33	183.22	272.45	230.71	223.66	**910.04**
2033-34	200.50	297.65	252.61	245.16	**995.92**
2034-35	216.90	322.65	273.34	264.55	**1077.44**
2035-36	235.07	349.96	296.66	287.14	**1168.84**
2036-37	253.94	377.25	319.81	309.98	**1260.97**
2037-38	275.26	409.13	346.27	335.59	**1366.25**
2038-39	298.14	442.80	374.89	362.49	**1478.31**
2039-40	322.35	478.16	405.32	392.51	**1598.34**
2040-41	346.55	514.85	436.00	421.00	**1718.39**
2041-42	374.15	555.50	470.40	454.27	**1854.33**
2042-43	403.48	598.78	507.08	489.98	**1999.33**
2043-44	437.11	648.52	548.77	529.80	**2164.20**

Table 7-20 : Toll Revenue Most Likely Scenario

(Rs. Crores)

Location / Year	TP-1 - Malthone (142+319)	TP-2 - Chitora (226+740)	TP-3 - Titarpani (295+000)	TP-4 - Bakori (357+739)	Total
2024-25	88.54	126.12	111.81	108.59	**435.06**
2025-26	97.10	144.83	122.64	118.92	**483.50**
2026-27	106.80	158.78	134.64	130.88	**531.11**
2027-28	117.78	175.47	148.83	144.33	**586.41**
2028-29	129.21	191.96	162.88	157.73	**641.79**
2029-30	141.70	210.72	178.25	172.71	**703.38**
2030-31	155.11	230.85	195.44	189.68	**771.07**
2031-32	170.52	253.69	215.10	208.44	**847.75**
2032-33	186.76	277.62	235.31	227.95	**927.64**
2033-34	204.83	304.02	258.34	250.43	**1017.62**
2034-35	222.11	330.37	280.24	270.88	**1103.59**
2035-36	241.30	359.27	304.91	294.71	**1200.20**
2036-37	261.26	388.25	329.52	318.96	**1297.98**
2037-38	283.88	422.08	357.67	346.12	**1409.76**
2038-39	308.19	457.91	388.19	374.74	**1529.03**
2039-40	334.02	495.68	420.72	406.75	**1657.18**
2040-41	359.99	535.02	453.70	437.37	**1786.08**
2041-42	389.53	578.69	490.67	473.11	**1932.00**
2042-43	421.07	625.36	530.24	511.61	**2088.28**
2043-44	457.23	678.88	575.23	554.50	**2265.85**

7.6 Modification in Concession Period

Modification of the concession period shall be done on the basis of Revenue targets given in the contract for milestones 1 & 2.

Modification in concession period as per provisions of DCA and same is summarized in table for all scenarios.

Pessimistic Case

Target Point 1- March 2031									
Target Month - March 2029	**Target Revenue (Rs. Crores)**	**Calculated Revenue (Rs. Crores)**	**Difference %**	**If qualifies for Modification in Concession Period**	**Qualifying increment or shortfall**	**Change in Concession period %**	**Original Concession Period**	**Change in Concession period**	**Modified Concession Period**
TOT-12	70	63.58	-9.17%	No	-	0.00%	20.00	0.00	

Target Point 2- March 2038											
Target Month - March 2036	**Target Revenue (Rs. Crores)**	**Calculated Revenue (Rs. Crores)**	**Difference %**	**If qualifies for Modification in Concession Period**	**Qualifying increment or short fall**	**Change in Concession period %**	**Original Concession Period**	**Change in Concession period**	**Total Change in Concession period**	**Calculated Modified Concession Period**	**Final Concession Period subject to Cap**
TOT-12	123	114.04	-7.28%	No	-	0.00%	20.00	0.00	0.00	20.00	

Most likely Case

Target Point 1- March 2031									
Target Month - March 2029	**Target Revenue (Rs. Crores)**	**Calculated Revenue (Rs. Crores)**	**Difference %**	**If qualifies for Modification in Concession Period**	**Qualifying increment or shortfall**	**Change in Concession period %**	**Original Concession Period**	**Change in Concession period**	**Modified Concession Period**
TOT-12	70	64.51	-7.85%	No	-	0.00%	20.00	0.00	

Target Point 2- March 2038											
Target Month - March 2036	Target Revenue (Rs. Crores)	Calculated Revenue (Rs. Crores)	Difference %	If qualifies for Modification in Concession Period	Qualifying increment or short fall	Change in Concession period %	Original Concession Period	Change in Concession period	Total Change in Concession period	Calculated Modified Concession Period	Final Concession Period subject to Cap
TOT-12	123	117.69	-4.32%	No	-	0.00%	20.00	0.00	0.00	20.00	

Optimistic Case

Target Point 1- March 2031									
Target Month - March 2029	Target Revenue (Rs. Crores)	Calculated Revenue (Rs. Crores)	Difference %	If qualifies for Modification in Concession Period	Qualifying increment or shortfall	Change in Concession period %	Original Concession Period	Change in Concession period	Modified Concession Period
TOT-12	70	65.42	-6.54%	No	-	0.00%	20.00	0.00	

Target Point 2- March 2038											
Target Month - March 2036	Target Revenue (Rs. Crores)	Calculated Revenue (Rs. Crores)	Difference %	If qualifies for Modification in Concession Period	Qualifying increment or short fall	Change in Concession period %	Original Concession Period	Change in Concession period	Total Change in Concession period	Calculated Modified Concession Period	Final Concession Period subject to Cap
TOT-12	123	121.35	-1.34%	No	-	0.00%	20.00	0.00	0.00	20.00	

TOT-12 (Lalitpur to Lakhadon)-Modification in Concession Period						
Types of Scenarios	**Pessimistic Case**		**Most likely Case**		**Optimistic Case**	
Target Month	**Mar-31**	**Mar-38**	**Mar-31**	**Mar-38**	**Mar-31**	**Mar-38**
Target Revenue (Rs. Crores)	70	123.00	70	123	70.00	123.00
Calculated Revenue (Rs. Crores)	63.58	114.04	64.51	117.69	65.42	121.35
Differences %	-9.17%	-7.28%	-7.85%	-4.32%	-6.54%	-1.34%
If qualifies for Modification in Concession Period	No	No	No	No	No	No
Qualifying Increment or shortfall	-	-	-	-	-	-
Change in Concession period %	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Original Concession Period	20.00	20.00	20.00	20.00	20.00	20.00
Change in Concession period	0.00	0.00	0.00	0.00	0.00	0.00
Total Change in Concession period	0.00		0.00		0.00	
Calculated Modified Concession Period	20.00		20.00		20.00	
Final Concession Period subject to Cap	0.00		0.00		0.00	

Thus, there is no modification expected in concession period due to variation in revenue as per above estimates in all scenarios.

CHAPTER 8

CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Lalitpur-Sagar- Lakhnadon from Km 99.00 to Km 415.089 section of NH-44 in state of Madhya Pradesh and Uttar Pradesh is currently four lane road. The road is in sound condition and serves healthy traffic volumes. Project corridor is a part of the important regional network connecting Uttar Pradesh, Madhya Pradesh to Southern States and vice-versa. There are large number of townships, industrial corridors and other business establishment coming up along project corridor. As discussed, dominant portion of traffic is long route traffic, which is more sensitive towards the growth of national economy. As Indian economy is poised to grow at 7%+ post COVID-19, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give positive impact to traffic flow on project. The following can be considered as major outcomes of the study

a) There is good amount of tollable traffic running on project

b) Project corridor has potential to witness traffic growth @ 6-8% annually in near future due to various development in area and overall development of economy

c) Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road

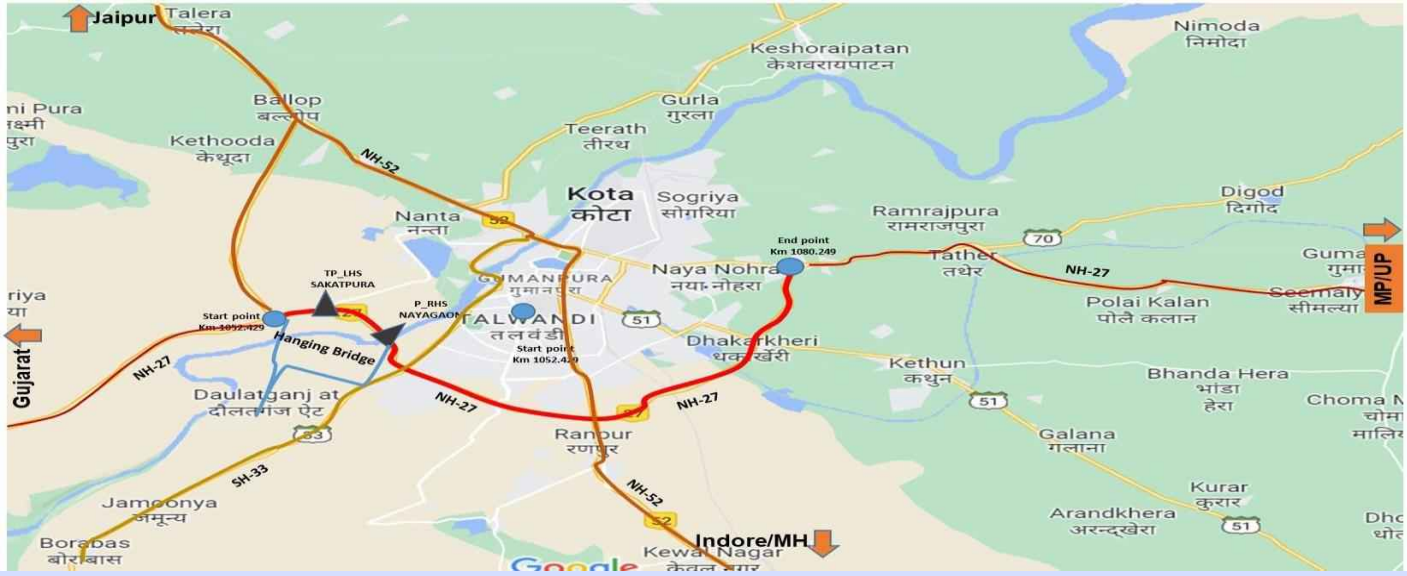
Based on above it can be considered a stable healthy project from traffic and revenue point of view.

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IRB INFRASTRUCTURE TRUST

KOTA BYPASS SECTION OF NH-76 (new NH-27) IN THE STATE OF RAJASTHAN UNDER (TOT Bundle-13)





TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

OCTOBER 2024

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KOTA BYPASS SECTION OF NH-76 (new NH-27) IN THE STATE OF RAJASTHAN UNDER (TOT Bundle-13)

TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

OCTOBER 2024

GMD CONSULTANTS ★ NAVI MUMBAI ★

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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic	**NHAI**	-	National Highway Authority of India
BOT	-	Build Operate Transfer	**NHDP**	-	National Highways Development Project
CAGR	-	Compound Annual Growth Rate	**NSDP**	-	Net State Domestic Product
CTV	-	Classified traffic volume	**O&M**	-	Operation & Maintenance
DBFOT	-	Design, Build, Finance, Operate & Transfer	**PCDP**	-	Per Capita Domestic Product
EME	-	Earth Moving Equipment	**PCI**	-	Per Capita Income
GDP	-	Gross Domestic Product	**PCU**	-	Passenger Car Unit
GSDP	-	Gross State Domestic Product	**PSC**	-	Pre-stressed Concrete
HCM	-	Heavy Construction Machinery	**RCC**	-	Reinforced cement concrete
HCV	-	Heavy Commercial Vehicle	**RHS**	-	Right Hand Side
HTMS	-	Highway Traffic Management System	**SH**	-	State Highway
IRC	-	Indian Road Congress	**TP**	-	Toll Plaza
IRR	-	Internal Rate of Return	**WPI**	-	Wholesale Price Index
LCV	-	Light Commercial Vehicle	**SIR**	-	Special Investment Region
LHS	-	Left Hand Side	**c.**	-	Circa
LGV	-	Light Goods Vehicle	**ROB**	-	Railway Over Bridge
MAV	-	Multi Axle Vehicle	**MDR**	-	Major District Road
MORTH	-	Ministry of Road Transport and Highways	**ODR**	-	Other District Road
NH	-	National Highway	**CA**	-	Concession Agreement
PCC	-	Plain Cement Concrete	**RMT**	-	Running Meter
CR	-	Coarse Rubble			

CHAPTER 1

INTRODUCTION

1.1 Background

The National Highways Authority of India (NHAI) introduced the Toll, Operate and Transfer (TOT) model for partnership with private developers in the road sector. Under this model, NHAI passes on the toll collection rights and operation and maintenance obligations for 20 years to the private developer against payment of upfront, one-time, lump sum concession fees quoted by the private developer as part of the comprehensive bidding process. Projects under this model are awarded as a bundle of operational national highways, which allows the investor to offset the risks of one project against another. Since existing and operational roads are auctioned under the TOT model.

Under the Toll Operate and Transfer (ToT) 13 bundle, NHAI had invited tenders for selection of concessionaire for maintenance of the National Highway stretch Kota Bypass section NH-27 in the state of Rajasthan.

M/s. IRB Infrastructure Developers Limited., has been declared as the selected bidder for the project. This report is for Part Section ToT bundle 13 "Kota Bypass section NH-27 spanning in the state of Rajasthan. Project Highway alignment is depicted in the following figure.



Figure 1-1: Project Stretch of ToT Bundle 13 (Part)

1.2 Objective of the Study

M/s IRB Infrastructure Developers Limited (IRB) intends to develop a traffic study report for Four Laning of Kota Bypass section NH-27 on BOT basis. GMD Consultants have been assigned the work of conducting traffic study and developing revenue model based on traffic projections and forecast.

The year 2024-25 has been taken as the base year for projections and forecasting of traffic in the horizon year. This report fulfils part of the requirement of the assignment.

1.3 Scope of Services

Following may be referred to as broad scope of Traffic Study of Four Laning of Kota Bypass section NH-27

Classified Traffic Volume Count at main toll plaza location at Toll Plaza locations. This data was supplied by the Concessionaire.

- Establishment of traffic pattern
- Working our traffic demand elasticity and growth
- Traffic forecast up to concession period.
- Preparation of revenue model up to concession period
- Any other analysis relevant to scope

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

The project stretch is a section of NH-44, which is the longest National Highway in the country, running through North, Central and South India. The Kota Bypass section is located along the Project Stretch starting from Km 1052+429 of NH-27 and ends at Km 1080+249 of NH-27 including a Cable-Stayed Bridge on the Chambal River in the State of Rajasthan.

Project Stretch Description

The project stretch under this study starts from Km 1052+429 of NH-27 and ends at Km 1080+249 of NH-27 at Jhansi in the state of Rajasthan. The length of project stretch is 27.820 km and has 4-lane configuration with single staggered of Toll Plaza (Sakatpura (LHS) at ch.1055+217 KM and Nayagaon (RHS) at ch.1058+837 KM).

The following figure shows this the alignment of the project highway in the above context.



Figure 2-1 : Project Alignment with Toll Plaza

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from a client for a project.

- Classified traffic volume counts at toll plaza locations on Kota Bypass section of NH-27- Provided by Concessionaire for year 2023-24 and traffic data from April 2024 to July 2024.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project
- Establish base year traffic
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1 below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	Km 1055+217 Toll Plaza at Sakatpura (LHS Carriageway), Km 1058+837 Toll Plaza at Nayagaon (RHS Carriageway)	AADT from previous traffic study report for Year 2023-24 & Four month from April 2024 to July 2024	AADT from previous traffic study report for Year 2023-24 & Four month from April 2024 to July 2024	AADT from previous traffic study report for Year 2023-24 & Four month from April 2024 to July 2024	AADT from previous traffic study report for Year 2023-24 & Four month from April 2024 to July 2024	AADT from previous traffic study report for Year 2023-24 & Four month from April 2024 to July 2024

Toll plaza is located in Rajasthan.

3.2 Classified Traffic Volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations-based traffic survey done at project stretch.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in table below .

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck

Vehicle Type	
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since the project highway is currently under toll operation, the data collected corresponds to the category of tollable vehicles. The following are the types of vehicles as per concession agreement.

- Car / Jeep / van
- Minibus /LCV
- Bus
- Truck /
- 3 Axle commercial vehicle
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data as per traffic survey conducted at toll plaza locations. It may not represent the whole year traffic as this pertains to specific period only. Hence a seasonality factor has been applied to average traffic of current period to arrive at Annual Average Daily Traffic of base year 2024-25. Same corrected traffic is used for future projections and revenue calculations. The following table shows historical traffic on project stretch and Annual Average Daily Traffic (AADT) for year 2024-25.

Table 3-3 : Traffic Data at Toll Plaza Sakatpura (Km 1055+217) / Nayagaon (Km 1058+837)

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.) - 2023-24	Annual Average Daily Traffic (Nos.) - 2024-25
1	Car	3733	2420
2	Minibus /LCV	68	582

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.) - 2023-24	Annual Average Daily Traffic (Nos.) - 2024-25
3	Bus	513	84
4	Truck	538	1253
5	3-Axle Commercial vehicle	745	1013
6	Multi axle	2493	2898
7	Oversized Vehicles	0	5
	Total	**8090**	**8255**

3.4 Data Analysis

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in "IRC-64-1990: Guidelines for Capacity of Roads in Rural areas". The adopted passenger car unit values (PCU) are presented in Table 3-4.

Table 3-4 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0

Vehicle Type	PCUs
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-5 : Traffic in PCU at Project Stretch

Year	Toll Plaza Location (Km)	Traffic No.	PCU	PCU Index
2023-2024	Km 1055+217 Toll Plaza at Sakatpura Km 1058+837 Toll Plaza at Nayagaon	8090	19753	2.44
2024-2025	Km 1055+217 Toll Plaza at Sakatpura Km 1058+837 Toll Plaza at Nayagaon	8255	23406	2.84

It can be observed from above that project traffic has PCU index 2 to 2.6 which is an indicator of high proportion of commercial traffic in traffic mix in project corridor. The following figure illustrates variation of PCU index at four toll plaza locations.

3.4.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.

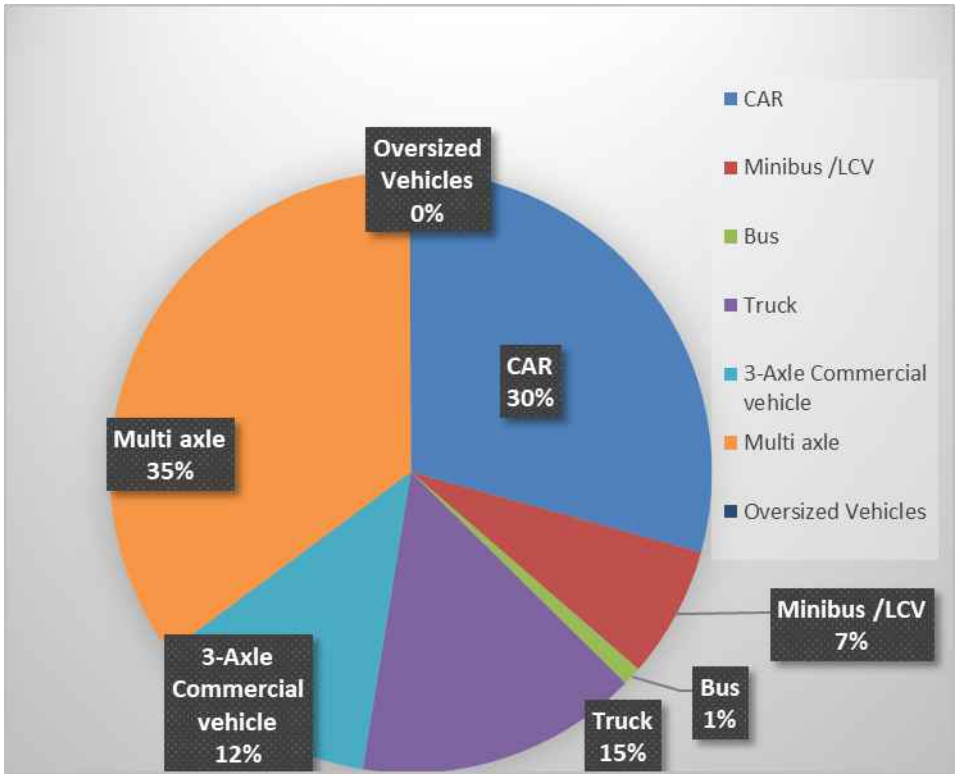


Figure 3-2: Model split of tollable vehicle @ Km 1055+217/ Km 1058+837

It is observed that car traffic forms about 30% of total traffic at toll plaza location KM 1055+217/ Km 1058+837 while multi axle commercial vehicles are about 67% of total traffic. Truck / Bus and LCV share about 16% and 7% of traffic volume respectively.

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like,

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

The following table provides numbers of vehicles falling in each of above category on base year 2024-25

Table 3-6 : Journey Type Bifurcation of Traffic at Sakatpura/Nayagaon Toll Plaza KM 1055+217/ Km 1058+837

Sr. No	Type	Traffic Volume (Nos.)
		2024-25
1	Single Journey	6094
2	Return Journey	2110

Sr. No	Type	Traffic Volume (Nos.)
		2024-25
3	Local Commercial Single Journey	49
4	Monthly Pass Local	2
5	Monthly Pass	0

3.5 Secondary Data Collection

There are several other factors which have a substantial impact on traffic patterns and growth on any project corridor. The following are some of such important factors.

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on the project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data
   a) GDP
   b) NSDP
   c) Population Growth
   d) Per Capita Income growth
   e) Industrial Growth
   f) Special Industry Potential
   g) Regional and National development vision / plan
   h) Any other relevant data
3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor. Same is discussed in subsequent chapter.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

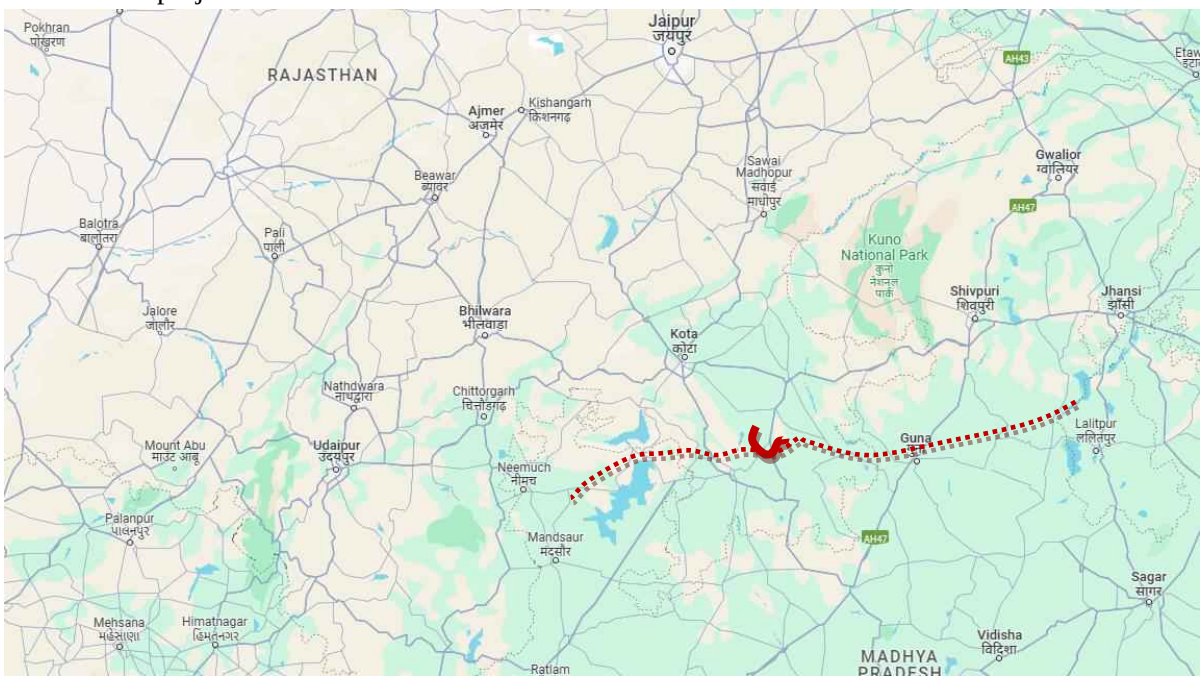
Highway corridors behave like integrated circuit networks and more often than not every road is connected to various networks having different origins and destinations. Traffic running on these networks behaves like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network.

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc.
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Regional Network

Kota Bypass is part of NH-27 which is major East – West connectivity in India. As can be seen from the data made available that most of the traffic on Kota Bypass is either local in nature or is part of the East – West connectivity corridor. Gwalior, Chittorgarh, Jhalawar, Bhilwara areas have major influence on project traffic.



In such a case upcoming corridors like Delhi Mumbai Expressway or Mumbai Vadodara Expressway or DFCC which basically cater for North -South connectivity, are not expected to have any substantial impact on project road traffic.

Delhi – Mumbai Expressway - The access controlled greenfield expressway connects Delhi and Mumbai (up to Jawaharlal Nehru Port Trust) and passes through states of Haryana, Rajasthan, Madhya Pradesh, Gujarat and Maharashtra. DME alignment will largely cater to traffic between North of India and Gujarat/Western Maharashtra and is not likely to affect traffic on the project road which caters to traffic on East – West connectivity and local traffic.

CHAPTER 5

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future patterns of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor of Kota Bypass from Km 1052+429 to Km 1080+249 section of NH-27 has been done taking the above factors into consideration. "**IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**" is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable for projects of short durations say 5-10 years, however for long term projections it would be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-12015-Guidelines for Traffic Prediction on Rural Highways**.

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different types of vehicles. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway typically depends on a number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, In order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

Log (P) = k x Log (EI) + A

Where,

P = Number of Vehicles (Mode wise)

EI = Economic Indicator

A = Regression constant

k = Elasticity coefficient (Regression coefficient)

The elasticity for car and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

The project corridor spreads across state of Rajasthan. Toll plazas at Sakatpura and Nayagaon in the state of Rajasthan. Project traffic has share of majorly states like Rajasthan, Madhya Pradesh, Uttar Pradesh, Gujrat and Delhi. For elasticity calculations, working data from these states also has been analysed.

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Rajasthan State.

Table 5-1 : Per Capita Income Vs Car Rajasthan

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth (8 Year)
2011	57192	591069	4.76	5.77		
2012	58441	659542	4.77	5.82	2%	
2013	61053	733916	4.79	5.87	4%	
2014	64496	814079	4.81	5.91	6%	
2015	68565	899307	4.84	5.95	6%	
2016	71324	988391	4.85	5.99	4%	
2017	73109	1095526	4.86	6.04	3%	
2018	75555	1204005	4.88	6.08	3%	4.1%

Regression analysis of same is given in figure below.

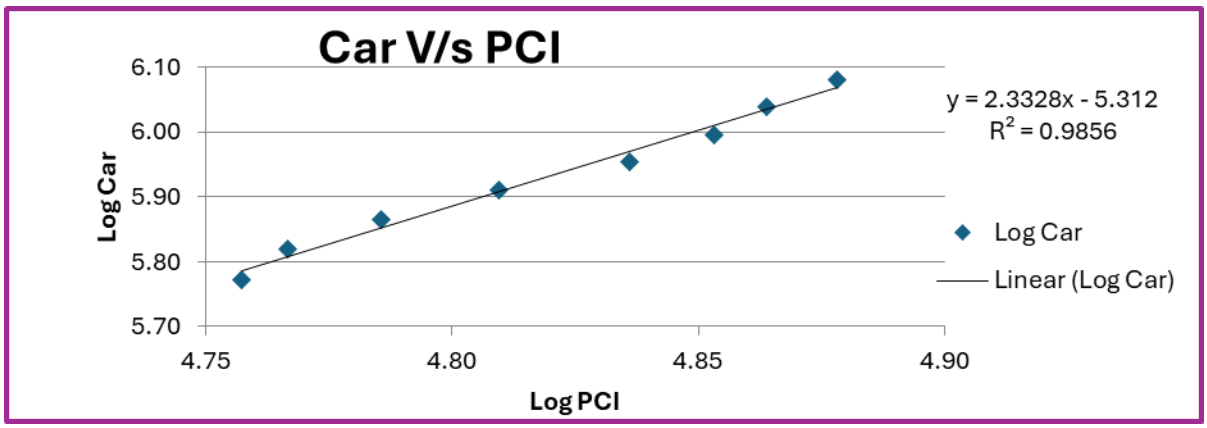


Figure 5-1 : Regression and Elasticity PCI vs. Car – Extrapolation Rajasthan

Table 5-2 : Population Vs Bus Rajasthan

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth (8 Year)
2011	68548000	83345	7.84	4.92		
2012	69687000	88616	7.84	4.95	2%	
2013	70825000	93892	7.85	4.97	2%	
2014	71963000	97650	7.86	4.99	2%	
2015	73102000	102818	7.86	5.01	2%	
2016	74240000	108680	7.87	5.04	2%	
2017	75248000	113964	7.88	5.06	1%	
2018	76256000	118301	7.88	5.07	1%	1.5%

Regression analysis of same is given in figure below.

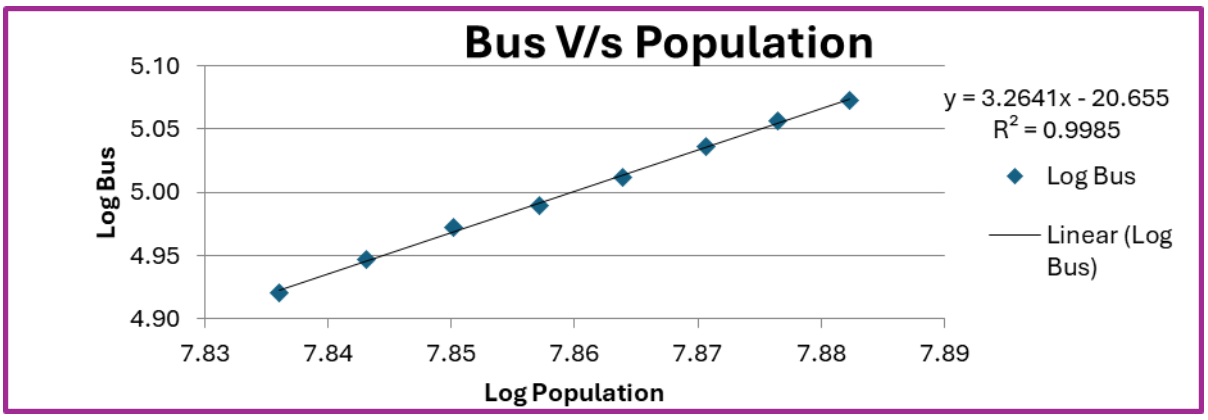


Figure 5-2 : Regression and Elasticity Population vs. Bus – Extrapolation Rajasthan

Elasticity of Trucks has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-3 : Trucks Vs NSDP Rajasthan

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (8 Year)
2011	39533093	362028	7.60	5.56		
2012	40980249	401983	7.61	5.60	4%	
2013	43429222	434379	7.64	5.64	6%	
2014	46540773	472365	7.67	5.67	7%	
2015	50192151	517604	7.70	5.71	8%	
2016	52965038	561158	7.72	5.75	6%	
2017	55442912	613055	7.74	5.79	5%	
2018	58059438	665926	7.76	5.82	5%	5.7%

The following figure depicts regression analysis and extrapolation.

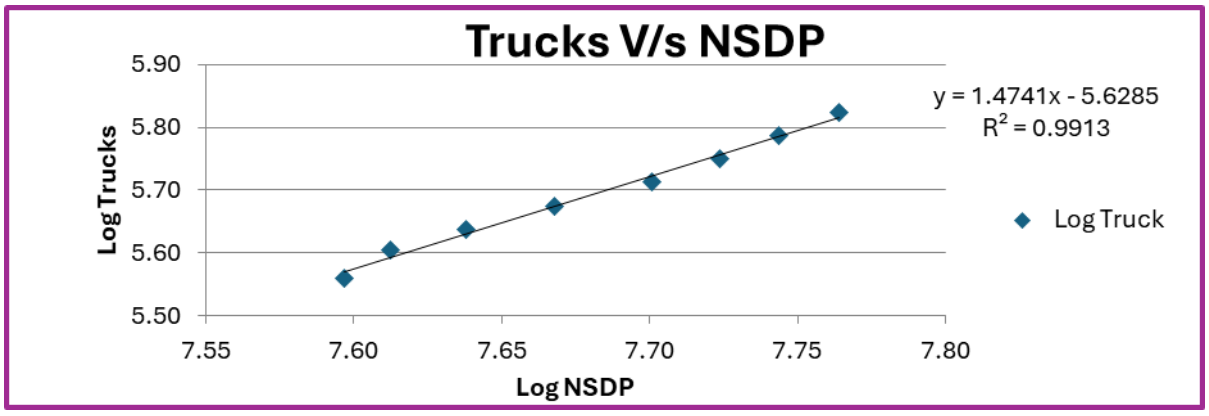


Figure 5-3 : Regression and Elasticity NSDP vs. Trucks Traffic - extrapolation Rajasthan.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-4 : Summary Regression Analysis Rajasthan

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth (8yrs)	Growth Elastic Model	Remarks
RAJASTHAN	**Car/Jeep**	PCI	y = 2.3328x - - 5.312	R^2 = 0.9856	2.3328	4.07%	9.49%	Good Regression
	Bus	Population	y = 3.2641x - - 20.6548	R^2 = 0.9985	3.2641	1.53%	5.01%	Good Regression
	Truck	NSDP	y = 1.4741x - - 5.6285	R^2 = 0.9913	1.4741	5.65%	8.33%	Good Regression

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Madhya Pradesh State.

Table 5-5 : Per Capita Income Vs Car Madhya Pradesh

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth (8 Year)
2011	38497	424644	4.59	5.63		
2012	41142	493412	4.61	5.69	7%	
2013	42548	555461	4.63	5.74	3%	
2014	44027	637626	4.64	5.80	3%	
2015	47351	820391	4.68	5.91	8%	
2016	52782	869777	4.72	5.94	11%	
2017	54829	982124	4.74	5.99	4%	
2018	57401	1087124	4.76	6.04	5%	5.9%

Regression analysis of same is given in figure below.

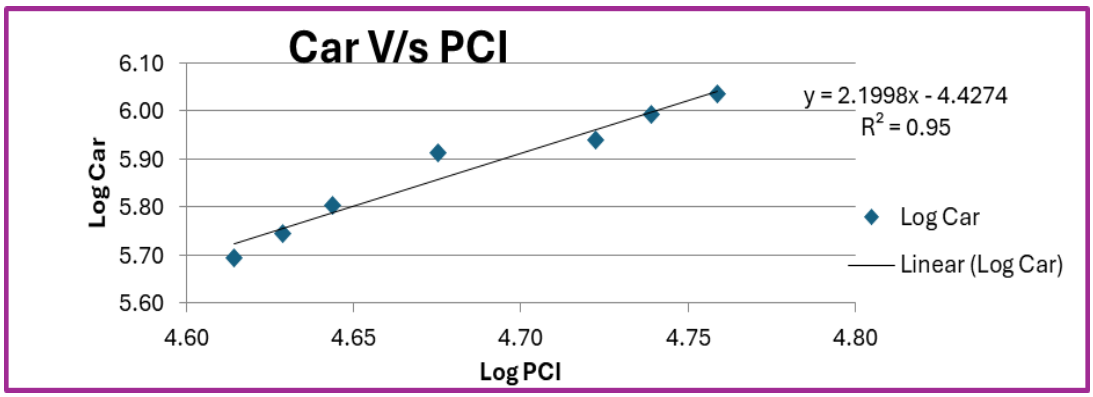


Figure 5-4 : Regression and Elasticity PCI vs. Car – Extrapolation Madhya Pradesh

Table 5-6 : Population Vs Bus Madhya Pradesh

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth (8 Year)
2011	72627000	181770	7.86	5.26		
2012	73863000	208530	7.87	5.32	2%	
2013	75099000	233569	7.88	5.37	2%	
2014	76334000	277898	7.88	5.44	2%	
2015	77570000	322227	7.89	5.51	2%	
2016	78806000	347227	7.90	5.54	2%	
2017	79948000	382227	7.90	5.58	1%	
2018	81090000	402227	7.91	5.60	1%	1.6%

Regression analysis of same is given in figure below.

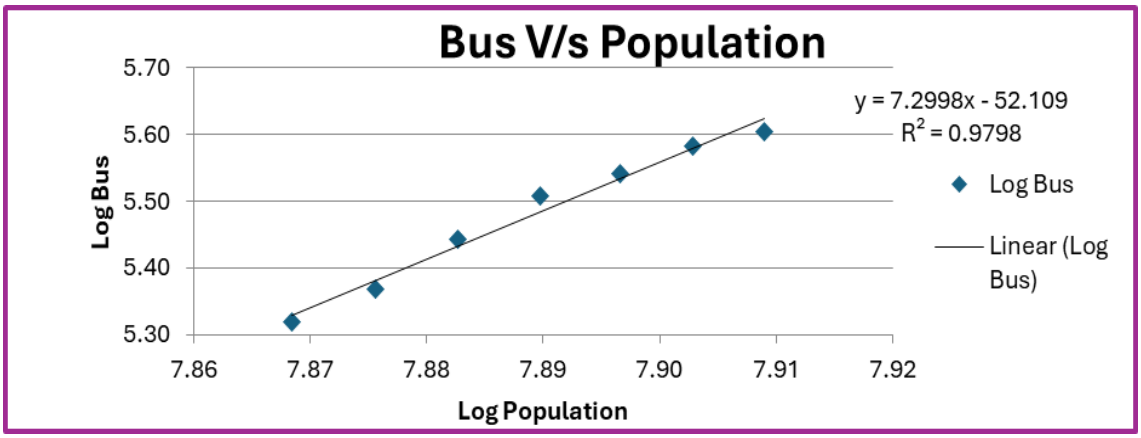


Figure 5-5 : Regression and Elasticity Population vs. Bus – Extrapolation Madhya Pradesh

Elasticity of Trucks has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-7 : Trucks Vs NSDP Madhya Pradesh

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (8 Year)
2011	28237104	121916	7.45	5.09		
2012	30685334	131098	7.49	5.12	9%	
2013	32259760	137815	7.51	5.14	5%	
2014	33924690	150921	7.53	5.18	5%	
2015	37071567	177352	7.57	5.25	9%	
2016	41946525	233553	7.62	5.37	13%	
2017	44200243	289754	7.65	5.46	5%	
2018	46928896	326291	7.67	5.51	6%	7.6%

The following figure depicts regression analysis and extrapolation.

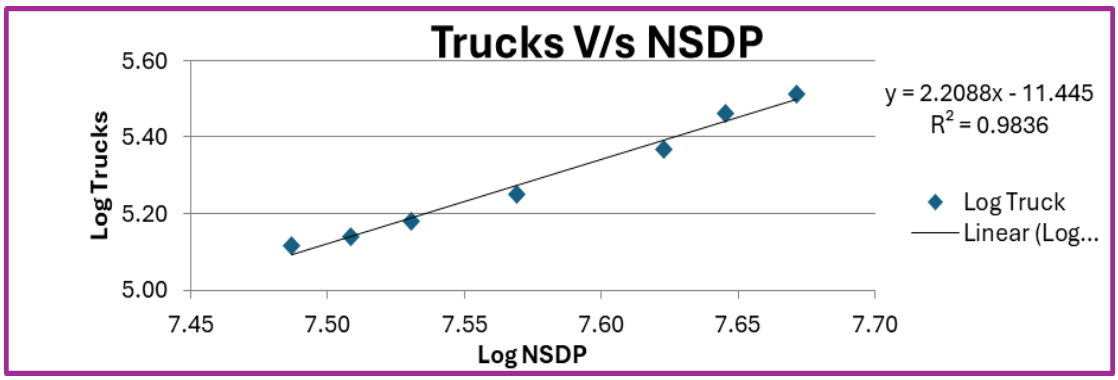


Figure 5-6 : Regression and Elasticity NSDP vs. Trucks Traffic - extrapolation Madhya Pradesh.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-8 : Summary Regression Analysis Madhya Pradesh

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth (8yrs)	Growth Elastic Model	Remarks
MADHYA PRADESH	**Car/Jeep**	PCI	y = 2.2965x - - 4.8829	R^2 = 0.9634	2.3	6%	13.57%	Good Regression
	Bus	Population	y = 7.4978x - - 53.6722	R^2 = 0.9862	7.5	2%	11.90%	Good Regression
	Truck	NSDP	y = 2.2088x - - 11.4451	R^2 = 0.9694	2.2	8%	16.70%	Good Regression

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Uttar Pradesh State.

Table 5-9 : Per Capita Income Vs Car Uttar Pradesh

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth (8 Year)
2011	32002	1108100	4.51	6.04		
2012	32908	1205374	4.52	6.08	3%	
2013	34044	1423020	4.53	6.15	3%	
2014	34583	1572217	4.54	6.20	2%	
2015	36973	1746117	4.57	6.24	7%	
2016	40847	2027972	4.61	6.31	10%	
2017	41832	2195783	4.62	6.34	2%	
2018	43670	2439845	4.64	6.39	4%	4.6%

Regression analysis of same is given in figure below.

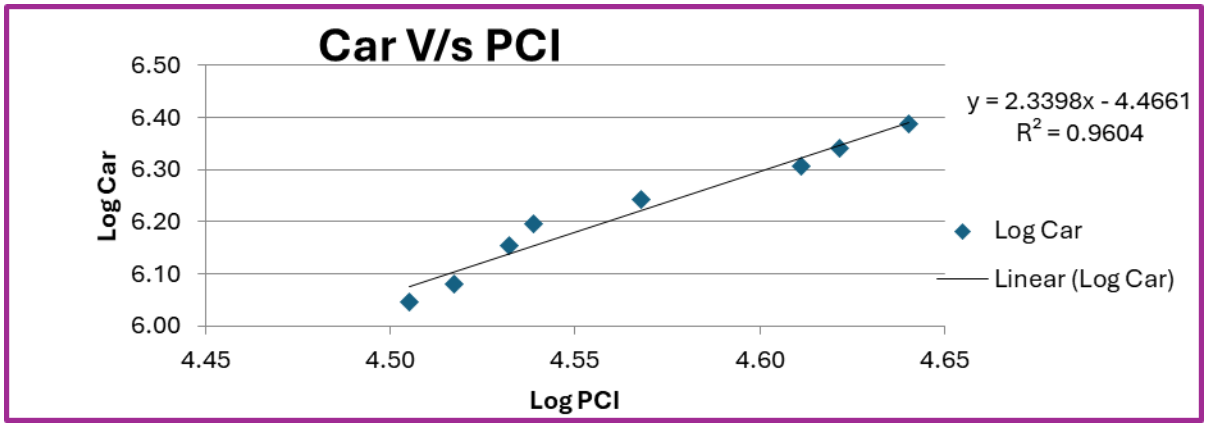


Figure 5-7 : Regression and Elasticity PCI vs. Car – Extrapolation Uttar Pradesh

Table 5-10 : Population Vs Bus Uttar Pradesh

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth (8 Year)
2011	199812000	57901	8.30	4.76		
2012	203670000	64147	8.31	4.81	2%	
2013	206322000	74389	8.31	4.87	1%	
2014	209577000	80460	8.32	4.91	2%	
2015	212832000	89127	8.33	4.95	2%	
2016	216870000	112020	8.34	5.05	2%	
2017	219510000	112766	8.34	5.05	1%	
2018	222150000	121975	8.35	5.09	1%	1.5%

Regression analysis of same is given in figure below.

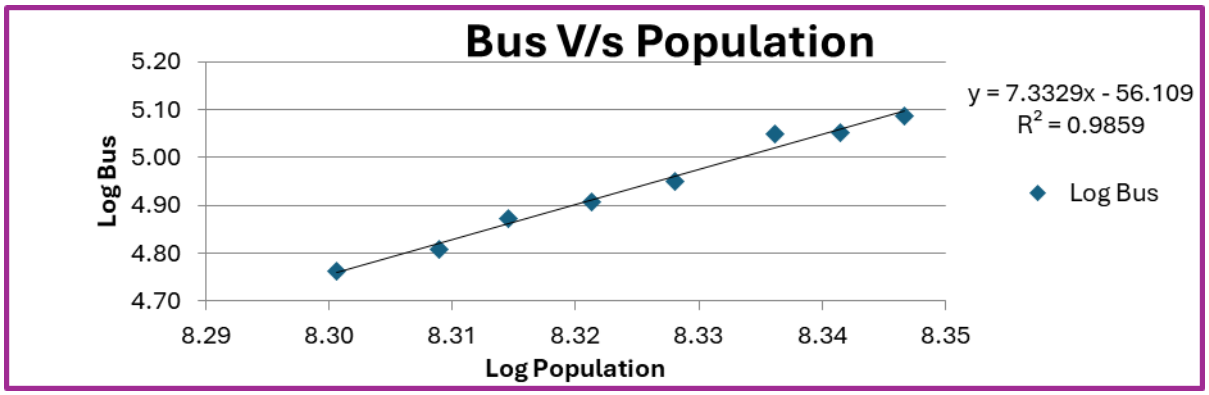


Figure 5-8 : Regression and Elasticity Population vs. Bus – Extrapolation Uttar Pradesh

Elasticity of Trucks has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-11 : Trucks Vs NSDP Uutar Pradesh

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (8 Year)
2011	64513155	162813	7.81	5.21		
2012	67355218	186404	7.83	5.27	4%	
2013	70746910	202761	7.85	5.31	5%	
2014	72968630	217609	7.86	5.34	3%	
2015	79204874	245688	7.90	5.39	9%	
2016	88845325	265167	7.95	5.42	12%	
2017	92380571	307096	7.97	5.49	4%	
2018	97915937	356828	7.99	5.55	6%	6.2%

The following figure depicts regression analysis and extrapolation.

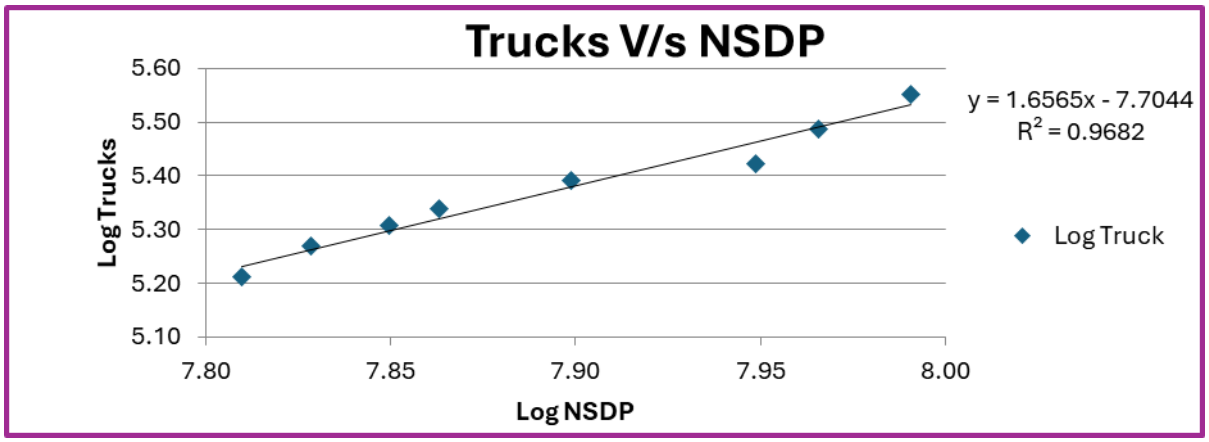


Figure 5-9 : Regression and Elasticity NSDP vs. Trucks Traffic - extrapolation Uttar Pradesh.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-12 : Summary Regression Analysis Uttar Pradesh

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth (8yrs)	Growth Elastic Model	Remarks
UTTAR PRADESH	**Car/Jeep**	PCI	y = 2.3398x - - 4.4661	R^2 = 0.9604	2.3398	4.58%	10.72%	Good Regression
	Bus	Population	y = 7.3329x - - 56.1092	R^2 = 0.9859	7.3329	1.53%	11.19%	Good Regression
	Truck	NSDP	y = 1.6565x - - 7.7044	R^2 = 0.9682	1.6565	6.18%	10.24%	Good Regression

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Gujrat State.

Table 5-13 : Per Capita Income Vs Car Gujrat

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth (8 Year)
2011	87481	1411898	4.94	6.15		
2012	96683	1602129	4.99	6.20	11%	
2013	102589	1771298	5.01	6.25	6%	
2014	111370	2008748	5.05	6.30	9%	
2015	120683	2260084	5.08	6.35	8%	
2016	129738	2527537	5.11	6.40	8%	
2017	143604	2794957	5.16	6.45	11%	
2018	154887	3011656	5.19	6.48	8%	8.5%

Regression analysis of same is given in figure below.

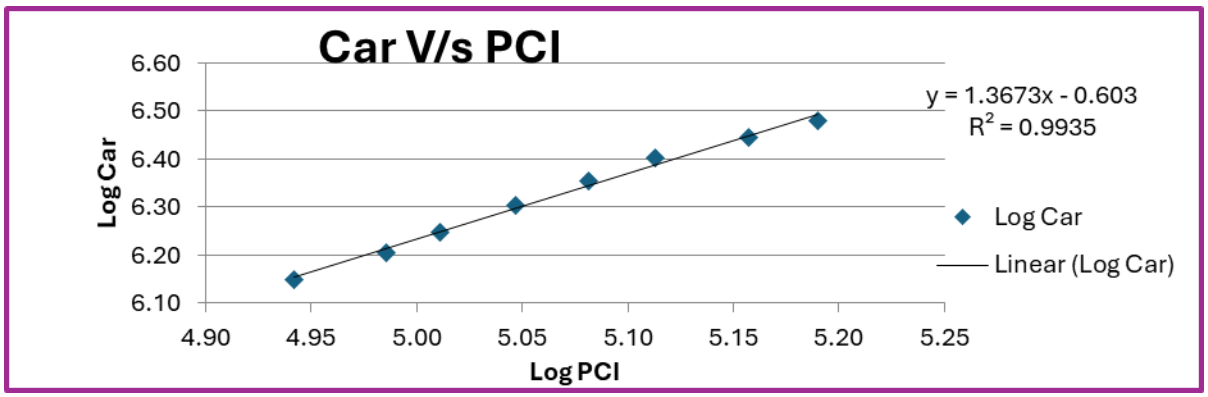


Figure 5-10 : Regression and Elasticity PCI vs. Car – Extrapolation Gujrat

Table 5-14 : Population Vs Bus Gujrat

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth (8 Year)
2011	60440000	67546	7.78	4.83		
2012	61383000	70615	7.79	4.85	2%	
2013	62327000	72998	7.79	4.86	2%	
2014	63271000	76435	7.80	4.88	2%	
2015	64214000	82734	7.81	4.92	1%	
2016	65158000	81911	7.81	4.91	1%	
2017	66084000	81087	7.82	4.91	1%	
2018	67010000	86156	7.83	4.94	1%	1.5%

Regression analysis of same is given in figure below.

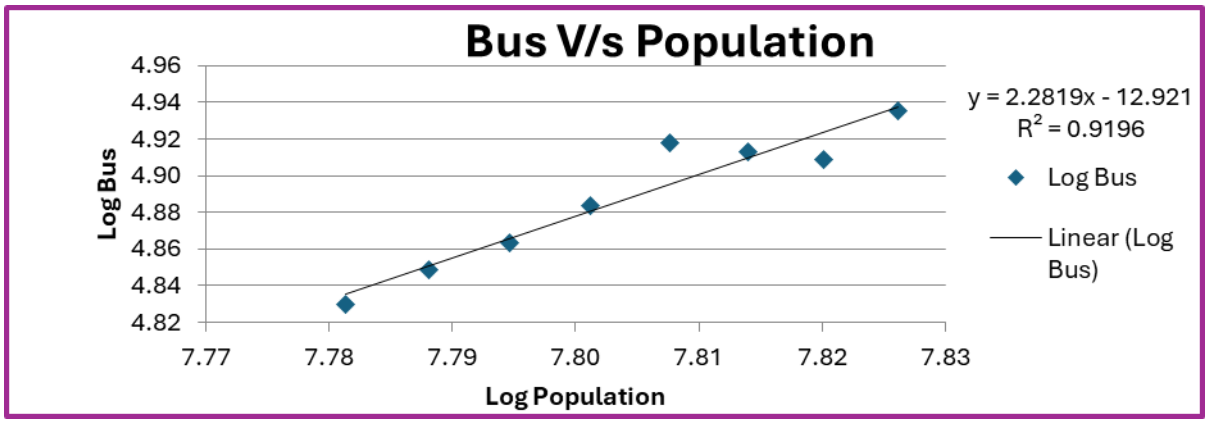


Figure 5-11 : Regression and Elasticity Population vs. Bus – Extrapolation Gujrat

Elasticity of Trucks has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-15 : Trucks Vs NSDP Gujrat

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (8 Year)
2011	53280946	301533	7.73	5.48		
2012	59665883	319207	7.78	5.50	12%	
2013	64148881	332185	7.81	5.52	8%	
2014	70562884	352225	7.85	5.55	10%	
2015	77477522	375265	7.89	5.57	10%	
2016	84393034	396061	7.93	5.60	9%	

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (8 Year)
2017	94651119	425799	7.98	5.63	12%	
2018	103439901	457299	8.01	5.66	9%	10.0%

The following figure depicts regression analysis and extrapolation.

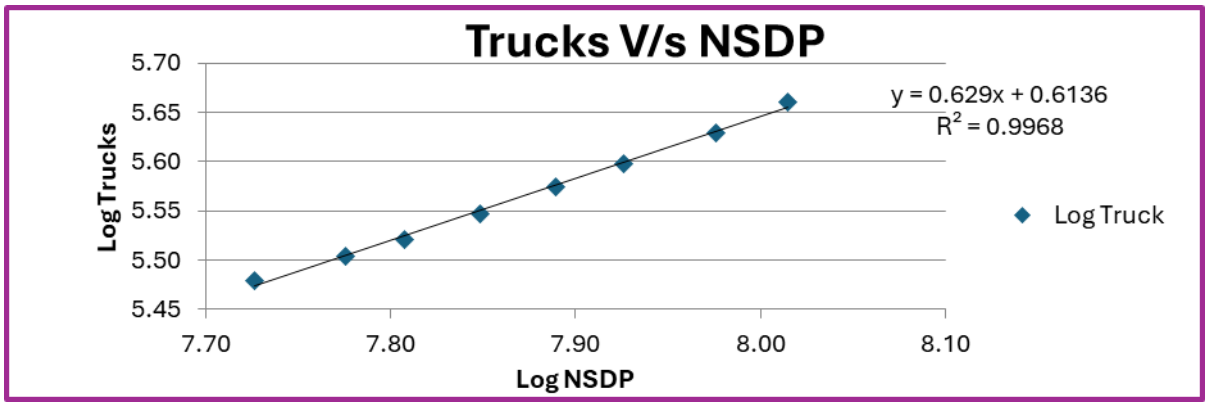


Figure 5-12 : Regression and Elasticity NSDP vs. Trucks Traffic - extrapolation Gujrat.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-16 : Summary Regression Analysis Gujrat

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth (8yrs)	Growth Elastic Model	Remarks
GUJRAT	**Car/Jeep**	PCI	y = 1.3673x - - 0.603	R^2 = 0.9935	1.3673	8.51%	11.64%	Good Regression
	Bus	Population	y = 2.2819x - - 12.9206	R^2 = 0.9196	2.2819	1.49%	3.39%	Good Regression
	Truck	NSDP	y = 0.629x - 0.6136	R^2 = 0.9968	0.6290	9.95%	6.26%	Good Regression

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Delhi State.

Table 5-17 : Per Capita Income Vs Car Delhi

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth (8 Year)
2011	185001	2172069	5.27	6.34		
2012	192220	2416974	5.28	6.38	4%	
2013	200702	2568380	5.30	6.41	4%	
2014	213669	2730071	5.33	6.44	6%	
2015	233115	2986579	5.37	6.48	9%	
2016	244255	3061817	5.39	6.49	5%	
2017	252960	3087309	5.40	6.49	4%	
2018	260967	3249670	5.42	6.51	3%	5.1%

Regression analysis of same is given in figure below.

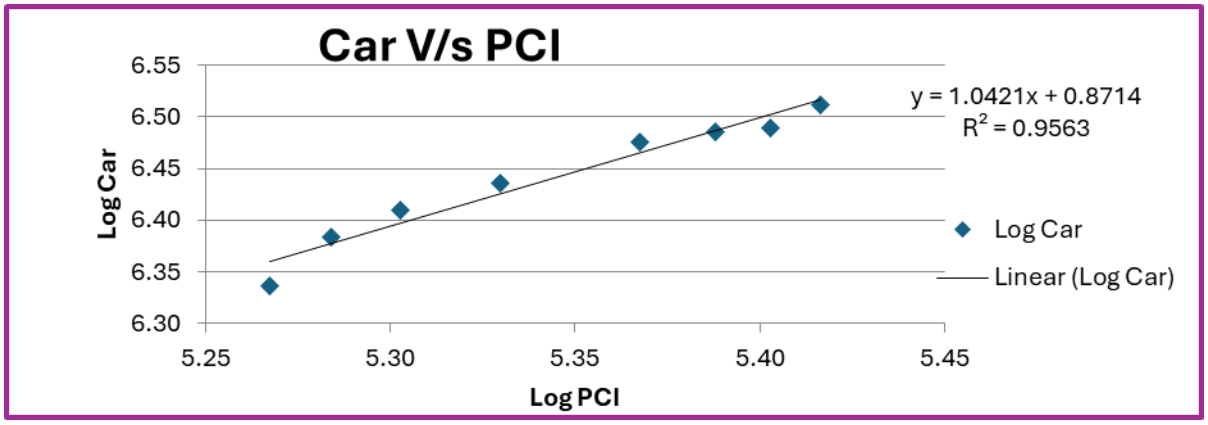


Figure 5-13 : Regression and Elasticity PCI vs. Car – Extrapolation Delhi

Table 5-18 : Population Vs Bus Delhi

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth (8 Year)
2011	16788000	20142	7.22	4.30		
2012	17166000	24642	7.23	4.39	2%	
2013	17544000	28142	7.24	4.45	2%	
2014	17921000	33342	7.25	4.52	2%	
2015	18299000	43723	7.26	4.64	2%	
2016	18677000	51823	7.27	4.71	2%	
2017	19056000	61023	7.28	4.79	2%	
2018	19435000	71043	7.29	4.85	2%	2.1%

Regression analysis of same is given in figure below.

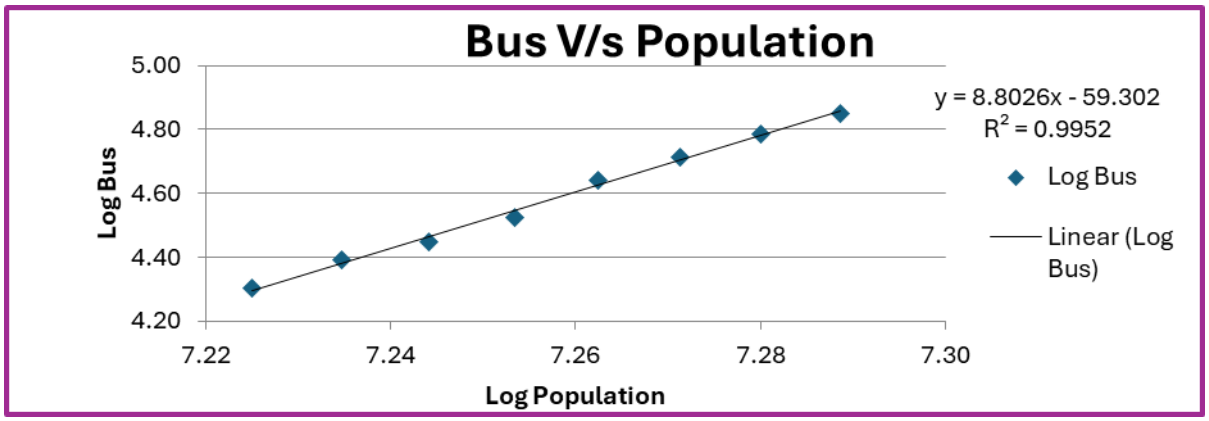


Figure 5-14 : Regression and Elasticity Population vs. Bus – Extrapolation Delhi

Elasticity of Trucks has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-19 : Trucks Vs NSDP Delhi

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (8 Year)
2011	31465002	149277	7.50	5.17		
2012	33419330	157277	7.52	5.20	6%	
2013	35652751	165477	7.55	5.22	7%	
2014	38763874	174577	7.59	5.24	9%	
2015	43172959	185027	7.64	5.27	11%	
2016	46159238	196527	7.66	5.29	7%	
2017	48763115	208417	7.69	5.32	6%	
2018	51295715	220417	7.71	5.34	5%	7.2%

The following figure depicts regression analysis and extrapolation.

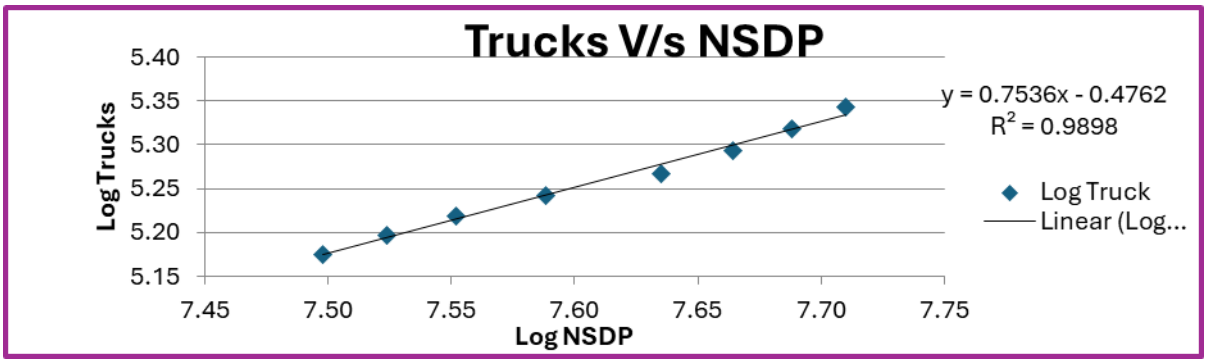


Figure 5-15 : Regression and Elasticity NSDP vs. Trucks Traffic - extrapolation Delhi.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-20 : Summary Regression Analysis Delhi

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth (8yrs)	Growth Elastic Model	Remarks
DELHI	**Car/Jeep**	PCI	y = 1.0421x - 0.8714	R^2 = 0.9563	1.0421	5.05%	5.27%	Good Regression
	Bus	Population	y = 8.8026x - - 59.3021	R^2 = 0.9952	8.8026	2.11%	18.61%	Good Regression
	Truck	NSDP	y = 0.7536x - - 0.4762	R^2 = 0.9898	0.7536	7.25%	5.46%	Good Regression

Economical model for predicting growth is good tool, however other local, regional, national factors should also be considered before finalizing growth factors. Considering factors such as proposed developments and other influencing economic factors, moderated growth should be considered. These factors are discussed in subsequent sections.

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trend of growth. Project stretch of Kota Bypass has recently been awarded to Concessionaire. Hence credible historical traffic data is currently not available.

5.5 Other Factors Influencing Growth

There are many factors which have an impact on traffic growth. As discussed previously these factors can be economical, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

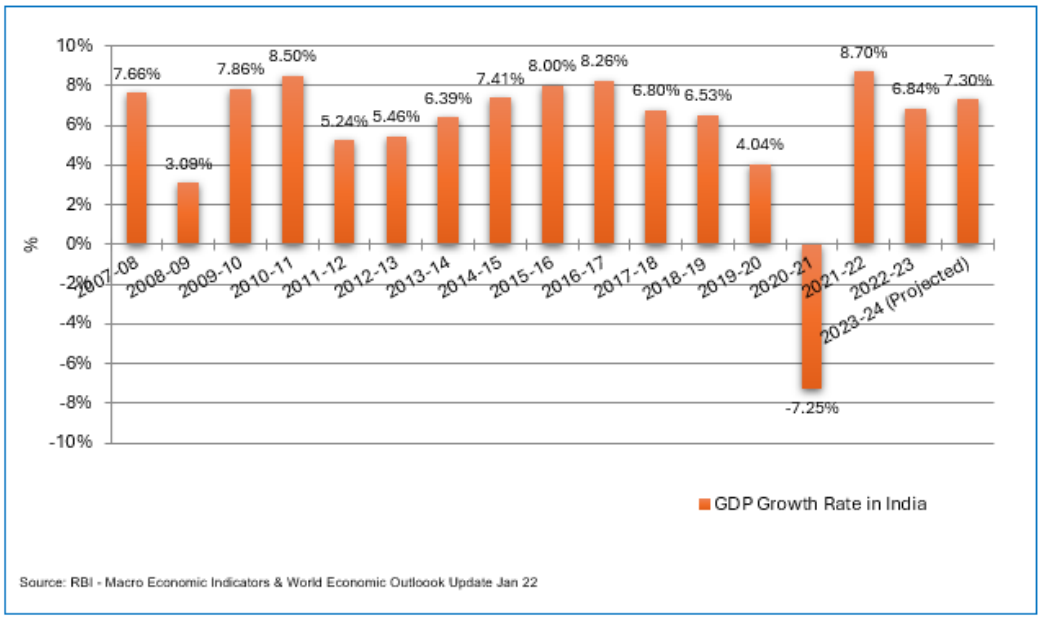


Figure 5-16 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had a slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. The government took major policy decisions including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honorable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into an opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on **Make -In- India** it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. Leading banking and financial institutions have estimated that India would keep on registering good growth in coming years and the growth in year 2023-24 is expected to be around 7.3%.

5.6 Developments along and around the Project Corridor & State

RAJASTHAN: Rajasthan is a state where tradition and glory meet in the midst of colours. It is endowed with magnificent forts, palaces, havellies, natural resources, heritage, beauty and culture. With the lofty hills of Aravali-one of the oldest mountain ranges of the world and the golden sand dunes of the Great Indian Desert, Rajasthan is the only desert of the sub-continent. Rajasthan is

located in the north-western region of India. It is the largest State in the Republic of India. It forms a corridor between the northern and the western states in the country.

KOTA DISTRICT: Kota district is one of the fifty districts of Rajasthan state. Kota is also the educational headquarters of this state. The town is considered as the Coaching Centre Hub of India.

Overall Rajasthan has 11th rank in India in terms of GDP. The state economy has shown promising growth in the past year in the range of 8-9% and it is expected that this would continue to grow in the same pattern and would contribute to growth of economy of country and region.

From the above it can be expected that the project corridor would serve as one of the important transportation links in the area and would contribute to the growth of the region.

5.7 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as under. Rate of growth is moderated in light of overall regional trend. Growth of Multi-Axle is kept slightly higher as trend of technological advances in logistic industry Favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, rate of growth diminishes. Same growth rate is not sustainable for long. Traffic growth has been suitably stepped down for future years.

Growth rates are recommended for three scenarios for sensitivity analysis namely **Optimistic, Pessimistic** and **Most Likely** with a positive and negative variation 0.25% from Most Likely case for corridor in both states.

5.7.1 Recommended Growth Rates of Stretch

Table 5-21 : Recommended Growth Rates Optimistic

Category / Year	FY 25-29	FY 30-34	FY 35-39	FY 40-44	FY 45-49
Car/Jeep/Van	8.48%	7.48%	6.62%	6.39%	5.51%
Mini LCV	4.78%	3.29%	2.38%	2.01%	2.79%
Bus	4.09%	2.58%	2.36%	2.14%	1.94%
Mini - Bus	4.09%	2.58%	2.36%	2.14%	1.94%
LCV	4.78%	3.29%	2.38%	2.01%	1.82%
2- Axle	4.43%	3.29%	2.38%	2.01%	1.82%
3 - Axle	4.43%	3.29%	2.38%	2.01%	1.82%
4 to6 Axle	5.82%	4.31%	3.09%	2.60%	2.34%
7 and Above Axle	4.43%	3.29%	2.38%	2.01%	1.82%

Table 5-22 : Recommended Growth Rates Pessimistic

Category / Year	FY 25-29	FY 30-34	FY 35-39	FY 40-44	FY 45-49
Car/Jeep/Van	7.98%	6.98%	6.12%	5.89%	5.01%
Mini LCV	4.28%	2.79%	1.88%	1.51%	2.29%
Bus	3.59%	2.08%	1.86%	1.64%	1.44%
Mini - Bus	3.59%	2.08%	1.86%	1.64%	1.44%
LCV	4.28%	2.79%	1.88%	1.51%	1.32%
2- Axle	3.93%	2.79%	1.88%	1.51%	1.32%
3 - Axle	3.93%	2.79%	1.88%	1.51%	1.32%

Category / Year	FY 25-29	FY 30-34	FY 35-39	FY 40-44	FY 45-49
4 to6 Axle	5.32%	3.81%	2.59%	2.10%	1.84%
7 and Above Axle	3.93%	2.79%	1.88%	1.51%	1.32%

Table 5-23 : Recommended Growth Rates Most Likely

Category / Year	FY 25-29	FY 30-34	FY 35-39	FY 40-44	FY 45-49
Car/Jeep/Van	8.23%	7.23%	6.37%	6.14%	5.26%
Mini LCV	4.53%	3.04%	2.13%	1.76%	2.54%
Bus	3.84%	2.33%	2.11%	1.89%	1.69%
Mini - Bus	3.84%	2.33%	2.11%	1.89%	1.69%
LCV	4.53%	3.04%	2.13%	1.76%	1.57%
2- Axle	4.18%	3.04%	2.13%	1.76%	1.57%
3 - Axle	4.18%	3.04%	2.13%	1.76%	1.57%
4 to6 Axle	5.57%	4.06%	2.84%	2.35%	2.09%
7 and Above Axle	4.18%	3.04%	2.13%	1.76%	1.57%

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in the previous section of the report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for the following three cases of growth up to concession period.

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza - Chainage 1055+217 KM/1058+837 KM (Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	2420	582	84	1253	1013	2898	5	8255	23406
2025-26	2625	610	87	1308	1058	3066	5	8759	24719
2026-27	2848	639	91	1366	1105	3245	5	9299	26118
2027-28	3089	669	95	1426	1154	3435	5	9873	27598
2028-29	3350	701	99	1489	1205	3635	5	10484	29161
2029-30	3600	724	101	1538	1245	3791	5	11004	30420
2030-31	3869	747	103	1588	1286	3954	5	11552	31736
2031-32	4158	772	105	1641	1328	4124	5	12133	33119
2032-33	4469	798	108	1695	1372	4303	5	12750	34577
2033-34	4803	824	111	1751	1417	4489	5	13400	36099
2034-35	5121	844	113	1793	1451	4627	5	13954	37302
2035-36	5459	864	116	1836	1486	4769	5	14535	38552
2036-37	5821	884	119	1880	1522	4916	5	15147	39855
2037-38	6206	905	122	1924	1559	5068	5	15789	41207
2038-39	6617	927	125	1969	1596	5224	5	16463	42608
2039-40	7039	946	128	2008	1629	5360	5	17115	43896
2040-41	7489	965	131	2048	1662	5500	5	17800	45232
2041-42	7967	984	134	2090	1696	5643	5	18519	46619
2042-43	8476	1004	137	2132	1730	5790	5	19274	48057
2043-44	9017	1024	140	2175	1765	5941	5	20067	49550

Table 6-2 : Total Tollable Traffic @ Toll Plaza 1 - Chainage 1055+217 KM/1058+837 KM

(Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	2420	582	84	1253	1013	2898	5	8255	23406
2025-26	2613	607	87	1302	1053	3051	5	8718	24602
2026-27	2821	633	90	1353	1095	3213	5	9210	25866
2027-28	3045	660	93	1406	1138	3384	5	9731	27197
2028-29	3287	688	96	1461	1183	3563	5	10283	28595
2029-30	3517	707	98	1501	1216	3699	5	10743	29691
2030-31	3762	727	100	1543	1250	3840	5	11227	30834
2031-32	4025	747	102	1586	1285	3986	5	11736	32024
2032-33	4306	767	104	1630	1322	4138	5	12272	33268
2033-34	4606	789	106	1675	1359	4295	5	12835	34560
2034-35	4888	804	108	1707	1385	4406	5	13303	35544
2035-36	5187	819	110	1739	1411	4520	5	13791	36558
2036-37	5505	835	112	1772	1438	4637	5	14304	37613
2037-38	5842	851	114	1805	1465	4758	5	14840	38704
2038-39	6200	867	116	1839	1493	4881	5	15401	39832
2039-40	6565	880	118	1867	1515	4984	5	15934	40836
2040-41	6952	893	120	1895	1537	5088	5	16490	41866
2041-42	7361	906	122	1923	1560	5195	5	17072	42935
2042-43	7794	919	124	1952	1583	5305	5	17682	44045
2043-44	8252	933	126	1981	1607	5416	5	18320	45188

Traffic projections for Most Likely scenario is given as under

Table 6-3 : Total Tollable Traffic @ Toll Plaza 1 - Chainage 1055+217 KM/1055+217 KM/1058+837 KM

(Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	2420	582	84	1253	1013	2898	5	8255	23406
2025-26	2619	608	87	1306	1055	3059	5	8739	24663
2026-27	2834	636	90	1360	1100	3229	5	9254	25991
2027-28	3067	665	93	1416	1146	3409	5	9801	27393
2028-29	3319	695	96	1475	1194	3599	5	10383	28875
2029-30	3559	717	98	1520	1231	3744	5	10874	30052
2030-31	3816	739	100	1566	1269	3896	5	11391	31284
2031-32	4091	761	102	1614	1308	4053	5	11934	32566

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2032-33	4387	784	104	1663	1348	4217	5	12508	33907
2033-34	4704	807	106	1713	1389	4388	5	13112	35307
2034-35	5004	824	108	1750	1419	4513	5	13623	36402
2035-36	5322	841	110	1787	1449	4641	5	14155	37529
2036-37	5661	859	112	1825	1480	4773	5	14715	38702
2037-38	6022	878	114	1864	1512	4909	5	15304	39922
2038-39	6406	897	116	1903	1545	5049	5	15921	41187
2039-40	6798	913	118	1936	1573	5168	5	16511	42327
2040-41	7215	929	120	1970	1601	5290	5	17130	43509
2041-42	7658	945	122	2004	1630	5415	5	17779	44734
2042-43	8127	961	124	2039	1659	5542	5	18457	45996
2043-44	8625	978	126	2075	1689	5672	5	19170	47309

CHAPTER 7

FORECAST OF TOLL REVENUE

7.1 General

This chapter presents the tolling rate calculations, categories and toll revenue of the project.

7.2 Discount Categories

As per the Toll Notification (Schedule - G) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent users monthly pass would be issued at fee at 2/3rd rate for 50 single journey trips.
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travellers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: There are several categories of local discounts.
    a) Local Car Jeep Van - Rs. 275 per month (for locals residing within a radius of 20 kms from toll plaza)

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.

The formula for determining the applicable rate of fee shall be as follows:-

$$\text{Applicable rate of fee} = \text{base rate} + \text{base rate} \times \left\{ \frac{\text{WPI A-WPI B}}{\text{WPI B}} \right\} \times 0.4$$

Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2022-23. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. The following graph provides historical rate of inflation (WPI) in India. Data has been sourced from the Office of Economic Advisor web site (www.eaindustry.nic.in) WPI for year 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series.

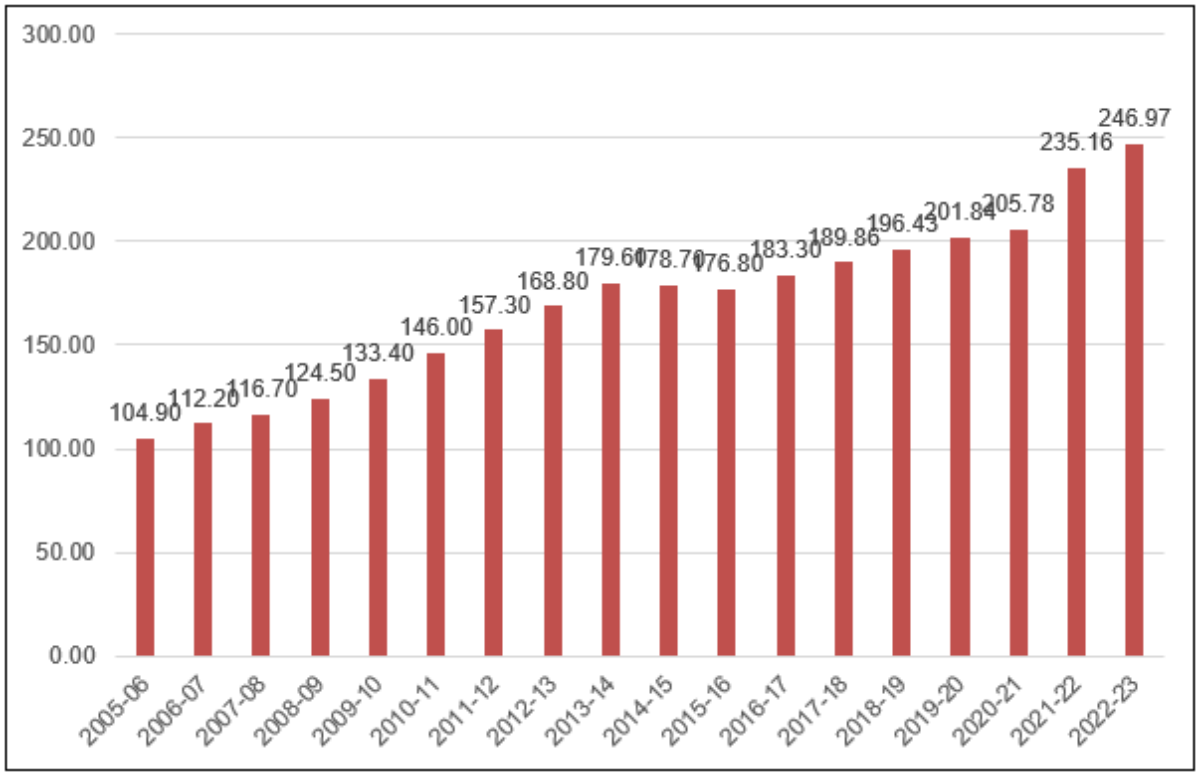


Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in the last few years is steadily growing. It grew by the range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

7.3 Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Oversized Vehicles (7 or more Axles)	4.20

These rates are then modified for as per procedure provided in guidelines of notification considering factors listed below.

- Annual revision of fee rate - @3%
- Application of WPI

Base rates have been worked out to map the current rates. These shall be updated when more details come in. Base toll rates are given below.

Above rates are applicable for base year 2024-25. These rates have been escalated for future. year as NHAI policy and MORTH guideline for future revenue working

Table 7-2 : Toll Rates for Single Journey @ Toll Plaza 1 - Chainage 1055+217 KM/1055+217 KM/1058+837 KM

Year	Car	Minibus /LCV	Bus	Truck	3 axles	Multi axle	Oversized Vehicles
2024-25	80	130	270	270	295	420	515
2025-26	85	135	285	285	310	445	540
2026-27	90	140	295	295	325	465	565
2027-28	90	150	310	310	340	490	595
2028-29	95	155	330	330	360	515	625
2029-30	100	165	345	345	375	540	660
2030-31	105	175	360	360	395	570	690
2031-32	115	180	380	380	415	595	725
2032-33	120	190	400	400	435	630	765
2033-34	125	200	420	420	460	660	805
2034-35	130	210	445	445	485	695	845
2035-36	140	225	465	465	510	730	890
2036-37	145	235	490	490	535	770	940
2037-38	155	245	520	520	565	810	990
2038-39	160	260	545	545	595	855	1040
2039-40	170	275	575	575	625	900	1095
2040-41	180	290	605	605	660	950	1155
2041-42	190	305	640	640	695	1000	1220
2042-43	200	320	670	670	735	1055	1285
2043-44	210	340	710	710	775	1110	1355

Table 7-3 : Toll Rates for Return Journey @ Toll Plaza 1 - Chainage 1055+217 KM/1055+217 KM/1058+837 KM

Year	Car	Minibus /LCV	Bus	Truck	3 axle	Multi axle	Oversized Vehicles
2024-25	120	195	405	405	440	635	770
2025-26	125	200	425	425	460	665	810
2026-27	130	210	445	445	485	700	850
2027-28	140	225	470	470	510	735	895
2028-29	145	235	490	490	535	770	940
2029-30	155	245	515	515	565	810	985
2030-31	160	260	545	545	595	850	1035
2031-32	170	275	570	570	625	895	1090
2032-33	180	285	600	600	655	945	1150
2033-34	185	300	630	630	690	990	1205
2034-35	195	320	665	665	725	1045	1270
2035-36	205	335	700	700	765	1100	1335
2036-37	220	350	735	735	805	1155	1410
2037-38	230	370	775	775	845	1220	1480
2038-39	240	390	820	820	890	1285	1560
2039-40	255	410	860	860	940	1350	1645
2040-41	270	435	910	910	990	1425	1735
2041-42	285	455	955	955	1045	1500	1825
2042-43	300	480	1010	1010	1100	1580	1925
2043-44	315	505	1065	1065	1160	1665	2030

Table 7-4: Toll Rates for Monthly Pass Local @ Toll Plaza 1 - Chainage 1055+217 KM/1055+217 KM/1058+837 KM

Year	Car
2024-25	355
2025-26	375
2026-27	390
2027-28	410
2028-29	435
2029-30	455
2030-31	480
2031-32	505
2032-33	530
2033-34	560
2034-35	585
2035-36	620
2036-37	650
2037-38	685

Year	Car
2038-39	720
2039-40	760
2040-41	800
2041-42	845
2042-43	890
2043-44	940

Table 7-5: Toll Rates for Monthly Pass @ Toll Plaza 1 - Chainage 1055+217 KM/1055+217 KM/1058+837 KM

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2024-25	2650	4280	8965	8965	9780	14060	17115
2025-26	2780	4495	9415	9415	10275	14765	17975
2026-27	2925	4720	9895	9895	10790	15515	18885
2027-28	3070	4960	10395	10395	11340	16300	19845
2028-29	3230	5215	10925	10925	11920	17130	20855
2029-30	3395	5480	11485	11485	12530	18010	21925
2030-31	3570	5765	12075	12075	13175	18935	23050
2031-32	3750	6060	12700	12700	13855	19915	24245
2032-33	3945	6375	13355	13355	14570	20945	25500
2033-34	4150	6705	14055	14055	15330	22040	26830
2034-35	4370	7060	14790	14790	16135	23190	28235
2035-36	4600	7430	15565	15565	16980	24410	29715
2036-37	4840	7820	16390	16390	17875	25700	31285
2037-38	5100	8235	17255	17255	18825	27060	32945
2038-39	5370	8675	18175	18175	19825	28500	34700
2039-40	5655	9140	19145	19145	20885	30025	36555
2040-41	5960	9630	20175	20175	22010	31635	38515
2041-42	6280	10150	21260	21260	23195	33340	40590
2042-43	6620	10695	22410	22410	24450	35145	42785
2043-44	6980	11275	23630	23630	25775	37055	45110

7.4 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under ***Optimistic***, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

7.5 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under all scenarios at each of the toll plaza up to 2043-44 years starting from the year 2024-25 are shown in tables below.

Table 7-6 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Location / Year	TP-01	Total
2024-25	73.25	**73.25**
2025-26	81.56	**81.56**
2026-27	90.08	**90.08**
2027-28	100.07	**100.07**
2028-29	110.94	**110.94**
2029-30	121.38	**121.38**
2030-31	133.17	**133.17**
2031-32	146.50	**146.50**
2032-33	160.75	**160.75**
2033-34	175.80	**175.80**
2034-35	191.21	**191.21**
2035-36	208.60	**208.60**
2036-37	226.00	**226.00**
2037-38	246.45	**246.45**
2038-39	267.72	**267.72**
2039-40	291.29	**291.29**
2040-41	315.76	**315.76**
2041-42	342.66	**342.66**
2042-43	371.82	**371.82**
2043-44	404.67	**404.67**

Table 7-7 : Toll Revenue Pessimistic Scenario

(Rs. Crores)

Location / Year	TP-01	Total
2024-25	73.25	**73.25**
2025-26	81.17	**81.17**
2026-27	89.24	**89.24**
2027-28	98.66	**98.66**
2028-29	108.84	**108.84**
2029-30	118.50	**118.50**
2030-31	129.37	**129.37**
2031-32	141.64	**141.64**
2032-33	154.64	**154.64**
2033-34	168.29	**168.29**
2034-35	182.16	**182.16**
2035-36	197.72	**197.72**

Location / Year	TP-01	Total
2036-37	213.16	**213.16**
2037-38	231.32	**231.32**
2038-39	250.09	**250.09**
2039-40	270.75	**270.75**
2040-41	292.06	**292.06**
2041-42	315.35	**315.35**
2042-43	340.53	**340.53**
2043-44	368.79	**368.79**

Table 7-8 : Toll Revenue Most Likely Scenario

(Rs. Crores)

Location / Year	TP-01	Total
2024-25	73.25	**73.25**
2025-26	81.39	**81.39**
2026-27	89.66	**89.66**
2027-28	99.38	**99.38**
2028-29	109.90	**109.90**
2029-30	119.94	**119.94**
2030-31	131.31	**131.31**
2031-32	144.12	**144.12**
2032-33	157.74	**157.74**
2033-34	172.10	**172.10**
2034-35	186.74	**186.74**
2035-36	203.19	**203.19**
2036-37	219.60	**219.60**
2037-38	238.90	**238.90**
2038-39	258.96	**258.96**
2039-40	281.05	**281.05**
2040-41	303.89	**303.89**
2041-42	328.92	**328.92**
2042-43	356.06	**356.06**
2043-44	386.55	**386.55**

7.6 Modification in Concession Period

Modification of the concession period shall be done on the basis of Revenue targets given in the contract for milestones 1 & 2.

Modification in concession period as per provisions of DCA and same is summarized in table for all scenarios.

Pessimistic Case

Target Point 1- March 2031									
Target Month - March 2031	**Target Revenue (Rs. Crores)**	**Calculated Revenue (Rs. Crores)**	**Difference %**	**If qualifies for Modification in Concession Period**	**Qualifying increment or shortfall**	**Change in Concession period %**	**Original Concession Period (Year)**	**Change in Concession period (Year)**	**Modified Concession Period**
TOT-13 - Kota	9.11	10.82	18.77 %	No	-	0.00%	20.00	0.00	

Target Point 2- March 2038											
Target Month - March 2038	**Target Revenue (Rs. Crores)**	**Calculated Revenue (Rs. Crores)**	**Difference %**	**If qualifies for Modification in Concession Period**	**Qualifying increment or shortfall**	**Change in Concession period %**	**Original Concession Period (Year)**	**Change in Concession period**	**Total Change in Concession period (Year)**	**Calculated Modified Concession Period**	**Final Concession Period subject to Cap**
TOT-13 - Kota	16.81	19.29	14.77 %	No	-	0.00%	20.00	0.00	0.00	20.00	

Most likely Case

Target Point 1- March 2031									
Target Month - March 2031	**Target Revenue (Rs. Crores)**	**Calculated Revenue (Rs. Crores)**	**Difference %**	**If qualifies for Modification in Concession Period**	**Qualifying increment or shortfall**	**Change in Concession period %**	**Original Concession Period (Year)**	**Change in Concession period (Year)**	**Modified Concession Period**
TOT-13 - Kota	9.11	10.98	20.55 %	Yes	0.55%	- 0.42%	20.00	-0.08	

Target Point 2- March 2038											
Target Month - March 2038	Target Revenue (Rs. Crores)	Calculated Revenue (Rs. Crores)	Difference %	If qualifies for Modification in Concession Period	Qualifying increment or shortfall	Change in Concession period %	Original Concession Period (Year)	Change in Concession period	Total Change in Concession period (Year)	Calculated Modified Concession Period	Final Concession Period subject to Cap
TOT-13 - Kota	16.81	19.93	18.56 %	No	-	0.00%	20.00	0.00	-0.08	19.92	

Optimistic Case

Target Point 1- March 2031									
Target Month - March 2031	Target Revenue (Rs. Crores)	Calculated Revenue (Rs. Crores)	Difference %	If qualifies for Modification in Concession Period	Qualifying increment or shortfall	Change in Concession period %	Original Concession Period (Year)	Change in Concession period (Year)	Modified Concession Period
TOT-13 - Kota	9.11	11.14	22.29 %	Yes	2.29%	- 1.71%	20.00	-0.34	

Target Point 2- March 2038											
Target Month - March 2038	Target Revenue (Rs. Crores)	Calculated Revenue (Rs. Crores)	Difference %	If qualifies for Modification in Concession Period	Qualifying increment or shortfall	Change in Concession period %	Original Concession Period (Year)	Change in Concession period	Total Change in Concession period (Year)	Calculated Modified Concession Period	Final Concession Period subject to Cap
TOT-13 - Kota	16.81	20.56	22.31 %	No	-	0.00%	20.00	0.00	-0.34	19.66	

TOT-13 (Kota bypass)-Modification in Concession Period						
Types of Scenarios	**Pessimistic Case**		**Most likely Case**		**Optimistic Case**	
Target Month	**Mar-31**	**Mar-38**	**Mar-31**	**Mar-38**	**Mar-31**	**Mar-38**
Target Revenue (Rs. Crores)	9.11	16.81	9.11	16.81	9.11	16.81
Calculated Revenue (Rs. Crores)	10.82	19.29	10.98	19.93	11.14	20.56
Differences %	18.77%	14.77%	20.55%	18.56%	22.29%	22.31%
If qualifies for Modification in Concession Period	No	No	Yes	No	Yes	No
Qualifying Increment or shortfall	-	-	0.55%	-	2.29%	-
Change in Concession period %	0.00%	0.00%	-0.42%	0.00%	-1.71%	0.00%
Original Concession Period	20.00	20.00	20.00	19.92	20.00	20.00
Change in Concession period	0.00	0.00	-0.08	0.00	-0.34	0.00
Total Change in Concession period	0.00		-0.08		-0.34	
Calculated Modified Concession Period	20.00		19.92		19.66	
Final Concession Period subject to Cap	0.00		0.00		0.00	

Thus, there is no modification expected in concession period due to variation in revenue as per above estimates in Pessimistic scenarios.
Reduction in Concession Period of about 29 days is expected as per revenue in *Most likely scenarios*.
Reduction in Concession Period of about 124 days is expected as per revenue in *Optimistic scenarios*.

CHAPTER 8

CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Kota Bypass from Km 1052+429 to Km 1080+249 section of NH-27 in state of Rajasthan is currently four lane road. The road is in sound condition and serves healthy traffic volumes. Project corridor is a part of the important regional network East-West connectivity. Kota Bypass is part of Silchar – Porbandar East – West Corridor. There are large number of townships, industrial corridors and other business establishment coming up along project corridor. As discussed, dominant portion of traffic is long route traffic, which is more sensitive towards the growth of national economy. As Indian economy is poised to grow at 7%+ post COVID-19, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give positive impact to traffic flow on project. The following can be considered as major outcomes of the study

a) There is good amount of tollable traffic running on project

b) Project corridor has potential to witness traffic growth @ 6-8% annually in near future due to various development in area and overall development of economy

c) Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road

Based on above it can be considered a stable healthy project from traffic and revenue point of view.

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AGRA TO ETAWAH (KM 199.660 TO KM 323.525) SECTION OF NH-2 IN THE STATE OF UTTAR PRADESH.



OCTOBER 2024

TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic	**NHAI**	-	National Highway Authority of India
BOT	-	Build Operate Transfer	**NHDP**	-	National Highways Development Project
CAGR	-	Compound Annual Growth Rate	**NSDP**	-	Net State Domestic Product
CTV	-	Classified traffic volume	**O&M**	-	Operation & Maintenance
DBFOT	-	Design, Build, Finance, Operate & Transfer	**PCDP**	-	Per Capita Domestic Product
EME	-	Earth Moving Equipment	**PCI**	-	Per Capita Income
GDP	-	Gross Domestic Product	**PCU**	-	Passenger Car Unit
GSDP	-	Gross State Domestic Product	**PSC**	-	Pre-stressed Concrete
HCM	-	Heavy Construction Machinery	**RCC**	-	Reinforced cement concrete
HCV	-	Heavy Commercial Vehicle	**RHS**	-	Right Hand Side
HTMS	-	Highway Traffic Management System	**SH**	-	State Highway
IRC	-	Indian Road Congress	**TP**	-	Toll Plaza
IRR	-	Internal Rate of Return	**WPI**	-	Wholesale Price Index
LCV	-	Light Commercial Vehicle	**SIR**	-	Special Investment Region
LHS	-	Left Hand Side	**c.**	-	Circa
LGV	-	Light Goods Vehicle	**ROB**	-	Railway Over Bridge
MAV	-	Multi Axle Vehicle	**MDR**	-	Major District Road
MORTH	-	Ministry of Road Transport and Highways	**ODR**	-	Other District Road
NH	-	National Highway	**CA**	-	Concession Agreement
PCC	-	Plain Cement Concrete	**RMT**	-	Running Meter
CR	-	Coarse Rubble			

CHAPTER 1

INTRODUCTION

1.1 Background

The Government of India through National Highway Authority of India (NHAI) embarked upon a program to enhance the traffic capacity and safety for efficient transportation of goods as well as passenger traffic on National Highway Sections under NHDP Phase V. Under Phase V NHAI has planned to convert 6,500 km of existing 4-lane National Highways into 6-lane National Highway. Sections envisaged under 6-laning comprise the Golden Quadrilateral section (5,700 km) and some other sections which are 800 km in length.

The project under consideration, **Agra** to **Etawah** section of NH-2 from km 199.660 to km 323.525is one such road project NHAI intended to implement on a BOT basis in the DBFOT format. *M/s AE Tollway. Ltd*. (Concessionaire) has been awarded the Project for a concession period of 24 years starting from 1st August 2016. The Project has been commissioned and is currently in the operation / maintenance phase. Six Laning of project has also been completed in Nov 2020.

Length of project road is 124.524 Kms. The project road is section of NH-2, which starts from Delhi and ends at Kolkata and is a part of the Golden Quadrilateral Project. The project road section passes through the districts of Agra, Firozabad and Etawah.

Project road alignment passes through the towns/ built-up areas of Tundla, Firozabad, Shikohabad, Sirsaganj, & Jaswantnagar. The following figure shows

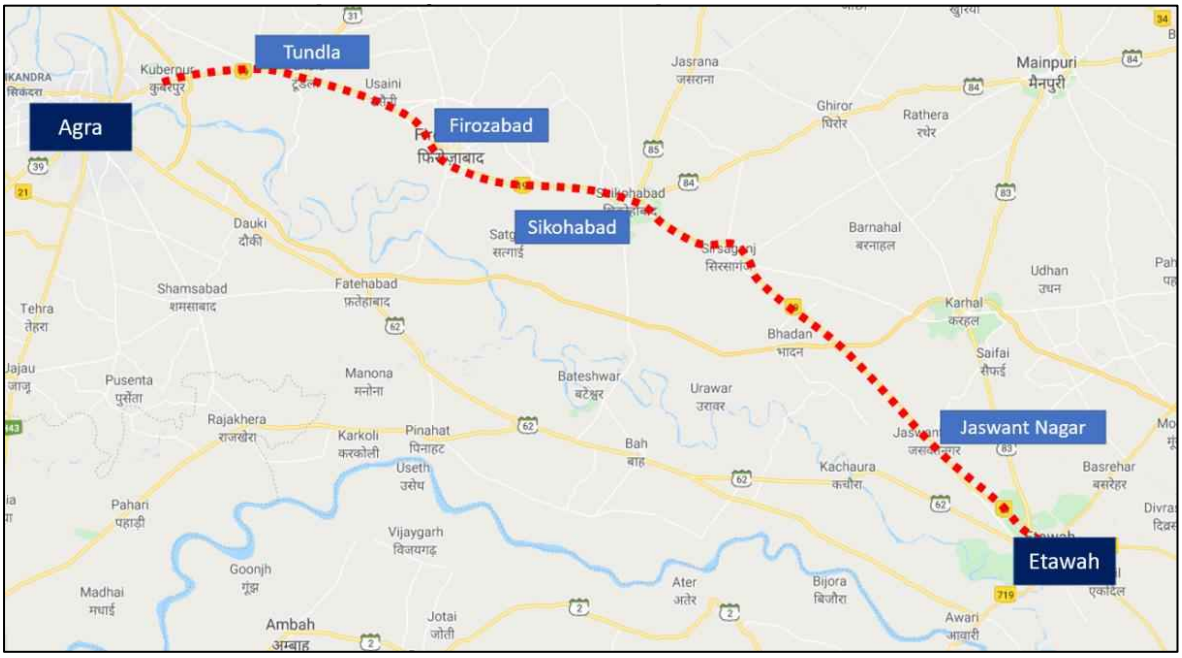


Figure 1-1: Alignment of Project Stretch

1.2 Objective of the Study

M/s IRB INFRASTRUCTURE TRUST has engaged *GMD Consultants* to assess the future traffic and toll potential of project along with related operation & maintenance expenditure involved.

This report named as **"Traffic Study &*Toll Revenue Projection Report*"** mainly focuses on traffic and revenue aspects of the project. Other parameters like competing road, area developments etc. have been considered from a traffic development point of view.

1.2.1 Scope of Services

The broad scope of work covered in the assignment is as follows.

a) Analysis of Traffic Growth
b) Toll Rate Growth
c) Revenue Forecasting

The Concessionaire has provided basic traffic data and other project details on the basis of which the above analysis has been carried out.

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

National Highway 2 (NH 2) which is now renumbered as NH-19 is oldest highway in India and connects state of Delhi, Haryana, Uttar Pradesh, Bihar, Jharkhand and West Bengal. It constitutes a major portion of the historical grand truck road.

It connects the national capital Delhi to Kolkata, as well as important cities Mathura, Agra, Kanpur, Allahabad, Varanasi, Dhanbad, Asansol, Durgapur and Bardhman. The highway is part of the Golden Quadrilateral project undertaken by National Highways Authority of India (NHAI).

The project road is a link between Agra and Kanpur in the state of Uttar Pradesh. The main project influence area of the project road consists of the three districts through which the project road passes. In addition, the project influence area includes the districts of Kanpur, Mathura and Aligarh also.

2.2 Project Stretch Description

Section of NH-2 from Agra to Etawah is part of the major transportation link in the area connecting industrial cities of Agra- Kanpur and Lucknow. Important cities of Firozabad, Shikohabad, and Jaswant Nagar fall on project alignment. Firozabad has a famous glass work industry. Like other parts of India rapid ribbon development is happening around these cities on project highway. This also contributes to sustainable traffic growth.

There are two operative toll plazas at project stretch. The first is at Tundla at Km 224.950 and second at Gurau at Km 285.200. The following figure shows project alignment and toll plaza locations.



Figure 2-1: Project Alignment with Toll Plaza

2.3 Project Corridor Illustration

Six laning of project stretch is complete. The following photographs illustrate the project section along the corridor.



Figure 2-2: Photographs showing Project Corridor

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from a client for a project.

- Classified traffic volume counts at toll plaza locations on Agra- Etawah section of NH-2 for years 2017-18, 2018-19, 2019-20, 2020-21,2021-22,22-23,April 2023 to November 2023 and traffic data from April 2024 to July 2024.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project.
- Establish base year traffic.
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	Km 224.950 Toll Plaza at Tundla	AADT for Year 2017-18, 2018-19, 2019-20,2020-21 ,2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from	For Year 2017-18, 2018-19, 2019-20, 2020-21, 2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four	For Year 2017-18, 2018-19, 2019-20, 2020-21, 2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four	For Year 2017-18, 2018-19, 2019-20, 2020-21, 2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four	For Year 2017-18, 2018-19, 2019-20, 2020-21, 2021-22, 2022-2023, Eight month from April 2023 to November 2023 &

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
		April 2024 to July 2024	month from April 2024 to July 2024	month from April 2024 to July 2024	month from April 2024 to July 2024	Four month from April 2024 to July 2024
2	Km 285.200 Toll Plaza at Gurau	AADT for Year 2017-18, 2018-19, 2019-20,2020-21 ,2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Year 2017-18, 2018-19, 2019-20, 2020-21,2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Year 2017-18, 2018-19, 2019-20, 2020-21,2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Year 2017-18, 2018-19, 2019-20, 2020-21,2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Year 2017-18, 2018-19, 2019-20, 2020-21 ,2021-22, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024

Toll plaza no. 1 & 2 are located in Uttar Pradesh.

3.2 Classified Traffic Volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations based on monthly data shared with NHAI.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in the table below.

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)

Vehicle Type	
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since the project highway is currently under toll operation, the data collected corresponds to the category of tollable vehicles. The following are the types of vehicles as per concession agreement.

- Car / Jeep / van
- Min Bus /LCV
- Bus
- Truck
- 3-Axle
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of the report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data for the years 2019-20 ,2020-21, 2021-22, 2022-23, April 2023 to November 2023 and traffic data from April 2024 to July 2024.
Since the traffic data available for this update is for only four months, from April 2024 to July 2024, it may not represent the whole year traffic. Hence a seasonality factor for balance part of year has been applied to average traffic of current four months to arrive at Annual Average Daily Traffic of base year 2024-25. Same corrected traffic is used for future projections and revenue calculations. The following table shows historical traffic on project stretch and derived Annual Average Daily Traffic (AADT) for year 2024-25.

Table 3-3 : Traffic Data at Gurau Toll Plaza at Km 285.200

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24	Annual Average Daily Traffic (Nos.)- 2024-25
1	Car	2071	3535	5268	3371	3525	3615

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24	Annual Average Daily Traffic (Nos.)- 2024-25
2	LCV	1097	1286	919	748	742	728
3	Bus	494	492	635	530	559	527
4	Truck	891	1100	1351	1410	1532	1547
5	3-Axle	901	909	882	839	826	727
6	Multi Axle	1426	1760	2138	2386	2685	2853
7	Oversize Vehicle	11	8	4	10	10	8
	Total	**6892**	**9090**	**11197**	**9292**	**9880**	**10004**

Table 3-4 : Traffic Data at Tundla Toll Plaza at Km 224.950

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24	Annual Average Daily Traffic (Nos.)- 2024-25
1	Car	8324	5849	7347	8954	9575	10010
2	LCV	1917	1514	1012	1082	1067	1053
3	Bus	1148	777	856	1181	1328	1225
4	Truck	1309	1272	1506	1775	1957	1987
5	3-Axle	955	948	924	887	879	799
6	Multi Axle	1255	1725	2179	2372	2764	2911
7	Oversize Vehicle	10	11	8	10	10	9
	Total	**14918**	**12096**	**13832**	**16260**	**17580**	**17994**

3.4 Data Analysis

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in "IRC-64-1990: Guidelines for Capacity of Roads in Rural areas". The adopted passenger car unit values (PCU) are presented in Table 3-5.

Table 3-5 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-6 : Traffic in PCU at Project Stretch Base Year 2023-24

Year	Toll Plaza Location (Km)	Traffic No.	PCU	PCU Index
2019-2020	Gurau Km 285.200	6892	17043	2.47
	Tundla Km 224.950	14918	27128	1.82

Year	Toll Plaza Location (Km)	Traffic No.	PCU	PCU Index
2020-2021	Gurau Km 285.200	9090	20922	2.30
	Tundla Km 224.950	12096	24923	2.06
2021-2022	Gurau Km 285.200	11197	24889	2.22
	Tundla Km 224.950	13832	28565	2.07
2022-2023	Gurau Km 285.200	9292	23606	2.54
	Tundla Km 224.950	16260	32820	2.02
2023-2024	Gurau Km 285.200	9880	25521	2.58
	Tundla Km 224.950	17580	36151	2.06
2024-2025	Gurau Km 285.200	10004	25981	2.60
	Tundla Km 224.950	17994	36761	2.04

It can be observed from above that project traffic has PCU index close to 2.5 at Guarau which is an indicator of high proportion of commercial traffic in traffic mix. At Tundla the index is more toward passenger traffic due to urban impact. The following figure illustrates variation of PCU index at two toll plaza locations.

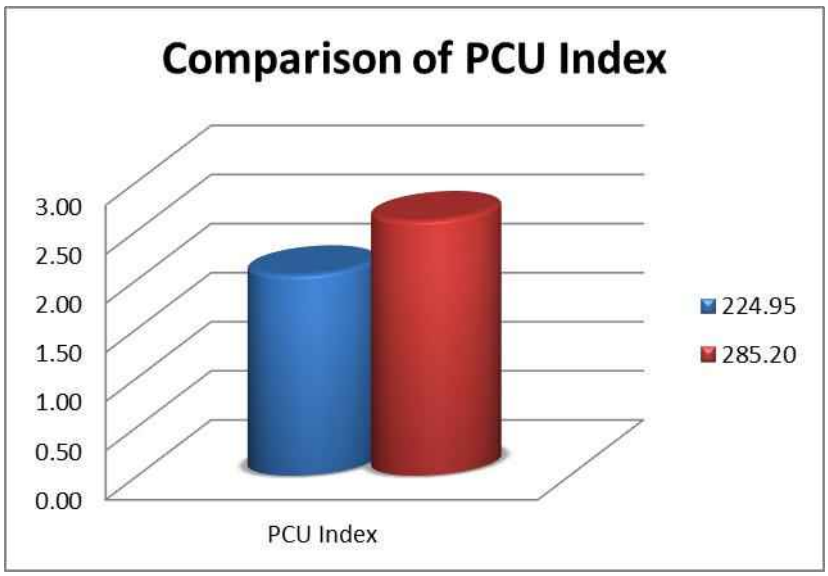


Figure 3-1: Comparison of PCU Index

3.4.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.

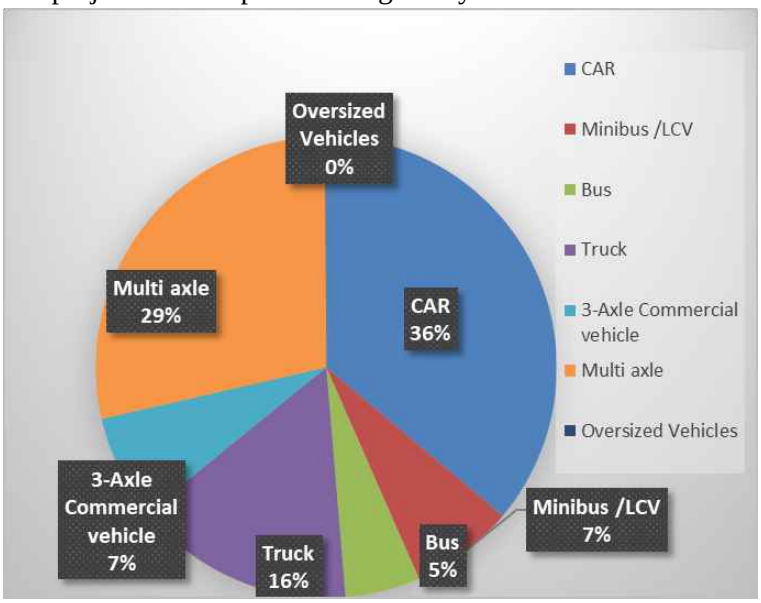


Figure 3-2 :Model Split of Tollable Vehicle-Km 285.200

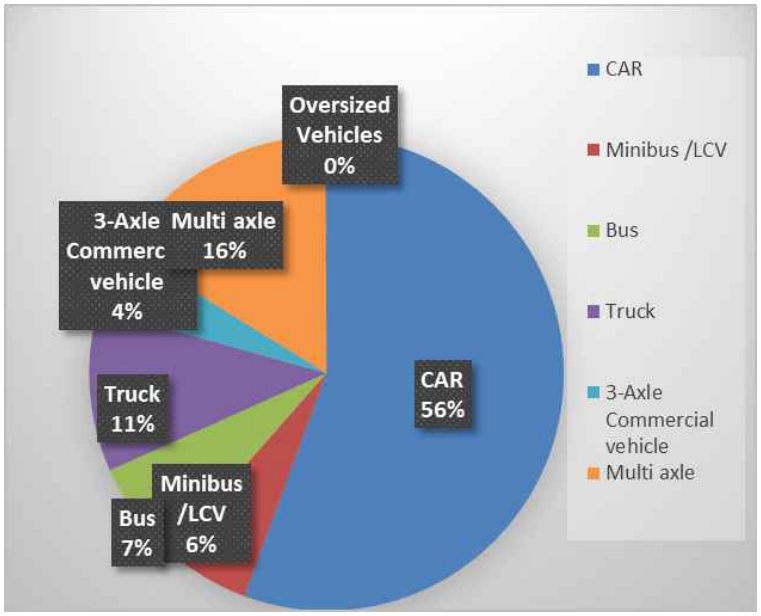


Figure 3-3 :Model Split of Tollable Vehicle-Km 224.950

It is observed that car traffic forms about 36% of total traffic at Gurau toll plaza location while multi axle commercial vehicles and trucks are about 64% of total traffic.

While at Tundla toll plaza car share rises to 56% and commercial vehicles multi axle and trucks share about 44%. This is due to the presence of strong urban impact of Tundla.

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey

2. Multi Journey
3. Monthly Pass (Local and General)

The following table provides numbers of vehicles falling in each of above category on base year 2024-25

Table 3-7 : Journey Type Bifurcation of Traffic at Gurau Toll Plaza KM 285.200

Sr. No	Type	Traffic Volume (Nos.)
		2024-25
1	Single Journey	6854
2	Return Journey	3126
3	Local Commercial Single Journey	13
4	Monthly Pass Local	11
5	Monthly Pass	0

Most dominant part of the above is the single journey type followed by return journey at project stretch. Monthly pass commuters are a very low fraction of the total traffic on the project corridor.

The single journey component in total traffic numbers is as high as 69%. Return journey component is 31%.

The following tables give the details of journey distribution at Tundla toll plaza at Km 224.950.

Table 3-8 : Journey Type Bifurcation of Traffic at Tundla Toll Plaza KM 224.950

Sr. No	Type	Traffic Volume (Nos.)
		2024-25
1	Single Journey	8752
2	Return Journey	8935
3	Local Commercial Single Journey	114
4	Monthly Pass Local	185
5	Monthly Pass	8

At Tundla toll plaza single journey share drops to 49% while return share is 50% respectively. Monthly pass is 0% and Local 1%.

It is observed that the project corridor demonstrates a similar pattern of single journey dominated mix of traffic across the entire stretch which is typical of major national highways.

3.5 Secondary Data Collection

There are several other factors which have a substantial impact on traffic patterns and growth on any project corridor. The following are some of such important factors.

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on the project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data
   a) GDP
   b) NSDP
   c) Population Growth
   d) Per Capita Income growth
   e) Industrial Growth
   f) Special Industry Potential
   g) Regional and National development vision / plan
   h) Any other relevant data
3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

Highway corridors behave like integrated circuit networks and more often than not every road is connected to various networks having different origins and destinations. Traffic running on these networks behaves like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network.

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc.,
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Competing / Alternate route

Project stretch has toll application history from last few years, and it can be assumed that project traffic is settled. However, from an analysis point of view there can be one alternate route using Agra Lucknow Expressway at local level.
At the regional level, this route connects Delhi to Kanpur and then goes towards Prayagraj and West Bengal. Most obvious alternate route is through Lucknow - Agra Expressway again.
The following maps show these routes in relation to project stretches at both local and regional level.

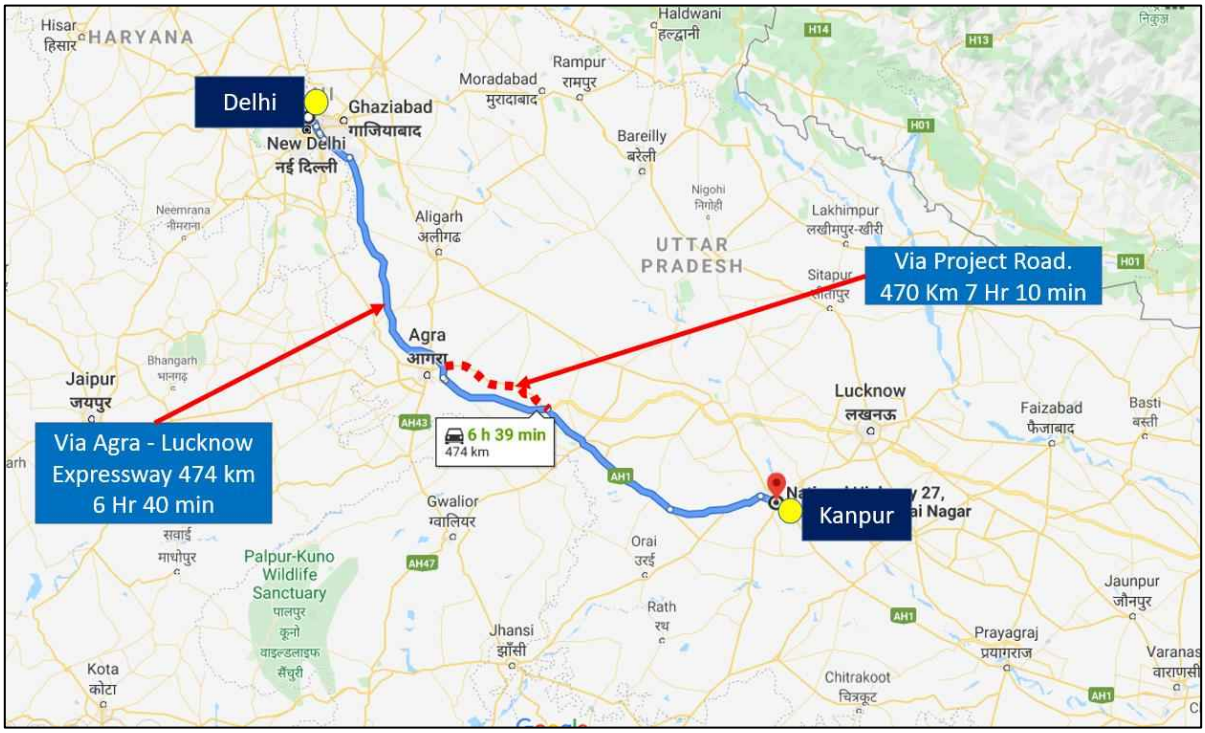


Figure 4-1: Alternate route at regional level.

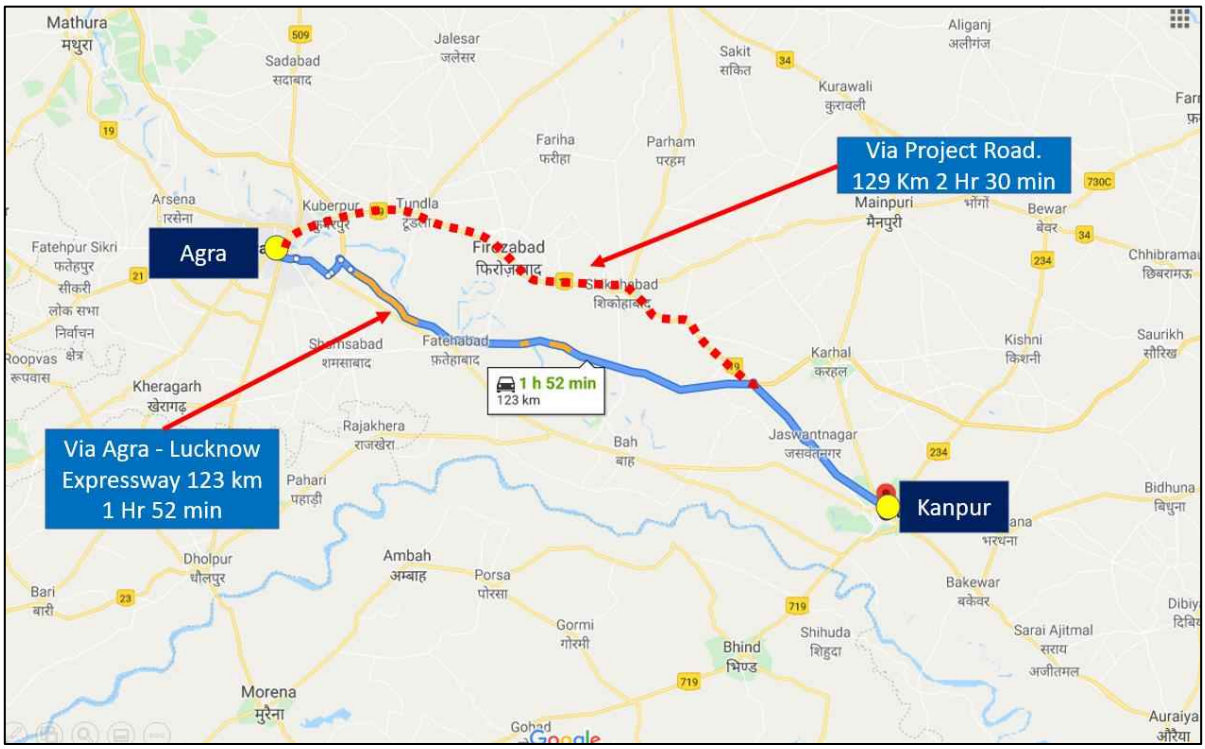


Figure 4-2: Alternate route at local level.

It can be observed that the project highway forms one of the main spines of the corridor between Agra and Etawah. Agra – Lucknow Expressway is a faster connectivity for obvious regions. It's been in operation for the last few years and most of the traffic which had potential of diversion had done so. Traffic on project road is now settled and it can be assumed as dedicated traffic on project road for logistic obligations. With six laning now complete, project stretch has become slightly more attractive due to the improved level of service.

At regional level also the difference between two alignment is only of Agra- Lucknow Expressway. Hence there too, regional level traffic is expected to have settled.

The following table provides summary of analysis of alternate route/ roads discussed above.

Table 4-1 : Competing Roads Details

Sr. No	Route Details	Designation	Length (Km)	Avg. Speed (KMPH)	Time Taken (Min)	Observations
Regional Level						
1	Delhi to Kanpur Via Agra- Lucknow Expressway	Alternate Route	474	70	6 Hr 40 Min	Alternate route running for years after toll on project road. Traffic Settled. No further diversion expected
	Delhi to Kanpur Via Project Road (NH-19)	Project Road	470	65	7 Hr 10 Min	
Local Level						
2	Agra to Etawah Via Agra- Lucknow Expressway	Alternate Route	123	65	1 Hr. 52 Min	Alternate route running for years after toll on project road. Traffic Settled. No further diversion expected
	Agra to Etawah Via Project Road (NH-19)	Project Road	129	50	2 Hr. 30 Min	

Under these circumstances it is not envisaged that commercial or passenger traffic would switch to alternate roads from the project road. Further, it may be noted that during its construction phase, the project road had many bottlenecks like Firozabad bypass etc. Due to this part of traffic preferred Agra Lucknow expressway over project road despite higher toll tariff at Agra – Lucknow Expressway. Now as these bottlenecks are removed it is expected that some part of traffic would return to Project Corridor due to improved level of service and low toll fee as compared to Agra – Lucknow Expressway.

CHAPTER 5

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future patterns of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor Surat- Dahisar section of NH-8has been done taking the above factors into consideration. "**IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**" is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable for projects of short durations say 5-10 years, however for long term projections it would-be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**.

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different types of vehicles. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway typically depends on a number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, in order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

$Log (P) = k \times Log (EI) + A$

Where,

P = *Number of Vehicles (Mode wise)*

EI = *Economic Indicator*

A = *Regression constant*

k = *Elasticity coefficient (Regression coefficient)*

The elasticity for cars and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

The project corridor spreads across the state of Uttar. Toll plazas at Tunda and Gurau are in the state of Uttar Pradesh. Project corridor has certain impact of traffic from Delhi, and Haryana also. For elasticity calculations, working data from these states has been analyzed.

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Uttar Pradesh State.

Table 5-1 : Per Capita Income Vs Car Uttar Pradesh

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	32002	1108100	4.51	6.04		
2013	32908	1205374	4.52	6.08	3%	
2014	34044	1423020	4.53	6.15	3%	
2015	34583	1572217	4.54	6.20	2%	
2016	36973	1746117	4.57	6.24	7%	
2017	40641	2027972	4.61	6.31	10%	4.94%

Regression analysis of same is given in figure below.

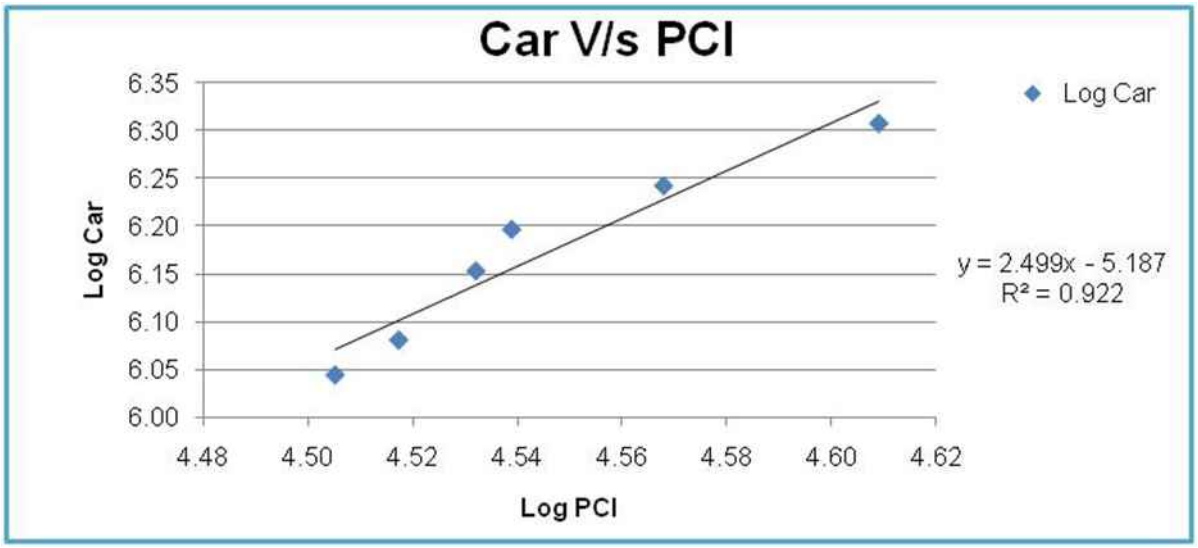


Figure 5-1: Regression and Elasticity PCI vs. Car–Extrapolation Uttar Pradesh

Table 5-2 : Population Vs Bus Uttar Pradesh

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	199812341	57901	8.30	4.76		
2013	203382046	64147	8.31	4.81	2%	
2014	206942855	74389	8.32	4.87	2%	
2015	210493544	80460	8.32	4.91	2%	
2016	214032922	89127	8.33	4.95	2%	
2017	217559836	112020	8.34	5.05	2%	1.72%

Regression analysis of same is given in figure below.

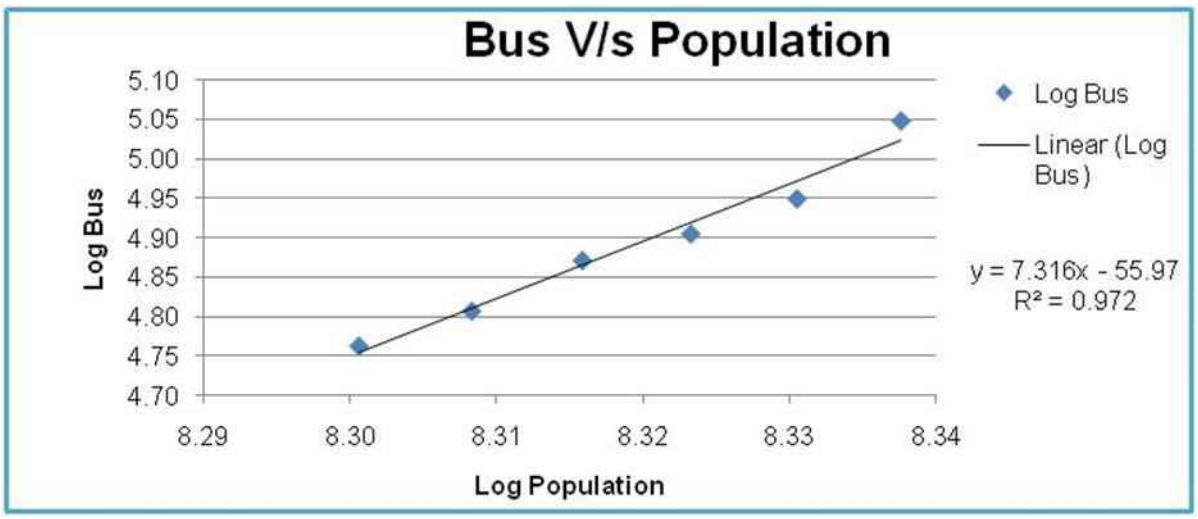


Figure 5-2: Regression and Elasticity Population vs. Bus – Extrapolation Uttar Pradesh

The elasticity of goods traffic has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-3 : LCV Traffic Vs NSDP Uttar Pradesh

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	645132	176164	5.81	5.25		
2013	673552	213657	5.83	5.33	4%	
2014	707469	265025	5.85	5.42	5%	
2015	729686	294022	5.86	5.47	3%	
2016	792049	316815	5.90	5.50	9%	5.28%

The following figure depicts regression analysis and extrapolation.

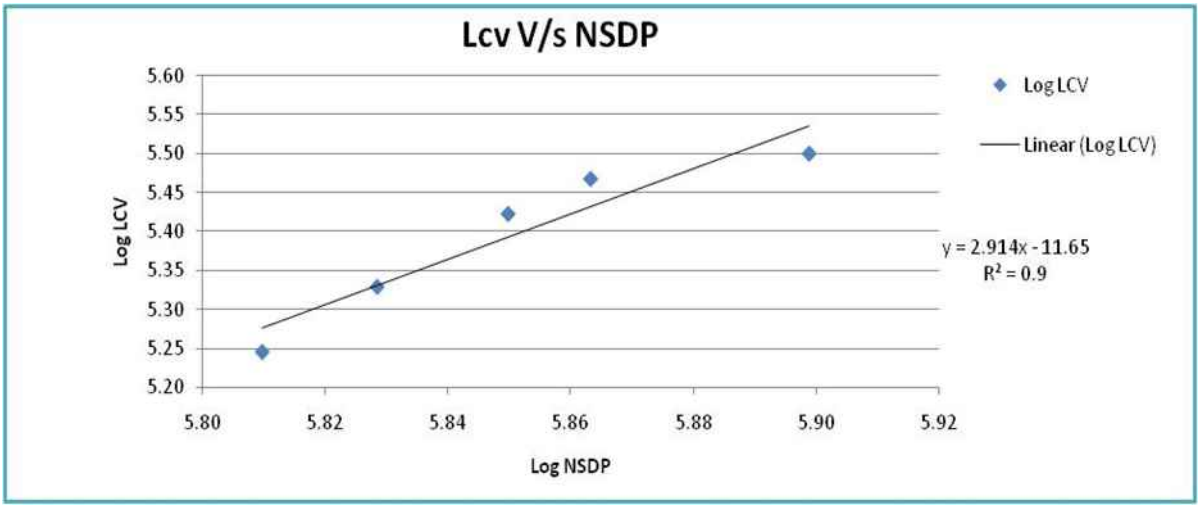


Figure 5-3: Regression and Elasticity NSDP vs. LCV Traffic – extrapolation Uttar Pradesh.

Table 5-4 : Truck Traffic Vs NSDP Uttar Pradesh

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	645132	162813	5.81	5.21		
2013	673552	186404	5.83	5.27	4%	
2014	707469	202761	5.85	5.31	5%	
2015	729686	217609	5.86	5.34	3%	
2016	792049	245688	5.90	5.39	9%	
2017	883962	265167	5.95	5.42	12%	6.55%

The following figure depicts regression analysis and extrapolation.

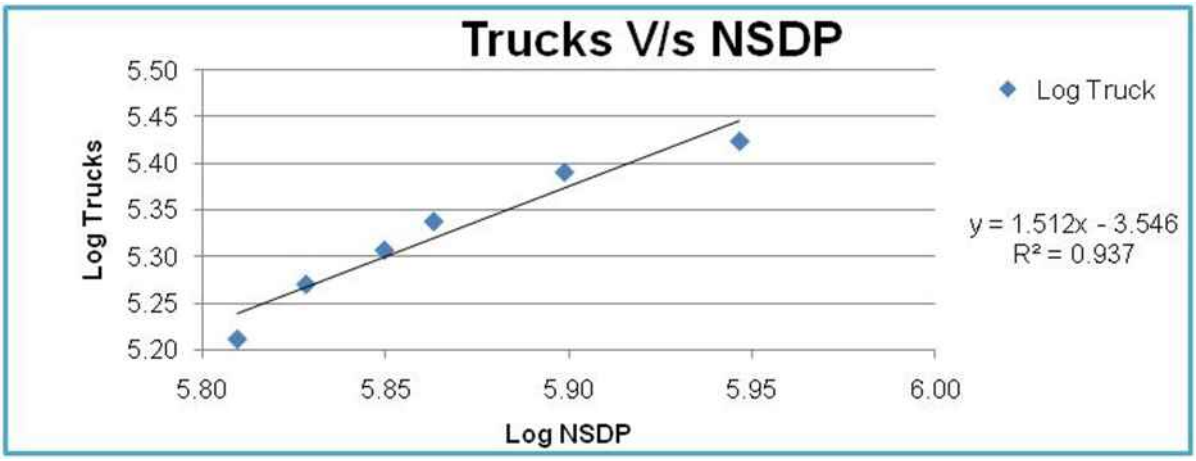


Figure 5-4: Regression and Elasticity NSDP vs. Truck Traffic – extrapolation Uttar Pradesh.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-5 : Summary Regression Analysis Uttar Pradesh

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Uttar Pradesh	Car/Jeep	PCI	y = 2.499x + -5.1874	R² = 0.922	2.4990	4.94%	12.34%	Good Regression
	Bus	Population	y = 7.3167x - -55.9791	R² = 0.9726	7.3167	1.72%	12.56%	Good Regression
	LCV	NSDP	y = 2.9149x - -11.6585	R² = 0.9	2.9149	5.28%	15.40%	Good Regression
	Truck	NSDP	y = 1.5121x - -3.5463	R² = 0.9373	1.5121	6.55%	9.90%	Good Regression

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Delhi State.

Table 5-6 : Per Capita Income Vs Car Delhi

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	185361	2172069	5.27	6.34		
2013	193175	2416974	5.29	6.38	4%	

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2014	202216	2568380	5.31	6.41	5%	
2015	215726	2730071	5.33	6.44	7%	
2016	235737	2986579	5.37	6.48	9%	
2017	247255	3061817	5.39	6.49	5%	5.95%

Regression analysis of same is given in figure below.

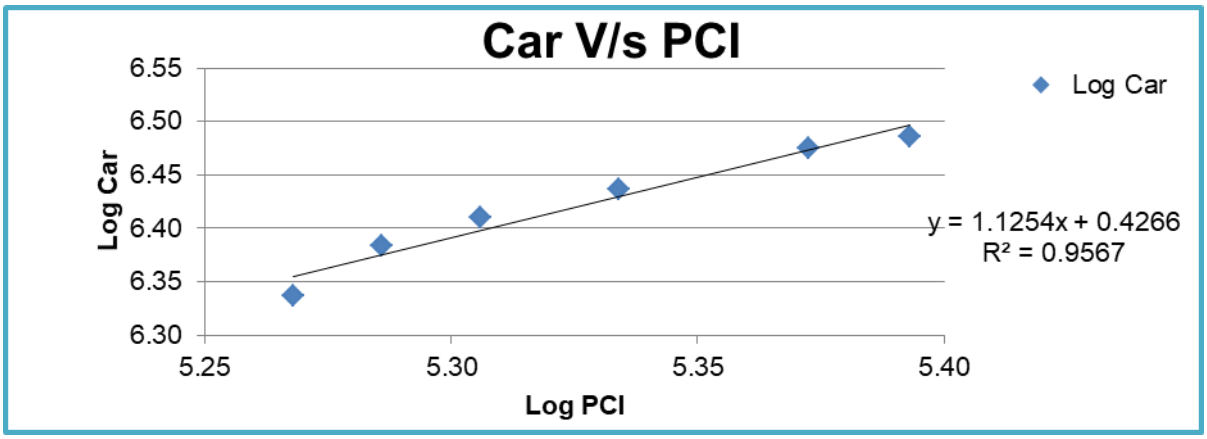


Figure 5-5: Regression and Elasticity PCI vs. Car–Extrapolation Delhi

Table 5-7 : Population Vs Bus Delhi

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	16787941	109790	7.22	5.04		
2013	17071599	19917	7.23	4.30	2%	
2014	17354281	19595	7.24	4.29	2%	
2015	17635897	19700	7.25	4.29	2%	
2016	17916359	43723	7.25	4.64	2%	
2017	18195583	41686	7.26	4.62	2%	1.62%

Regression analysis of same is given in figure below.

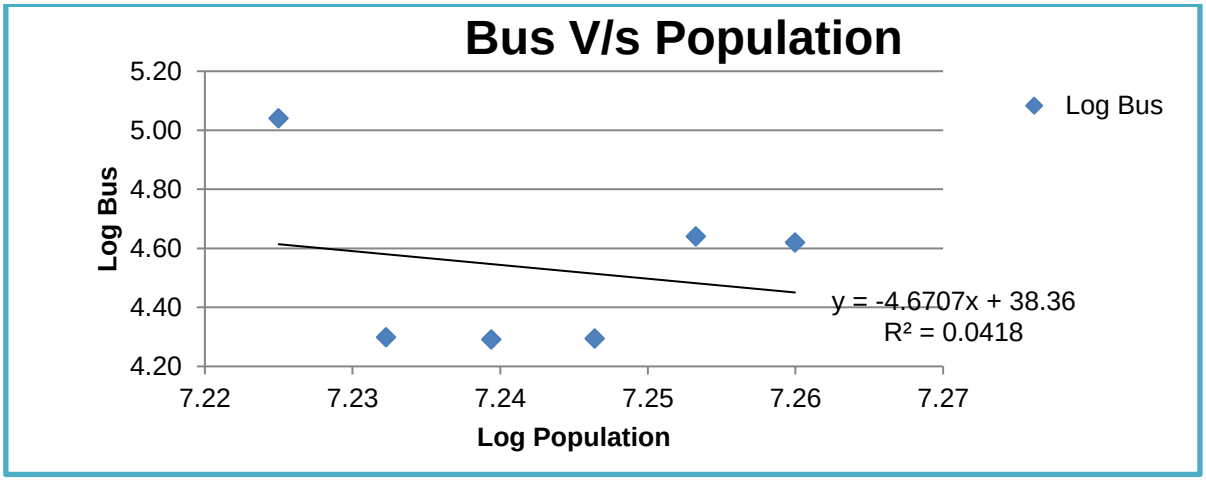


Figure 5-6: Regression and Elasticity Population vs. Bus – Extrapolation Delhi

The elasticity of goods traffic has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-8 : LCV Traffic Vs NSDP Delhi

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	314650	124547	5.50	5.10		
2013	334193	126539	5.52	5.10	6%	
2014	356528	136110	5.55	5.13	7%	
2015	387639	145903	5.59	5.16	9%	
2016	431730	183486	5.64	5.26	11%	
2017	461476	221068	5.66	5.34	7%	7.98%

The following figure depicts regression analysis and extrapolation.

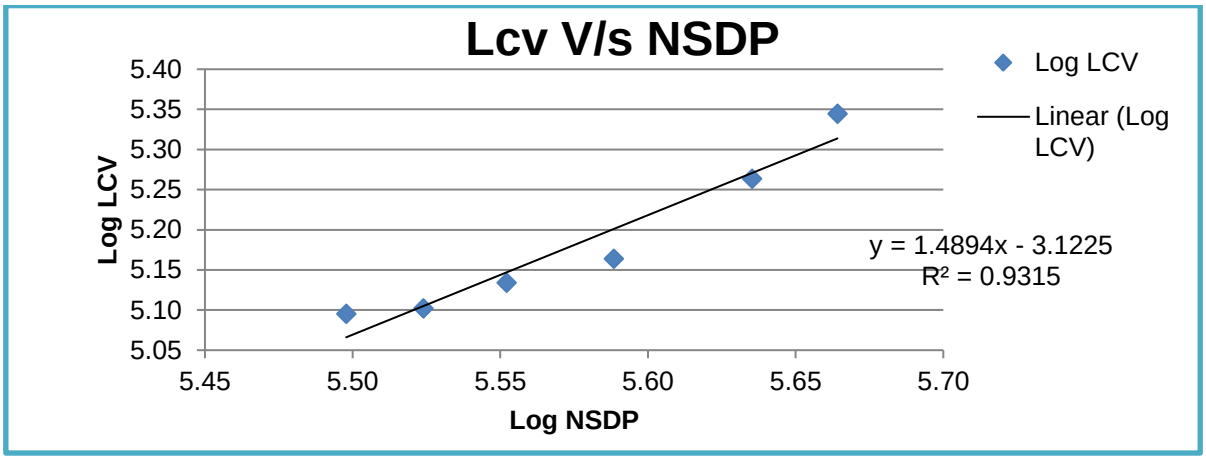


Figure 5-7: Regression and Elasticity NSDP vs. LCV Traffic – extrapolation Delhi.

Table 5-9 : Truck Traffic Vs NSDP Delhi

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	314650	4792	5.50	3.68		
2013	334193	5176	5.52	3.71	6%	
2014	356528	6093	5.55	3.78	7%	
2015	387639	7503	5.59	3.88	9%	
2016	431730	8703	5.64	3.94	11%	
2017	461476	10440	5.66	4.02	7%	7.98%

The following figure depicts regression analysis and extrapolation.

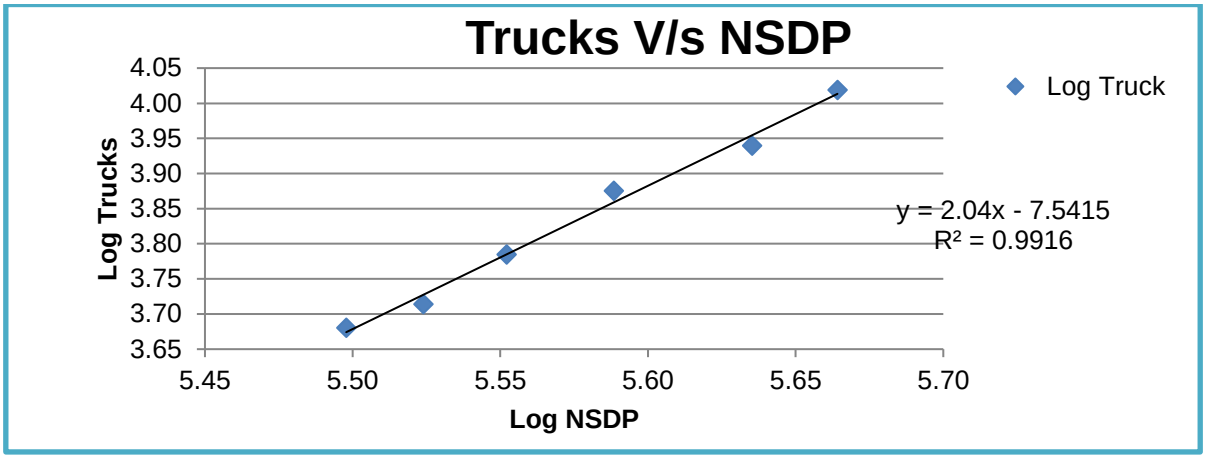


Figure 5-8: Regression and Elasticity NSDP vs. Truck Traffic – extrapolation Delhi.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-10 : Summary Regression Analysis Delhi

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Delhi	Car/Jeep	PCI	y = 1.1254x + 0.4266	R^2 = 0.9567	1.1254	5.95%	6.69%	Good Regression
	Bus	Population	y = -4.6707x - 38.36	R^2 = 0.0418	-4.6707	1.62%	-7.58%	Poor Regression
	LCV	NSDP	y = 1.4894x - -3.1225	R^2 = 0.9315	1.4894	7.98%	11.88%	Good Regression
	Truck	NSDP	y = 2.04x - -7.5415	R^2 = 0.9916	2.0400	7.98%	16.27%	Good Regression

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Haryana State.

Table 5-11 : Per Capita Income Vs Car Haryana

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	106085	989519	5.03	6.00		
2013	111780	1134616	5.05	6.05	5%	
2014	119791	1278272	5.08	6.11	7%	
2015	125032	1420621	5.10	6.15	4%	

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2016	137818	1711692	5.14	6.23	10%	
2017	150241	1851788	5.18	6.27	9%	7.23%

Regression analysis of same is given in figure below.

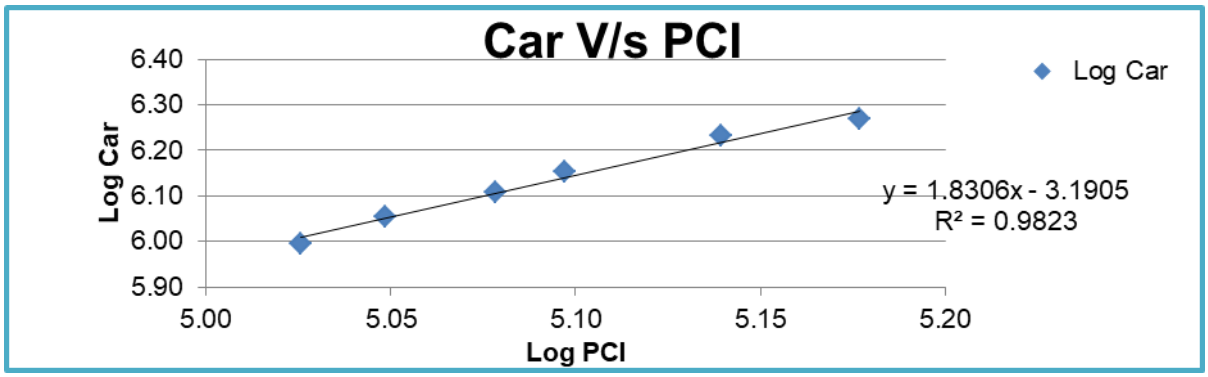


Figure 5-9: Regression and Elasticity PCI vs. Car–Extrapolation Haryana

Table 5-12 : Population Vs Bus Haryana

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	25351462	39153	7.40	4.59		
2013	25751257	43456	7.41	4.64	2%	
2014	26149236	46558	7.42	4.67	2%	
2015	26545282	52640	7.42	4.72	2%	
2016	26939286	55781	7.43	4.75	1%	
2017	27331141	60129	7.44	4.78	1%	1.52%

Regression analysis of same is given in figure below.

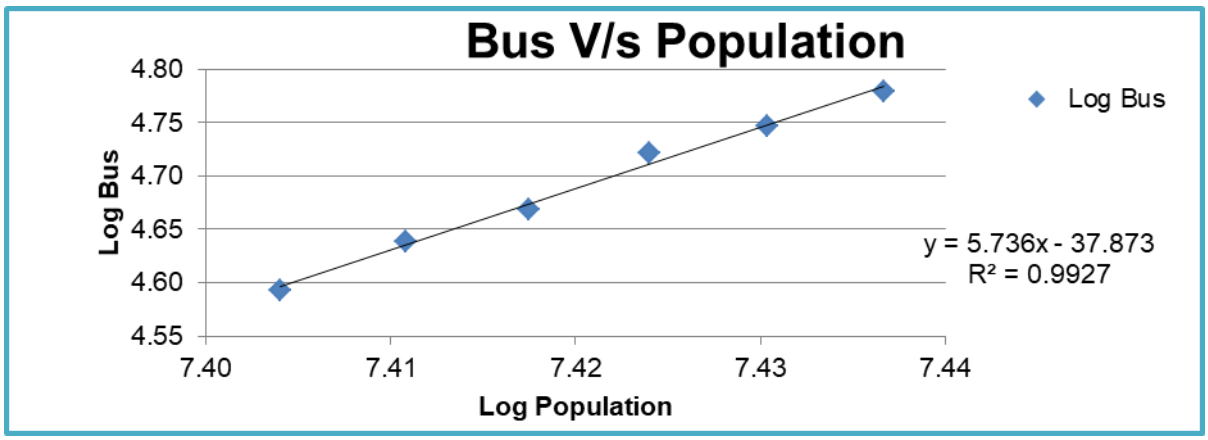


Figure 5-10: Regression and Elasticity Population vs. Bus – Extrapolation Haryana

The elasticity of goods traffic has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-13 : LCV Traffic Vs NSDP Haryana

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	271152	124897	5.43	5.10		
2013	289756	137511	5.46	5.14	7%	
2014	314931	152069	5.50	5.18	9%	
2015	333359	167901	5.52	5.23	6%	
2016	372659	182776	5.57	5.26	12%	

The following figure depicts regression analysis and extrapolation.

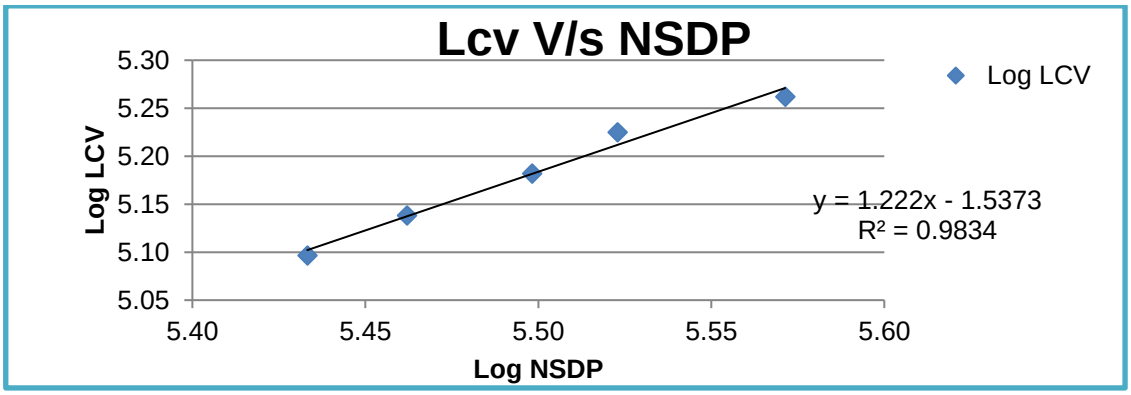


Figure 5-11: Regression and Elasticity NSDP vs. LCV Traffic – extrapolation Haryana.

Table 5-14 : Truck Traffic Vs NSDP Haryana

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	271152	292735	5.43	5.47		
2013	289756	307509	5.46	5.49	7%	
2014	314931	327882	5.50	5.52	9%	
2015	333359	348732	5.52	5.54	6%	
2016	372659	367730	5.57	5.57	12%	
2017	412006	390321	5.61	5.59	11%	8.75%

The following figure depicts regression analysis and extrapolation.

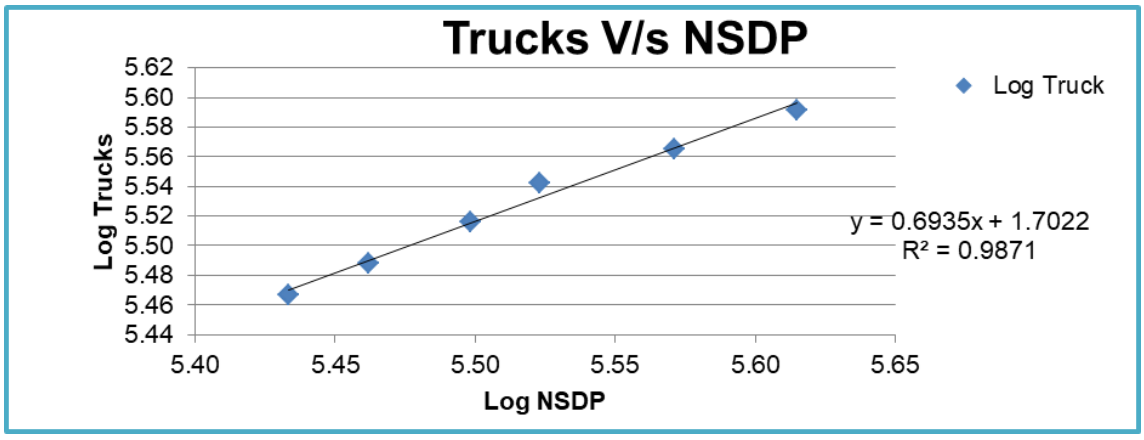


Figure 5-12: Regression and Elasticity NSDP vs. Truck Traffic – extrapolation Haryana.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-15 : Summary Regression Analysis Haryana

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Haryana	Car/Jeep	PCI	y = 1.8306x + -3.1905	R^2 = 0.9823	1.8306	7.23%	13.24 %	Good Regression
	Bus	Population	y = 5.736x - -37.8732	R^2 = 0.9927	5.7360	1.52%	8.69%	Good Regression
	LCV	NSDP	y = 1.222x - -1.5373	R^2 = 0.9834	1.2220	8.30%	10.14 %	Good Regression
	Truck	NSDP	y = 0.6935x - 1.7022	R^2 = 0.9871	0.6935	8.75%	6.07%	Good Regression

The economic model for predicting growth is a good tool, however other local, regional, and national factors should also be considered before finalizing growth factors. Considering factors such as proposed developments and other influencing economic factors, moderated growth should be considered. These factors are discussed in subsequent sections.

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trends of growth. Project stretch of Agra to Etawah has recently been commissioned and is under tolling operation since 2016-17. As traffic data is available with the project concessionaire of three years, we do not have sufficient data points to be able to establish a reliable past trend of traffic growth. Moreover, the part two years traffic is affected by COVID-19 impact. A minimum of about 5 -6 years' traffic data is required for establishing a reliable past trend.

5.5 Other Factors Influencing Growth

There are many factors which have an impact on traffic growth. As discussed previously these factors can be economical, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

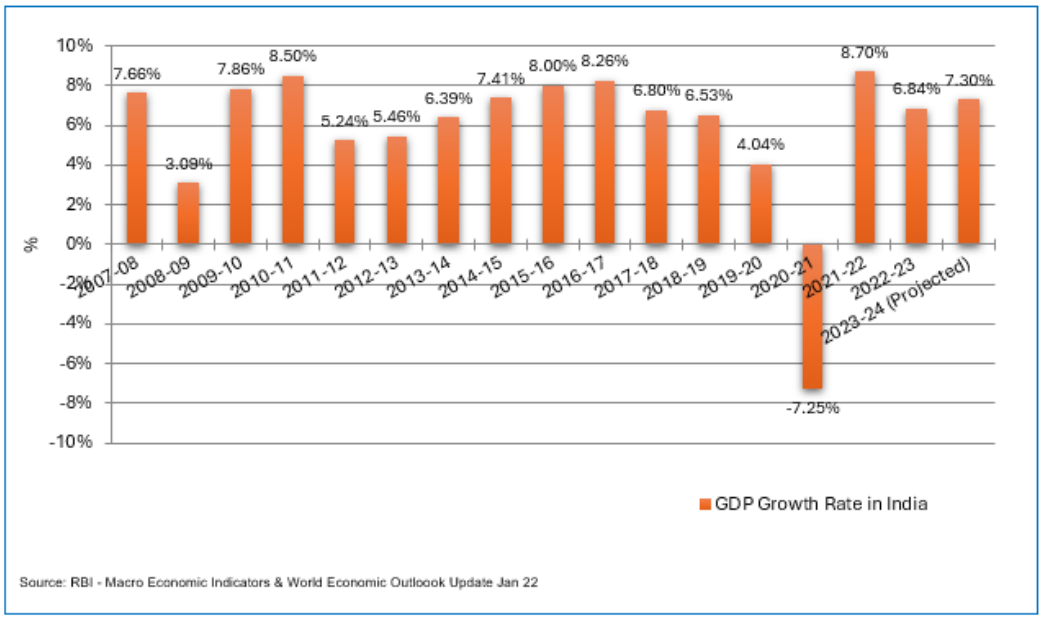


Figure 5-13 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had a slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. The government took major policy decisions including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honorable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into an opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on **Make -In-India** it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. The World Economic Outlook update also has predicted a growth rate of about 7.5 % in the year 2022-23.

5.6 Developments along and around the Project Corridor & State

Though the growth of Delhi has been consistently below the national average economic growth, it is the largest state in terms of population and consumption driven demand for goods and services will remain significantly high. The rate of growth of NSDP also seems to be catching up with the national average over the years. Other regions in the influenced area states, namely Delhi, Haryana and Uttarakhand are all growing significantly faster than the national average. Considering the scenario, it may be assumed that the traffic

growth on the project highway would remain high and there are minimal risks in terms of growth.

Table 5-16 : GDP of India, UP and other important states

Year	India (GDP)	Bihar	Haryana	Madhya Pradesh	Maharashtra	Odisha	Punjab	Rajasthan	Uttar Pradesh	Uttarakhand	West Bengal	Delhi
1980-81	12336	514	357	623	1464	529	504	560	1631	138	830	269
1981-82	13030	543	371	639	1498	528	551	607	1670	141	808	291
1982-83	13411	548	394	668	1556	497	568	620	1800	152	840	328
1983-84	14464	601	402	702	1654	597	578	761	1871	158	939	320
1984-85	15037	658	418	668	1675	569	623	706	1900	161	964	333
1985-86	15663	672	493	726	1807	635	670	704	1975	167	1005	386
1986-87	16339	725	493	694	1832	643	694	771	2060	174	1045	411
1987-88	16917	685	484	789	1955	623	730	718	2154	182	1101	447
1988-89	18635	772	602	847	2159	754	769	1014	2434	206	1148	486
1989-90	19778	759	610	865	2515	805	834	993	2502	212	1188	531
1990-91	20824	831	674	987	2629	668	849	1149	2651	224	1251	553
1991-92	21122	784	688	916	2620	753	888	1061	2662	225	1349	638
1992-93	22254	737	688	983	3017	740	930	1220	2690	228	1389	660
1993-94	23519	755	719	1088	3349	788	970	1121	2757	233	1490	705
1994-95	25023	842	771	1107	3414	826	995	1325	2901	254	1594	790
1995-96	26846	712	787	1174	3791	864	1032	1374	2995	251	1713	804
1996-97	28987	893	879	1252	3941	804	1107	1535	3327	267	1832	915
1997-98	30234	850	887	1318	4158	920	1137	1721	3292	270	1985	1063
1998-99	32255	904	934	1405	4324	948	1203	1797	3316	274	2112	1116
1999-00	34837	950	1002	1552	4735	1008	1267	1801	3440	274	2264	1170
2000-01	36282	1106	1081	1426	4589	982	1309	1743	3511	308	2343	1215
2001-02	38236	1043	1165	1528	4751	1042	1326	1941	3575	323	2512	1262
2002-03	39719	1175	1236	1449	5079	1034	1348	1708	3690	353	2600	1359
2003-04	42883	1099	1358	1611	5471	1185	1433	2251	3885	381	2753	1433
2004-05	45906	1238	1475	1664	5948	1340	1504	2196	4079	431	2936	1588
2005-06	50257	1207	1608	1748	6810	1399	1577	2344	4317	492	3121	1752
2006-07	55066	1416	1791	1907	7748	1574	1748	2620	4660	551	3366	1969
2007-08	60199	1489	1931	1997	8650	1708	1899	2739	4959	648	3627	2191
2008-09	64248	1716	2080	2250	8786	1837	2004	2969	5336	716	3774	2464
2009-10	69769	1798	2340	2463	9634	1852	2132	3142	5668	839	4067	2667
2010-11	75987	2073	2498	2592	10732	1968	2270	3614	6120	927	4313	2888
2011-12	81069	2285	2712	2824	11222	2042	2392	3953	6451	1020	4471	3147
2012-13	85463	2369	2894	3069	11842	2163	2518	4098	6736	1095	4838	3342
2013-14	90636	2469	3142	3226	12671	2331	2675	4343	7075	1178	5247	3565
2014-15	97121	2557	3314	3394	13322	2359	2777	4656	7297	1257	5633	3882
2015-16	105033	2749	3612	3597	14417	2557	2926	4981	7894	1355	-	4291
2016-17	112476	3033	3927	4129	15744	2828	3095	5352	8457	1448	-	4658
2017-18	119762	-	-	4432	-	3029	-	5736	9011	1547	-	5035
Growth 1981-2018	6.34	5.05	6.88	5.44	6.82	4.83	5.17	6.49	4.73	6.75	5.79	8.24
Growth 1994-2018	7.02	6.23	7.66	6.03	6.96	5.77	5.17	7.04	5.06	8.20	6.54	8.53
Growth 2000-2018	7.10	7.07	8.37	6.00	7.32	6.30	5.40	6.65	5.50	10.10	6.27	8.45

5.7 Industrial Units along Project Corridor

There are a number of big and small industrial units along the project corridor. The following figure shows some of these along corridors.

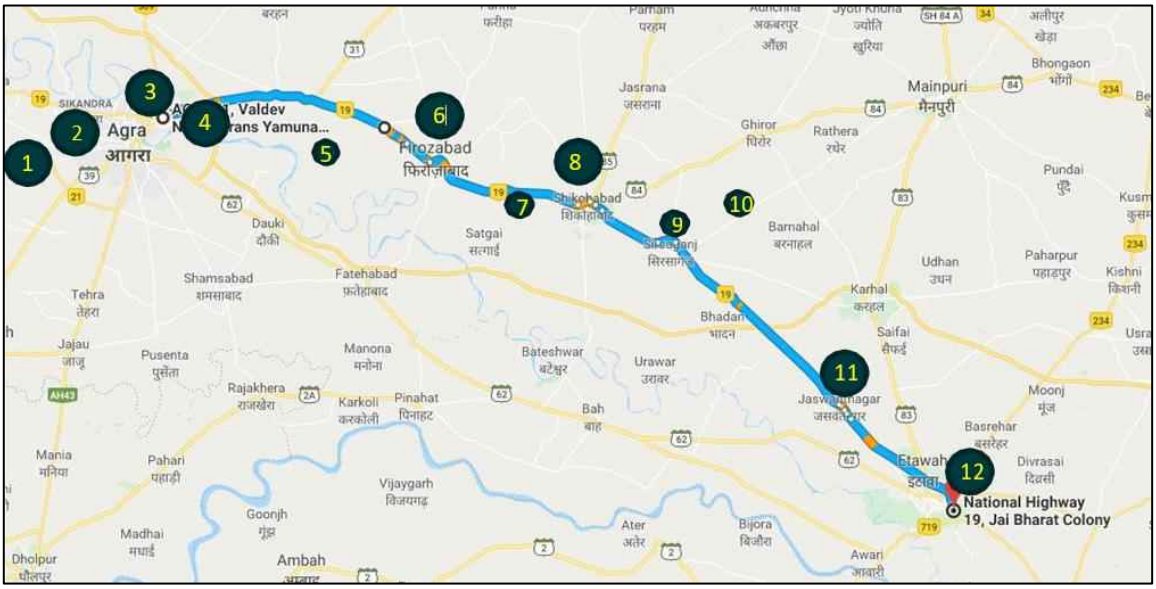


Figure 5-14 : Industrial Units along project corridor.

The following is the list of industrial units along the project corridor.

1. Leather Park, **Agra**
2. Export Promotional Industrial Park (EPIP)
3. Foundry Nagar (BK Casting, Agricultural Industries, Paint Industries, Plastic Industries, Metal Industries), **Agra**
4. Industrial Estate, **Agra**
5. Agarbatti Industry
6. Glass Industries, **Firozabad**
7. Pipe Industries, Glass Bulb Industries
8. Agro Industries, Glass Industries, Cold Storage
9. Food Processing Industries
10. PVC Pipe Industries
11. Rural Industrial Estate, **Jaswant Nagar**
12. **Etawah** (Caplock Industries Private Limited, Rice Mills)

Such industries along project corridor and urban development around major cities of Firozabad, Tundla, Shikohabad, Jaswantnagar and Wtawah provide impetus to project traffic on corridor.

5.8 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as below. The rate of growth is moderate in light of overall regional trends. Growth of multi-Axle is kept slightly higher as trend of technological advances in logistic industry favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, the rate of growth diminishes. Same growth rate is not sustainable for long. Hence growth rates have been suitably stepped down in future years.

Growth rates are recommended for three scenarios for sensitivity analysis namely **Optimistic, Pessimistic** and **Most Likely** with a positive and negative variation from Most Likely case for corridor in both states.

5.8.1 Recommended Growth Rates of Traffic for Project Stretch

Table 5-17 : Recommended Growth Rates Optimistic

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	8.96%	8.75%	8.71%	7.42%	6.23%	5.15%
Bus	4.86%	4.70%	4.68%	3.29%	2.58%	1.95%
LCV	5.91%	5.71%	5.65%	4.63%	3.71%	3.16%
2- Axle	6.25%	6.07%	6.01%	5.06%	4.20%	3.42%
3 - Axle	6.59%	6.39%	6.33%	5.32%	4.41%	3.59%
4 to 6 Axle	6.93%	6.72%	6.64%	5.58%	4.62%	3.76%
7 and Above Axle	6.93%	6.72%	6.64%	5.58%	4.62%	3.76%

Table 5-18 : Recommended Growth Rates Pessimistic

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	8.46%	8.25%	8.21%	6.92%	5.73%	4.65%
Bus	4.36%	4.20%	4.18%	2.79%	2.08%	1.45%
LCV	5.41%	5.21%	5.15%	4.13%	3.21%	2.66%
2- Axle	5.75%	5.57%	5.51%	4.56%	3.70%	2.92%
3 - Axle	6.09%	5.89%	5.83%	4.82%	3.91%	3.09%
4 to 6 Axle	6.43%	6.22%	6.14%	5.08%	4.12%	3.26%
7 and Above Axle	6.43%	6.22%	6.14%	5.08%	4.12%	3.26%

Table 5-19 : Recommended Growth Rates Most Likely

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	8.71%	8.50%	8.46%	7.17%	5.98%	4.90%
Bus	4.61%	4.45%	4.43%	3.04%	2.33%	1.70%
LCV	5.66%	5.46%	5.40%	4.38%	3.46%	2.91%
2- Axle	6.00%	5.82%	5.76%	4.81%	3.95%	3.17%
3 - Axle	6.34%	6.14%	6.08%	5.07%	4.16%	3.34%
4 to 6 Axle	6.68%	6.47%	6.39%	5.33%	4.37%	3.51%
7 and Above Axle	6.68%	6.47%	6.39%	5.33%	4.37%	3.51%

Traffic and revenue have been worked out on the basis of the above growths and some are presented in subsequent chapters of the report.

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in the previous section of the report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for the following three cases of growth up to concession period.

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza 1- Chainage 224.95 KM

(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	10010	1053	1225	1987	799	2911	9	17994	36761
2025-26	10886	1113	1282	2106	849	3107	9	19352	39289
2026-27	11839	1177	1342	2234	904	3316	9	20821	42007
2027-28	12876	1244	1405	2370	962	3539	9	22405	44919
2028-29	14003	1315	1471	2514	1024	3777	9	24113	48040
2029-30	15228	1389	1540	2666	1090	4030	9	25952	51375
2030-31	16554	1468	1612	2826	1159	4298	9	27926	54929
2031-32	17995	1551	1687	2995	1233	4583	9	30053	58731
2032-33	19562	1639	1765	3175	1311	4887	9	32348	62806
2033-34	21265	1731	1847	3366	1394	5212	9	34824	67177
2034-35	23116	1828	1934	3568	1482	5558	9	37495	71862
2035-36	24830	1913	1998	3748	1561	5868	9	39927	76067
2036-37	26672	2001	2063	3937	1644	6195	9	42521	80524
2037-38	28650	2093	2131	4136	1731	6541	9	45291	85259
2038-39	30776	2190	2201	4345	1823	6906	9	48250	90286
2039-40	33060	2291	2273	4565	1920	7292	9	51410	95625
2040-41	35121	2376	2332	4757	2005	7629	9	54229	100338
2041-42	37311	2464	2392	4957	2093	7982	9	57208	105293
2042-43	39639	2555	2454	5165	2185	8351	9	60358	110504
2043-44	42111	2649	2517	5382	2282	8737	9	63687	115985
2044-45	44737	2747	2582	5607	2382	9141	9	67205	121746
2045-46	47041	2833	2633	5799	2468	9484	9	70267	126709

Table 6-2 : Total Tollable Traffic @ Toll Plaza 2- Chainage 285.20 KM

(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	3615	728	527	1547	727	2853	8	10004	25981
2025-26	3933	769	551	1641	773	3045	8	10720	27720
2026-27	4277	813	577	1741	823	3250	8	11489	29581
2027-28	4651	860	604	1847	876	3468	8	12314	31564
2028-29	5058	909	633	1959	932	3700	8	13199	33680
2029-30	5501	961	662	2078	991	3948	8	14149	35938
2030-31	5980	1016	693	2203	1054	4210	8	15164	38335
2031-32	6500	1073	725	2336	1121	4489	8	16252	40892
2032-33	7067	1133	758	2476	1192	4787	8	17421	43622
2033-34	7682	1197	793	2625	1267	5104	8	18676	46537
2034-35	8350	1265	830	2782	1347	5443	8	20025	49654
2035-36	8970	1324	857	2923	1419	5747	8	21248	52451
2036-37	9636	1385	885	3071	1495	6068	8	22548	55409
2037-38	10351	1449	914	3226	1574	6407	8	23929	58534
2038-39	11118	1516	944	3389	1658	6765	8	25398	61844
2039-40	11942	1586	975	3560	1746	7142	8	26959	65339
2040-41	12686	1645	1000	3709	1823	7471	8	28342	68405
2041-42	13477	1706	1026	3865	1903	7816	8	29801	71626
2042-43	14317	1769	1052	4027	1987	8178	8	31338	75006
2043-44	15209	1834	1079	4196	2075	8555	8	32956	78544
2044-45	16157	1902	1107	4372	2166	8950	8	34662	82256
2045-46	16989	1962	1129	4521	2244	9286	8	36139	85437

Table 6-3 : Total Tollable Traffic @ Toll Plaza 1- Chainage 224.95 KM

(Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	10010	1053	1225	1987	799	2911	9	17994	36761
2025-26	10837	1108	1276	2097	846	3092	9	19265	39111
2026-27	11732	1166	1329	2215	896	3285	9	20632	41624
2027-28	12701	1227	1384	2338	950	3489	9	22098	44299
2028-29	13749	1291	1442	2469	1006	3706	9	23672	47154
2029-30	14884	1358	1502	2607	1066	3936	9	25362	50199
2030-31	16106	1428	1565	2751	1128	4177	9	27164	53417
2031-32	17428	1501	1630	2903	1194	4433	9	29098	56850
2032-33	18859	1578	1698	3063	1263	4705	9	31175	60511
2033-34	20407	1659	1769	3231	1337	4994	9	33406	64420
2034-35	22082	1744	1843	3409	1415	5301	9	35803	68594
2035-36	23610	1815	1894	3565	1483	5570	9	37946	72264

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2036-37	25244	1889	1947	3728	1555	5853	9	40225	76147
2037-38	26991	1967	2001	3898	1630	6150	9	42646	80244
2038-39	28858	2048	2057	4076	1709	6463	9	45220	84580
2039-40	30855	2132	2114	4262	1791	6792	9	47955	89159
2040-41	32624	2200	2158	4420	1861	7072	9	50344	93106
2041-42	34494	2271	2203	4583	1934	7363	9	52857	97235
2042-43	36472	2344	2249	4753	2009	7666	9	55502	101559
2043-44	38562	2420	2296	4929	2088	7981	9	58285	106086
2044-45	40772	2497	2344	5111	2169	8310	9	61212	110825
2045-46	42669	2564	2378	5261	2236	8580	9	63697	114791

Table 6-4 : Total Tollable Traffic @ Toll Plaza 2- Chainage 285.20KM (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	3615	728	527	1547	727	2853	8	10004	25981
2025-26	3914	766	548	1633	770	3031	8	10670	27592
2026-27	4236	806	571	1723	815	3219	8	11378	29294
2027-28	4586	847	594	1819	863	3419	8	12136	31106
2028-29	4964	891	619	1920	914	3631	8	12947	33035
2029-30	5373	938	645	2027	968	3856	8	13815	35088
2030-31	5814	986	672	2138	1024	4092	8	14734	37245
2031-32	6291	1037	700	2255	1083	4343	8	15717	39540
2032-33	6807	1090	729	2379	1146	4609	8	16768	41981
2033-34	7366	1146	759	2510	1213	4892	8	17894	44581
2034-35	7971	1205	791	2648	1283	5193	8	19099	47349
2035-36	8522	1254	813	2769	1345	5457	8	20168	49777
2036-37	9112	1306	836	2896	1410	5734	8	21302	52336
2037-38	9742	1359	859	3028	1478	6025	8	22499	55024
2038-39	10416	1415	882	3166	1550	6331	8	23768	57858
2039-40	11136	1474	907	3310	1625	6652	8	25112	60843
2040-41	11774	1522	926	3432	1689	6926	8	26277	63401
2041-42	12449	1571	945	3559	1755	7211	8	27498	66068
2042-43	13163	1622	965	3690	1823	7508	8	28779	68852
2043-44	13918	1674	985	3826	1895	7817	8	30123	71760
2044-45	14715	1727	1005	3968	1969	8139	8	31531	74793
2045-46	15399	1772	1019	4084	2030	8404	8	32716	77310

Traffic projections for Most Likely scenario is given as under

Table 6-5 : Total Tollable Traffic @ Toll Plaza 1-Tundla- Chainage 224.95 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	10010	1053	1225	1987	799	2911	9	17994	36761
2025-26	10862	1110	1280	2102	848	3100	9	19311	39208
2026-27	11786	1171	1337	2225	900	3300	9	20728	41819
2027-28	12788	1235	1396	2355	956	3513	9	22252	44611
2028-29	13875	1302	1458	2493	1015	3740	9	23892	47597
2029-30	15056	1373	1523	2638	1078	3981	9	25658	50788
2030-31	16329	1447	1591	2790	1144	4236	9	27546	54177
2031-32	17709	1525	1661	2950	1213	4506	9	29573	57786
2032-33	19206	1607	1735	3120	1287	4793	9	31757	61652
2033-34	20831	1693	1812	3300	1366	5100	9	34111	65795
2034-35	22592	1784	1892	3489	1449	5426	9	36641	70216
2035-36	24212	1862	1949	3657	1523	5716	9	38928	74155
2036-37	25949	1944	2008	3833	1600	6020	9	41363	78319
2037-38	27810	2029	2068	4017	1681	6341	9	43955	82727
2038-39	29804	2117	2131	4210	1766	6679	9	46716	87397
2039-40	31942	2210	2195	4412	1855	7035	9	49658	92341
2040-41	33854	2286	2246	4587	1932	7343	9	52257	96662
2041-42	35879	2365	2298	4768	2012	7664	9	54995	101189
2042-43	38025	2447	2351	4956	2095	7999	9	57882	105938
2043-44	40302	2532	2405	5152	2182	8348	9	60930	110924
2044-45	42714	2620	2461	5356	2273	8713	9	64146	116163
2045-46	44806	2696	2503	5526	2349	9018	9	66907	120606

Table 6-6 : Total Tollable Traffic @ Toll Plaza 2- Gurau - Chainage 285.20 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	3615	728	527	1547	727	2853	8	10004	25981
2025-26	3922	767	550	1637	772	3038	8	10694	27657
2026-27	4256	808	575	1732	819	3234	8	11432	29435
2027-28	4618	852	601	1833	870	3442	8	12224	31333
2028-29	5010	899	627	1940	924	3665	8	13073	33360
2029-30	5435	948	655	2053	981	3902	8	13982	35519
2030-31	5894	999	684	2171	1040	4151	8	14947	37793
2031-32	6392	1052	714	2296	1103	4416	8	15981	40217
2032-33	6933	1109	746	2428	1170	4698	8	17092	42806
2033-34	7520	1169	779	2568	1242	4998	8	18284	45568
2034-35	8156	1232	814	2716	1318	5317	8	19561	48511
2035-36	8741	1285	839	2846	1385	5601	8	20705	51119
2036-37	9368	1341	864	2983	1455	5899	8	21918	53867
2037-38	10040	1400	890	3126	1529	6213	8	23206	56770
2038-39	10760	1461	917	3276	1606	6544	8	24572	59833
2039-40	11531	1525	945	3433	1687	6893	8	26022	63068
2040-41	12221	1578	967	3569	1757	7194	8	27294	65876
2041-42	12952	1633	989	3710	1830	7508	8	28630	68811

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2042-43	13727	1689	1012	3857	1906	7836	8	30035	71884
2043-44	14548	1748	1035	4009	1985	8179	8	31512	75099
2044-45	15419	1808	1059	4167	2068	8536	8	33065	78461
2045-46	16174	1860	1077	4299	2137	8835	8	34390	81297

6.2 Modification in Concession Period

As per Article 29 of the concession agreement, if actual traffic on the project falls short or exceeds Target Traffic on project highway on defined date, concession period shall be modified subject to calculation stipulated therein. For Agra-Etawah project, the Target Date and Target Traffic are defined as under:

Target Date - 1st April 2025

Target Traffic - 52995 PCU

It was observed that as per traffic projections, average traffic volume falls short of target traffic in all scenarios. The probable extension of the concession period is estimated according to article 29 of the concession agreement which comes to about 5 years. Traffic forecast and revenue projections are done for probable extended period accordingly.

Most Likely

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2025	52995	33477	-37%	55%	20%	24	4.8

Optimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2025	52995	33556	-37%	55%	20%	24	4.8

Pessimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2025	52995	33393	-37%	55%	20%	24	4.8

CHAPTER 7

FORECAST OF TOLL REVENUE

7.1 General

This chapter presents the tolling rate calculations, categories and toll revenue of the project.

7.2 Discount Categories

The fee schedule in the CA of Surat-Dahisar section of NH-8 is based on the old toll policy. As per the Toll Notification (Schedule -G) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent user's monthly pass would be issued at fee 50 time the single journey fee at 2/3rd Rate.
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travelers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: Local Car Jeep Van -Rs. 275 per month (for locals residing within a radius of 20 kms from toll plaza). Additionally, local commercial vehicles are charged at 50% rate of single journey.

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.

The formula for determining the applicable rate of fee shall be as follows:-

$$\text{Applicable rate of fee} = \text{base rate} + \text{base rate} \times \left\{ \frac{\text{WPI A-WPI B}}{\text{WPI B}} \right\} \times 0.4$$

Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2021-22. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. Following graph provides projection of rate of inflation (WPI) in India. Data has been taken from Office of Economic Advisor web site (www.eaindustry.nic.in). WPI for years 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series.

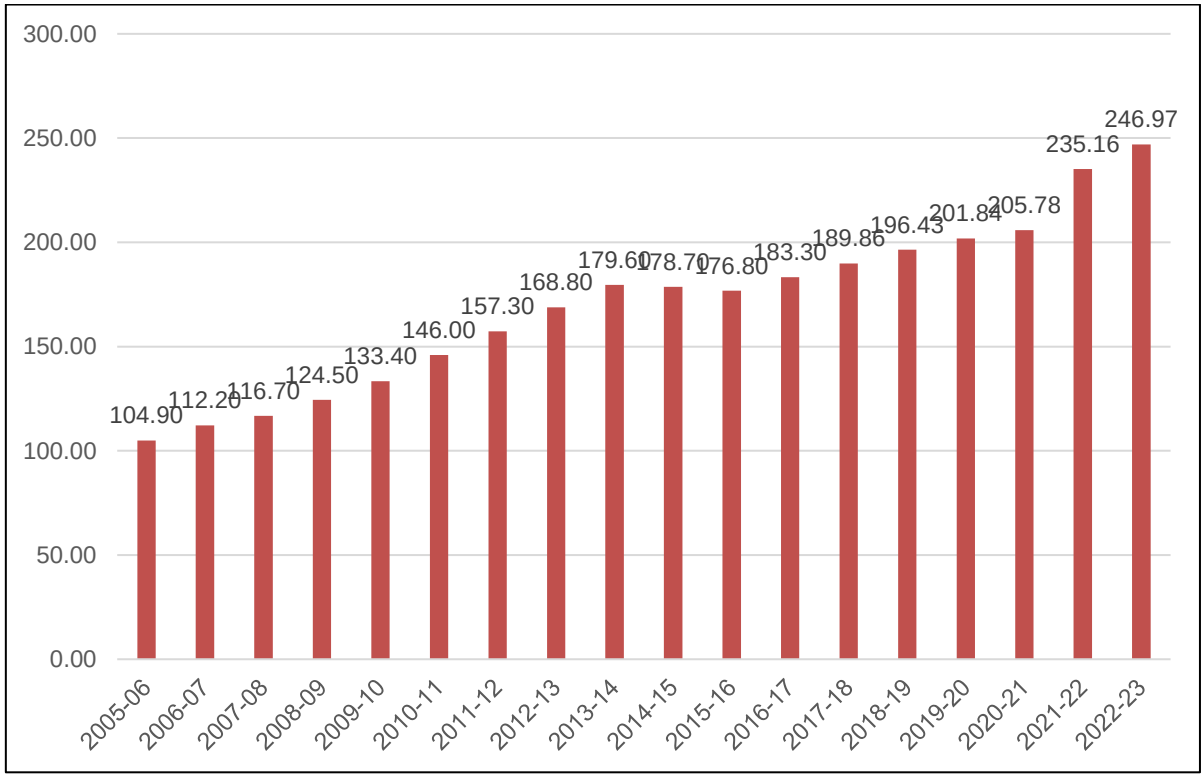


Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in the last few years is steadily growing. It grew by the range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

7.3 Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45
Oversized Vehicles (7 or more Axles)	4.20

Toll rates are calculated as per guidelines provided in schedule R (rounded to nearest Rs.) for the concession period and are given below.

Thus, worked out rates for various categories of vehicle and discounts are given as under

Table 7-2 : Toll Rates for Single Journey@ Km 224.95

Year	Car	Minibus /LCV	Bus	Truck	3 axles	Multi axle	Oversized Vehicles
2024-25	105	175	365	365	395	570	695
2025-26	115	180	380	380	415	600	730
2026-27	120	190	400	400	435	630	765
2027-28	125	200	420	420	460	660	805
2028-29	130	210	440	440	485	695	845
2029-30	135	220	465	465	505	730	890
2030-31	145	235	490	490	535	765	935
2031-32	150	245	515	515	560	805	980
2032-33	160	260	540	540	590	850	1035
2033-34	170	270	570	570	620	890	1085
2034-35	175	285	600	600	655	940	1145
2035-36	185	300	630	630	690	990	1205
2036-37	195	315	665	665	725	1040	1265
2037-38	205	335	700	700	760	1095	1335
2038-39	215	350	735	735	805	1155	1405
2039-40	230	370	775	775	845	1215	1480
2040-41	240	390	815	815	890	1280	1560
2041-42	255	410	860	860	940	1350	1645
2042-43	270	435	905	905	990	1425	1730
2043-44	285	455	955	955	1045	1500	1825
2044-45	300	480	1010	1010	1100	1580	1925
2045-46	315	510	1065	1065	1160	1670	2030

Table 7-3 : Toll Rates for Single Journey @ Km 285.20

Year	Car	Minibus /LCV	Bus	Truck	3 axles	Multi axle	Oversized Vehicles
2024-25	115	185	390	390	425	615	750
2025-26	120	195	410	410	450	645	785
2026-27	125	205	430	430	470	680	825
2027-28	130	215	455	455	495	710	865
2028-29	140	230	475	475	520	750	910
2029-30	145	240	500	500	545	785	960
2030-31	155	250	525	525	575	825	1005
2031-32	160	265	555	555	605	870	1060
2032-33	170	280	585	585	635	915	1115
2033-34	180	295	615	615	670	965	1170
2034-35	190	310	645	645	705	1015	1235
2035-36	200	325	680	680	740	1065	1300
2036-37	210	340	715	715	780	1125	1365
2037-38	220	360	755	755	820	1180	1440

Year	Car	Minibus /LCV	Bus	Truck	3 axles	Multi axle	Oversized Vehicles
2038-39	230	380	795	795	865	1245	1515
2039-40	245	400	835	835	910	1310	1595
2040-41	255	420	880	880	960	1380	1680
2041-42	270	445	930	930	1015	1455	1775
2042-43	285	465	980	980	1070	1535	1870
2043-44	300	495	1030	1030	1125	1620	1970
2044-45	315	520	1090	1090	1185	1705	2080
2045-46	335	550	1150	1150	1250	1800	2190

Table 7-4 : Toll Rates for Return Journey @ Km 224.95

Year	Car	Minibus /LCV	Bus	Truck	3 axles	Multi axle	Oversized Vehicles
2024-25	160	260	545	545	595	855	1040
2025-26	170	275	570	570	625	895	1090
2026-27	180	285	600	600	655	940	1145
2027-28	185	300	630	630	690	990	1205
2028-29	195	315	665	665	725	1040	1265
2029-30	205	335	700	700	760	1095	1330
2030-31	215	350	735	735	800	1150	1400
2031-32	230	370	770	770	840	1210	1470
2032-33	240	385	810	810	885	1270	1550
2033-34	250	405	855	855	930	1340	1630
2034-35	265	430	900	900	980	1410	1715
2035-36	280	450	945	945	1030	1485	1805
2036-37	295	475	995	995	1085	1560	1900
2037-38	310	500	1050	1050	1145	1645	2000
2038-39	325	525	1105	1105	1205	1730	2105
2039-40	345	555	1165	1165	1270	1825	2220
2040-41	360	585	1225	1225	1335	1920	2340
2041-42	380	615	1290	1290	1410	2025	2465
2042-43	400	650	1360	1360	1485	2135	2600
2043-44	425	685	1435	1435	1565	2250	2740
2044-45	445	720	1515	1515	1650	2375	2890
2045-46	470	760	1595	1595	1740	2505	3045

Table 7-5 : Toll Rates for Return Journey @ Km 285.20

Year	Car	Minibus /LCV	Bus	Truck	3 axles	Multi axle	Oversized Vehicles
2024-25	170	280	585	585	640	920	1120
2025-26	180	295	615	615	675	970	1180
2026-27	190	310	650	650	705	1015	1235
2027-28	195	325	680	680	745	1070	1300
2028-29	210	340	715	715	780	1120	1365
2029-30	220	360	750	750	820	1180	1435
2030-31	230	380	790	790	865	1240	1510
2031-32	240	395	830	830	910	1305	1590
2032-33	255	420	875	875	955	1370	1670

Year	Car	Minibus /LCV	Bus	Truck	3 axles	Multi axle	Oversized Vehicles
2033-34	265	440	920	920	1005	1445	1760
2034-35	280	460	970	970	1055	1520	1850
2035-36	295	485	1020	1020	1115	1600	1945
2036-37	310	510	1075	1075	1170	1685	2050
2037-38	330	540	1130	1130	1235	1775	2160
2038-39	345	570	1190	1190	1300	1865	2275
2039-40	365	600	1255	1255	1370	1965	2395
2040-41	385	630	1320	1320	1440	2075	2525
2041-42	405	665	1395	1395	1520	2185	2660
2042-43	425	700	1470	1470	1600	2305	2805
2043-44	450	740	1550	1550	1690	2430	2955
2044-45	475	780	1630	1630	1780	2560	3115
2045-46	500	820	1720	1720	1880	2700	3285

Table 7-6 : Toll Rates for Monthly pass Local @ 224.95

Year	Car	Minibus /LCV
2024-25	340	340
2025-26	355	355
2026-27	375	375
2027-28	390	390
2028-29	410	410
2029-30	435	435
2030-31	455	455
2031-32	480	480
2032-33	505	505
2033-34	530	530
2034-35	560	560
2035-36	585	585
2036-37	620	620
2037-38	650	650
2038-39	685	685
2039-40	720	720
2040-41	760	760
2041-42	800	800
2042-43	845	845
2043-44	890	890
2044-45	940	940
2045-46	990	990

Table 7-7 : Toll Rates for Monthly pass Local @ 285.20

Year	Car	Minibus /LCV
2024-25	340	340
2025-26	355	355

Year	Car	Minibus /LCV
2026-27	375	375
2027-28	390	390
2028-29	410	410
2029-30	435	435
2030-31	455	455
2031-32	480	480
2032-33	505	505
2033-34	530	530
2034-35	560	560
2035-36	585	585
2036-37	620	620
2037-38	650	650
2038-39	685	685
2039-40	720	720
2040-41	760	760
2041-42	800	800
2042-43	845	845
2043-44	890	890
2044-45	940	940
2045-46	990	990

Table 7-8 : Toll Rates for Monthly Pass @ Km 224.95

Year	Car	Minibus /LCV	Bus	Truck	3 axles	Multi axle	Oversized Vehicles
2024-25	3575	5775	12100	12100	13200	18975	23100
2025-26	3755	6065	12710	12710	13865	19930	24265
2026-27	3945	6375	13350	13350	14565	20940	25490
2027-28	4145	6695	14030	14030	15305	22000	26785
2028-29	4355	7040	14745	14745	16085	23125	28150
2029-30	4580	7400	15500	15500	16910	24305	29590
2030-31	4815	7780	16295	16295	17780	25555	31115
2031-32	5065	8180	17140	17140	18695	26875	32720
2032-33	5325	8605	18030	18030	19665	28270	34420
2033-34	5605	9055	18970	18970	20690	29745	36210
2034-35	5895	9525	19960	19960	21775	31300	38105
2035-36	6205	10025	21010	21010	22920	32945	40110
2036-37	6535	10555	22120	22120	24130	34685	42225
2037-38	6880	11115	23290	23290	25410	36525	44465
2038-39	7250	11710	24530	24530	26760	38470	46830
2039-40	7635	12335	25840	25840	28190	40525	49335
2040-41	8045	12995	27230	27230	29705	42700	51985
2041-42	8480	13695	28695	28695	31305	45000	54785
2042-43	8935	14435	30250	30250	33000	47435	57745
2043-44	9420	15220	31890	31890	34790	50010	60885
2044-45	9935	16050	33630	33630	36685	52735	64200
2045-46	10480	16930	35470	35470	38690	55620	67710

Table 7-9 : Toll Rates for Monthly Pass @ Km 285.20

Year	Car	Minibus /LCV	Bus	Truck	3 axles	Multi axle	Oversized Vehicles
2024-25	3780	6230	13055	13055	14240	20470	24920
2025-26	3970	6545	13710	13710	14955	21500	26175
2026-27	4175	6875	14405	14405	15715	22590	27500
2027-28	4390	7225	15135	15135	16510	23735	28895
2028-29	4615	7590	15905	15905	17355	24945	30365
2029-30	4850	7980	16720	16720	18240	26220	31920
2030-31	5100	8390	17580	17580	19180	27570	33565
2031-32	5365	8825	18490	18490	20170	28995	35295
2032-33	5645	9280	19450	19450	21215	30500	37130
2033-34	5945	9765	20460	20460	22320	32085	39060
2034-35	6255	10275	21530	21530	23490	33765	41105
2035-36	6585	10815	22665	22665	24725	35540	43265
2036-37	6935	11390	23860	23860	26030	37415	45550
2037-38	7305	11990	25125	25125	27410	39400	47965
2038-39	7695	12630	26460	26460	28870	41500	50520
2039-40	8110	13305	27875	27875	30410	43715	53220
2040-41	8550	14020	29375	29375	32045	46065	56075
2041-42	9010	14775	30955	30955	33770	48545	59100
2042-43	9500	15575	32630	32630	35595	51170	62295
2043-44	10020	16420	34400	34400	37530	53950	65675
2044-45	10565	17315	36275	36275	39575	56890	69255
2045-46	11145	18260	38260	38260	41740	60000	73045

7.4 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under ***Optimistic***, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

7.5 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under all scenarios at each of the toll plaza up to 2045-46 years starting from the year 2023-24 are shown in tables below.

Table 7-10 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Year	TP-1	TP2	Total
2024-25	117.68	144.51	**262.19**
2025-26	131.90	162.68	**294.58**
2026-27	147.85	182.66	**330.51**
2027-28	165.57	204.71	**370.28**
2028-29	185.85	229.29	**415.13**
2029-30	207.67	257.28	**464.96**
2030-31	232.97	289.38	**522.35**

Year	TP-1	TP2	Total
2031-32	262.10	326.03	**588.14**
2032-33	293.61	365.84	**659.45**
2033-34	329.74	410.60	**740.35**
2034-35	369.95	461.99	**831.94**
2035-36	411.61	516.00	**927.61**
2036-37	456.73	572.80	**1029.54**
2037-38	507.32	637.77	**1145.08**
2038-39	564.06	709.77	**1273.83**
2039-40	629.34	795.50	**1424.84**
2040-41	691.35	873.34	**1564.69**
2041-42	763.61	966.66	**1730.27**
2042-43	842.47	1069.20	**1911.66**
2043-44	932.33	1186.56	**2118.90**
2044-45	1025.35	1306.76	**2332.11**
2045-46	1124.10	1433.92	**2558.02**

Table 7-11 : Toll Revenue Pessimistic Scenario

(Rs. Crores)

Year	TP-1	TP2	Total
2024-25	117.68	144.51	**262.19**
2025-26	131.28	161.93	**293.20**
2026-27	146.47	180.99	**327.46**
2027-28	163.28	201.85	**365.13**
2028-29	182.44	225.02	**407.46**
2029-30	202.94	251.32	**454.26**
2030-31	226.53	281.35	**507.89**
2031-32	253.70	315.48	**569.17**
2032-33	282.85	352.36	**635.22**
2033-34	316.23	393.61	**709.84**
2034-35	353.10	440.82	**793.92**
2035-36	391.06	490.07	**881.13**
2036-37	431.85	541.47	**973.32**
2037-38	477.39	600.05	**1077.44**
2038-39	528.21	664.67	**1192.88**
2039-40	586.51	741.46	**1327.97**
2040-41	641.28	810.23	**1451.51**
2041-42	704.97	892.54	**1597.52**
2042-43	774.05	982.53	**1756.57**
2043-44	852.58	1085.17	**1937.75**
2044-45	933.09	1189.39	**2122.48**
2045-46	1018.04	1298.77	**2316.82**

Table 7-12 : Toll Revenue Most Likely Scenario

(Rs. Crores)

Year	TP-1	TP2	Total
2024-25	117.68	144.51	**262.19**
2025-26	131.65	162.29	**293.94**
2026-27	147.21	181.83	**329.04**
2027-28	164.44	203.30	**367.74**
2028-29	184.17	227.20	**411.37**
2029-30	205.41	254.36	**459.76**
2030-31	229.87	285.42	**515.29**
2031-32	257.96	320.82	**578.78**
2032-33	288.31	359.12	**647.43**
2033-34	323.03	402.15	**725.18**
2034-35	361.52	451.45	**812.97**
2035-36	401.31	503.11	**904.42**
2036-37	444.28	557.21	**1001.49**
2037-38	492.27	618.95	**1111.22**
2038-39	545.96	687.26	**1233.22**
2039-40	607.74	768.43	**1376.17**
2040-41	666.13	841.63	**1507.76**
2041-42	733.96	929.25	**1663.21**
2042-43	807.76	1025.28	**1833.05**
2043-44	891.80	1135.10	**2026.89**
2044-45	978.41	1247.13	**2225.54**
2045-46	1070.15	1365.12	**2435.26**

CHAPTER 8

CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Agra to Etawah section of NH-2 in state of Delhi from km 199.660 to km 323.525 is currently six lane road. The road is in sound condition and serves healthy traffic volumes. Project corridor is a part of the most busy and prominent national highway NH-2 which connects political and cultural capitals of India. This is one of the most important trunk roads which spreads across many states. There are large number of townships, industrial corridors and other business establishments coming up along the project corridor. As discussed, the dominant portion of traffic is long route traffic, which is more sensitive towards the growth of national economy. As Indian economy is poised to grow at 7%+ post COVID-19, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give a positive impact to traffic flow on the project. The following can be considered as major outcomes of the study.

a) There is a good amount of tollable traffic running on the project.

b) Project corridor has potential to witness traffic growth @ 6-8% annually in near future due to various development in area and overall development of economy.

c) The Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road.

Based on the above it can be considered a stable healthy project from the traffic and revenue point of view.

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HAPUR TO MORADABAD SECTION OF NH-9 IN THE STATE OF UTTAR PRADESH (KM 50.000 TO KM148.277)









TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

OCTOBER 2024

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HAPUR TO MORADABAD SECTION OF NH-9 IN THE STATE OF UTTAR PRADESH (KM 50.000 TO KM148.277)

TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

OCTOBER 2024

GMD CONSULTANTS ★ NAVI MUMBAI ★

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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic	**NHAI**	-	National Highway Authority of India
BOT	-	Build Operate Transfer	**NHDP**	-	National Highways Development Project
CAGR	-	Compound Annual Growth Rate	**NSDP**	-	Net State Domestic Product
CTV	-	Classified traffic volume	**O&M**	-	Operation & Maintenance
DBFOT	-	Design, Build, Finance, Operate & Transfer	**PCDP**	-	Per Capita Domestic Product
EME	-	Earth Moving Equipment	**PCI**	-	Per Capita Income
GDP	-	Gross Domestic Product	**PCU**	-	Passenger Car Unit
GSDP	-	Gross State Domestic Product	**PSC**	-	Pre-stressed Concrete
HCM	-	Heavy Construction Machinery	**RCC**	-	Reinforced cement concrete
HCV	-	Heavy Commercial Vehicle	**RHS**	-	Right Hand Side
HTMS	-	Highway Traffic Management System	**SH**	-	State Highway
IRC	-	Indian Road Congress	**TP**	-	Toll Plaza
IRR	-	Internal Rate of Return	**WPI**	-	Wholesale Price Index
LCV	-	Light Commercial Vehicle	**SIR**	-	Special Investment Region
LHS	-	Left Hand Side	**c.**	-	Circa
LGV	-	Light Goods Vehicle	**ROB**	-	Railway Over Bridge
MAV	-	Multi Axle Vehicle	**MDR**	-	Major District Road
MORTH	-	Ministry of Road Transport and Highways	**ODR**	-	Other District Road
NH	-	National Highway	**CA**	-	Concession Agreement
PCC	-	Plain Cement Concrete	**RMT**	-	Running Meter
CR	-	Coarse Rubble			

CHAPTER 1

INTRODUCTION

1.1 Background

The Government of India through National Highway Authority of India (NHAI) embarked upon a program to enhance the traffic capacity and safety for efficient transportation of goods as well as passenger traffic on National Highway Sections under NHDP Phase V. Under Phase V NHAI has planned to convert 6,500 km of existing 4-lane National Highways into 6-lane National Highway. Sections envisaged under 6-laning comprise the Golden Quadrilateral section (5,700 km) and some other sections which are 800 km in length.

The project under consideration, Six Laning of **Hapur Bypass to Moradabad section** of NH-9 from km 50.000 to km 148.277is one such road project NHAI intended to implement on a BOT basis in the DBFOT format. M/s IRB Hapur Moradabad Tollway Ltd. (Concessionaire) has been awarded the Project for a concession period of 22 years starting from 28th May 2019. The Project is under capacity augmentation to six lanes. Tolling operation under current concession started in May 2019.COD-2 has been received in April 2023.

Project stretch from Hapur to Moradabad is part of new NH-9 which starts from Fazilka in Punjab and terminates in Uttarakhand at Pithoragarh. Previously this section was part of old NH-24 which is still popularly known and Delhi – Lucknow Road. New NH-9 takes off towards Pithoragarh from Rampur. A number of sections along the project road from Hapur to Moradabad have witnessed urban development along the highway. Places like Pilakhua, Babugarh, Brijghat, Gajrola and Joya are fast upcoming urban centers. Close proximity to Delhi and this being main connectivity of region to NCR is main region for this ribbon development along highway. The following figure shows the project road alignment.

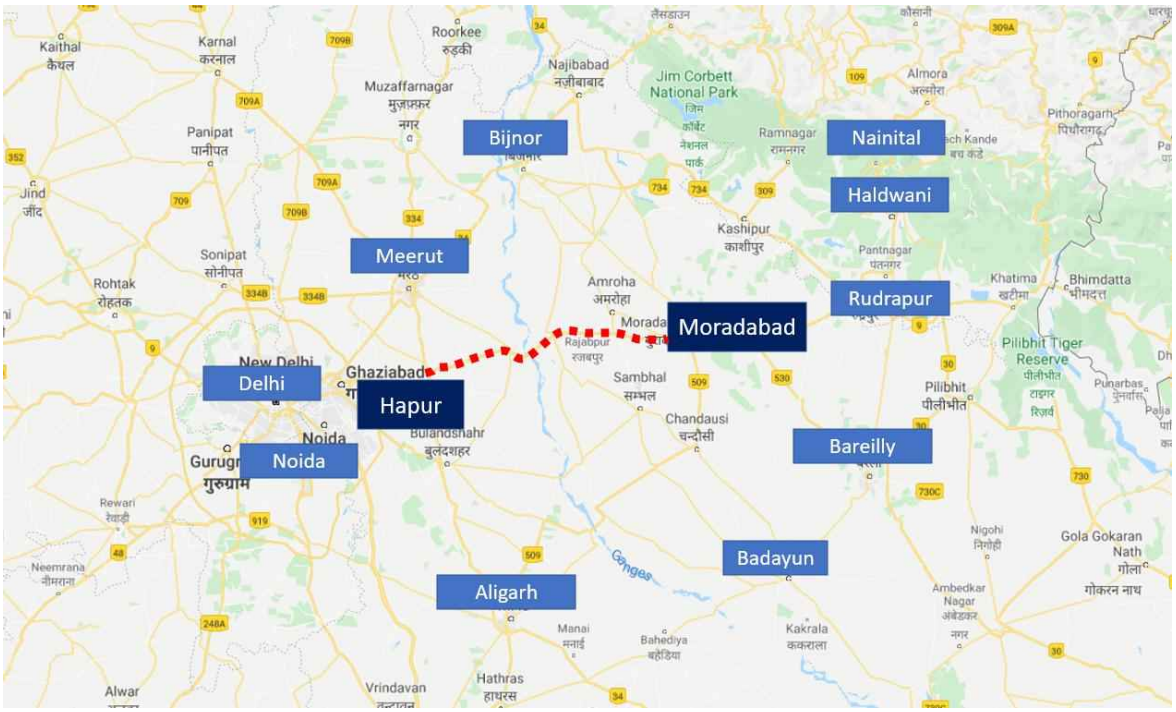


Figure 1-1: Alignment of Project Stretch

1.2 Objective of the Study

M/s IRB INFRASTRUCTURE TRUST has engaged GMD Consultants to assess the future traffic and toll potential of project along with related operation & maintenance expenditure involved.

This report named as **"Traffic Study &Toll Revenue Projection Report"** mainly focuses on traffic and revenue aspects of the project. Other parameters like competing road, area developments etc. have been considered from a traffic development point of view.

1.2.1 Scope of Services

The broad scope of work covered in the assignment is as follows.

a) Analysis of Traffic Growth
b) Toll Rate Growth
c) Revenue Forecasting

The Concessionaire has provided basic traffic data and other project details on the basis of which the above analysis has been carried out.

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

The project road is the section of the former NH-24 which has now been re-designated as NH-9 connecting Fazilka in Punjab to Pithoragarh in Uttarakhand. On the way it connects several important cities in five states in North India (from west towards east): Malout, Sirsa, Hisar, Rohtak, Bahadurgarh, Delhi, Ghaziabad, Hapur, Moradabad, Rampur, Rudrapur, Sitarganj, Khatima, Pithoragarh. The total length of the highway is 811 Km. After renumbering of all national highways by National Highway Authority of India in2010, the current NH 9 was formed by merging five differently numbered national highways in 2010, including Old NH 10 (Fazilka-Delhi section), Old NH 24 (Delhi-Rampur section), Old NH 87 (Rampur-Rudrapur section), Old NH 74 (Rudrapur-Sitarganj-Khatima section) and Old NH 125 (Tanakpur-Pithoragarh section)

2.2 Project Stretch Description

The Project section starts from Hapur Bypass (Km50.000) and ends in Moradabad (Km148.277). The total design length of project road section is about 99.869 Kms. The existing road is four lane divided carriageway, which is proposed to be six laned.The road passes through the districts of Hapur, Amrohaand Moradabad; all in Uttar Pradesh.

Project road alignment passes through the small towns/built-up areas of Pakwara, Joya and Babugarh. Simbhaoli, one of the largest integrated sugar refinery complexes is right on the project road.

Hapur – Moradabad section of NH-9 was previously known as Delhi Road locally. This forms the main connectivity of areas like Moradabad, Rampur, Bareilly and important destinations in Uttarakhand like Rudrapur, Kashipur, Ranikhet, Pithoragarh etc to the national capital of Delhi.

There are two operative toll plazas at project stretch. The first is at Garh at Km 90.661 and second at Joya at Km 123.875. The following figure shows project alignment and toll plaza locations.

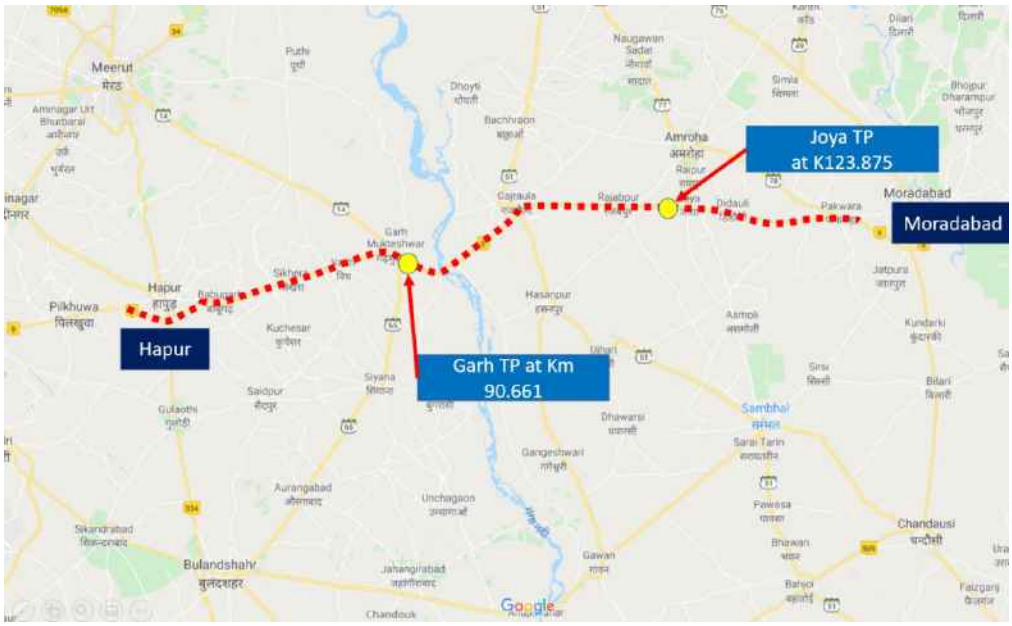


Figure 2-1: Project Alignment with Toll Plaza

2.3 Project Corridor Illustration

Six laning of project stretch is in progress and will be completed soon. The following photographs illustrate the project section along the corridor.



Figure 2-2: Photographs showing Project Corridor

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from a client for a project.

- Classified traffic volume counts at toll plaza locations on Hapur Bypass- Moradabad Section of NH-9 for years 2017-18, 2018-19, 2019-20, 2020-21 ,2021-22,22-23, April 2023 to November 2023 and traffic data from April 2024 to July 2024.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project.
- Establish base year traffic.
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

ic details have been collected.

Table 3-1below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	Km 90.661 Toll Plaza at Garh	AADT for Period from 2019 to 2020, 2020 to 2021, 2021 to 2022, 2022-2023, Eight	For Period from 2019 to 2020, 2020 to 2021, 2021 to 2022, 2022-2023, Eight month from April 2023 to	For Period from 2019 to 2020, 2020 to 2021, 2021 to 2022, 2022-2023, Eight month from	For Period from 2019 to 2020, 2020 to 2021, 2021 to 2022 and 2022, 2022-2023, Eight month	For Period from 2019 to 2020, 2020 to 2021, 2021 to 2022, 2022-2023, Eight month from

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
		month from April 2023 to November 2023 & Four month from April 2024 to July 2024	November 2023 & Four month from April 2024 to July 2024	April 2023 to November 2023 & Four month from April 2024 to July 2024	from April 2023 to November 2023 & Four month from April 2024 to July 2024	April 2023 to November 2023 & Four month from April 2024 to July 2024
2	Km 123.875 Toll Plaza at Zoro ka Khera	AADT for Period from 2019 to 2020, 2020 to 2021, 2021 to 2022, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Period from 2019 to 2020, 2020 to 2021, 2021 to 2022, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Period from 2019 to 2020, 2020 to 2021, 2021 to 2022, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Period from 2019 to 2020, 2020 to 2021, 2021 to 2022, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024	For Period from 2019 to 2020, 2020 to 2021, 2021 to 2022, 2022-2023, Eight month from April 2023 to November 2023 & Four month from April 2024 to July 2024

3.5 Classified Traffic Volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations based on monthly data shared with NHAI.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in the table below.

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)

Vehicle Type	
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since the project highway is currently under toll operation, the data collected corresponds to the category of tollable vehicles. The following are the types of vehicles as per concession agreement.

- Car / Jeep / van
- Min Bus /LCV
- Bus
- Truck
- 3-Axle
- Multi Axle

3.6 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of the report.

3.6.1 Traffic Data

Project concessionaire has provided Traffic data for the years 2019-20 ,2020-21, 2021-22, 2022-23, April 2023 to November 2023 and traffic data from April 2024 to July 2024.

Since the traffic data available for this update is for only four months, from April 2024 to July 2024, it may not represent the whole year traffic. Hence a seasonality factor for balance part of year has been applied to average traffic of current four months to arrive at Annual Average Daily Traffic of base year 2024-25. Same corrected traffic is used for future projections and revenue calculations. The following table shows historical traffic on project stretch and derived Annual Average Daily Traffic (AADT) for year 2024-25.

Table 3-3 : Traffic Data at Garh Toll Plaza at Km 90.661

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24	Annual Average Daily Traffic (Nos.)- 2024-25
1	Car	14878	15865	21889	24088	27330	29520
2	Minibus/LCV	3704	3119	1995	1730	1743	1748
3	Bus	2033	1573	1862	2069	2303	2310
4	Truck	1289	1354	1674	1972	2036	1713
5	3-Axle	1318	1105	1112	1070	1075	838
6	Multi Axle	1753	1635	1745	1962	2191	2051
7	Oversized Vehicle	2	6	6	9	7	5
	Total	**24977**	**24657**	**30283**	**32899**	**36686**	**38184**

Table 3-4 : Traffic Data at Zoya Toll Plaza at Km 123.875

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24	Annual Average Daily Traffic (Nos.)- 2024-25
1	Car	10298	10526	13695	16037	18696	20024
2	Minibus/LCV	2595	2259	1335	1181	1191	1232
3	Bus	1062	1303	1485	1768	2008	1883
4	Truck	1532	1040	1184	1436	1628	1627

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24	Annual Average Daily Traffic (Nos.)- 2024-25
5	3-Axle	1128	1064	1081	1008	936	754
6	Multi Axle	1365	1370	1458	1765	2017	2091
7	Oversize Vehicle	2	8	8	9	6	4
	Total	**17982**	**17570**	**20246**	**23203**	**26481**	**27615**

3.7 Data Analysis

3.7.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in "IRC-64-1990: Guidelines for Capacity of Roads in Rural areas". The adopted passenger car unit values (PCU) are presented in **Table 3-5.**

Table 3-5 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0

Vehicle Type	PCUs
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-6 : Traffic in PCU at Project Stretch Base Year 2023-24

Toll Plaza Location (Km)	Year	Traffic No	PCU	PCU Index
Garh Km 90.661	**2019-2020**	24977	42251	1.69
	2020-2021	24657	40024	1.62
	2021-2022	30283	46705	1.54
	2022-2023	32899	50882	1.55
	2023-2024	36686	56079	1.53
	2024-2025	38184	55975	1.47
Joya Km 123.875	**2019-2020**	17982	31508	1.75
	2020-2021	17570	30337	1.73
	2021-2022	20246	33545	1.66
	2022-2023	23203	38427	1.66
	2023-2024	26481	43300	1.64
	2024-2025	27615	44091	1.60

It can be observed from above that project traffic has PCU index in range of 1.5 to 1.7 which is an indicator of high proportion of Passenger traffic in traffic mix in project corridor. The following figure illustrates variation of PCU index at four toll plaza locations.

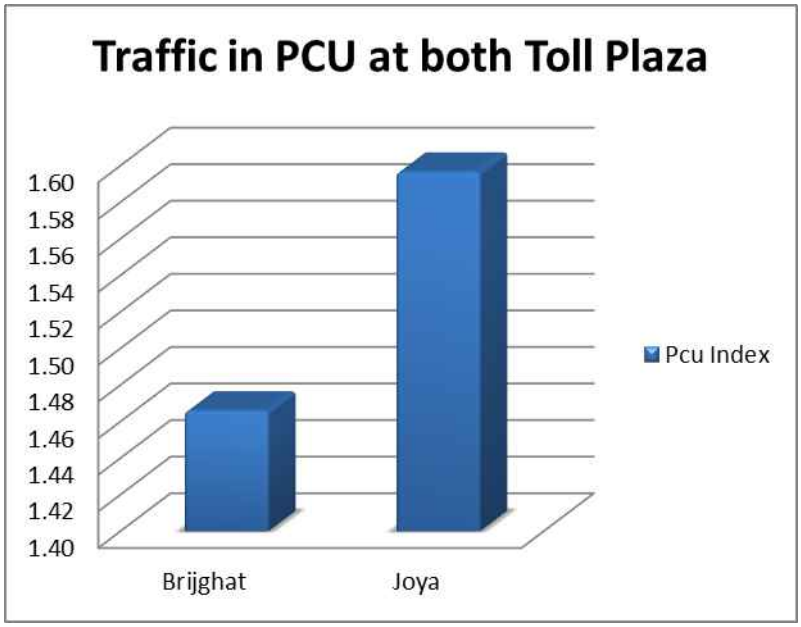


Figure 3-1: Comparison of PCU Index

It can be observed that PCU index is consistent at both toll plaza locations.

3.7.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.

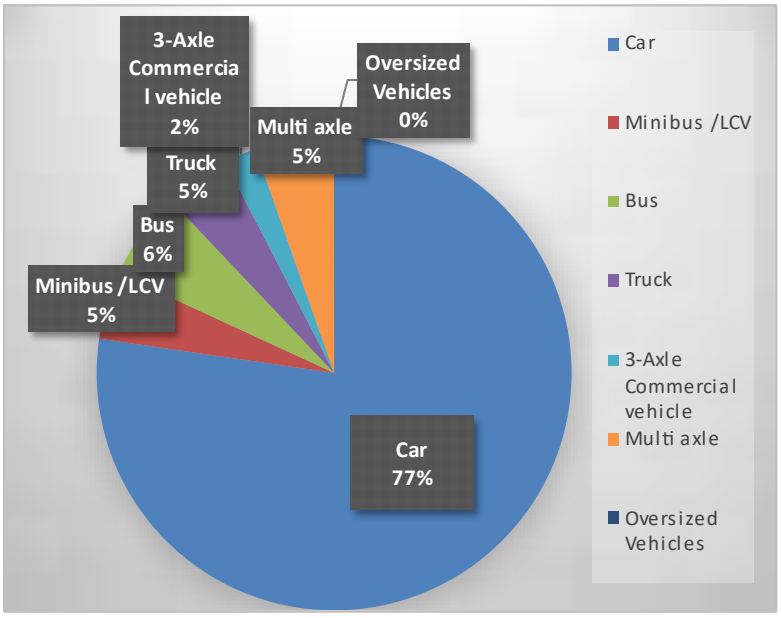


Figure 3-2: Model Split of Tollable Vehicle @TP-1

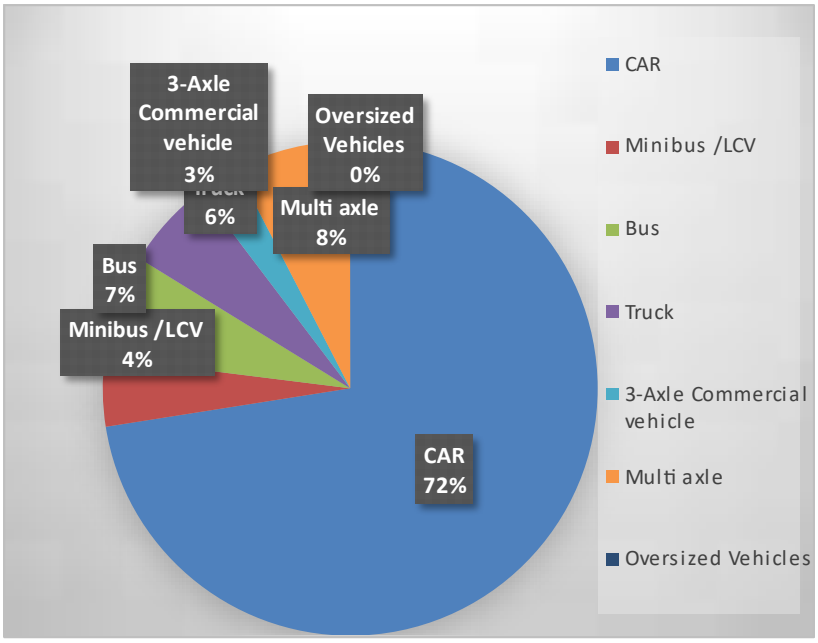


Figure 3-3: Model Split of Tollable Vehicle @TP-2

It is observed that car traffic forms about 77% - 72% of total traffic at toll plaza locations while multi axle commercial vehicles are about 7% -11% of total traffic. Truck / Bus and LCV share about 11%-13% and 5%-4% of traffic volume respectively.

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

The following table provides numbers of vehicles falling in each of above category on base year 2024-25

Table 3-7 : Journey Type Bifurcation of Traffic at GarhTP-1 KM 90.661

Sr. No	Type	Traffic Volume (Nos.) 2024-25
1	Single Journey	17096
2	Return Journey	21044
3	Local Commercial Single Journey	9
4	Monthly Pass Local	30
5	Monthly Pass	5

Most dominant part of the above is the single journey type followed by return journey at project stretch. Monthly pass commuters are a very low fraction of the total traffic on the project corridor.

The single journey component in total traffic numbers is as high as 45%. Return journey component is 55%. The number of monthly pass local and Local Commercial Journey is 0% at Brijghat.
The following tables give the details of journey distribution at Joya toll plaza at Km 123.875.

Table 3-8 : Journey Type Bifurcation of Traffic at Zoro ka Khera TP-2 KM 121.020

Sr. No	Type	Traffic Volume (Nos.) 2024-25
1	Single Journey	14280
2	Return Journey	13308
3	Local Commercial Single Journey	12
4	Monthly Pass Local	8
5	Monthly Pass	7

It is observed that the project corridor demonstrates a similar pattern of single journey dominated mix of traffic across the entire stretch which is typical of major national highways.

3.8 Secondary Data Collection

There are several other factors which have a substantial impact on traffic patterns and growth on any project corridor. The following are some of such important factors.

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on the project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data
   a) GDP
   b) NSDP
   c) Population Growth
   d) Per Capita Income growth
   e) Industrial Growth
   f) Special Industry Potential
   g) Regional and National development vision / plan

h) Any other relevant data

3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

Highway corridors behave like integrated circuit networks and more often than not every road is connected to various networks having different origins and destinations. Traffic running on these networks behaves like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network.

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc.,
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Competing / Alternate route

Project stretch has toll application history from last few years, and it can be assumed that project traffic is settled. However, from an analysis point of view there can be a few alternate routes at local level. Garh toll plaza is very near to the major river Ganga over which major bridge about 1 km in length is constructed. Due to this there is no locals alternative route to toll plaza at Garh. There can be one alternative route which can bypass the toll plaza at Joya. From Atrasi one can take a left and bypass Toll Plaza at Joya and go back to NH-9 at Moradabad. This route quite long and passes through congested areas of Amroha. Further the road alignment of these district roads is very poor with little chance of improvement.

The following maps show these routes in relation to project stretch at local level.



Figure 4-1: Alternate route at regional level

At regional level if we take Hisar and Rudrapur two origin destinations representing Delhi/ Haryana and Uttarakhand region, there can be one alternate via Bulandshahar – Sambhal Road. One can take Bulaandshahar road after getting down from Peripheral Expressway at after Ghaziabad. This road bypasses NH-9 between Ghaziabad and Moradabad. This route is also quite long as compared to NH-9 and also the road between Bulandshahar – Sambhal and Moradabad is poor and mostly of two-lane specifications. Hence in such case it has very little potential of any further traffic diversion from the project road.

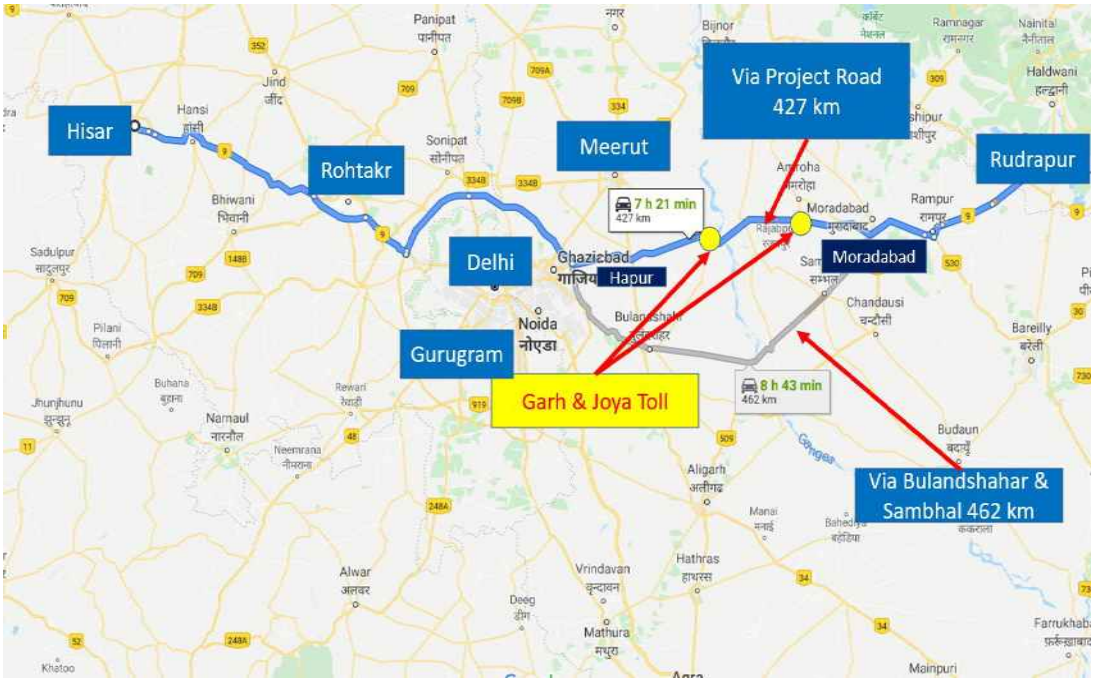


Figure 4-2: Alternate route at local level

It can be observed that the project highway forms one of the main spines of the corridor between Delhi / Ghaziabad/ Hapurand Moradabad / Rudrapur/ Haldwani. Traffic on project road is now settled and it can be assumed as dedicated traffic on project road for logistic obligations.

With six laning now nearing completion, the project stretch would become slightly more attractive due to the improved level of service. In such a case any diversion of traffic from the project road is not envisaged.

The following table provides summary of analysis of alternate route/ roads discussed above.

Table 4-1 : Competing Roads Details

Sr. No	Route Details	Designation	Length (Km)	Avg. Speed (KMPH)	Time Taken (Min)	Observations
Regional Level						
1	Hisar-Delhi- Bulandshahar- Sambhal- Moradabad - Rudrapur	Alternate Route	462	53	8Hr 43 Min	Alternate route is longer and has poor geometrics and specifications. Traffic diversion not envisaged
	Hisar-Delhi- Hapur- Gajrola- Moradabad - Rudrapur	Project Road	427	57	7 Hr 27 Min	
Local Level						
2	Atrasi- Amroha- Pakbara- Moradabad (bypassing Joya Toll)	Alternate Route	36	51	1 Hr.	Alternate route is unlikely to attract project traffic due to very poor geometrics and high congestion
	Atrasi- Joya- Palkbara- Moradabad	Project Road	220	50	28 Min	

Under these circumstances it is not envisaged that commercial or passenger traffic would switch to alternate roads from the project road. Further, it may be noted that since the project highway has already been commissioned and has a tolling history, the current traffic traversing the project corridor already factors in traffic diversion (if any) that may have taken place.

CHAPTER 5
GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future patterns of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor Hapur–Moradabad section of NH-9has been done taking the above factors into consideration**. "IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways"** is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable for projects of short durations say 5-10 years, however for long term projections it would be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways.**

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different types of vehicles. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway typically depends on a number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, in order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

Log (P) = k x Log (EI) + A

Where,

P = Number of Vehicles (Mode wise)

EI = Economic Indicator

A = Regression constant

k = Elasticity coefficient (Regression coefficient)

The elasticity for cars and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

The project corridor spreads across the state of Rajasthan. Toll plazas at Garh and Joya are in the state of Uttar Pradesh. For elasticity calculations, working data from Uttar Pradesh, Delhi and Haryana has been analyzed since Delhi and Haryana have substantial impact on project traffic.

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Maharashtra State.

Table 5-1 : Per Capita Income Vs Car Uttar Pradesh

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	32002	1108100	4.51	6.04		
2013	32908	1205374	4.52	6.08	3%	
2014	34044	1423020	4.53	6.15	3%	
2015	34583	1572217	4.54	6.20	2%	

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2016	36973	1746117	4.57	6.24	7%	
2017	40641	2027972	4.61	6.31	10%	4.94%

Regression analysis of same is given in figure below.

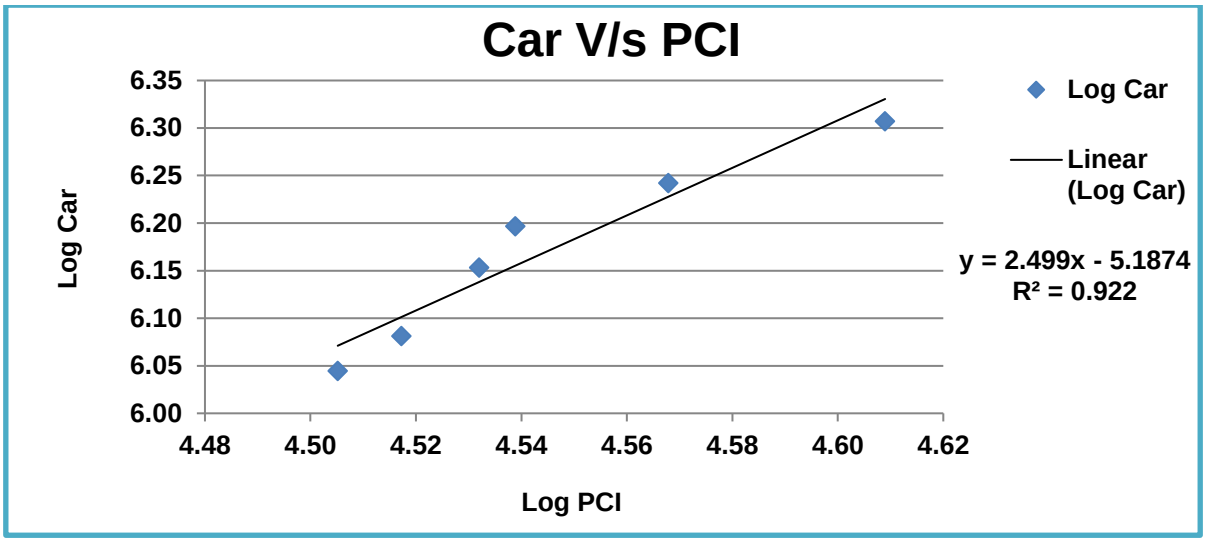


Figure 5-1: Regression and Elasticity PCI vs. Car–Extrapolation Uttar Pradesh

Table 5-2 : Population Vs Bus Uttar Pradesh

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	199812341	57901	8.30	4.76		
2013	203382046	64147	8.31	4.81	2%	
2014	206942855	74389	8.32	4.87	2%	
2015	210493544	80460	8.32	4.91	2%	
2016	214032922	89127	8.33	4.95	2%	
2017	217559836	112020	8.34	5.05	2%	1.72%

Regression analysis of same is given in figure below.

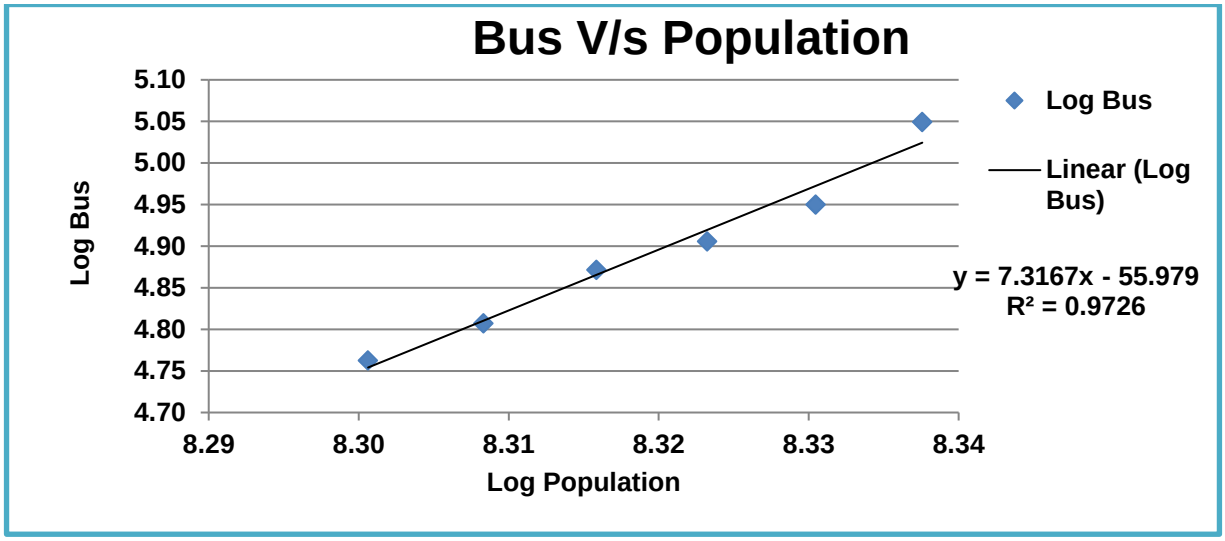


Figure 5-2: Regression and Elasticity Population vs. Bus – Extrapolation Uttar Pradesh

The elasticity of goods traffic has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-3 : LCV Traffic Vs NSDP Uttar Pradesh

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	645132	176164	5.81	5.25		
2013	673552	213657	5.83	5.33	4%	
2014	707469	265025	5.85	5.42	5%	
2015	729686	294022	5.86	5.47	3%	
2016	792049	316815	5.90	5.50	9%	5.28%

The following figure depicts regression analysis and extrapolation.

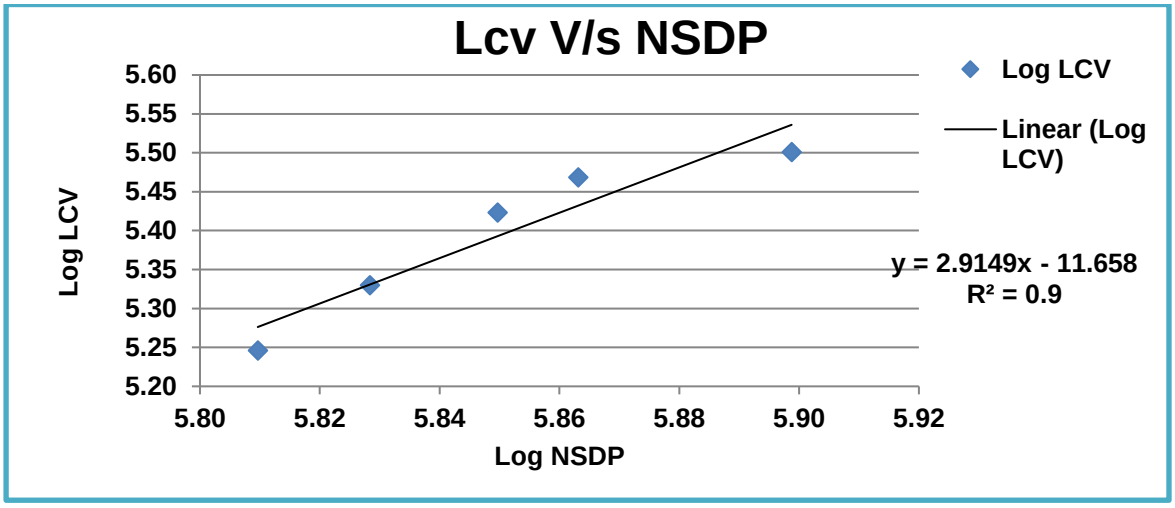


Figure 5-3: Regression and Elasticity NSDP vs. LCV Traffic – extrapolation Uttar Pradesh

Table 5-4: Trucks Traffic Vs NSDP Uttar Pradesh

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	645132	162813	5.81	5.21		
2013	673552	186404	5.83	5.27	4%	
2014	707469	202761	5.85	5.31	5%	
2015	729686	217609	5.86	5.34	3%	
2016	792049	245688	5.90	5.39	9%	
2017	883962	265167	5.95	5.42	12%	6.55%

The following figure depicts regression analysis and extrapolation.

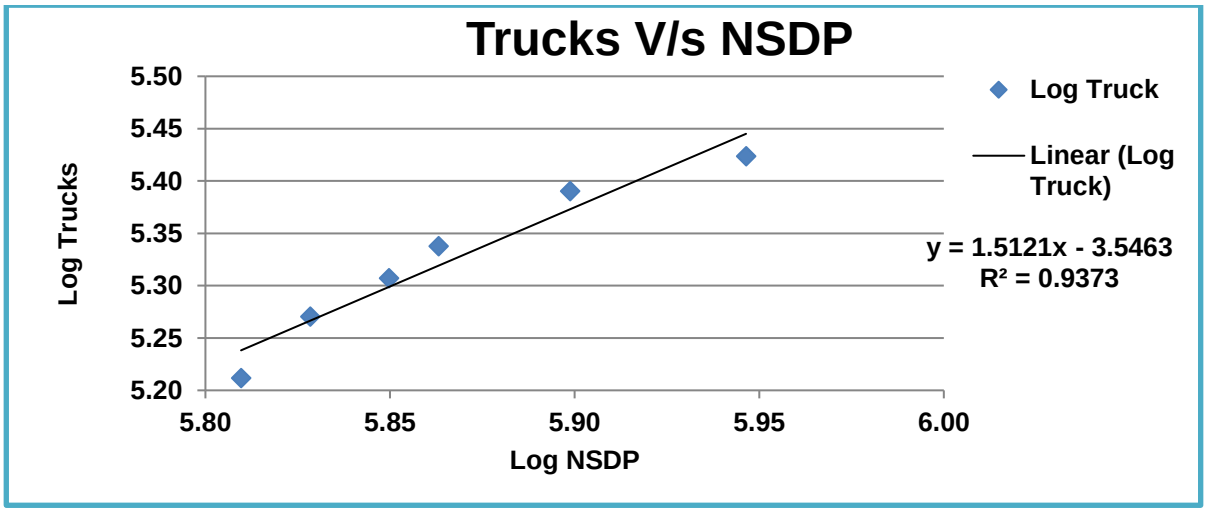


Figure 5-4: Regression and Elasticity NSDP vs. Truck Traffic – extrapolation Uttar Pradesh

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-4 : Summary Regression Analysis Uttar Pradesh

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth	Growth Elastic Model
Uttar Pradesh	Car/Jeep	PCI	y = 2.499x + -5.1874	R^2 = 0.922	2.4990	4.94%	12.34%
	Bus	Population	y = 7.3167x - - 55.9791	R^2 = 0.9726	7.3167	1.72%	12.56%
	LCV	NSDP	y = 2.9149x - - 11.6585	R^2 = 0.9	2.9149	5.28%	15.40%
	Truck	NSDP	y = 1.5121x - - 3.5463	R^2 = 0.9373	1.5121	6.55%	9.90%

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Delhi State.

Table 5-5 : Per Capita Income Vs Car Delhi

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	185361	2172069	5.27	6.34		
2013	193175	2416974	5.29	6.38	4%	
2014	202216	2568380	5.31	6.41	5%	
2015	215726	2730071	5.33	6.44	7%	
2016	235737	2986579	5.37	6.48	9%	
2017	247255	3061817	5.39	6.49	5%	5.95%

Regression analysis of same is given in figure below.

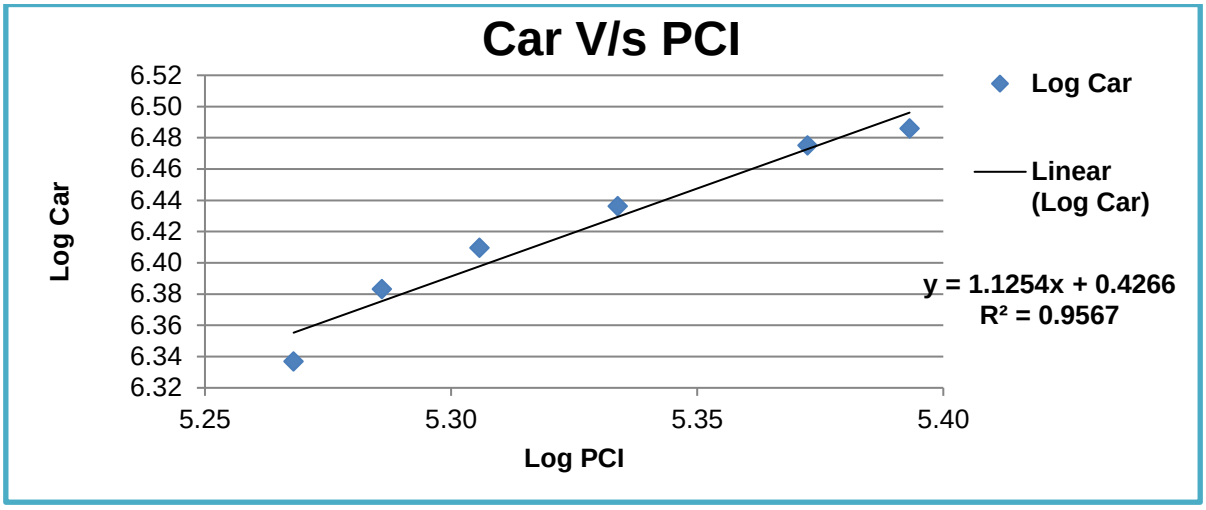


Figure 5-5: Regression and Elasticity PCI vs. Car–Extrapolation Delhi

Table 5-6 : Population Vs Bus Delhi

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	16787941	109790	7.22	5.04		
2013	17071599	19917	7.23	4.30	2%	
2014	17354281	19595	7.24	4.29	2%	
2015	17635897	19700	7.25	4.29	2%	
2016	17916359	43723	7.25	4.64	2%	
2017	18195583	41686	7.26	4.62	2%	1.62%

Regression analysis of same is given in figure below.

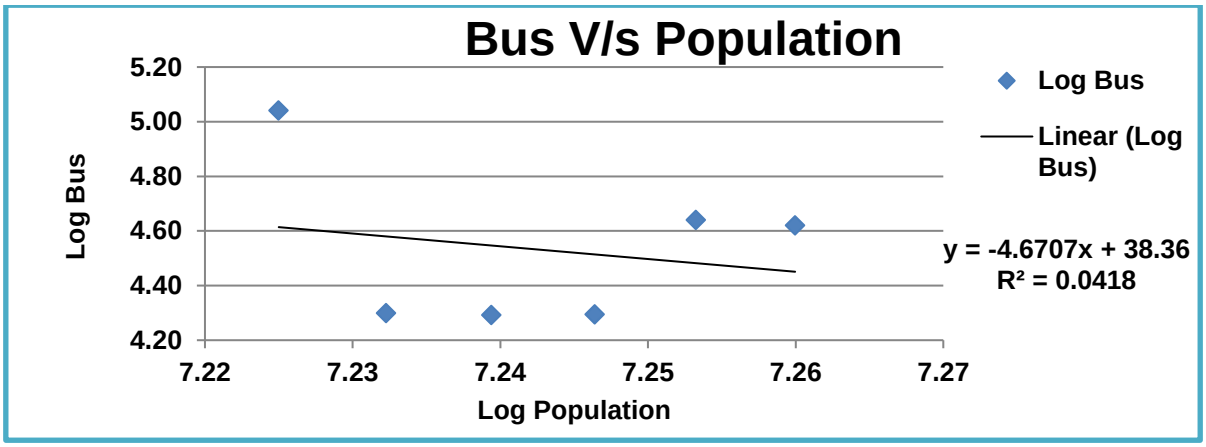


Figure 5-6: Regression and Elasticity Population vs. Bus – Extrapolation Delhi

The elasticity of goods traffic has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-7 : LCV Traffic Vs NSDP Delhi

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	314650	124547	5.50	5.10		
2013	334193	126539	5.52	5.10	6%	
2014	356528	136110	5.55	5.13	7%	
2015	387639	145903	5.59	5.16	9%	
2016	431730	183486	5.64	5.26	11%	
2017	461476	221068	5.66	5.34	7%	7.98%

The following figure depicts regression analysis and extrapolation.

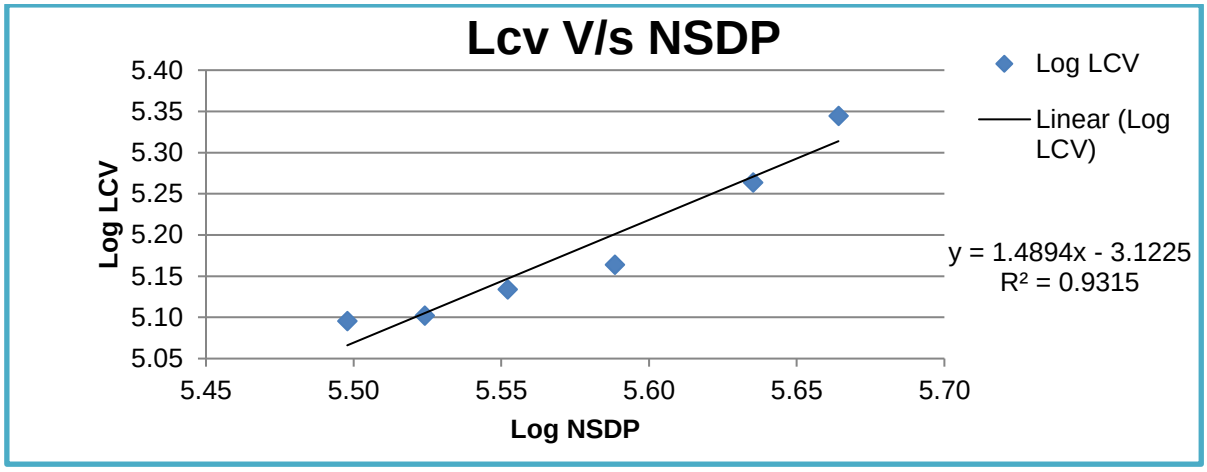


Figure 5-7: Regression and Elasticity NSDP vs. LCV Traffic – extrapolation Delhi

Table 5-4: Trucks Traffic Vs NSDP Delhi

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	314650	4792	5.50	3.68		
2013	334193	5176	5.52	3.71	6%	
2014	356528	6093	5.55	3.78	7%	
2015	387639	7503	5.59	3.88	9%	
2016	431730	8703	5.64	3.94	11%	
2017	461476	10440	5.66	4.02	7%	7.98%

The following figure depicts regression analysis and extrapolation.

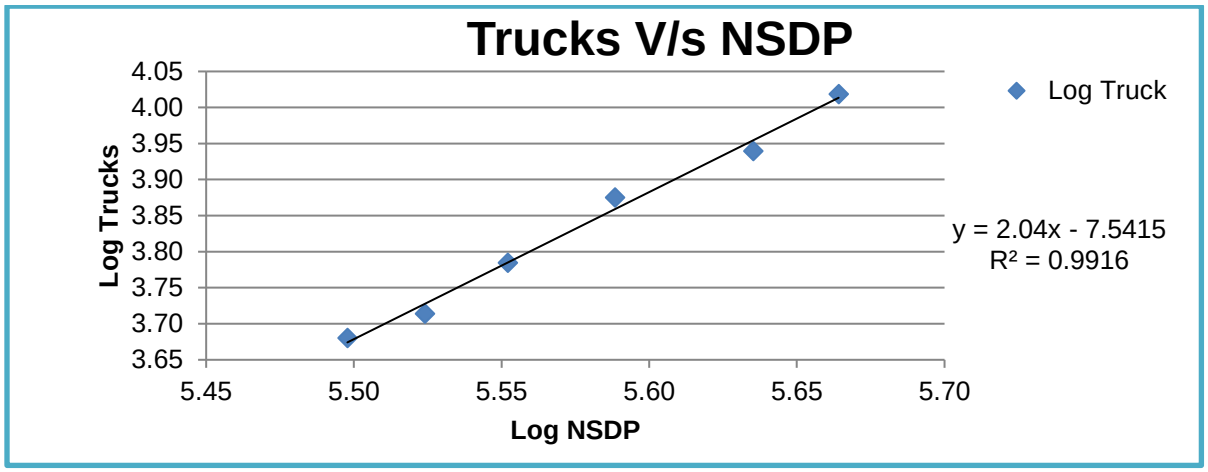


Figure 5-8: Regression and Elasticity NSDP vs. Truck Traffic – extrapolation Delhi

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-8 : Summary Regression Analysis Delhi

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth	Growth Elastic Model
Delhi	Car/Jeep	PCI	y = 1.1254x + 0.4266	R^2 = 0.9567	1.1254	5.95%	6.69%
	Bus	Population	y = -4.6707x - 38.36	R^2 = 0.0418	-4.6707	1.62%	-7.58%
	LCV	NSDP	y = 1.4894x - -3.1225	R^2 = 0.9315	1.4894	7.98%	11.88%
	Truck	NSDP	y = 2.04x - -7.5415	R^2 = 0.9916	2.0400	7.98%	16.27%

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Haryana State.

Table 5-9 : Per Capita Income Vs Car Haryana

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	106085	1134514	5.03	6.05		
2013	111780	1293065	5.05	6.11	5%	
2014	119791	1454182	5.08	6.16	7%	
2015	125032	1609544	5.10	6.21	4%	
2016	137818	1764448	5.14	6.25	10%	
2017	150241	1879587	5.18	6.27	9%	7.23%

Regression analysis of same is given in figure below.

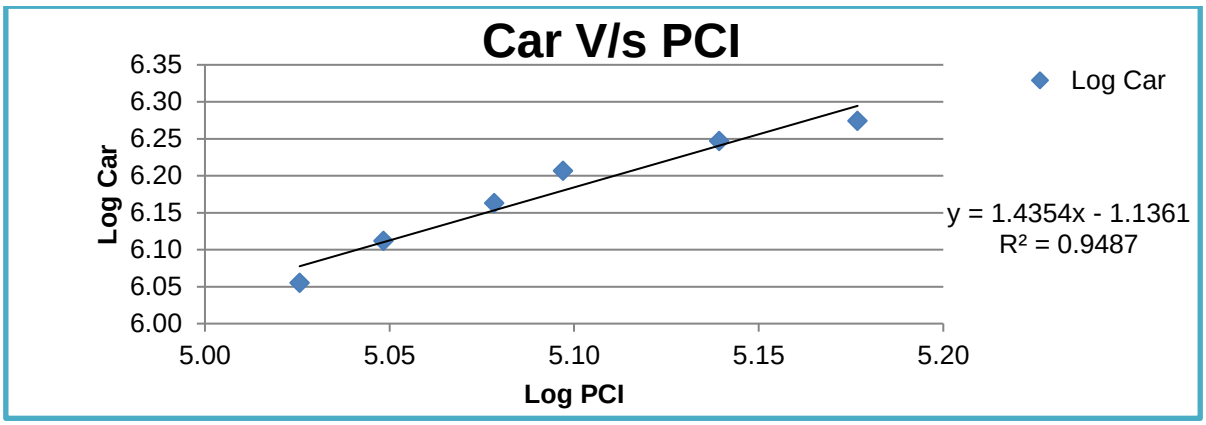


Figure 5-9: Regression and Elasticity PCI vs. Car–Extrapolation Haryana

Table 5-10 : Population Vs Bus Haryana

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	25351462	39153	7.40	4.59		
2013	25751257	43456	7.41	4.64	2%	
2014	26149236	46558	7.42	4.67	2%	
2015	26545282	52640	7.42	4.72	2%	
2016	26939286	55781	7.43	4.75	1%	
2017	27331141	60129	7.44	4.78	1%	1.52%

Regression analysis of same is given in figure below.

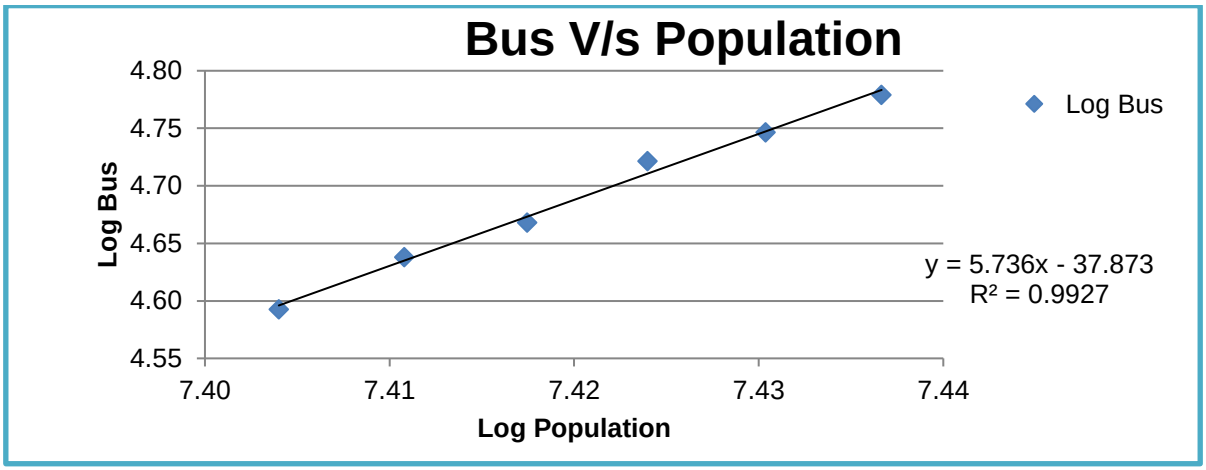


Figure 5-10: Regression and Elasticity Population vs. Bus – Extrapolation Haryana

The elasticity of goods traffic has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-11 : LCV Traffic Vs NSDP Haryana

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	271152	124897	5.43	5.10		
2013	289756	137511	5.46	5.14	7%	
2014	314931	152069	5.50	5.18	9%	
2015	333359	167901	5.52	5.23	6%	
2016	372659	182776	5.57	5.26	12%	8.30%

The following figure depicts regression analysis and extrapolation.

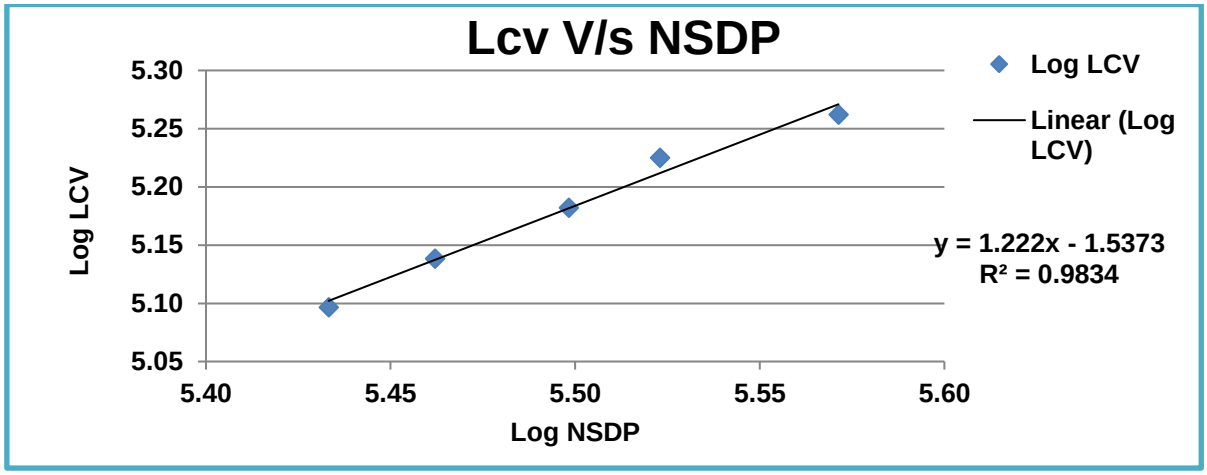


Figure 5-11: Regression and Elasticity NSDP vs. LCV Traffic – extrapolation Haryana

Table 5-4: Trucks Traffic Vs NSDP Haryana

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	271152	292735	5.43	5.47		
2013	289756	307509	5.46	5.49	7%	
2014	314931	327882	5.50	5.52	9%	
2015	333359	348732	5.52	5.54	6%	
2016	372659	367730	5.57	5.57	12%	
2017	412006	390321	5.61	5.59	11%	8.75%

The following figure depicts regression analysis and extrapolation.

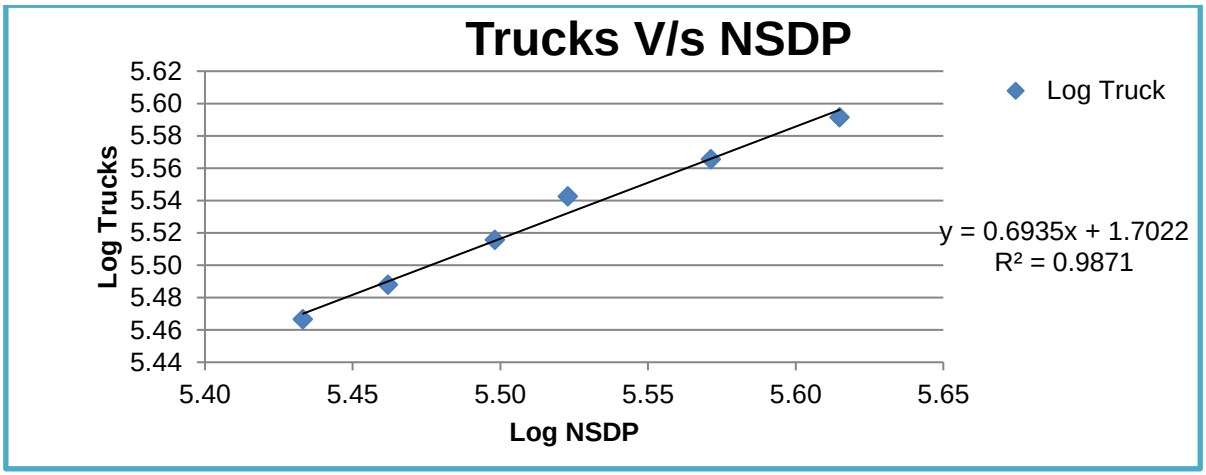


Figure 5-12: Regression and Elasticity NSDP vs. Truck Traffic – extrapolation Haryana

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for the good fit regression as reflected by R2 values are presented in the Table below.

Table 5-13: Summary Regression Analysis Haryana

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth	Growth Elastic Model
Haryana	Car/Jeep	PCI	y = 1.4354x - -1.1361	R^2 = 0.9487	1.4354	7.23%	10.38%
	Bus	Population	y = 5.736x - -37.8732	R^2 = 0.9927	5.7360	1.52%	8.69%
	LCV	NSDP	y = 1.222x - -1.5373	R^2 = 0.9834	1.2220	8.30%	10.14%
	Truck	NSDP	y = 0.6935x - 1.7022	R^2 = 0.9871	0.6935	8.75%	6.07%

The economic model for predicting growth is a good tool, however other local, regional, and national factors should also be considered before finalizing growth factors. Considering factors such as proposed developments and other influencing economic factors, moderated growth should be considered. These factors are discussed in subsequent sections.

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trends of growth. Project stretch of Hapur to Moradabad is under tolling operation with current concessionaire and has less than a year of tolling history from May 2019. Traffic data for the last two years is affected by COVID-19 impact. Hence sufficient data points are not available to be able to establish a reliable past trend of traffic growth. A minimum of about 5 -6 years' traffic data is required for establishing a reliable past trend.

5.5 Other Factors Influencing Growth

There are many factors which have an impact on traffic growth. As discussed previously these factors can be economical, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

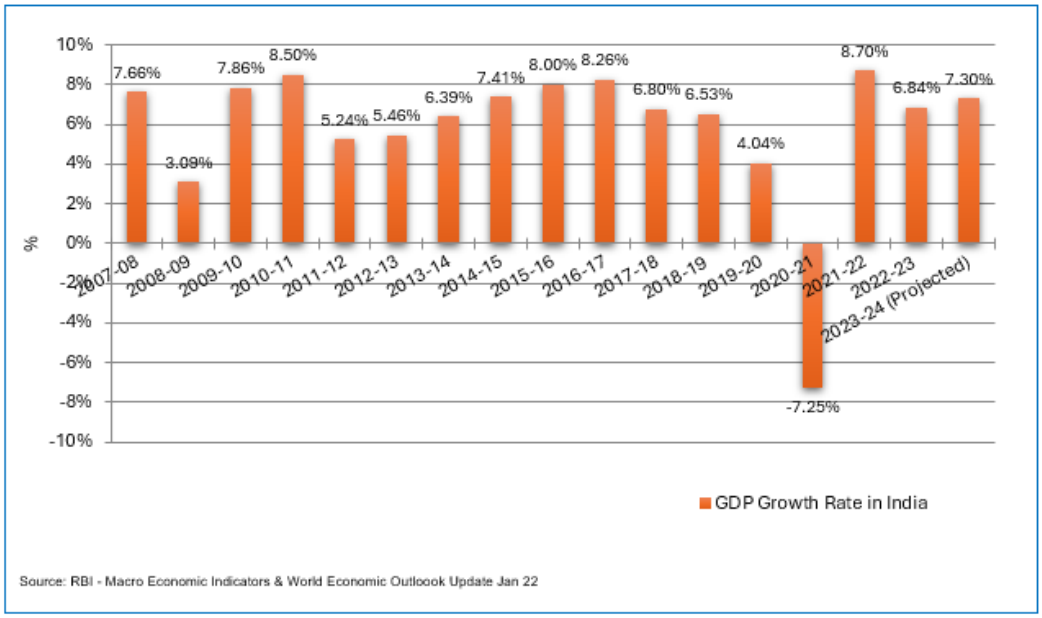


Figure 5-14: Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had a slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. The government took major policy decisions including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honorable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into an opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on Make -In- India it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. The World Economic Outlook update also has predicted a growth rate of about 7.5 % in the year 2022-23.

5.6 Developments along and around the Project Corridor & State

Though growth of Uttar Pradesh has been consistently below the national average economic growth, it is the largest state in terms of population and consumption driven demand for goods and services will remain significantly high. The rate of growth of NSDP also seems to be catching up with the national average over the years. Other regions in the influenced area states, namely Delhi, Haryana and Uttarakhand are all growing significantly faster than the national average. Considering the scenario, it may be assumed that the traffic growth on the project highway would remain high and there are minimal risks in terms of growth.

The corridor passes through heavily cultivated Gangetic plains and also connects the fertile Doaba regions of the Uttarakhand plains. Simbaoli, one of the largest and most modern sugar refinery complexes falls right on the project corridor. Sugar refineries like this link agriculture, distillery, clean fuel technologies, green energy generation including cogeneration etc. which is a positive influence on this agriculturally right region. Other parts of the capital region of Delhi are also

experiencing rapid urbanization fueled by industrialization and growth. Thus, induced traffic from these developments around the project corridor and due to the improved facility will be a positive contributing factor to the traffic growth on the project corridor.

5.6.1 Industrial Units along Project Corridor

This project section of the NH-24 (newNH-9) crosses three districts of Uttar Pradesh (Hapur, Amroha and Moradabad). There are about 1000 significant industrial units in these districts out of which there are 40 large Scale and 11 Medium Scale industries. The major industrial base is dependent on agriculture and timber in the surrounding region. Being a sugarcane growing region, there are a number of sugar mills in the project catchment. Simbhawli Sugarmill is one of the largest integrated refineries producing gsugar, ethanol and other related products. The following map shows some of the major industrial establishments along and in influence area of project stretch.

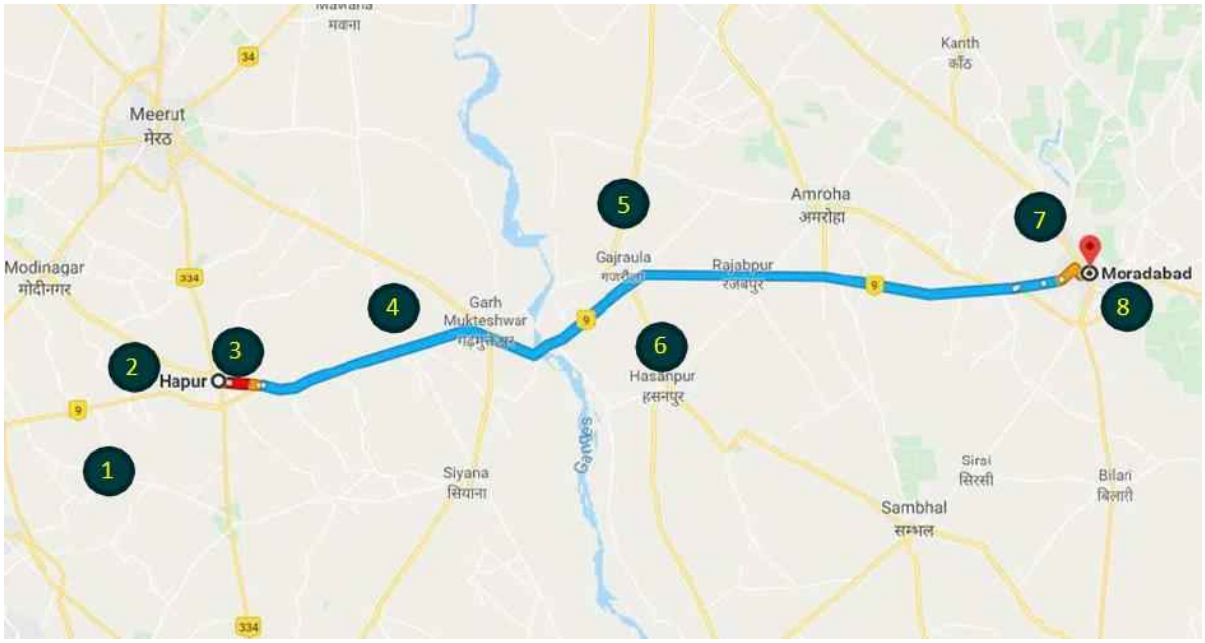


Figure 5-15: Industrial Units along project corridor

Industries shown in the above map are listed below.

1. **Dhaolana** (Chetak enterprises, Spooner Industries Pvt. Ltd., Astech build product India Pvt. ltd.,
2. **Jindal Nagar, Hapur** (Marino Industries Jindal Nagar Hapur)– Large Scale Industry of Laminated Furnitures.
3. Medium Scale Industries in **Shakti Nagar, Hapur**
4. Sugar Mills (**Simbhawali** Sugar mills)
5. **GajraulaIndustrialArea1&2**(Paper & Sugar Mills, Food Products, Organic food Products)
6. Trivani Engineering & Industries Ltd., **Hasanpur** (Engineering Goods)
7. **Agwanpur** (Industries of Milk Powder, Ghee, Acrylic Fibre, Crystal Sugar, Craft Paper)
8. **Dalpatpur** (Moradabad Dugdh Utpadan Sahakari Sangh– Milk & Milk Products)

Rapid expansion of NCR and NOIDA has triggered growth along the project corridor as well. Large number of residential projects can be seen coming up along project road near Hapur, Gajraula and Moradabad. In fact, there is a new city “New Moradabad” has come up near Pakbara on Delhi Road.

5.7 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as below. The rate of growth is moderate in light of overall regional trends. Growth of multi-Axle is kept slightly higher as trend of technological advances in logistic industry favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, the rate of growth diminishes. The same growth rate is not sustainable for long. It is an established practice to step down future growth rates at suitable interval of years.

Growth rates are recommended for three scenarios for sensitivity analysis namely **Optimistic, Pessimistic and Most Likely** with a positive and negative variation 0.5% from Most Likely case for corridor in both states.

5.7.1 Recommended Growth Rates of Traffic for Project Stretch

Table 5-12 : Recommended Growth Rates Optimistic

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046
Car/Jeep/Van	6.23%	6.01%	5.78%	4.36%	4.17%
LCV	3.26%	3.06%	2.47%	1.76%	1.57%
Bus	3.33%	3.20%	3.44%	2.73%	2.62%
2- Axle	3.81%	3.61%	3.17%	1.76%	1.57%
3 - Axle	3.81%	3.61%	3.17%	1.76%	1.57%
4 to 6 Axle	4.14%	3.92%	3.43%	1.89%	1.68%
7 and Above Axle	4.14%	3.92%	3.43%	1.89%	1.68%

Table 5-13 : Recommended Growth Rates Pessimistic

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046
Car/Jeep/Van	5.73%	5.51%	5.28%	3.86%	3.67%
LCV	2.76%	2.56%	1.97%	1.26%	1.07%
Bus	2.83%	2.70%	2.94%	2.23%	2.12%
2- Axle	3.31%	3.11%	2.67%	1.26%	1.07%
3 - Axle	3.31%	3.11%	2.67%	1.26%	1.07%
4 to 6 Axle	3.64%	3.42%	2.93%	1.39%	1.18%
7 and Above Axle	3.64%	3.42%	2.93%	1.39%	1.18%

Table 5-14 : Recommended Growth Rates Most Likely

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046
Car/Jeep/Van	5.98%	5.76%	5.53%	4.11%	3.92%
LCV	3.01%	2.81%	2.22%	1.51%	1.32%
Bus	3.08%	2.95%	3.19%	2.48%	2.37%
2- Axle	3.56%	3.36%	2.92%	1.51%	1.32%
3 - Axle	3.56%	3.36%	2.92%	1.51%	1.32%
4 to 6 Axle	3.89%	3.67%	3.18%	1.64%	1.43%
7 and Above Axle	3.89%	3.67%	3.18%	1.64%	1.43%

Traffic and revenue have been worked out on the basis of the above growths and some are presented in subsequent chapters of the report.

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in the previous section of the report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below. These projections have been done for the following three cases of growth up to concession period.

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza 1- Garh @90.661 KM

(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	29520	1748	2310	1713	838	2051	5	38184	55975
2025-26	31295	1802	2384	1775	868	2132	5	40261	58696
2026-27	33177	1857	2460	1839	899	2216	5	42453	61551
2027-28	35172	1913	2538	1906	932	2303	5	44769	64556
2028-29	37287	1971	2619	1975	966	2393	5	47216	67715
2029-30	39529	2031	2703	2047	1001	2486	5	49802	71038
2030-31	41813	2081	2796	2112	1032	2571	5	52410	74347
2031-32	44229	2132	2892	2179	1065	2659	5	55161	77823
2032-33	46786	2184	2991	2248	1099	2750	5	58063	81474
2033-34	49490	2238	3094	2320	1134	2845	5	61126	85316
2034-35	52350	2294	3200	2394	1170	2943	5	64356	89349
2035-36	54634	2334	3288	2437	1190	2999	5	66887	92398
2036-37	57018	2375	3378	2480	1211	3055	5	69522	95558
2037-38	59505	2417	3470	2523	1232	3113	5	72265	98837
2038-39	62101	2460	3565	2567	1253	3172	5	75123	102243
2039-40	64810	2503	3662	2612	1275	3232	5	78099	105778
2040-41	67514	2543	3758	2653	1295	3286	5	81054	109256
2041-42	70331	2583	3856	2694	1315	3342	5	84126	112862
2042-43	73266	2623	3957	2737	1335	3398	5	87321	116601
2043-44	76323	2664	4061	2780	1356	3455	5	90644	120480
2044-45	79507	2706	4167	2824	1377	3513	5	94099	124501
2045-46	82675	2744	4272	2863	1396	3564	5	97519	128445

Table 6-2 : Total Tollable Traffic @ Toll Plaza 2- Joya @123.875 KM

(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	20024	1232	1883	1627	754	2091	4	27615	44091
2025-26	21229	1270	1944	1686	781	2173	4	29087	46164
2026-27	22505	1308	2006	1746	809	2258	4	30636	48329
2027-28	23858	1348	2070	1809	838	2347	4	32274	50611
2028-29	25293	1389	2136	1874	869	2439	4	34004	53007
2029-30	26814	1431	2204	1942	901	2535	4	35831	55527
2030-31	28364	1466	2280	2004	929	2622	4	37669	58019
2031-32	30003	1502	2358	2067	958	2712	4	39604	60627
2032-33	31737	1539	2439	2132	989	2806	4	41646	63371
2033-34	33570	1577	2523	2200	1021	2902	4	43797	66245
2034-35	35510	1616	2610	2270	1053	3001	4	46064	69256
2035-36	37059	1645	2681	2310	1072	3057	4	47828	71490
2036-37	38676	1674	2755	2351	1091	3115	4	49666	73814
2037-38	40363	1703	2830	2392	1110	3173	4	51575	76210
2038-39	42124	1733	2907	2435	1130	3233	4	53566	78706
2039-40	43961	1764	2987	2478	1150	3294	4	55638	81293
2040-41	45795	1791	3065	2517	1168	3349	4	57689	83820
2041-42	47706	1819	3146	2557	1187	3405	4	59824	86445
2042-43	49696	1848	3228	2597	1206	3463	4	62042	89163
2043-44	51770	1877	3312	2638	1225	3521	4	64347	91973
2044-45	53930	1906	3399	2679	1244	3581	4	66743	94888
2045-46	56079	1933	3485	2716	1262	3634	4	69113	97739

Table 6-3 : Total Tollable Traffic @ Toll Plaza 1- Garh @ 90.661 KM
(Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	29520	1748	2310	1713	838	2051	5	38184	55975
2025-26	31148	1793	2372	1766	864	2121	5	40069	58411
2026-27	32865	1838	2436	1821	890	2194	5	42049	60959
2027-28	34677	1885	2502	1877	918	2269	5	44133	63629
2028-29	36588	1933	2569	1935	947	2347	5	46324	66425
2029-30	38605	1982	2638	1995	976	2428	5	48629	69354
2030-31	40643	2021	2715	2048	1002	2499	5	50933	72238
2031-32	42788	2061	2795	2103	1028	2572	5	53352	75254
2032-33	45046	2101	2877	2159	1056	2648	5	55892	78412
2033-34	47424	2142	2961	2217	1084	2726	5	58559	81713
2034-35	49928	2184	3049	2277	1113	2806	5	61362	85171
2035-36	51857	2211	3117	2306	1127	2845	5	63468	87649
2036-37	53860	2238	3186	2335	1141	2884	5	65649	90204
2037-38	55941	2267	3257	2364	1155	2924	5	67913	92850
2038-39	58102	2296	3330	2393	1170	2964	5	70260	95586

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2039-40	60346	2325	3404	2424	1185	3005	5	72694	98418
2040-41	62562	2350	3477	2450	1198	3041	5	75083	101169
2041-42	64860	2375	3551	2476	1211	3077	5	77555	104006
2042-43	67242	2400	3626	2503	1224	3113	5	80113	106932
2043-44	69711	2425	3703	2530	1237	3150	5	82761	109956
2044-45	72271	2451	3781	2557	1251	3187	5	85503	113079
2045-46	74790	2473	3857	2579	1262	3218	5	88184	116097

Table 6-4 : Total Tollable Traffic @ Toll Plaza 2- Joya @123.875 KM

(Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	20024	1232	1883	1627	754	2091	4	27615	44091
2025-26	21128	1263	1934	1678	778	2163	4	28948	45944
2026-27	22292	1295	1986	1730	802	2237	4	30346	47873
2027-28	23521	1328	2039	1784	827	2314	4	31817	49894
2028-29	24817	1362	2094	1839	853	2393	4	33362	52005
2029-30	26184	1397	2151	1896	879	2475	4	34986	54213
2030-31	27566	1424	2214	1947	903	2548	4	36606	56378
2031-32	29021	1452	2279	1999	927	2623	4	38305	58636
2032-33	30552	1481	2346	2053	952	2700	4	40088	60995
2033-34	32164	1510	2415	2107	977	2779	4	41956	63450
2034-35	33862	1540	2486	2163	1003	2861	4	43919	66021
2035-36	35169	1559	2542	2190	1016	2900	4	45380	67820
2036-37	36527	1578	2599	2217	1029	2941	4	46895	69682
2037-38	37938	1597	2657	2245	1042	2982	4	48465	71603
2038-39	39403	1618	2716	2273	1055	3023	4	50092	73584
2039-40	40925	1639	2777	2302	1068	3065	4	51780	75635
2040-41	42428	1656	2836	2327	1080	3101	4	53432	77614
2041-42	43986	1673	2897	2352	1092	3137	4	55141	79653
2042-43	45601	1691	2959	2377	1104	3174	4	56910	81759
2043-44	47276	1709	3022	2402	1116	3212	4	58741	83932
2044-45	49012	1728	3086	2428	1128	3250	4	60636	86173
2045-46	50720	1743	3148	2450	1138	3282	4	62485	88330

Traffic projections for Most Likely scenario is given as under

Table 6-5 : Total Tollable Traffic @ Toll Plaza 1- Garh @ 90.661 KM
(Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	29520	1748	2310	1713	838	2051	5	38184	55975
2025-26	31221	1797	2378	1771	866	2126	5	40164	58551
2026-27	33021	1847	2448	1831	895	2204	5	42251	61254
2027-28	34923	1899	2521	1892	925	2285	5	44450	64091
2028-29	36936	1952	2595	1955	956	2369	5	46768	67065

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2029-30	39064	2006	2671	2020	989	2456	5	49211	70188
2030-31	41224	2051	2756	2078	1018	2534	5	51666	73282
2031-32	43502	2096	2844	2138	1048	2615	5	54248	76526
2032-33	45907	2143	2935	2200	1078	2699	5	56967	79929
2033-34	48446	2190	3028	2264	1109	2785	5	59827	83489
2034-35	51125	2239	3125	2330	1142	2874	5	62840	87230
2035-36	53228	2273	3202	2366	1160	2921	5	65155	89989
2036-37	55417	2307	3282	2402	1178	2969	5	67560	92847
2037-38	57696	2342	3364	2438	1196	3017	5	70058	95802
2038-39	60069	2378	3447	2475	1214	3067	5	72655	98868
2039-40	62539	2414	3532	2513	1233	3117	5	75353	102043
2040-41	64991	2446	3616	2546	1249	3162	5	78015	105145
2041-42	67541	2478	3701	2580	1265	3207	5	80777	108350
2042-43	70191	2511	3789	2614	1281	3253	5	83644	111671
2043-44	72945	2544	3879	2648	1297	3300	5	86618	115106
2044-45	75806	2578	3971	2683	1315	3347	5	89705	118664
2045-46	78637	2607	4061	2714	1330	3388	5	92742	122131

Table 6-6 : Total Tollable Traffic @ Toll Plaza 2- Joya @123.875 KM

(Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	20024	1232	1883	1627	754	2091	4	27615	44091
2025-26	21178	1266	1939	1681	779	2168	4	29015	46048
2026-27	22398	1302	1996	1738	805	2248	4	30491	48102
2027-28	23689	1338	2054	1797	832	2330	4	32044	50248
2028-29	25055	1376	2115	1857	860	2415	4	33682	52501
2029-30	26499	1414	2177	1919	888	2504	4	35405	54858
2030-31	27964	1445	2246	1975	914	2584	4	37132	57183
2031-32	29510	1477	2317	2032	941	2666	4	38947	59611
2032-33	31142	1510	2391	2091	968	2751	4	40857	62155
2033-34	32864	1543	2467	2152	996	2838	4	42864	64813
2034-35	34681	1577	2545	2215	1025	2928	4	44975	67596
2035-36	36108	1600	2608	2248	1040	2976	4	46584	69606
2036-37	37593	1625	2673	2282	1055	3025	4	48257	71691
2037-38	39139	1650	2740	2317	1071	3075	4	49996	73854
2038-39	40748	1675	2808	2352	1087	3126	4	51800	76087
2039-40	42424	1700	2878	2387	1103	3177	4	53673	78393
2040-41	44088	1723	2946	2419	1117	3223	4	55520	80640
2041-42	45817	1746	3016	2451	1132	3269	4	57435	82962
2042-43	47614	1769	3087	2483	1147	3315	4	59419	85354
2043-44	49481	1792	3161	2516	1162	3363	4	61479	87838
2044-45	51421	1815	3236	2549	1177	3411	4	63613	90397
2045-46	53342	1836	3310	2578	1190	3453	4	65713	92887

6.2 Modification in Concession Period

As per Article 29 of the concession agreement, if actual traffic on the project falls short or exceeds Target Traffic on project highway on defined date, concession period shall be modified subject to calculation stipulated therein. For Hapur-Moradabad project, the Target Date and Target Traffic are defined as under:

Target Date - 1st April 2028

Target Traffic - 67413 in PCU

It was observed that as per traffic projections, average traffic volume is in excess of target traffic in all scenarios. The probable extension of the concession period is estimated according to article 29 of the concession agreement which comes to about 2 years. Traffic forecast and revenue projections have been kept up to concession period in report till actual finalization of modification.

Most Likely

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2028	67413	59825	-11%	17%	17%	22	3.7

Optimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2028	67413	60409	-10%	16%	16%	22	3.4

Pessimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2028	67413	59253	-12%	18%	18%	22	4.0

CHAPTER 7

FORECAST OF TOLL REVENUE

7.1 General

This chapter presents the tolling rate calculations, categories and toll revenue of the project.

7.2 Discount Categories

The fee schedule in the CA of Hapur-Moradabad section of NH-9 is based on the old toll policy. As per the Toll Notification (Schedule -G) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent user's monthly pass would be issued for 50 trips in month at 2/3d rate.
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travelers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: There are several categories of local discounts.
    a) Local Car Jeep Van I - Rs. 265 per month
    b) Local Commercial Vehicles at 50% rate for single journey

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.

The formula for determining the applicable rate of fee shall be as follows:-

$$\text{Applicable rate of fee} = \text{base rate} + \text{base rate} \times \left\{ \frac{\text{WPI A-WPI B}}{\text{WPI B}} \right\} \times 0.4$$

Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2018-19. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. The following graph provides historical rate of inflation (WPI) in India. Data has been sourced from the Office of Economic Advisor web site (www.eaindustry.nic.in) WPI for year 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series.

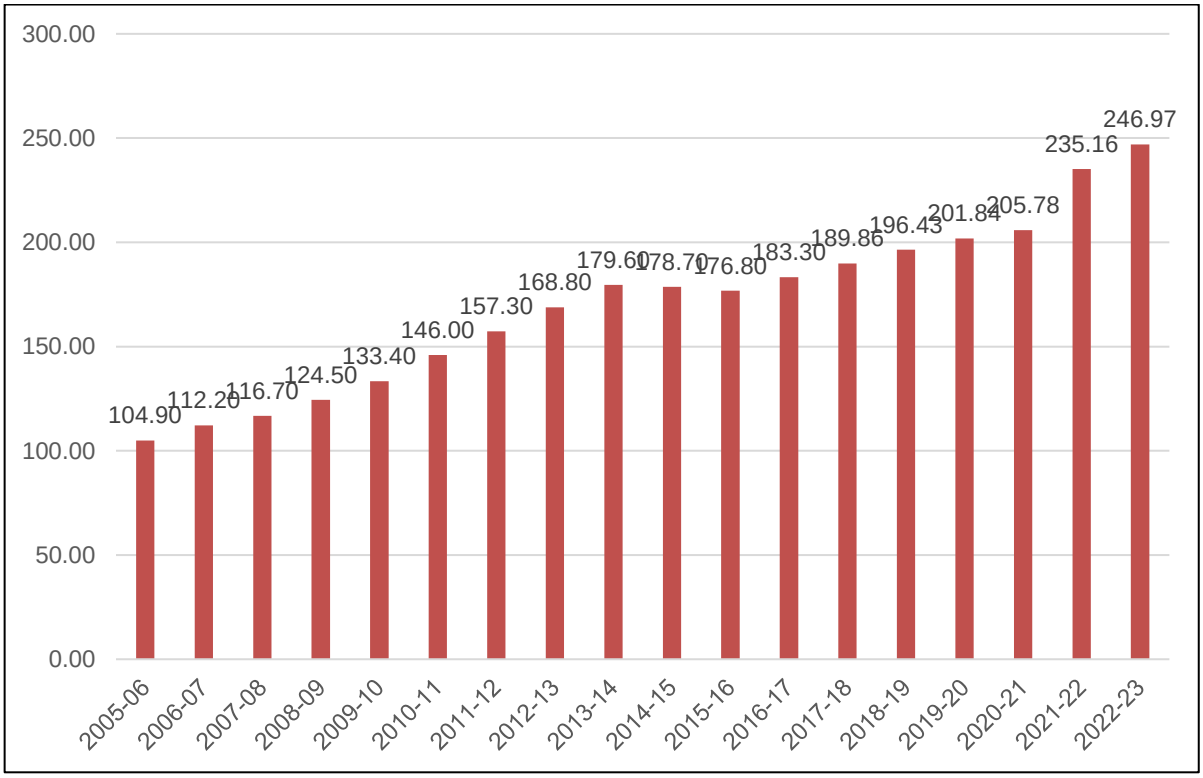


Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in the last few years is steadily growing. It grew by the range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

7.3 Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Oversized Vehicles (7 or more Axles)	4.20

There is no bypass or structure to be factored in for rates calculations.

Toll rates are calculated as per guidelines provided in schedule R (rounded to nearest Rs.) for the concession period and are given below.

Thus, worked out rates for various categories of vehicle and discounts are given below.

Table 7-2 : Toll Rates for Single Journey@ Km 90.661

Year	Car	Minibus /LCV	Bus	Truck	3 Axle	Multi axle	Oversized Vehicles
2024-25	110	180	370	370	405	580	705
2025-26	120	190	395	395	430	615	750
2026-27	130	205	425	425	460	660	800
2027-28	135	215	445	445	485	695	845
2028-29	140	225	470	470	510	730	885
2029-30	150	240	490	490	535	765	930
2030-31	155	250	515	515	565	805	980
2031-32	165	265	545	545	595	850	1030
2032-33	175	275	575	575	625	895	1085
2033-34	180	290	605	605	655	940	1145
2034-35	190	305	635	635	690	990	1205
2035-36	200	325	670	670	730	1045	1265
2036-37	210	340	705	705	765	1100	1335
2037-38	225	360	740	740	805	1155	1405
2038-39	235	380	780	780	850	1220	1480
2039-40	250	400	825	825	895	1285	1560
2040-41	260	420	865	865	945	1355	1645
2041-42	275	440	915	915	995	1425	1735
2042-43	290	465	965	965	1050	1505	1830
2043-44	305	490	1015	1015	1110	1585	1930
2044-45	320	520	1070	1070	1170	1675	2035
2045-46	340	545	1130	1130	1230	1765	2145

Table 7 3: Toll Rates for Single Journey @ Km 123.875

Year	Car	Minibus /LCV	Bus	Truck	3 Axle	Multi axle	Oversized Vehicles
2024-25	70	115	235	235	260	370	450
2025-26	75	120	250	250	270	390	475
2026-27	75	125	260	260	285	410	500
2027-28	80	130	275	275	300	430	525
2028-29	85	135	290	290	315	450	550
2029-30	90	145	305	305	330	475	580

Year	Car	Minibus /LCV	Bus	Truck	3 Axle	Multi axle	Oversized Vehicles
2030-31	95	150	320	320	345	500	610
2031-32	100	160	335	335	365	525	640
2032-33	105	170	350	350	385	550	670
2033-34	110	175	370	370	405	580	705
2034-35	115	185	390	390	425	610	745
2035-36	120	195	410	410	450	645	785
2036-37	130	205	430	430	470	675	825
2037-38	135	215	455	455	495	715	870
2038-39	140	230	480	480	525	750	915
2039-40	150	240	505	505	550	790	965
2040-41	155	255	530	530	580	835	1015
2041-42	165	265	560	560	610	880	1070
2042-43	175	280	590	590	645	925	1130
2043-44	185	295	625	625	680	975	1190
2044-45	195	315	655	655	715	1030	1255
2045-46	205	330	695	695	755	1085	1320

Table 7-3 : Toll Rates for Return Journey @ Km 90.661

Year	Car	Minibus /LCV	Bus	Truck	3 Axle	Multi axle	Oversized Vehicles
2024-25	165	265	555	555	605	870	1060
2025-26	180	290	595	595	645	925	1125
2026-27	190	310	635	635	690	990	1205
2027-28	200	325	665	665	725	1040	1265
2028-29	210	340	700	700	765	1095	1330
2029-30	225	360	740	740	805	1150	1400
2030-31	235	375	775	775	845	1210	1470
2031-32	245	395	815	815	890	1275	1550
2032-33	260	415	860	860	935	1340	1630
2033-34	275	440	905	905	985	1410	1715
2034-35	285	460	950	950	1035	1485	1805
2035-36	300	485	1000	1000	1090	1565	1900
2036-37	320	510	1055	1055	1150	1645	2000
2037-38	335	540	1110	1110	1210	1735	2110
2038-39	355	565	1170	1170	1275	1830	2220
2039-40	370	595	1235	1235	1345	1925	2340
2040-41	390	630	1300	1300	1415	2030	2470
2041-42	415	665	1370	1370	1495	2140	2605
2042-43	435	700	1445	1445	1575	2255	2745
2043-44	460	735	1525	1525	1660	2380	2895
2044-45	485	775	1610	1610	1750	2510	3055
2045-46	510	820	1695	1695	1850	2650	3220

Table 7-4 : Toll Rates for Return Journey @ Km 123.875

Year	Car	Minibus /LCV	Bus	Truck	3 Axle	Multi axle	Oversized Vehicles
2024-25	105	170	355	355	385	555	675
2025-26	110	180	370	370	405	585	710
2026-27	115	185	390	390	425	615	745
2027-28	120	195	410	410	450	645	785
2028-29	130	205	430	430	470	675	825
2029-30	135	215	455	455	495	710	865
2030-31	140	230	475	475	520	750	910
2031-32	150	240	500	500	550	785	960
2032-33	155	250	530	530	575	830	1010
2033-34	165	265	555	555	605	870	1060
2034-35	175	280	585	585	640	915	1115
2035-36	180	295	615	615	670	965	1175
2036-37	190	310	650	650	705	1015	1235
2037-38	200	325	680	680	745	1070	1305
2038-39	210	345	720	720	785	1125	1370
2039-40	225	360	755	755	825	1185	1445
2040-41	235	380	800	800	870	1250	1525
2041-42	250	400	840	840	915	1320	1605
2042-43	260	425	885	885	965	1390	1690
2043-44	275	445	935	935	1020	1465	1785
2044-45	290	470	985	985	1075	1545	1880
2045-46	305	495	1040	1040	1135	1630	1985

Table 7-5 : Toll Rates for Monthly Pass Local @ Km 90.661

Year	Car
2024-25	330
2025-26	340
2026-27	360
2027-28	375
2028-29	395
2029-30	420
2030-31	440
2031-32	460
2032-33	485
2033-34	510
2034-35	540
2035-36	570
2036-37	600
2037-38	630
2038-39	665
2039-40	700
2040-41	740
2041-42	780

Year	Car
2042-43	820
2043-44	865
2044-45	915
2045-46	965

Table 7-6 : Toll Rates for Monthly Pass Local @ Km 123.87

Year	Car
2024-25	340
2025-26	355
2026-27	375
2027-28	390
2028-29	410
2029-30	435
2030-31	455
2031-32	480
2032-33	505
2033-34	530
2034-35	560
2035-36	585
2036-37	620
2037-38	650
2038-39	685
2039-40	720
2040-41	760
2041-42	800
2042-43	845
2043-44	890
2044-45	940
2045-46	990

Table 7-7 : Toll Rates for Monthly Pass @ Km 90.661

Year	Car	Minibus /LCV	Bus	Truck	3 Axle	Multi axle	Oversized Vehicles
2024-25	3700	5935	12355	12355	13475	19335	23525
2025-26	3985	6395	13180	13180	14360	20555	24985
2026-27	4265	6840	14100	14100	15360	21990	26725
2027-28	4480	7190	14820	14820	16150	23120	28095
2028-29	4710	7555	15585	15585	16980	24310	29545
2029-30	4950	7945	16390	16390	17860	25570	31075
2030-31	5205	8355	17240	17240	18785	26895	32690
2031-32	5475	8785	18135	18135	19760	28300	34395
2032-33	5760	9245	19085	19085	20795	29780	36200
2033-34	6060	9725	20085	20085	21885	31345	38105
2034-35	6375	10235	21145	21145	23040	33000	40115
2035-36	6710	10775	22265	22265	24260	34750	42240
2036-37	7065	11345	23445	23445	25550	36600	44490

Year	Car	Minibus /LCV	Bus	Truck	3 Axle	Multi axle	Oversized Vehicles
2037-38	7440	11950	24695	24695	26915	38555	46870
2038-39	7835	12585	26020	26020	28355	40625	49385
2039-40	8255	13260	27420	27420	29880	42810	52045
2040-41	8700	13970	28900	28900	31495	45125	54860
2041-42	9170	14725	30465	30465	33200	47570	57835
2042-43	9665	15525	32120	32120	35005	50160	60985
2043-44	10190	16370	33875	33875	36920	52900	64320
2044-45	10745	17260	35730	35730	38940	55800	67845
2045-46	11330	18205	37690	37690	41080	58870	71580

Table 7-8 : Toll Rates for Monthly Pass @ Km 123.875

Year	Car	Minibus /LCV	Bus	Truck	3 Axle	Multi axle	Oversized Vehicles
2024-25	2325	3760	7875	7875	8595	12355	15040
2025-26	2445	3950	8275	8275	9025	12975	15795
2026-27	2570	4150	8695	8695	9485	13630	16595
2027-28	2700	4360	9135	9135	9965	14325	17435
2028-29	2835	4580	9600	9600	10470	15055	18325
2029-30	2980	4815	10090	10090	11010	15825	19265
2030-31	3135	5065	10610	10610	11575	16640	20255
2031-32	3295	5325	11160	11160	12170	17500	21300
2032-33	3470	5600	11735	11735	12805	18405	22405
2033-34	3650	5895	12350	12350	13470	19365	23575
2034-35	3840	6200	12995	12995	14175	20380	24810
2035-36	4040	6530	13675	13675	14920	21450	26110
2036-37	4255	6870	14400	14400	15710	22580	27490
2037-38	4480	7235	15165	15165	16540	23780	28945
2038-39	4720	7620	15970	15970	17420	25045	30490
2039-40	4970	8030	16825	16825	18355	26385	32120
2040-41	5235	8460	17725	17725	19340	27800	33840
2041-42	5520	8915	18680	18680	20380	29295	35665
2042-43	5820	9400	19690	19690	21485	30880	37595
2043-44	6135	9910	20760	20760	22650	32560	39635
2044-45	6470	10450	21895	21895	23885	34330	41795
2045-46	6820	11020	23090	23090	25190	36210	44080

7.4 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under **Optimistic, Pessimistic and Most Likely** growth scenarios are presented in the following section.

7.5 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under all scenarios at each of the toll plaza up to 2045-46 starting from the year 2024-25 are shown in tables below.

Table 7-9 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Year	TP-1	TP2	Total
2024-25	208.26	107.30	**315.56**
2025-26	235.30	118.51	**353.81**
2026-27	263.99	128.44	**392.43**
2027-28	290.61	142.01	**432.62**
2028-29	318.21	156.86	**475.06**
2029-30	354.19	172.86	**527.06**
2030-31	386.72	189.28	**576.00**
2031-32	427.60	209.13	**636.72**
2032-33	471.51	228.27	**699.78**
2033-34	516.50	250.98	**767.48**
2034-35	566.64	275.89	**842.53**
2035-36	618.60	298.46	**917.06**
2036-37	672.82	325.66	**998.48**
2037-38	734.36	352.45	**1086.81**
2038-39	799.25	381.32	**1180.57**
2039-40	873.02	418.67	**1291.69**
2040-41	942.93	450.14	**1393.06**
2041-42	1029.60	491.04	**1520.64**
2042-43	1119.02	532.73	**1651.75**
2043-44	1221.38	581.62	**1803.00**
2044-45	1324.59	630.20	**1954.79**
2045-46	1441.62	683.15	**2124.77**

Table 7-10 : Toll Revenue Pessimistic Scenario

(Rs. Crores)

Year	TP-1	TP2	Total
2024-25	208.26	107.30	**315.56**
2025-26	234.16	117.94	**352.09**
2026-27	261.48	127.20	**388.68**
2027-28	286.48	139.97	**426.45**
2028-29	312.20	153.87	**466.07**
2029-30	345.81	168.75	**514.56**
2030-31	375.83	183.93	**559.76**
2031-32	413.56	202.22	**615.78**
2032-33	453.90	219.71	**673.61**
2033-34	494.77	240.39	**735.16**
2034-35	540.23	262.98	**803.22**
2035-36	586.90	283.11	**870.01**
2036-37	635.22	307.42	**942.64**
2037-38	689.97	331.09	**1021.06**
2038-39	747.38	356.49	**1103.87**
2039-40	812.40	389.54	**1201.94**

Year	TP-1	TP2	Total
2040-41	873.11	416.84	**1289.95**
2041-42	948.63	452.52	**1401.15**
2042-43	1025.97	488.62	**1514.59**
2043-44	1114.43	530.88	**1645.30**
2044-45	1202.85	572.42	**1775.27**
2045-46	1302.90	617.56	**1920.45**

Table 7-11 : Toll Revenue Most Likely Scenario

(Rs. Crores)

Year	TP-1	TP2	Total
2024-25	208.26	107.30	**315.56**
2025-26	234.73	118.21	**352.94**
2026-27	262.71	127.80	**390.51**
2027-28	288.52	140.96	**429.48**
2028-29	315.19	155.34	**470.53**
2029-30	349.95	170.75	**520.70**
2030-31	381.18	186.51	**567.69**
2031-32	420.45	205.56	**626.02**
2032-33	462.56	223.87	**686.42**
2033-34	505.36	245.54	**750.90**
2034-35	553.12	269.29	**822.41**
2035-36	602.34	290.62	**892.96**
2036-37	653.54	316.32	**969.86**
2037-38	711.68	341.53	**1053.21**
2038-39	772.79	368.61	**1141.39**
2039-40	842.08	403.73	**1245.82**
2040-41	907.29	433.08	**1340.36**
2041-42	988.24	471.27	**1459.51**
2042-43	1071.53	510.03	**1581.56**
2043-44	1166.69	555.52	**1722.21**
2044-45	1262.20	600.46	**1862.66**
2045-46	1370.44	649.35	**2019.79**

CHAPTER 8

CONCLUSION AND RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Hapur to Moradabad section of NH-9 in state of Uttar Pradesh from km 50.000 to km 148.277is currently four lane and would be augmented to six lane in current concession. The road is in sound condition and serves healthy traffic volumes. Project corridor is a part of the busy and prominent national highway NH-9which is main link for traffic from Punjab, Haryana, Delhi to Moradabad, Rampur and eastern part of Uttarakhand. There are large number of townships, industrial corridors and other business establishments coming up along the project corridor. As Indian economy is poised to grow at 7%+ post COVID-19, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give a positive impact to traffic flow on the project. The following can be considered as major outcomes of the study.

a) There is a good amount of tollable traffic running on the project.

b) Project corridor has potential to witness traffic growth @ 6-8% annually Post COVID-19 in near future due to various development in area and overall development of economy.

c) The Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road.

Based on the above it can be considered a stable healthy project from the traffic and revenue point of view.

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UDAIPUR TO GUJARAT BORDER ON NH 8
(KM 287.400 TO KM 401.200)
IN THE STATE OF RAJASTHAN



OCTOBER 2024





TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

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UDAIPUR TO GUJARAT BORDER SECTION OF NH-8

(KM 287.400 TO 401.200)

IN THE STATE OF RAJASTHAN

TRAFFIC STUDY & REVENUE
PROJECTION REPORT
(FINAL)

OCTOBER 2024

GMD CONSULTANTS ★ NAVI MUMBAI ★

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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic	**NHAI**	-	National Highway Authority of India
BOT	-	Build Operate Transfer	**NHDP**	-	National Highways Development Project
CAGR	-	Compound Annual Growth Rate	**NSDP**	-	Net State Domestic Product
CTV	-	Classified traffic volume	**O&M**	-	Operation & Maintenance
DBFOT	-	Design, Build, Finance, Operate & Transfer	**PCDP**	-	Per Capita Domestic Product
EME	-	Earth Moving Equipment	**PCI**	-	Per Capita Income
GDP	-	Gross Domestic Product	**PCU**	-	Passenger Car Unit
GSDP	-	Gross State Domestic Product	**PSC**	-	Pre-stressed Concrete
HCM	-	Heavy Construction Machinery	**RCC**	-	Reinforced cement concrete
HCV	-	Heavy Commercial Vehicle	**RHS**	-	Right Hand Side
HTMS	-	Highway Traffic Management System	**SH**	-	State Highway
IRC	-	Indian Road Congress	**TP**	-	Toll Plaza
IRR	-	Internal Rate of Return	**WPI**	-	Wholesale Price Index
LCV	-	Light Commercial Vehicle	**SIR**	-	Special Investment Region
LHS	-	Left Hand Side	**c.**	-	Circa
LGV	-	Light Goods Vehicle	**ROB**	-	Railway Over Bridge
MAV	-	Multi Axle Vehicle	**MDR**	-	Major District Road
MORTH	-	Ministry of Road Transport and Highways	**ODR**	-	Other District Road
NH	-	National Highway	**CA**	-	Concession Agreement
PCC	-	Plain Cement Concrete	**RMT**	-	Running Meter
CR	-	Coarse Rubble			

CHAPTER 1

INTRODUCTION

1.1 Background

The Government of India through National Highway Authority of India (NHAI) embarked upon a program to enhance the traffic capacity and safety for efficient transportation of goods as well as passenger traffic on National Highway Sections under NHDP Phase V. Under Phase V NHAI has planned to convert 6,500 km of existing 4-lane National Highways into 6-lane National Highway. Sections envisaged under 6-laning comprise the Golden Quadrilateral section (5,700 km) and some other sections which are 800 km in length.

The project under consideration, Six Laning of section from Km 287.400 to Km 401.200 of NH-8 in state of Rajasthan and Gujarat is one such road project NHAI intended to implement on a BOT basis in the DBFOT format. *M/s Udaipur Tollway Ltd*. (Concessionaire) has been awarded the Project for a concession period of 21 years starting from 3rd September 2017. The Project has been commissioned and is currently in the operation / maintenance phase. Six laning of project has also been completed in June 2021.

The length of the project road is 113.800 Km approx. The project road is section of NH-8, one of the busiest national highways of India and part of Mumbai – Delhi arm of golden quadrilateral.

Project road alignment passes through the rural area in most part of stretch. After Udaipur there is no major urban establishment other than Rishabhdeo, a famous religious place in the region. The following figure shows project road in regional context.

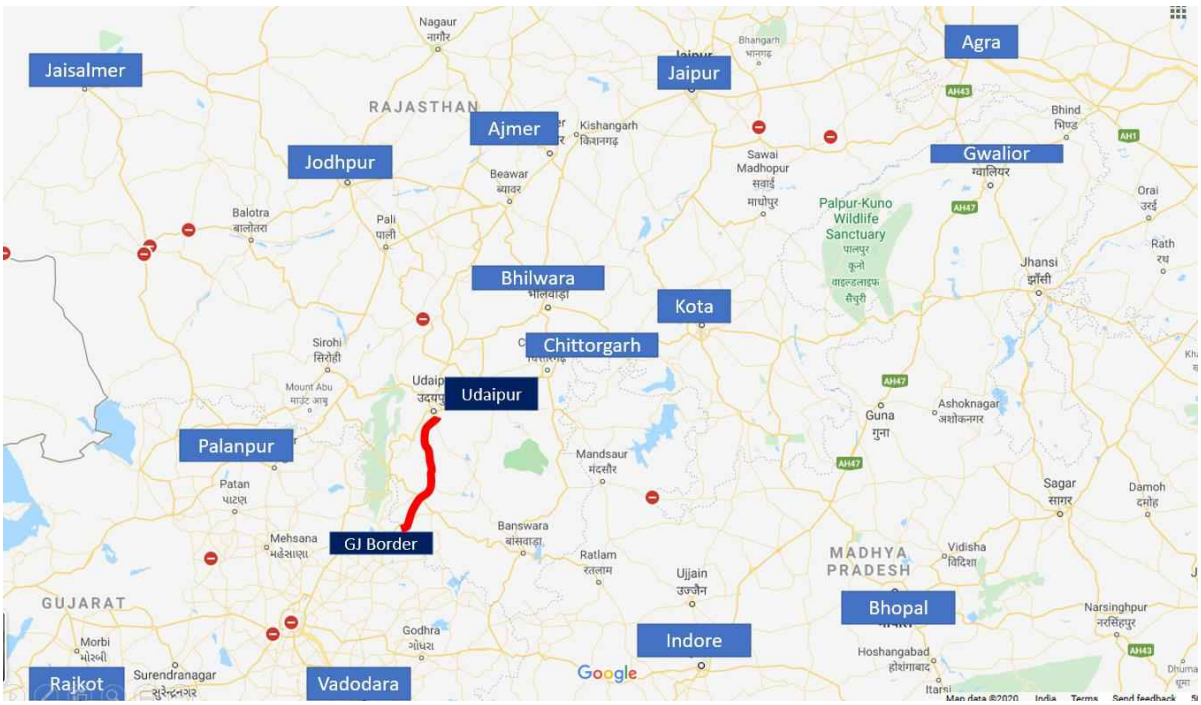


Figure 1-1 : Alignment of Project Stretch

1.2 Objective of the Study

M/s IRB INFRASTRUCTURE TRUST has engaged *GMD Consultants* to assess the future traffic and toll potential of project along with related operation & maintenance expenditure involved.

This report named as **"Traffic Study & *Toll Revenue Projection Report*"** mainly focuses on traffic and revenue aspects of the project. Other parameters like competing road, area developments etc. have been considered from a traffic development point of view.

1.2.1 Scope of Services

The broad scope of work covered in the assignment is as follows.

a) Analysis of Traffic Growth
b) Toll Rate Growth
c) Revenue Forecasting

The Concessionaire has provided basic traffic data and other project details on the basis of which the above analysis has been carried out.

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

National Highway 8 is one of the busiest national highways of India. Project stretch from Udaipur to Gujarat border on NH-8 is part of Delhi Mumbai arm of Golden quadrilateral.

Besides being part of major transport link between Mumbai and Delhi, stretching from Udaipur to Shamlaji forms major connectivity between Udaipur, Ahmedabad, Rajkot Jamnagar and Porbandar. After renumbering of all national highways by National Highway Authority of India in 2010, the current NH 48 was formed by merging the old NH 8 (Delhi-Mumbai section) and NH 4 (Mumbai-Chennai). National Highway 48 starts at Delhi and terminates at Chennai and goes through Jaipur, Udaipur, Vadodara, Mumbai, Pune and Bengaluru, traversing through six states of India.

2.2 Project Stretch Description

Section of NH-8 (New NH-48) from Udaipur to Gujarat Border is part of major transportation link in the area connecting industrial / tourist cities of Udaipur-, Ahmedabad, Vadodara, Mumbai. Project stretch would be faster connectivity to Udaipur from Gujarat border and onwards to Ahmedabad once six laning is complete.

Project stretch from Udaipur to Gujarat border as such passes through rural areas. The area has a number of green marble mines and there are many establishments on the way. Rishabhdeo in one such area having more than 500 such units.

Major religious centers like Shamlaji and Ekling ji contribute to substantial passenger traffic on project stretch.

There is one operative toll plaza at project stretch at Khandi Obri at km 348.450. The following figure shows project alignment and toll plaza location.

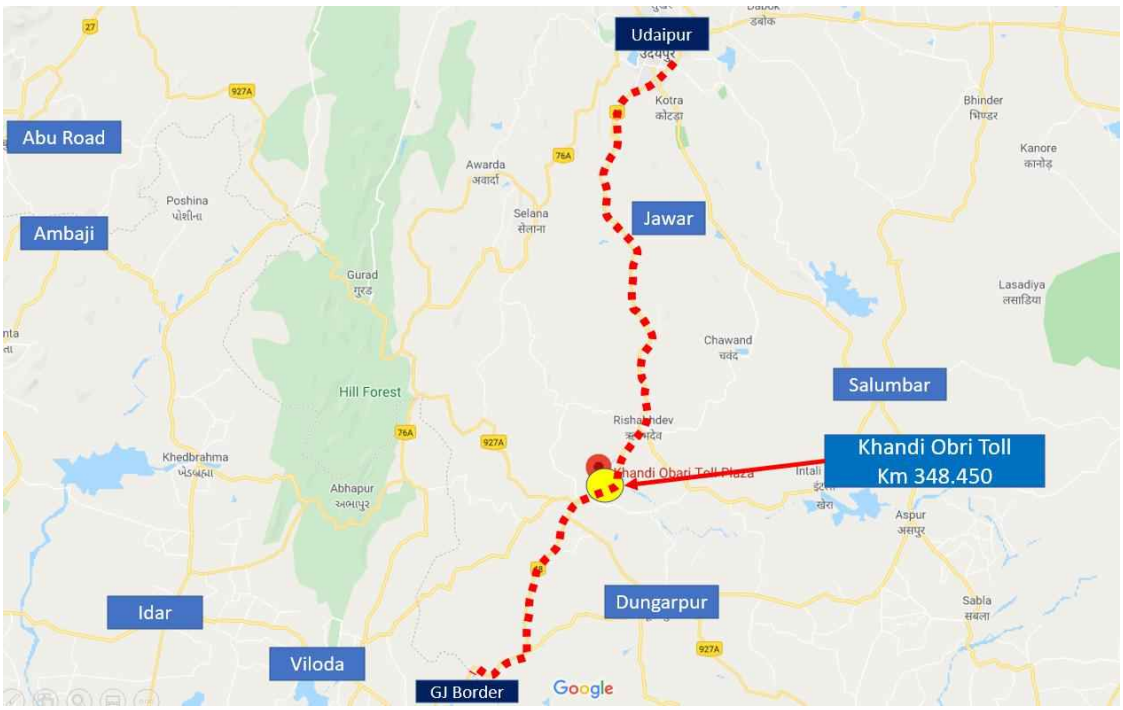


Figure 2-1 : Project Alignment with Toll Plaza

2.3 Project Corridor Illustration

The sixth laning of the project stretch is completely underway and is expected to be completed soon. The following photographs illustrate the project section along the corridor.



Figure 2-2 : Photographs showing Project Corridor

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from a client for a project.

- Classified traffic volume counts at toll plaza location on Udaipur – Gujarat section of NH-8 for year 2017-18, 2018-19, 2019-20, 2020-21 ,2021-22,2022-23, April 2023 to November 2023 and traffic data from April 2024 to July 2024.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project.
- Establish base year traffic.
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1 below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. No	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	Km 348.450 Toll Plaza at Khandi Obri	AADT for Year 2017-18, 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023, Eight month from April 2023 to	For Year 2017-18, 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023, Eight month from April 2023	For Year 2017-18, 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023, Eight month from April	For Year 2017-18, 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023, Eight month from April 2023	For Year 2017-18, 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023, Eight month from April

SR. No	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
		November 2023 & Four month from April 2024 to July 2024	to November 2023 & Four month from April 2024 to July 2024	2023 to November 2023 & Four month from April 2024 to July 2024	to November 2023 & Four month from April 2024 to July 2024	2023 to November 2023 & Four month from April 2024 to July 2024

3.2 Classified traffic Volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations based on monthly data shared with NHAI.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in the table below.

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since the project highway is currently under toll operation, the data collected corresponds to the category of tollable vehicles. The following are the types of vehicles as per concession agreement.

- Car / Jeep / van
- Min Bus /LCV
- Truck / Bus
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of the report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data for the year 2024-2025(traffic data from April 2024 to July 2024).

Since the traffic data available for this update is for only four months, from April 2024 to July 2024, it may not represent the whole year traffic. Hence a seasonality factor for balance part of year has been applied to average traffic of current four months to arrive at Annual Average Daily Traffic of base year 2024-25. Same corrected traffic is used for future projections and revenue calculations. The following table shows historical traffic on project stretch and derived Annual Average Daily Traffic (AADT) for year 2024-25.

Table 3-3 : Traffic Data at Khandi Obri Toll Plaza at Km 348.450

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24	Annual Average Daily Traffic (Nos.)- 2024-25
1	Car	4532	3574	4773	5335	6220	6841
2	LCV	934	737	619	672	777	834
3	Bus	800	472	661	781	894	832
4	Truck	1448	1402	1703	1864	2213	2428
5	3-Axle	1806	1548	1691	1724	1934	1849
6	Multi Axle	3717	3367	3887	4157	4868	5027

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24	Annual Average Daily Traffic (Nos.)- 2024-25
7	Oversized Vehicle	11	13	21	13	13	9
	Total	**13248**	**11113**	**13355**	**14545**	**16919**	**17820**

3.4 Data Analysis

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in "IRC-64-1990: Guidelines for Capacity of Roads in Rural areas". The adopted passenger car unit values (PCU) are presented in ***Table 3-4***.

Table 3-4 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-5 : Traffic in PCU at Project Stretch Base Year 2023-24

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
2019-20	Khandi Obri at Km 348.450	13248	34871	2.63
2020-21	Khandi Obri at Km 348.450	11113	30155	2.71
2021-22	Khandi Obri at Km 348.450	13355	35453	2.65
2022-23	Khandi Obri at Km 348.450	14545	38213	2.63
2023-24	Khandi Obri at Km 348.450	16919	44472	2.63
2024-25	Khandi Obri at Km 348.450	17820	46081	2.59

It can be observed from above that project traffic has PCU index more than 2.5 which is an indicator of high proportion of commercial traffic in traffic mix in project corridor.

3.4.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.

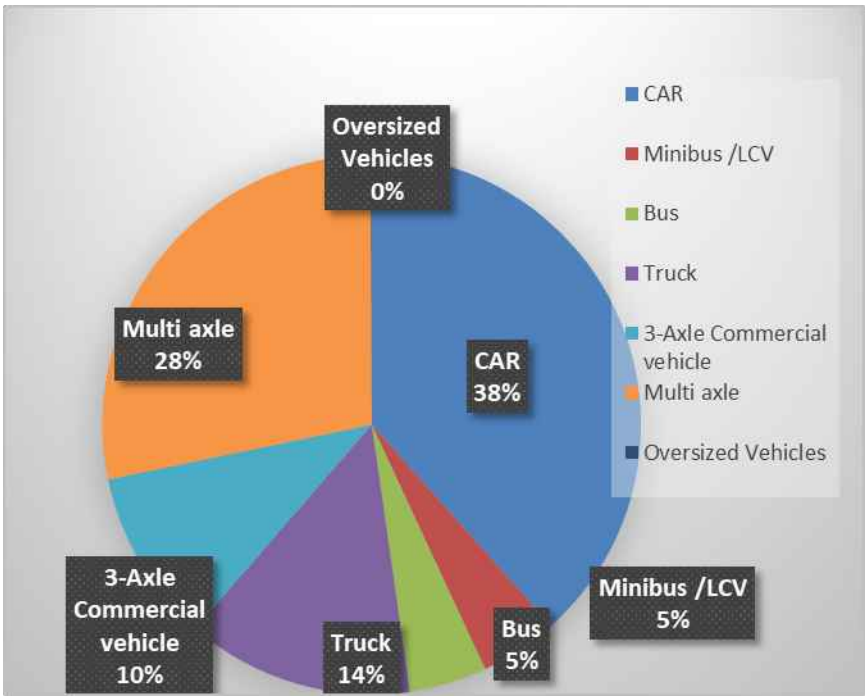


Figure 3-1 : Model Split of Tollable Vehicle

It is observed that car traffic forms about 38% of total traffic at toll plaza locations while multi axle commercial vehicles are about 38% of total traffic. Truck /Bus and LCV share about 18% and 5 % of traffic volume respectively.

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

The following table provides numbers of vehicles falling in each of above category on base year 2024-25

Table 3-6 : Journey Type Bifurcation of Traffic at Khandi Obri TP KM 348.450

Sr. No	Type	Traffic Volume (Nos.) 2024-25
1	Single Journey	14312
2	Return Journey	3280
3	Local Commercial Single Journey	155
4	Monthly Pass Local	73
5	Monthly Pass	0

Most dominant part of the above is the single journey type followed by return journey at project stretch. Monthly pass commuters are a very low fraction of the total traffic on the project corridor.

The single journey component in total traffic numbers is as high as 80%. Return journey component is 18%. The number of monthly pass Local is 0% and Local Commercial Single journey is 1% at Khandi Obri toll plaza.

It is observed that the project corridor demonstrates pattern of single journey dominated mix of traffic which is typical of major national highways having more long-distance traffic.

3.5 Secondary Data Collection

There are several other factors which have a substantial impact on traffic patterns and growth on any project corridor. The following are some of such important factors.

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor

- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on the project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data
   a) GDP
   b) NSDP
   c) Population Growth
   d) Per Capita Income growth
   e) Industrial Growth
   f) Special Industry Potential
   g) Regional and National development vision / plan
   h) Any other relevant data
3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

Highway corridors behave like integrated circuit networks and more often than not every road is connected to various networks having different origins and destinations. Traffic running on these networks behaves like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network.

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc,
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Competing / Alternate route

Project stretch is part of Delhi – Mumbai arm of golden quadrilateral transport network. Additionally, it also forms good connectivity to Ahmedabad, Rajkot, Jamnagar and other port and industrial establishments in bay of Khambat of Gujarat.

At regional level, there can be three alternates for Udaipur- Ahmedabad pair of Origin & Destination. One via project road (Udaipur – Rishabhdeo- Shamlaji- Ahemedabad), second on east side (via Himmatnagar) and third on far east side via Palanpur- Mehsana.

The following maps show these routes in relation to project stretch at regional level.

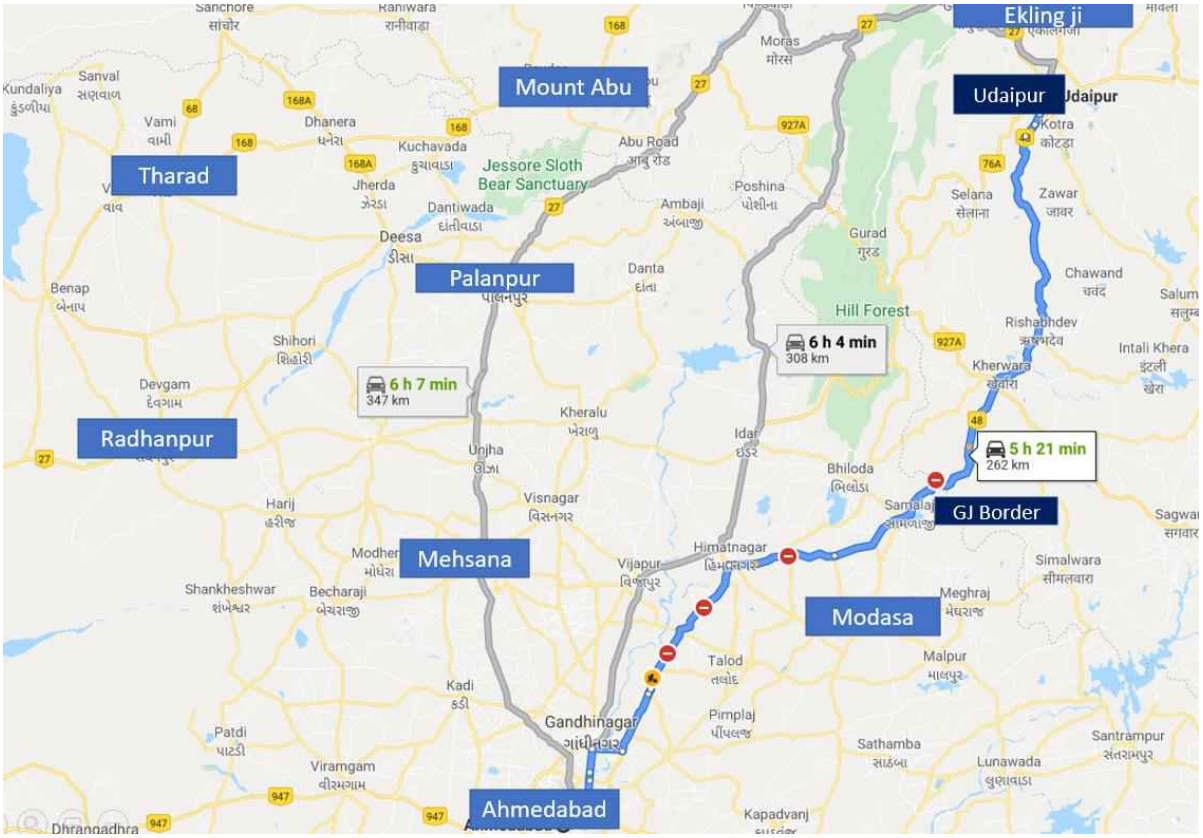


Figure 4-1 : Alternate route at regional level Udaipur - Ahmedabad

The route via project road is the most preferred one due to minimum travel time and shortest length.

On a high level, between Delhi and Vadodara, there can be three alternatives. One via project road (Delhi- Jaipur- Udaipur- Shamlaji -Vadodara), second via Delhi-Sikar-Ahmedabad- Vadodara) and third via Delhi- Jaipur- Mandsauar – Banswara- Godhra- Vadodara. The following map shows these alignments.

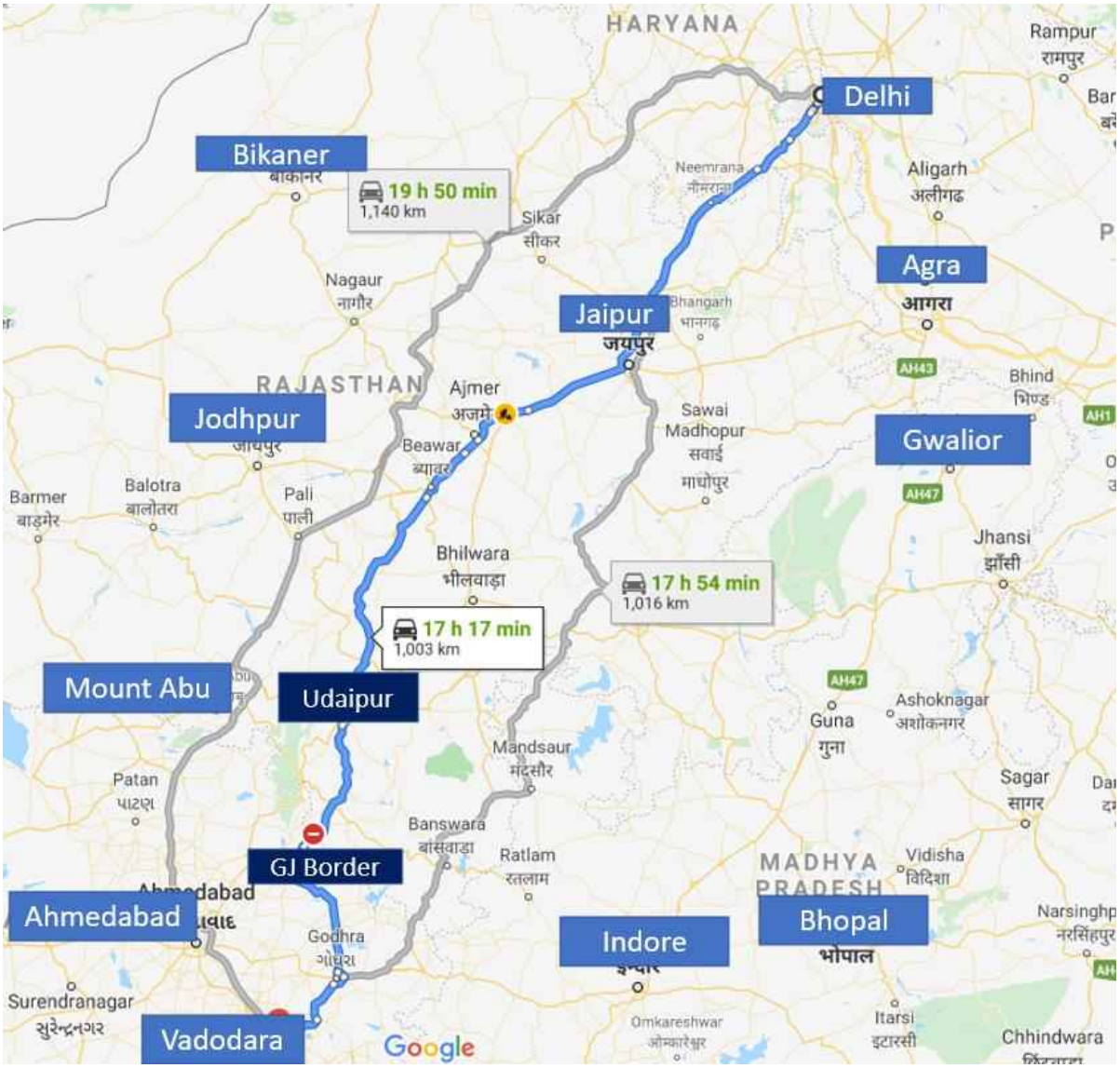


Figure 4-2 : Alternate route at regional level Delhi - Vadodara

For Delhi- Vadodara pair of origin and destination, route via project road (Udaipur – Shamlaji) is most preferred one due to minimum travel time and length of route.

Thus, at regional level project road is preferred route of long-distance traffic between Mumbai- Delhi and Udaipur- Ahmedabad. Project road is under toll operation since long hence traffic on project road is now settled and it can be assumed as dedicated traffic on project road for logistic obligations.

After six laning completion, the project stretch would become slightly more attractive due to the improved level of service. In such a case any further diversion of traffic from the project road is not envisaged. It is expected that there could be some attracted traffic on the project road after completion of the six laning of Kishangarh Gulabpura stretch which is connecting section for project corridor.

At the local level there is no potential alternate route to bypass the toll plaza.

The following table provides summary of analysis of alternate route/ roads discussed above.

Table 4-1 : Competing Roads Details

Sr. No	Route Details	Designation	Length (Km)	Avg. Speed (KMPH)	Time Taken (Min)	Observations
Regional Level						
1	Udaipur- Palanpur -Mehsana- Ahemedabad	Alternate Route	347	64	6 Hr 7 Min	Project road alternate has minimum travel time and shortest road
	Udaipur- Idar - Himmatnagar- Ahemedabad	Alternate Route	308	50	6 Hr 8 Min	
	Udaipur- Rishabhdeo- Shamlaji- Ahemedabad	Project Road	262	49	5 Hr 21 Min	
2	Delhi- Jaipur- Mandsaur - Banswara- Vadodara	Alternate Route	1140	57	19 Hr 50 Min	Project road alternate has minimum travel time and shortest road
	Delhi- Sikar- Mt. Abu - Ahemedabad- Vadodara	Alternate Route	1016	57	17 Hr 54 Min	
	Delhi- Jaipur- Udaipur - Vadodara	Project Road	1003	58	17 Hr 54 Min	

Under these circumstances it is not envisaged that commercial or passenger traffic would switch to alternate roads from the project road. Further, it may be noted that since the project highway has already been commissioned and has a tolling history, the current traffic traversing the project corridor already factors in traffic diversion (if any) that may have taken place. Further after completion of six laning, level of service would improve on project corridor, and this would create favorable conditions for traffic.

CHAPTER 5

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future patterns of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor Udaipur to Gujarat Border section of NH-8 has been done taking the above factors into consideration. "**IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**" is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable for projects of short durations say 5-10 years, however for long term projections it would be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**.

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different types of vehicles. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway typically depends on a number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, in order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

$$Log (P) = k \times Log (EI) + A$$

Where,

P = *Number of Vehicles (Mode wise)*
EI = *Economic Indicator*
A = *Regression constant*
k = *Elasticity coefficient (Regression coefficient)*

The elasticity for cars and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

The project corridor spreads across the state of Rajasthan. Toll plazas at Khondi Obri is in the state of Rajasthan but the traffic on project stretch has certain contribution from other states as well. For elasticity calculations, working data from such states in addition to Rajasthan has been analyzed.

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Rajasthan State.

Table 5-1 : Per Capita Income Vs Car Rajasthan

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	57192	591069	4.76	5.77		
2013	58441	659542	4.77	5.82	2%	
2014	61053	733916	4.79	5.87	4%	
2015	64496	814079	4.81	5.91	6%	
2016	68565	899307	4.84	5.95	6%	
2017	71394	988391	4.85	5.99	4%	4.55%

Regression analysis of same is given in figure below.

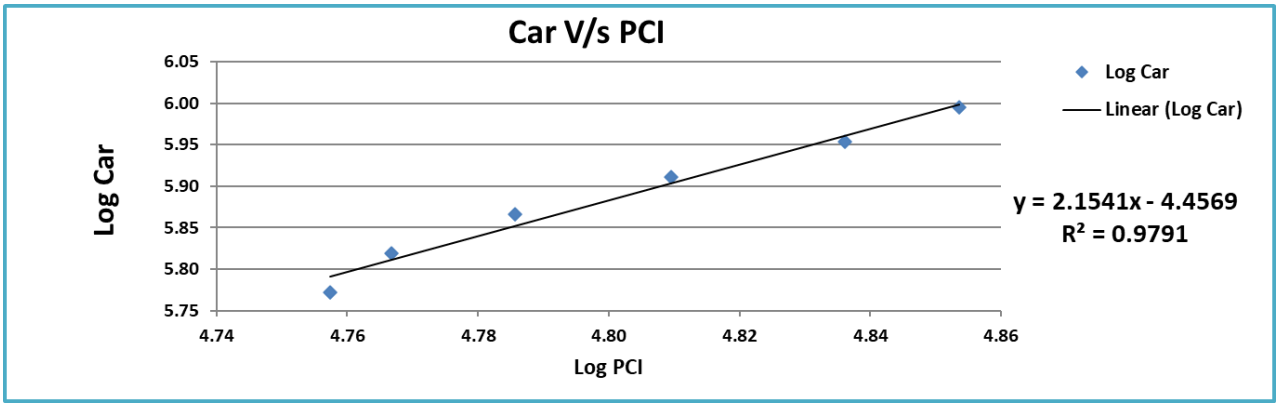


Figure 5-1 : Regression and Elasticity PCI vs. Car – Extrapolation Rajasthan

Table 5-2 : Population Vs Bus Rajasthan

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	68548437	83345	7.84	4.92		
2013	69783885	88616	7.84	4.95	2%	
2014	71016445	93892	7.85	4.97	2%	
2015	72245688	97650	7.86	4.99	2%	
2016	73471198	102818	7.87	5.01	2%	
2017	74692571	108680	7.87	5.04	2%	1.73%

Regression analysis of same is given in figure below.

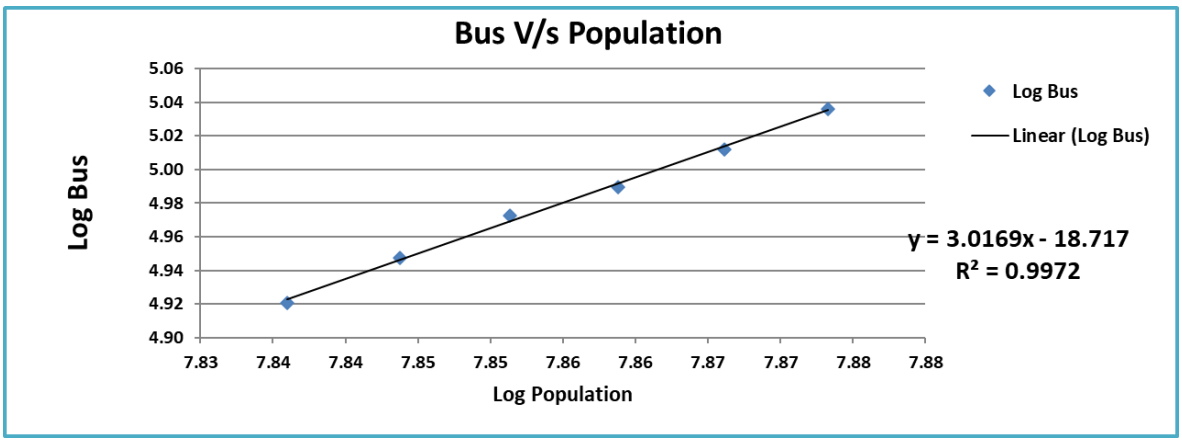


Figure 5-2 : Regression and Elasticity Population vs. Bus – Extrapolation Rajasthan

Elasticity of LCV has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-3 : LCV Vs NSDP Rajasthan

Year	NSDP	LCV	Log NSDP	Log LCV	NSDP Growth	Average Growth
2012	395331	69509	5.60	4.84		
2013	409802	76396	5.61	4.88	4%	
2014	434292	33379	5.64	4.52	6%	
2015	465408	91787	5.67	4.96	7%	
2016	501922	99763	5.70	5.00	8%	6.16%

The following figure depicts regression analysis and extrapolation.

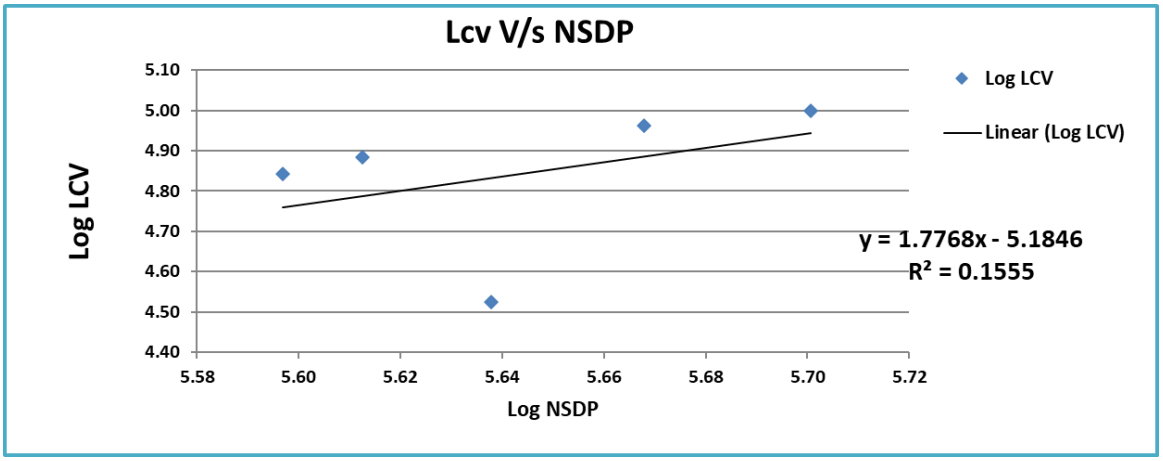


Figure 5-3 : Regression and Elasticity NSDP vs. LCV Traffic - extrapolation Rajasthan.

Elasticity of Goods Traffic has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-4 : GOODS Traffic Vs NSDP Rajasthan

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth
2012	395331	362028	5.60	5.56		
2013	409802	401983	5.61	5.60	4%	
2014	434292	434379	5.64	5.64	6%	
2015	465408	472365	5.67	5.67	7%	
2016	501922	517604	5.70	5.71	8%	
2017	530172	561158	5.72	5.75	6%	6.06%

Following figure depict regression analysis and extrapolation.

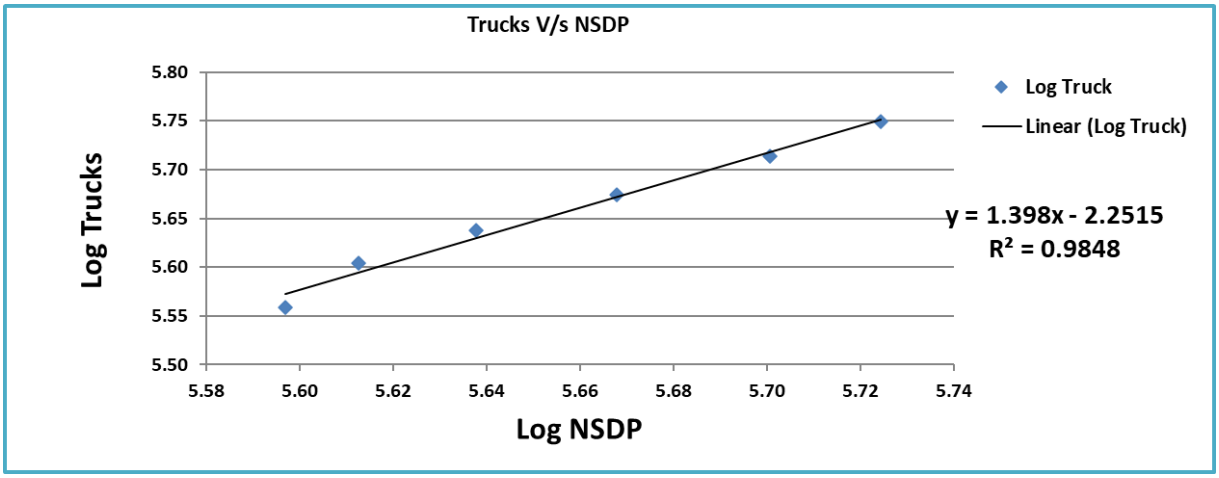


Figure 5-4 : Regression and Elasticity NSDP vs. Goods Traffic - extrapolation Rajasthan.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-5 : Summary Regression Analysis Rajasthan

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Rajasthan	Car/Jeep	PCI	y = 2.1541x + -4.4569	R² = 0.9791	2.1541	4.55%	9.79%	Good Regression
	Bus	Population	y = 3.0169x - -18.7174	R² = 0.9972	3.0169	1.73%	5.22%	Good Regression
	LCV	NSDP	y = 1.7768x - -5.1846	R² = 0.1555	1.7768	6.16%	10.95%	Poor Regression
	Truck	NSDP	y = 1.398x - -2.2515	R² = 0.9848	1.3980	6.06%	8.46%	Good Regression

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Rajasthan State.

Table 5-6 : Per Capita Income Vs Car Gujarat

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	87481	1411898	4.94	6.15		
2013	96683	1602129	4.99	6.20	11%	
2014	102589	1771298	5.01	6.25	6%	
2015	111370	2008748	5.05	6.30	9%	
2016	120683	2260084	5.08	6.35	8%	
2017	129738	2527537	5.11	6.40	8%	8.21%

Regression analysis of same is given in figure below.

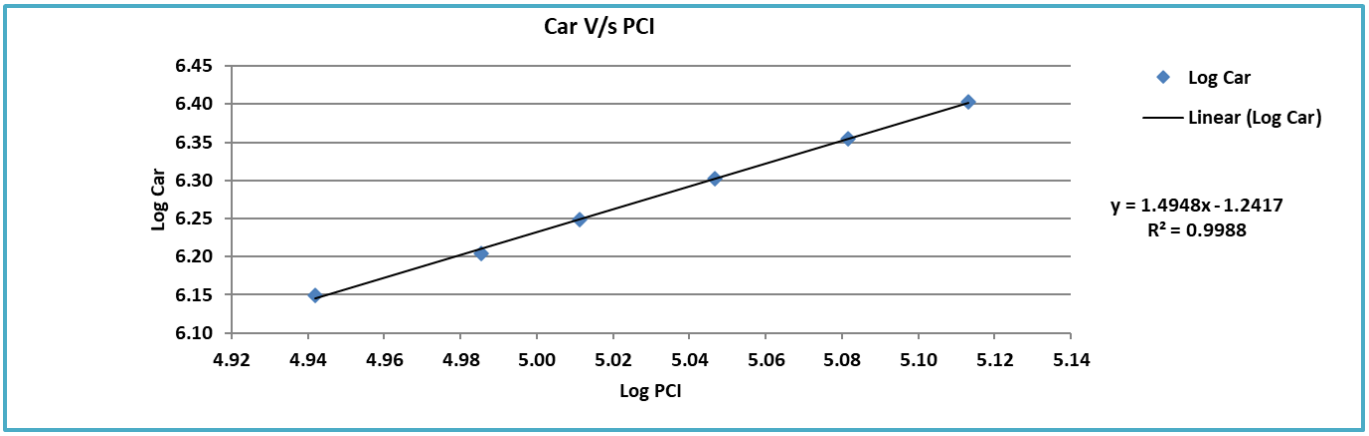


Figure 5-5 : Regression and Elasticity PCI vs. Car – Extrapolation Gujarat

Table 5-7 : Population Vs Bus Gujarat

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	60439692	67546	7.78	4.83		
2013	61563037	70615	7.79	4.85	2%	
2014	62684375	72998	7.80	4.86	2%	
2015	63803304	76435	7.80	4.88	2%	
2016	64919427	82734	7.81	4.92	2%	
2017	66032362	74855	7.82	4.87	2%	1.79%

Regression analysis of same is given in figure below.

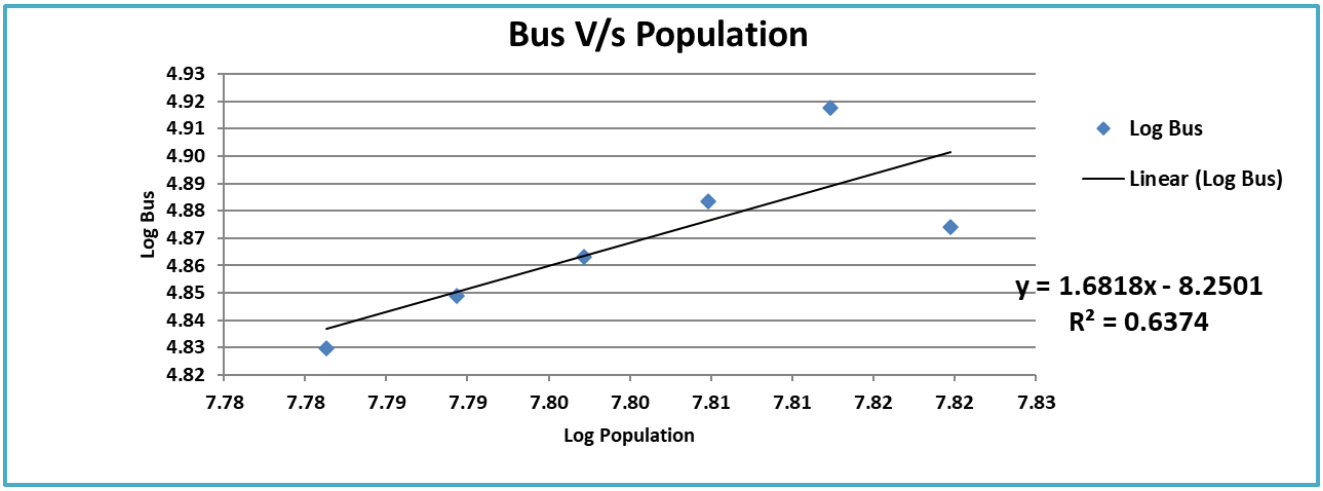


Figure 5-6 : Regression and Elasticity Population vs. Bus – Extrapolation Gujarat

Elasticity of LCV has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-8 : LCV Vs NSDP Gujarat

Year	NSDP	LCV	Log NSDP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	532809	448958	5.73	5.65		
2013	596659	499277	5.78	5.70	12%	
2014	641489	542918	5.81	5.73	8%	
2015	705629	589984	5.85	5.77	10%	
2016	774775	633599	5.89	5.80	10%	9.82%

The following figure depicts regression analysis and extrapolation.

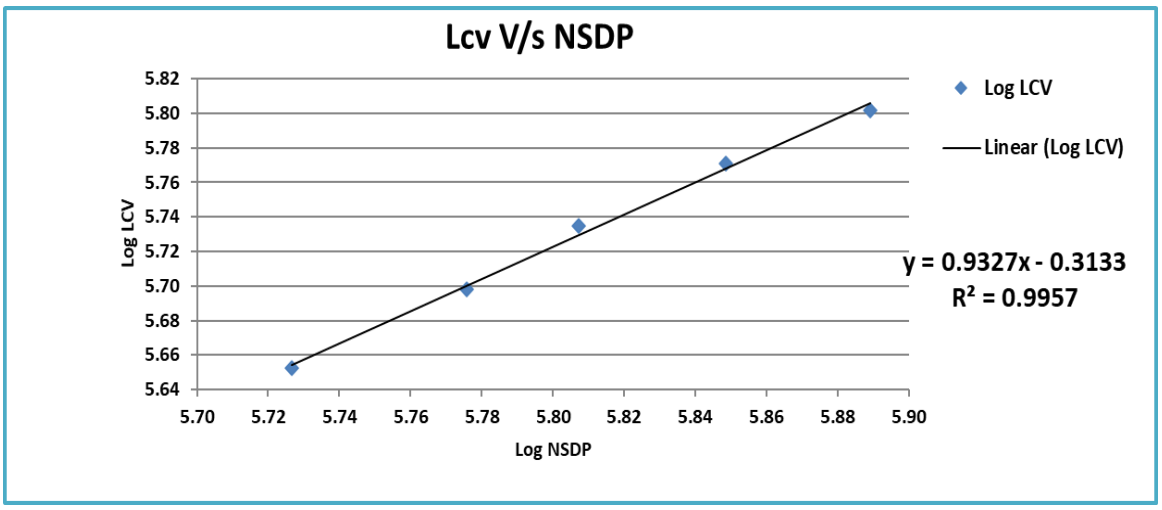


Figure 5-7 : Regression and Elasticity NSDP vs. LCV Traffic - extrapolation Gujarat.

Elasticity of Goods Traffic has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-9 : GOODS Traffic Vs NSDP Gujarat

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	532809	301533	5.73	5.48		
2013	596659	319207	5.78	5.50	12%	
2014	641489	332185	5.81	5.52	8%	
2015	705629	352225	5.85	5.55	10%	
2016	774775	375265	5.89	5.57	10%	
2017	843930	396061	5.93	5.60	9%	9.64%

The following figure depicts regression analysis and extrapolation.

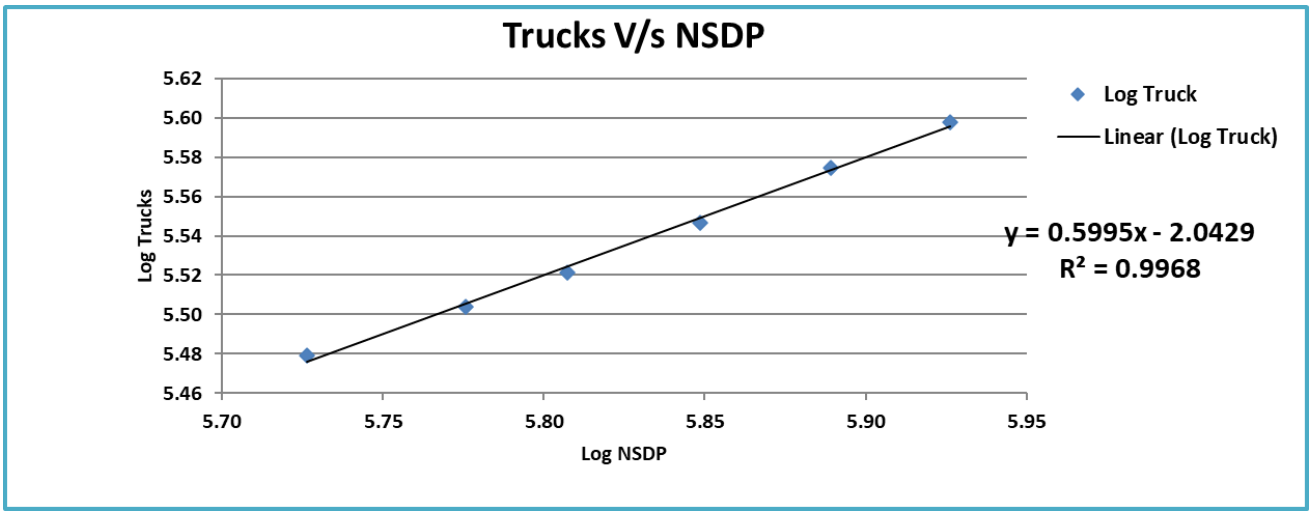


Figure 5-8 : Regression and Elasticity NSDP vs. Goods Traffic - extrapolation Gujarat.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-10 : Summary Regression Analysis Gujarat

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Gujarat	Car/Jeep	PCI	y = 1.4948x - - 1.2417	R^2 = 0.9988	1.4948	8.21%	12.27%	Good Regression
	Bus	Population	y = 1.6818x - - 8.2501	R^2 = 0.6374	1.6818	1.79%	3.00%	Fair Regression
	LCV	NSDP	y = 0.9327x - - 0.3133	R^2 = 0.9957	0.9327	9.82%	9.16%	Good Regression
	Truck	NSDP	y = 0.5995x - - 2.0429	R^2 = 0.9968	0.5995	9.64%	5.78%	Good Regression

The economic model for predicting growth is a good tool, however other local, regional, and national factors should also be considered before finalizing growth factors. Considering factors such as proposed developments and other influencing economic factors, moderated growth should be considered. These factors are discussed in subsequent sections.

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trends of growth. Project stretch of Udaipur to Gujarat on NH-8 is under tolling operation with current concessionaire and has three year of tolling history from 2017-18 (Part year). As traffic data available with the project concessionaire is of less than three years, we do not have sufficient data points to be able to establish a reliable past trend of traffic growth. A minimum of about 5 -6 years' traffic data is required for establishing a reliable past trend.

5.5 Other Factors Influencing Growth

There are many factors which have an impact on traffic growth. As discussed previously these factors can be economical, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

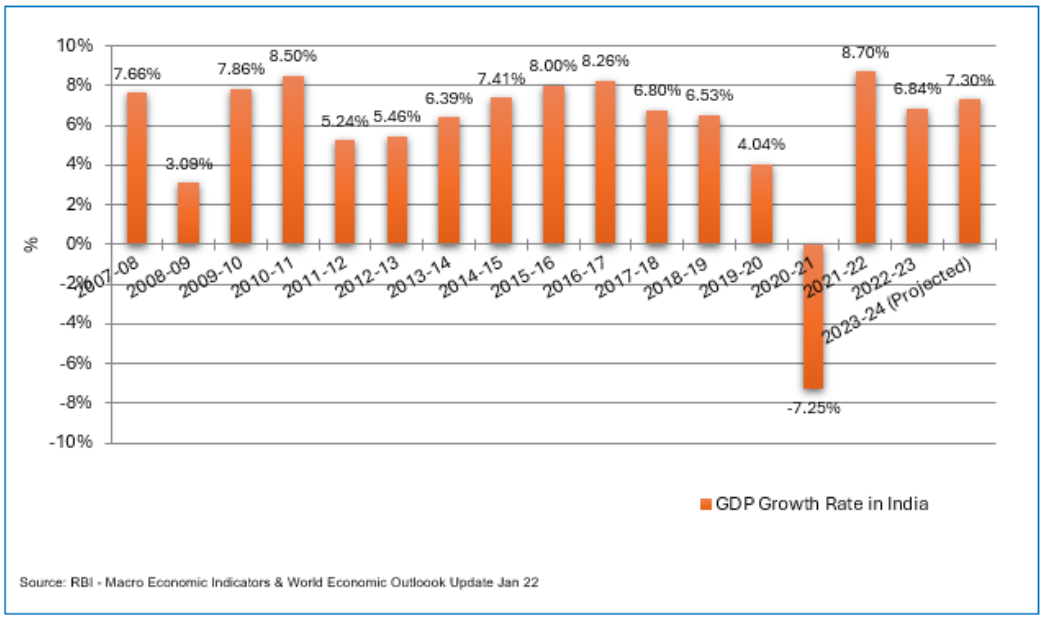


Figure 5-9 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had a slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. The government took major policy decisions including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honorable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into an opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on **Make -In- India** it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. The World Economic Outlook update also has predicted a growth rate of about 7.5 % in the year 2022-23.

5.6 Developments along and around the Project Corridor & State

Project stretch passes through mineral rich belt of marble and minerals.

Tourism, agriculture, and mineral industries contribute to Udaipur's diverse economic base. Udaipur sees major tourist footfall throughout the year owing to its picturesque landscape, lakes, and historic palaces and architecture. Shamlaji is a major Hindu pilgrimage dedicated to God Vishnu. Each year an annual fair is held in October which attracts huge crowds from the surrounding region. Udaipur district is rich in lead, zinc, silver, phosphate, calcite, copper and limestone minerals. Udaipur is known for its marble which is mined, processed, and exported across the world. Nathdwara in the north of asset is one of biggest extractors of marble and limestone minerals. Hindustran Zinc, which is the world's second largest zinc producer, is based out of Udaipur.

Rishbhdeo is one of the major religious and industrial settlement on project corridor. This region has more than 200 mines of green marble. Rishabhdeo is the largest miner of green

marble.9 0 per-cent of green marble in the world is produced in Rishabhdev. The turnover of marble industry is more than 500 crores. It also gives employment to many labourers. Beyond this the town also has spinning and weaving mill by lnjbhilwara group. Thus, it gives employment to 10000 local workers. The presence of temple also leads to income of many people.

The growth of Rajasthan has been comparable to the national average economic growth. Rajasthan is rich in natural resources and benefits from its strategic geographic location in India. The state is pre-eminent in quarrying, mining in India and has been a leader in crude oil extraction over the past the few years. Moreover, Rajasthan is also a relevant tourism attractor in India. Considering the scenario, it may be assumed that the traffic growth on the project highway would remain high and there are minimal risks in terms of growth.

Table 5-11 : GDP of India, Rajasthan and other important states

Year	India (GDP)	Bihar	Haryana	Madhya Pradesh	Maharashtra	Odisha	Punjab	Rajasthan	Uttar Pradesh	Uttarakhand	West Bengal	Delhi
1980-81	12336	514	357	623	1464	529	504	560	1631	138	830	269
1981-82	13030	543	371	639	1498	528	551	607	1670	141	808	291
1982-83	13411	548	394	668	1556	497	568	620	1800	152	840	328
1983-84	14464	601	402	702	1654	597	578	761	1871	158	939	320
1984-85	15037	658	418	668	1675	569	623	706	1900	161	964	333
1985-86	15663	672	493	726	1807	635	670	704	1975	167	1005	386
1986-87	16339	725	493	694	1832	643	694	771	2060	174	1045	411
1987-88	16917	685	484	789	1955	623	730	718	2154	182	1101	447
1988-89	18635	772	602	847	2159	754	769	1014	2434	206	1148	486
1989-90	19778	759	610	865	2515	805	834	993	2502	212	1188	531
1990-91	20824	831	674	987	2629	668	849	1149	2651	224	1251	553
1991-92	21122	784	688	916	2620	753	888	1061	2662	225	1349	638
1992-93	22254	737	688	983	3017	740	930	1220	2690	228	1389	660
1993-94	23519	755	719	1088	3349	788	970	1121	2757	233	1490	705
1994-95	25023	842	771	1107	3414	826	995	1325	2901	254	1594	790
1995-96	26846	712	787	1174	3791	864	1032	1374	2995	251	1713	804
1996-97	28987	893	879	1252	3941	804	1107	1535	3327	267	1832	915
1997-98	30234	850	887	1318	4158	920	1137	1721	3292	270	1985	1063
1998-99	32255	904	934	1405	4324	948	1203	1797	3316	274	2112	1116
1999-00	34837	950	1002	1552	4735	1008	1267	1801	3440	274	2264	1170
2000-01	36282	1106	1081	1426	4589	982	1309	1743	3511	308	2343	1215
2001-02	38236	1043	1165	1528	4751	1042	1326	1941	3575	323	2512	1262
2002-03	39719	1175	1236	1449	5079	1034	1348	1708	3690	353	2600	1359
2003-04	42883	1099	1358	1611	5471	1185	1433	2251	3885	381	2753	1433
2004-05	45906	1238	1475	1664	5948	1340	1504	2196	4079	431	2936	1588
2005-06	50257	1207	1608	1748	6810	1399	1577	2344	4317	492	3121	1752
2006-07	55066	1416	1791	1907	7748	1574	1748	2620	4660	551	3366	1969
2007-08	60199	1489	1931	1997	8650	1708	1899	2739	4959	648	3627	2191
2008-09	64248	1716	2080	2250	8786	1837	2004	2969	5336	716	3774	2464
2009-10	69769	1798	2340	2463	9634	1852	2132	3142	5668	839	4067	2667
2010-11	75987	2073	2498	2592	10732	1968	2270	3614	6120	927	4313	2888
2011-12	81069	2285	2712	2824	11222	2042	2392	3953	6451	1020	4471	3147
2012-13	85463	2369	2894	3069	11842	2163	2518	4098	6736	1095	4838	3342
2013-14	90636	2469	3142	3226	12671	2331	2675	4343	7075	1178	5247	3565
2014-15	97121	2557	3314	3394	13322	2359	2777	4656	7297	1257	5633	3882
2015-16	105033	2749	3612	3597	14417	2557	2926	4981	7894	1355	-	4291
2016-17	112476	3033	3927	4129	15744	2828	3095	5352	8457	1448	-	4658
2017-18	119762	-	-	4432	-	3029	-	5736	9011	1547	-	5035
Growth 1981-2018	6.34	5.05	6.88	5.44	6.82	4.83	5.17	6.49	4.73	6.75	5.79	8.24
Growth 1994-2018	7.02	6.23	7.66	6.03	6.96	5.77	5.17	7.04	5.06	8.20	6.54	8.53

Growth 2000-2018	7.10	7.07	8.37	6.00	7.32	6.30	5.40	6.65	5.50	10.10	6.27	8.45

5.7 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as below. The rate of growth is moderate in light of overall regional trends. Growth of multi-Axle is kept slightly higher as trend of technological advances in logistic industry favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, the rate of growth diminishes. The same growth rate is not sustainable for long. Traffic growth is suitably stepped down for future years.

Growth rates are recommended for three scenarios for sensitivity analysis namely **Optimistic, Pessimistic** and **Most Likely** with a positive and negative variation 0.5% from Most Likely case for corridor in both states.

5.7.1 Recommended Growth Rates of Traffic for Project Stretch

Table 5-12 : Recommended Growth Rates Optimistic

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	9.44%	8.82%	8.21%	7.60%	7.01%	6.43%
Bus	5.26%	4.95%	4.64%	4.35%	4.07%	3.79%
LCV	3.55%	3.09%	2.64%	2.19%	1.75%	1.31%
2- Axle	3.73%	3.35%	2.96%	2.58%	2.21%	1.84%
3 - Axle	5.82%	5.20%	4.59%	3.99%	3.39%	2.80%
4 to6 Axle	6.52%	5.82%	5.13%	4.45%	3.78%	3.12%
7 and Above Axle	6.52%	5.82%	5.13%	4.45%	3.78%	3.12%

Table 5-13 : Recommended Growth Rates Pessimistic

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	8.94%	8.32%	7.71%	7.10%	6.51%	5.93%
Bus	4.76%	4.45%	4.14%	3.85%	3.57%	3.29%
LCV	3.05%	2.59%	2.14%	1.69%	1.25%	0.81%
2- Axle	3.23%	2.85%	2.46%	2.08%	1.71%	1.34%
3 - Axle	5.32%	4.70%	4.09%	3.49%	2.89%	2.30%
4 to6 Axle	6.02%	5.32%	4.63%	3.95%	3.28%	2.62%
7 and Above Axle	6.02%	5.32%	4.63%	3.95%	3.28%	2.62%

Table 5-14 : Recommended Growth Rates Most Likely

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	9.19%	8.57%	7.96%	7.35%	6.76%	6.18%
Bus	5.01%	4.70%	4.39%	4.10%	3.82%	3.54%
LCV	3.30%	2.84%	2.39%	1.94%	1.50%	1.06%
2- Axle	3.48%	3.10%	2.71%	2.33%	1.96%	1.59%

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
3 - Axle	5.57%	4.95%	4.34%	3.74%	3.14%	2.55%
4 to6 Axle	6.27%	5.57%	4.88%	4.20%	3.53%	2.87%
7 and Above Axle	6.27%	5.57%	4.88%	4.20%	3.53%	2.87%

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in the previous section of the report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for the following three cases of growth up to concession period.

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza - 348.450 KM

(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	6841	834	832	2428	1849	5027	9	17820	46081
2025-26	7444	861	873	2509	1945	5320	9	18961	48697
2026-27	8100	888	916	2592	2047	5630	9	20182	51473
2027-28	8815	916	961	2679	2154	5958	9	21492	54423
2028-29	9591	945	1009	2768	2266	6305	9	22893	57551
2029-30	10436	974	1058	2860	2384	6672	9	24393	60868
2030-31	11292	1000	1107	2945	2494	7014	9	25861	64034
2031-32	12219	1027	1158	3032	2608	7373	9	27426	67373
2032-33	13222	1055	1211	3122	2727	7751	9	29097	70905
2033-34	14308	1083	1267	3214	2853	8149	9	30883	74646
2034-35	15483	1112	1326	3309	2984	8567	9	32790	78600
2035-36	16661	1136	1383	3395	3103	8947	9	34634	82310
2036-37	17929	1161	1443	3483	3227	9345	9	36597	86223
2037-38	19293	1187	1506	3573	3356	9761	9	38685	90344
2038-39	20760	1214	1572	3665	3490	10195	9	40905	94680
2039-40	22338	1241	1641	3760	3629	10649	9	43267	99251
2040-41	23905	1262	1708	3843	3752	11052	9	45531	103482
2041-42	25581	1284	1777	3928	3879	11470	9	47928	107915
2042-43	27375	1306	1849	4015	4010	11904	9	50468	112565

Table 6-2 : Total Tollable Traffic @ Toll Plaza - Chainage 348.450 KM
(Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	6841	834	832	2428	1849	5027	9	17820	46081
2025-26	7410	855	869	2497	1935	5294	9	18869	48459
2026-27	8026	877	907	2568	2025	5576	9	19988	50974
2027-28	8693	899	948	2640	2119	5873	9	21181	53632
2028-29	9416	922	990	2715	2219	6186	9	22457	56449
2029-30	10199	945	1034	2792	2324	6515	9	23818	59425
2030-31	10985	965	1076	2861	2418	6817	9	25131	62215
2031-32	11831	986	1121	2931	2517	7133	9	26528	65156
2032-33	12742	1007	1167	3003	2620	7464	9	28012	68251
2033-34	13724	1028	1215	3076	2728	7810	9	29590	71509
2034-35	14782	1050	1265	3152	2840	8171	9	31269	74938
2035-36	15833	1067	1314	3218	2939	8493	9	32873	78106
2036-37	16958	1084	1364	3285	3041	8828	9	34569	81421
2037-38	18163	1103	1416	3353	3147	9177	9	36368	84903
2038-39	19453	1122	1470	3423	3257	9539	9	38273	88552
2039-40	20835	1141	1526	3494	3371	9915	9	40291	92378
2040-41	22193	1155	1580	3554	3468	10240	9	42199	95852
2041-42	23639	1170	1636	3615	3568	10576	9	44213	99484
2042-43	25179	1185	1694	3676	3671	10923	9	46337	103274

Traffic projections for Most Likely scenario is given as under

Table 6-3 : Total Tollable Traffic @ Toll Plaza - Chainage 348.450 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	6841	834	832	2428	1849	5027	9	17820	46081
2025-26	7427	858	871	2503	1940	5307	9	18915	48578
2026-27	8063	882	912	2580	2036	5603	9	20085	51224
2027-28	8753	907	954	2660	2137	5915	9	21335	54025
2028-29	9502	933	999	2742	2243	6245	9	22673	56997
2029-30	10316	960	1045	2827	2354	6593	9	24104	60143
2030-31	11137	983	1091	2904	2457	6914	9	25495	63121
2031-32	12023	1007	1139	2983	2564	7251	9	26976	66262
2032-33	12978	1031	1189	3064	2675	7605	9	28551	69572
2033-34	14010	1056	1241	3146	2791	7976	9	30229	73061
2034-35	15125	1081	1295	3231	2912	8365	9	32018	76744
2035-36	16238	1102	1348	3307	3021	8716	9	33741	80182
2036-37	17432	1123	1403	3384	3134	9082	9	35567	83789
2037-38	18714	1144	1460	3463	3251	9464	9	37505	87581
2038-39	20090	1166	1520	3543	3372	9861	9	39561	91559
2039-40	21568	1188	1581	3625	3498	10275	9	41744	95740
2040-41	23027	1205	1641	3696	3608	10638	9	43824	99581
2041-42	24584	1222	1704	3768	3721	11013	9	46021	103595
2042-43	26248	1240	1768	3841	3838	11402	9	48346	107799

6.2 Modification in Concession Period

As per Article 29 of the concession agreement, if actual traffic on the project falls short or exceeds Target Traffic on project highway on defined date, concession period shall be modified subject to calculation stipulated therein. For Udaipur – Gujarat Border on NH-8 project stretch, the Target Date and Target Traffic are defined as under:

Target Date – 21st September 2026

Target Traffic - 61435 in PCU

It was observed that as per traffic projections, average traffic volume falls short of target traffic in all scenarios. The probable extension of the concession period is estimated according to article 29 of the concession agreement which comes to about a year. Traffic forecast and revenue projections are done for probable extended period accordingly.

Most Likely

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2026	61435	51276	-17%	25%	20%	21	4.2

Optimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2026	61435	51531	-16%	24%	20%	21	4.2

Pessimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2026	61435	51022	-17%	25%	20%	21	4.2

CHAPTER 7

FORECAST OF TOLL REVENUE

7.1 General

This chapter presents the tolling rate calculations, categories and toll revenue of the project.

7.2 Discount Categories

The fee schedule in the CA of Udaipur- Gujarat Border section of NH-8 is based on the old toll policy. As per the Toll Notification (Schedule - G) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent user's monthly pass would be issued at fee 30 time the single journey fee.
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travelers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: There are several categories of local discounts.
    a) Local Car Jeep Van I - Rs. 275 per month
    b) Other local Commercial at 50% of the regular single journey toll fee

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.

The formula for determining the applicable rate of fee shall be as follows:-

$$\text{Applicable rate of fee} = \text{base rate} + \text{base rate} \times \left\{ \frac{\text{WPI A-WPI B}}{\text{WPI B}} \right\} \times 0.4$$

Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2018-19. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. The following graph provides historical rate of inflation (WPI) in India. Data has been sourced from the Office of Economic Advisor web site (www.eaindustry.nic.in) WPI for year 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series.

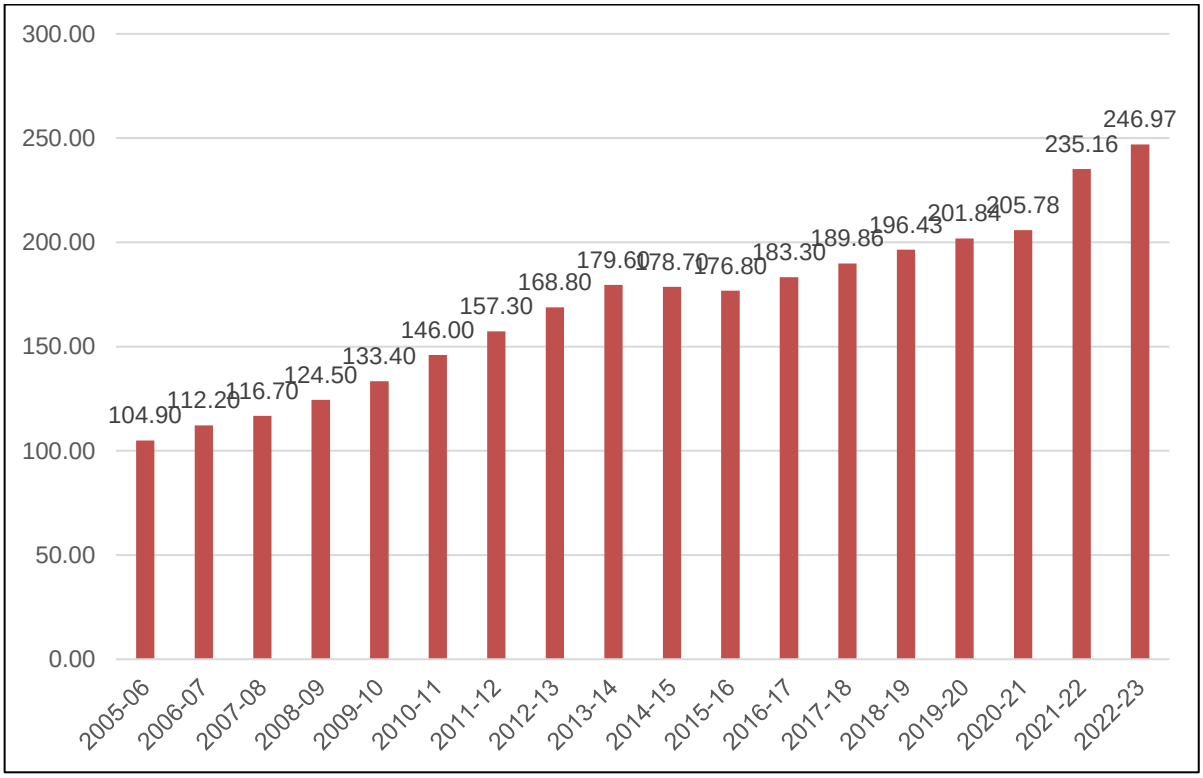


Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in the last few years is steadily growing. It grew by the range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

7.3 Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45
Oversized Vehicles (7 or more Axles)	4.20

There is no bypass or structure to be factored in for rates calculations.

Toll rates are calculated as per guidelines provided in schedule R (rounded to nearest Rs.) for the concession period and are given below.

Thus, worked out rates for various categories of vehicle and discounts are given as under

Table 7-2 : Toll Rates for Single Journey @ Km TP-348.450 KM

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial Vehicle	Multi Axle	Oversized Vehicle
2024-25	175	285	600	600	655	940	1145
2025-26	185	300	630	630	685	985	1200
2026-27	195	315	660	660	720	1035	1260
2027-28	205	330	695	695	755	1090	1325
2028-29	215	350	730	730	795	1145	1390
2029-30	225	365	765	765	835	1200	1465
2030-31	240	385	805	805	880	1265	1540
2031-32	250	405	850	850	925	1330	1620
2032-33	265	425	890	890	975	1400	1700
2033-34	275	450	940	940	1025	1470	1790
2034-35	290	470	985	985	1075	1550	1885
2035-36	305	495	1040	1040	1135	1630	1985
2036-37	325	520	1095	1095	1195	1715	2090
2037-38	340	550	1150	1150	1255	1805	2200
2038-39	360	580	1215	1215	1325	1905	2315
2039-40	380	610	1280	1280	1395	2005	2440
2040-41	400	645	1345	1345	1470	2110	2570
2041-42	420	675	1420	1420	1550	2225	2710
2042-43	440	715	1495	1495	1630	2345	2855

Table 7-3 : Toll Rates for Return Journey @ TP-348.450 KM

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial Vehicle	Multi Axle	Oversized Vehicle
2024-25	265	430	900	900	980	1410	1715
2025-26	280	450	945	945	1030	1480	1800
2026-27	295	475	990	990	1080	1555	1890
2027-28	310	495	1040	1040	1135	1630	1985
2028-29	325	520	1095	1095	1195	1715	2090
2029-30	340	550	1150	1150	1255	1805	2195
2030-31	355	575	1210	1210	1320	1895	2310
2031-32	375	605	1270	1270	1385	1995	2430
2032-33	395	640	1340	1340	1460	2100	2555
2033-34	415	670	1405	1405	1535	2205	2685
2034-35	440	705	1480	1480	1615	2320	2825
2035-36	460	745	1560	1560	1700	2445	2975
2036-37	485	785	1640	1640	1790	2575	3135
2037-38	510	825	1730	1730	1885	2710	3300
2038-39	540	870	1820	1820	1985	2855	3475
2039-40	565	915	1915	1915	2090	3005	3660
2040-41	595	965	2020	2020	2205	3170	3855
2041-42	630	1015	2130	2130	2325	3340	4065
2042-43	665	1070	2245	2245	2450	3520	4285

Table 7-4 : Toll Rates for Monthly Pass Local @ TP-348.450 KM

Year	Car
2024-25	340
2025-26	355
2026-27	375
2027-28	390
2028-29	410
2029-30	435
2030-31	455
2031-32	480
2032-33	505
2033-34	530
2034-35	560
2035-36	585
2036-37	620
2037-38	650
2038-39	685
2039-40	720
2040-41	760
2041-42	800
2042-43	845

Table 7-5 : Toll Rates for Monthly Pass @ TP-348.450 KM

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial Vehicle	Multi Axle	Oversized Vehicle
2024-25	5895	9520	19950	19950	21765	31285	38085
2025-26	6190	10000	20955	20955	22860	32860	40005
2026-27	6505	10505	22015	22015	24015	34525	42025
2027-28	6835	11040	23130	23130	25235	36275	44160
2028-29	7185	11605	24310	24310	26520	38125	46415
2029-30	7550	12195	25555	25555	27880	40075	48790
2030-31	7940	12825	26870	26870	29315	42135	51300
2031-32	8350	13485	28260	28260	30825	44315	53945
2032-33	8780	14185	29725	29725	32425	46610	56745
2033-34	9240	14925	31270	31270	34115	49040	59700
2034-35	9725	15705	32910	32910	35900	51605	62825
2035-36	10235	16530	34640	34640	37790	54320	66130
2036-37	10775	17405	36465	36465	39780	57185	69620
2037-38	11345	18330	38400	38400	41890	60220	73310
2038-39	11950	19305	40445	40445	44120	63425	77215
2039-40	12590	20335	42605	42605	46480	66815	81340
2040-41	13265	21425	44895	44895	48975	70400	85705
2041-42	13980	22580	47315	47315	51615	74195	90325
2042-43	14735	23805	49870	49870	54405	78210	95210

7.4 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under ***Optimistic***, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

7.5 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under all scenarios at each of the toll plaza up to 2042-43 years starting from the year 2023-24 are shown in tables below.

Table 7-6 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Year	TP-1	Total
2024-25	328.13	**328.13**
2025-26	363.64	**363.64**
2026-27	403.48	**403.48**
2027-28	449.65	**449.65**
2028-29	497.96	**497.96**
2029-30	551.72	**551.72**
2030-31	611.62	**611.62**
2031-32	677.66	**677.66**
2032-33	748.33	**748.33**
2033-34	826.21	**826.21**
2034-35	915.06	**915.06**
2035-36	1010.39	**1010.39**
2036-37	1111.48	**1111.48**
2037-38	1222.94	**1222.94**
2038-39	1351.99	**1351.99**
2039-40	1494.52	**1494.52**
2040-41	1633.93	**1633.93**
2041-42	1793.86	**1793.86**
2042-43	1967.45	**1967.45**

Table 7-7 : Toll Revenue Pessimistic Scenario

(Rs. Crores)

Year	TP-1	Total
2024-25	328.13	**328.13**
2025-26	361.84	**361.84**
2026-27	399.71	**399.71**
2027-28	443.33	**443.33**
2028-29	488.64	**488.64**
2029-30	538.84	**538.84**
2030-31	594.49	**594.49**
2031-32	655.58	**655.58**

Year	TP-1	Total
2032-33	720.53	**720.53**
2033-34	791.64	**791.64**
2034-35	872.66	**872.66**
2035-36	959.05	**959.05**
2036-37	1049.91	**1049.91**
2037-38	1149.64	**1149.64**
2038-39	1264.91	**1264.91**
2039-40	1391.57	**1391.57**
2040-41	1514.08	**1514.08**
2041-42	1654.38	**1654.38**
2042-43	1805.65	**1805.65**

Table 7-8 : Toll Revenue Most Likely Scenario

(Rs. Crores)

Year	TP-1	Total
2024-25	328.13	**328.13**
2025-26	362.78	**362.78**
2026-27	401.65	**401.65**
2027-28	446.50	**446.50**
2028-29	493.33	**493.33**
2029-30	545.22	**545.22**
2030-31	603.01	**603.01**
2031-32	666.58	**666.58**
2032-33	734.38	**734.38**
2033-34	808.81	**808.81**
2034-35	893.56	**893.56**
2035-36	984.35	**984.35**
2036-37	1080.32	**1080.32**
2037-38	1185.75	**1185.75**
2038-39	1307.72	**1307.72**
2039-40	1442.02	**1442.02**
2040-41	1572.74	**1572.74**
2041-42	1722.51	**1722.51**
2042-43	1884.60	**1884.60**

CHAPTER 8

CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Udaipur to Gujarat Border section of NH-8 in state of Rajasthan is nearing completion of six laning. The road is in sound condition and serves healthy traffic volumes. Project corridor is a part of the busy and prominent national highway NH-8 which connects Mumbai to Delhi and is part of golden quadrilateral. There are large number of townships, industrial corridors and other business establishments coming up along the project corridor. As discussed, the dominant portion of traffic is long route traffic, which is more sensitive towards the growth of national economy. As Indian economy is poised to grow at 7%+ post COVID-19, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give a positive impact to traffic flow on the project. The following can be considered as major outcomes of the study.

a) There is a good amount of tollable traffic running on the project.

b) Project corridor has potential to witness traffic growth @ 6-8% annually in near future due to various development in area and overall development of economy.

c) The Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road.

Based on the above it can be considered a stable healthy project from the traffic and revenue point of view.

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OCTOBER 2024

TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

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TRAFFIC STUDY & REVENUE
PROJECTION REPORT
(FINAL)

OCTOBER 2024

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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic	**NHAI**	-	National Highway Authority of India
BOT	-	Build Operate Transfer	**NHDP**	-	National Highways Development Project
CAGR	-	Compound Annual Growth Rate	**NSDP**	-	Net State Domestic Product
CTV	-	Classified traffic volume	**O&M**	-	Operation & Maintenance
DBFOT	-	Design, Build, Finance, Operate & Transfer	**PCDP**	-	Per Capita Domestic Product
EME	-	Earth Moving Equipment	**PCI**	-	Per Capita Income
GDP	-	Gross Domestic Product	**PCU**	-	Passenger Car Unit
GSDP	-	Gross State Domestic Product	**PSC**	-	Pre-stressed Concrete
HCM	-	Heavy Construction Machinery	**RCC**	-	Reinforced cement concrete
HCV	-	Heavy Commercial Vehicle	**RHS**	-	Right Hand Side
HTMS	-	Highway Traffic Management System	**SH**	-	State Highway
IRC	-	Indian Road Congress	**TP**	-	Toll Plaza
IRR	-	Internal Rate of Return	**WPI**	-	Wholesale Price Index
LCV	-	Light Commercial Vehicle	**SIR**	-	Special Investment Region
LHS	-	Left Hand Side	**c.**	-	Circa
LGV	-	Light Goods Vehicle	**ROB**	-	Railway Over Bridge
MAV	-	Multi Axle Vehicle	**MDR**	-	Major District Road
MORTH	-	Ministry of Road Transport and Highways	**ODR**	-	Other District Road
NH	-	National Highway	**CA**	-	Concession Agreement
PCC	-	Plain Cement Concrete	**RMT**	-	Running Meter
CR	-	Coarse Rubble			

CHAPTER 1

INTRODUCTION

1.1 Background

Project stretch from Santalpur to Samakhiyali (Km 339.200 to km 430.100) is a 90.90 km long 4-lane National Highway Section on NH-27 in the state of Gujarat. NH-27 which is basically the east west connector of country.

Project stretch is gateway link to both Kandla and Mundra ports and also to region of Saurashtra from northern part of India. Stretch is also part of Jamnagar – Amritsar Expressway which will boost the connectivity of Saurashtra and both ports from north Indian sates of Punjab, Haryana, Rajasthan, and part of Uttar Pradesh.

The Government of India had entrusted National Highways Authority of India (NHAI) with developing of road infrastructure to match growing transportation demands of expanding economy. The Authority had resolved to undertake the six laning of existing four lane highway section from Santalpur to Samakhiyali (Km 339.200 to km 430.100) on BOT basis. This report is part of the traffic and revenue assessment of stretch including future growth projections. Project Highway alignment is depicted in the following figure.

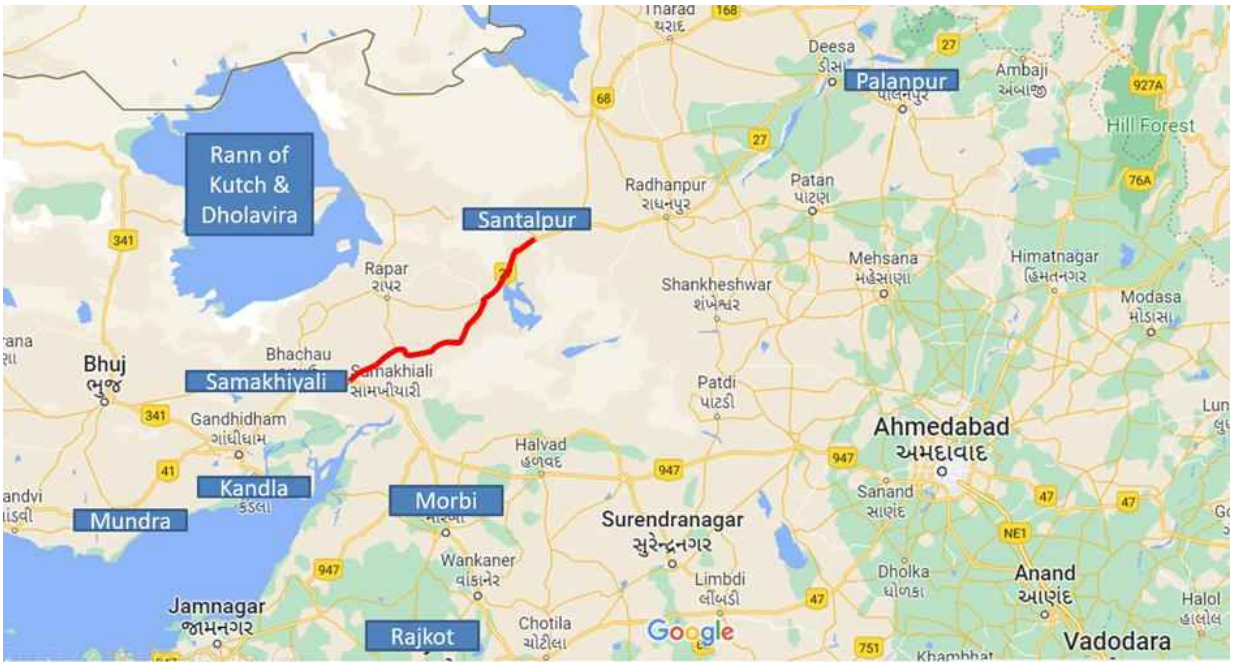


Figure 1-1 : Alignment of Project Stretch

1.2 Objective of the Study

M/s IRB Infrastructure Developers Limited (IRB) intends to participate in bidding for Six Laning of Santalpur- Samakhiyali section of NH-27 on BOT basis.

This report named as **"Traffic Study & *Toll Revenue Projection Report*"** mainly focuses on traffic and revenue aspects of the project. Other parameters like competing road, area developments etc. have been considered from a traffic development point of view.

1.2.1 Scope of Services

The broad scope of work covered in the assignment is as follows.

a) Analysis of Traffic Growth
b) Toll Rate Growth
c) Revenue Forecasting

The Concessionaire has provided basic traffic data and other project details on the basis of which the above analysis has been carried out.

CHAPTER 2

PROJECT DETAILS

2.1 Project Stretch Description

Project stretch from Santalpur to Samakhiyali is gateway link for both the ports of Mundra and Kandla and also of Saurashtra region. The stretch is having combined traffic of NH-27 which is coming from Palanpur / Radhanpur Abu Road and northern link from north Indian states via NH-68 and small section of SH-127 from Suigaon to Sidhadha on project highway. The following figure shows this the alignment of the project highway in the above context.



Figure 2-1 : Project Alignment with Toll Plaza

As discussed previously, the project stretch is gateway link to both ports of Kandla and Mundra and also area of Saurashtra. On the north of the project stretch lies the great Rann of Kutch which is also emerging as an important tourist destination of area. The presence of the historical Harrapan site of Dholavira in Rann of Kutch adds value to historical tourism.

2.2 Project Corridor Illustration

Project stretch has one Toll Plaza at Makhel. It has six lanes on either side including an oversized lane. As observed and inquired, Toll Operations are running smoothly and there no significant violations or forced exemption on toll plaza.



Figure 2-2 : Photographs showing Project Corridor

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from a client for a project.

- Classified traffic volume counts at toll plaza location on Samkhayali–Santalpur section of NH-27 for year 2024-2025.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project.
- Establish base year traffic.
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1 below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. No	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	Km 394.200 Toll Plaza at Makhel	AADT for Year 2024-2025 (Four months data from April 2024 to July 2024)	AADT for Year 2024-2025 (Four months data from April 2024 to July 2024).	AADT for Year 2024-2025 (Four months data from April 2024 to July 2024).	AADT for Year 2024-2025 (Four months data from April 2024 to July 2024).	AADT for Year 2024-2025 (Four months data from April 2024 to July 2024).

3.2 Classified traffic Volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations based on monthly data shared with NHAI.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in the table below.

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since the project highway is currently under toll operation, the data collected corresponds to the category of tollable vehicles. The following are the types of vehicles as per concession agreement.

- Car / Jeep / van
- Min Bus /LCV
- Truck / Bus
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of the report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data for the year 2024-2025(traffic data from April 2024 to July 2024).

Since the traffic data available for this update is for only four months, from April 2024 to July 2024, it may not represent the whole year traffic. Hence a seasonality factor for balance part of year has been applied to average traffic of current four months to arrive at Annual Average Daily Traffic of base year 2024-25. Same corrected traffic is used for future projections and revenue calculations. The following table shows historical traffic on project stretch and derived Annual Average Daily Traffic (AADT) for year 2024-25.

Table 3-3 : Traffic Data at Makhel Toll Plaza at Km 394+200

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2024-25
1	Car	1682
2	LCV	91
3	Bus	226
4	Truck	291
5	3-Axle	223
6	Multi Axle	7453
7	Oversized Vehicle	11
	Total	**9977**

3.4 Data Analysis

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in "IRC-64-1990: Guidelines for Capacity of Roads in Rural areas". The adopted passenger car unit values (PCU) are presented in ***Table*** 3-4.

Table 3-4 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-5 : Traffic in PCU at Project Stretch Base Year 2024-25

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
2024-25	Makhel at Km 394.200	9977	37627	3.77

It can be observed from above that project traffic has PCU index more than 3.5 which is an indicator of high proportion of commercial traffic in traffic mix in project corridor.

3.4.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.

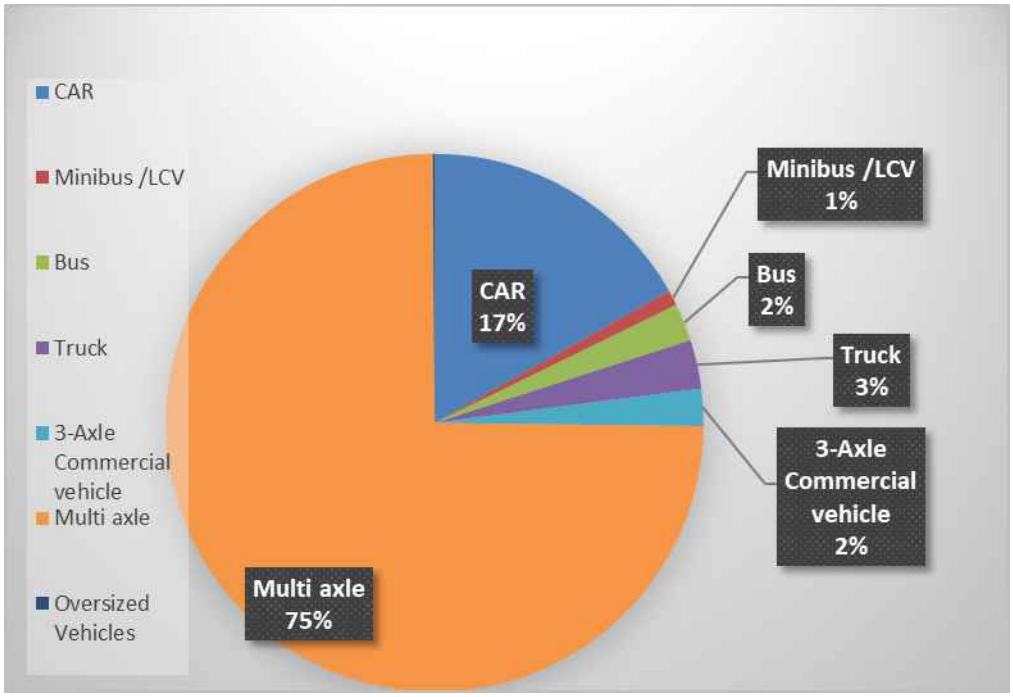


Figure 3-1 : Model Split of Tollable Vehicle

It is observed that car traffic forms about 17% of total traffic at toll plaza locations while multi axle commercial vehicles are about 77% of total traffic. Truck / Bus and LCV share about 5% and 1% of traffic volume respectively.

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

The following table provides numbers of vehicles falling in each of above category on base year 2024-25

Table 3-6 : Journey Type Bifurcation of Traffic at Makhel TP KM 394.200

Sr. No	Type	Traffic Volume (Nos.) 2024-25
1	Single Journey	8453
2	Return Journey	1414
3	Local Commercial Single Journey	107
4	Monthly Pass Local	2
5	Monthly Pass	2

Most dominant part of the above is the single journey type followed by return journey at project stretch. Monthly pass commuters are a very low fraction of the total traffic on the project corridor.

The single journey component in total traffic numbers is as high as 85%. Return journey component is 14%. The number of monthly pass Local is 0% and Local Commercial Single journey is 1% at Makhel toll plaza.

It is observed that the project corridor demonstrates pattern of single journey dominated mix of traffic which is typical of major national highways having more long-distance traffic.

3.5 Secondary Data Collection

There are several other factors which have a substantial impact on traffic patterns and growth on any project corridor. The following are some of such important factors.

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on the project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data
   a) GDP
   b) NSDP
   c) Population Growth
   d) Per Capita Income growth
   e) Industrial Growth
   f) Special Industry Potential
   g) Regional and National development vision / plan
   h) Any other relevant data
3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

Highway corridors behave like integrated circuit networks and more often than not every road is connected to various networks having different origins and destinations. Traffic running on these networks behaves like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network.

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc,
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Development in the Project Influence Area

The Project Highway acts as gateway for the traffic of northern, western and part of central India leading to the major western ports of Kandla and Mundra in Gujarat. The Project Highway would majorly cater to the export and import traffic. The contribution of Kandla and Mundra port is about 60% of total traffic at project stretch. Hence, growth and expansion at port will have a major positive impact on project traffic.



Brief details of key influencing establishments around the project corridor are as summarized below:

a. Kandla Port



- Kandla is the largest Cargo handling major government port with a capacity of approximately 120 MMTA. It shares about 15% of all major port traffic. The port has shown good consistent growth over past years.
- Kandla Port handles a variety of cargo ranging from Bulk Cargo like Coal, Grain, Fertilizer, Minerals, Ores, Steel, Edible Oils, Chemicals, and Petroleum Products to Container Cargo, Automobiles and Crude Oil.
- Petroleum Oil Lubricants ("POL") is about 64% of total cargo handled by the Port.
- At present Kandla is having a Container Terminal with a capacity of 0.75 MTEU.
- The Government of India has recently approved the development of two new mega container terminals at Tuna-Tekra in Kandla Port at an estimated cost of ~ Rs 6,000 crores. This would result in increase in capacity of dry cargo from 60MMTA to about 79 MMTA and increase in container cargo capacity from 6 lakh TEU to 26 lakh TEU.



- The Container Terminal and Multipurpose Cargo Terminal are expected to be completed in ~FY25 / FY26 at a total expenditure of ~Rs.

6000 Cr. The development of the two mega terminals of Container & Multipurpose Cargo is expected to induce migration of some of the traffic from JNPT, Mumbai to Kandla and Mundra port in Gujarat.

- The above development of two major terminal is expected to give high traffic growth on Project Highway.
- **DP World wins bid for development of a mega-container terminal at India's Deendayal Port**
  - DP World has won a major concession to develop, operate and maintain the mega-container terminal at Deendayal port in Gujarat, on the western coast of India.
  - The project involves the construction of a mega-container terminal at Tuna-Tekra through a Public-Private Partnership (PPP). Once complete, the terminal will include a 1,100-metre berth and will be capable of handling vessels carrying more than 18,000 TEUs. Total capacity will be 2.19 million TEUs.
  - The contract was awarded by the Deendayal Port Authority under on a Build-Operate-Transfer (BOT) basis.
  - Once complete, the terminal will help unlock future container traffic growth in India, catering to exports and imports from Northern, Western and Central India, reducing logistics cost and enhancing efficiencies across supply chains. The project will complement initiatives of the Government of India, such as the PM Gati Shakti Master Plan and National Logistics Policy, which has been introduced to provide greater focus on developing multimodal logistics infrastructure promoting economic growth.
  - DP World's strategic investments in ports and terminals in the country is aligned with the Indian Government's Vision 2047, which aims to quadruple the country's port handling capacity.

    Development of mega container terminal would have positive impact on project traffic as it would enhance the hinterland logistic relations and volume of export / import with Kandla port.

b. Mundra Port



- Mundra port is located further to Kandla port and is the largest private port in India with about 330 MMTA capacity, 24 berths & 10 Terminals. The port is owned by Adani Group having 12 ports in total. The mega port at Mundra is a major economic gateway that caters to the northern hinterland of India with multimodal connectivity.
- Mundra port has handled 144 MMT in year 20-21 which is highest by any India port.
- The port handles multiple products – coal, POL, Liquid, Dry Bulk. The Mundra port has expansion plans for various products including Waterfront Development, Multi- Purpose cargo and Liquid/ Gas/ Cryogenic Cargo handling quay development.
- The container handling capacity at Mundra port has shown a very impressive growth of over 15% in past 12 years starting with 0.92 MTEU in FY10 to 6.94 MTEU expected in FY23. The total Container handling capacity at Mundra port is 7.5 MTEU and would be operating at over 90% Capacity Utilization by end of FY23.



- Mundra port is coming up with expansion of Container Terminal of 1.2 MTEU at estimated expense of R. 1239 Cr. The expansion work of Container Terminal is under progress and is expected to be operational by FY24.
- Other growth drivers in long term at ports of Kandla and Mundra Ports will be increasingly adoption of China+1 policy by Europe and US market. The diversification

of manufacturing facilities to India in addition to other emerging Asian economies is expected to boost exports consistently over next 10 years.

- China decision to cap its steel production and no export of steel from Russia would help India steel export.
- Coal import has also seen a surge due to domestic shortage of Coal.
- Defence Corridor at Jhansi and also Tata Aircraft manufacturing plant at Vadodara would have some add on to port traffic.
- As per an ICRA report, the port traffic is expected to grow by 6-8% per year.
- The above development of major terminal is expected to give high traffic growth on Project Highway.

c. Barmer Refinery

- A 9 MTA capacity refinery and a 2 MTPA Petrochemical Complex is under construction at Pachpadra near Barmer. The complex is a 74:26 Venture between HPCL & Govt. of Rajasthan being developed across 4400 acres at a cost of Rs. 5000 Cr.



- This refinery will relate to Jamnagar Refinery and Bathinda Refinery through Amritsar Jamnagar Expressway
- The refinery is likely to be commissioned by FY25.
- About 6.5 MTA crude will be transported from Gujarat for processing
- RIICO (Rajasthan State Industrial Development & Investment Corporation Limited) to develop PCPIR - Petroleum, Chemical and Petrochemical Investment Region in vicinity of Refinery cum Petrochemical Complex (area ~100km)
- Development of a third refinery enroute Jamnagar to Amritsar, viz; Bhatinda, Barmer and Jamnagar will lead to Petrochemical based traffic growth along Project Highway (via Amritsar Jamnagar Expressway).



d. Ceramic Cluster at Morbi



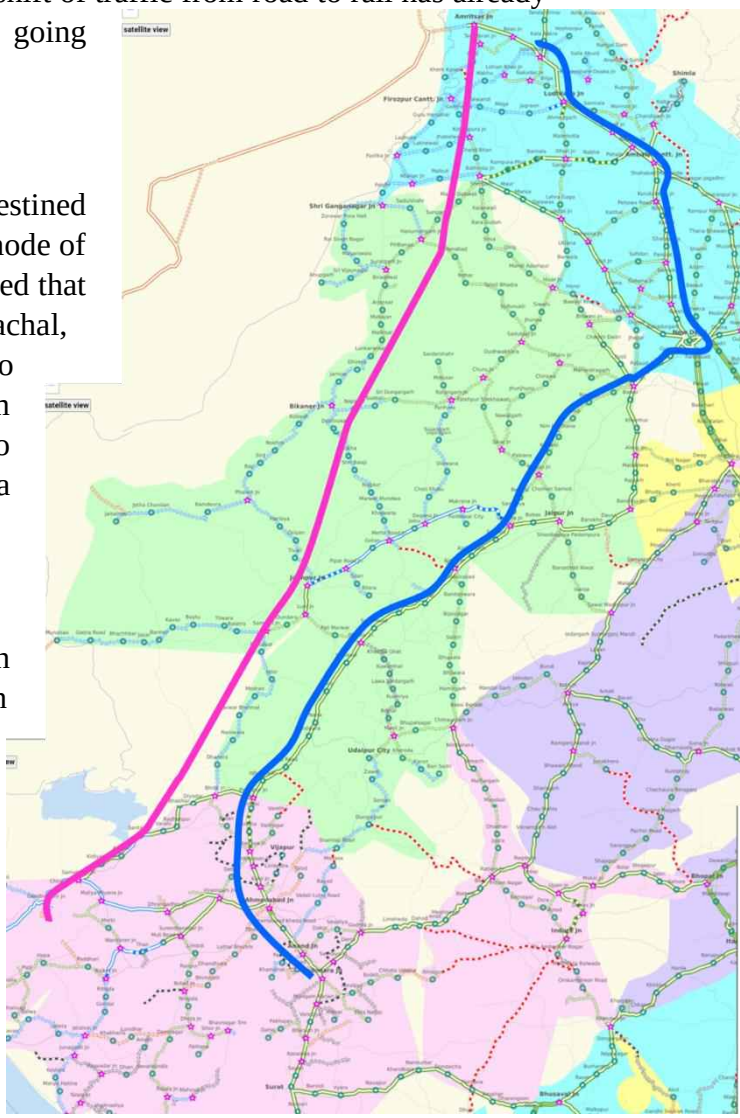
- Morbi accounts for 70% of total ceramic production in India and 2nd largest ceramic tile producing cluster in world.
- The cluster houses ~ 1,000 ceramic units, catering to 18 % of global demand and earns Rs 15,000 crore from exports.
- The ceramic cluster provides 10 Lakhs plus employment and produces over 14000 SQM tiles per day. The tiles are exported through Kandla and Mundra Port.
- The tiles are exported to more than 160 countries through Kandla and Mundra Port which are within 180 km from Morbi. This results in competitive pricing of the tiles in the international market due to savings in transportation costs. Domestic brands like Kajaria, HR Johnson, AGL, Somani outsource from Morbi. Global brands housed in Morbi include Daltile, Portobello, Emser, RAK, etc.
- Rajasthan has the highest proven reserves of China Clay followed by Gujarat. China clay mining is in Nagaur, Bikaner, Jaisalmer, Jodhpur, Bhilwara, and Chittorgarh.
- The Project highway is enroute to supply raw material to Morbi and finished products to domestic market in north India.
- The ceramic industry in India is expected to grow annually at a rate of ~9-10%.

Western DFCC -

Western DFCC is 1500 km plus dedicated freight corridor of railway which connects Dadri in Uttar Pradesh to JNPT in Mumbai. It is designed to carry double stack, higher capacity trains at higher speed. The section from Rewari to Palanpur is already operational since March 2021. The balance section from Palanpur-Makarpura-Sachin-Vaitarna-JNPT is expected to be commissioned in stages by end of FY24.

The Kandla and Mudra ports are connected to Palanpur by an operational western railway line. Since rail movement from Rewari to Palanpur and Palanpur to Kandla / Mundra are operational since long, the modal shift of traffic from road to rail has already taken place and no diversion is expected going forward.

Further, only the traffic originating and destined within 50-75 kms of the DFCC will find rail mode of transport logistically viable. It is also to be noted that the cargo originating from Punjab, Himachal, Haryana will have to travel from Sahnewal to Dadri, Rewari along Eastern DFCC from where it will have to take Western DFCC to reach Palanpur which is connected to Ports via Western Railway.



The traffic originating from the northern hinterland has to take rail route via. Eastern DFCC by 450 kms from Sahnewal upto Dadri and then take Western DFCC from Dadri to Palanpur by 786 kms and further Palanpur to Gandhidham/Kandla by western rail which is 300 kms. Thus, the total rail route will be over 1500 kms which is ~25% longer as compared to alternative road network via. upcoming Jamnagar-Amritsar Expressway having a length of ~ 1200 kms.

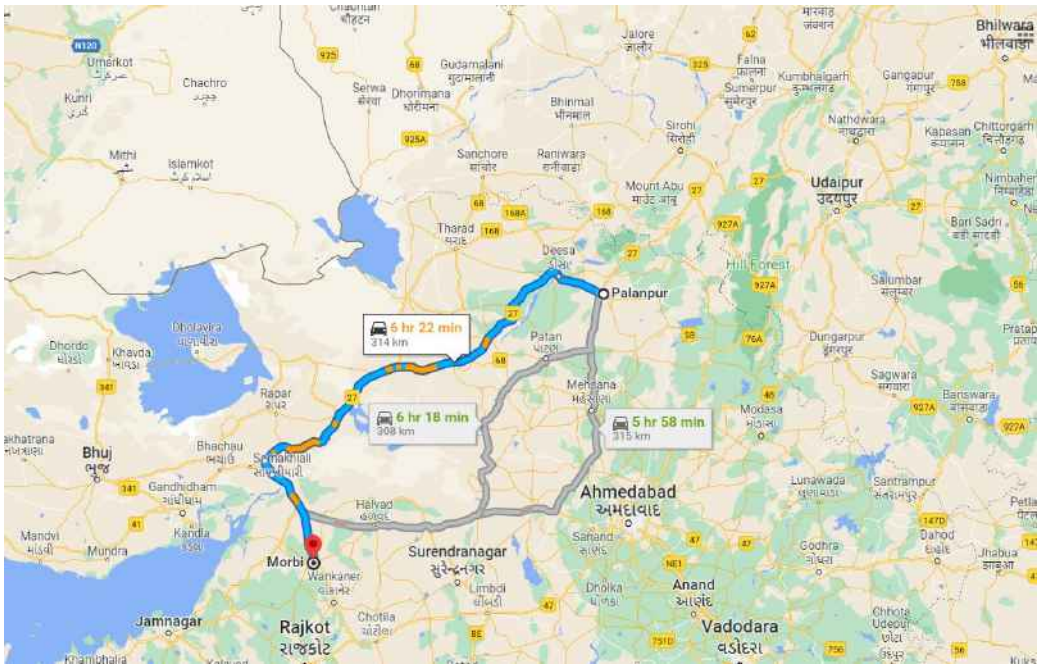
Thus, we do not see the material impact of DFC on the Project and no further diversion of good traffic to DFCC is envisaged.

e. Amritsar – Jamnagar Expressway

The Amritsar – Jamnagar Expressway (AJE) is an access controlled 1300 km long partly greenfield / brownfield expressway. The AJE which is 4-lane up to PB/HR border and then 6-lane up to Jamnagar is under execution and is likely to be commissioned in FY25. The AJE will not only act as port connectivity expressway but will also have induced traffic due to connectivity of 3 refineries enroute, the Bhatinda refinery, Barmer refinery and Jamnagar refinery. Further all the major cities enroute the AJE are developing bypass / ring roads which will facilitate diversion of long-distance traffic. Thus, the long-distance traffic will have a better level of service and shorter turnaround time for port bound traffic which will be comparable to Freight movement by rail.

f. Morbi – Rajasthan via Mehsana: Divergence

There is some traffic originating from Morbi, Rajkot and travelling towards Punjab, Himachal, Haryana, Rajasthan and are taking alternate route via. Mehsana, Palanpur. Once the AJE is commissioned, the distance to the northern states via. AJE will be shorter by ~5-7%.



We have conducted OD survey along this alternate route near Mehsana and have worked out a total impact of divergence from alternate route and the development of AJE together will be nearly +2% for all categories of commercial vehicles.

Summary of impact as estimated is given in table below.

Sr. No	Development Factor	Impact	Action
1	Amritsar Jamnagar Expressway	Reduces travel time substantially. Connects Rajasthan, Haryana, UP & Punjab with a faster connectivity. New fast connectivity may add to growth in the initial years of its commissioning. May also add new development area around its greenfield corridor	4% additional traffic including divergence may be taken in year 2025-26, expected commissioning of full stretch
2	Barmer Refinery	New refinery. About 70% of crude is expected to come from Gujarat and also Amritsar – Jamnagar Expressway would provide fast access to ports for export / import,	It will add to traffic growth on the project road once Expressway is commissioned. No additional impact separately
3	Kandla Mundra Ports	About 30% of the traffic on project stretch has Kandla Mundra connection. Both ports are doing good in terms of growth. These basically serve to northern hinterland of Rajasthan, Gujarat, Haryana, Punjab and UP	Capacity and facility expansion of both ports would support traffic growth on the project stretch. No additional impact on traffic
4	Morbi Tile Industry	90% of India's Ceramic is produced in Morbi. Over 1000 Ceramic factories. Domestic supplies to northern India through project stretch.	Would support traffic growth on project stretch. Would be part of growth

Sr. No	Development Factor	Impact	Action
5	Road Network	No Competing Road Network	No Impact
6	DFCC	Kandla to Palanpur is existing rail line and Palnpur to Rewari is operational since last year. DFCC stretches from Rewari to Palanpur is already operational. Most of the traffic has already been shifted. Lack of last mile connectivity from DFCC hub to final destination of Goods will keep dependability of road network for goods transport.	No additional diversion is envisaged.

CHAPTER 5

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future patterns of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor Udaipur to Gujarat Border section of NH-8 has been done taking the above factors into consideration. "*IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways*" is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable for projects of short durations say 5-10 years, however for long term projections it would be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in *IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways.*

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different types of vehicles. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway typically depends on a number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, in order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

$Log (P) = k \times Log (EI) + A$

Where,

P = *Number of Vehicles (Mode wise)*
EI = *Economic Indicator*
A = *Regression constant*
k = *Elasticity coefficient (Regression coefficient)*

The elasticity for cars and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

The project corridor spreads across the state of Gujrat. Toll plazas at Makhel is in the state of Gujrat but the traffic on project stretch has certain contribution from other states as well. For elasticity calculations, working data from such states in addition to Gujrat has been analyzed.

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Rajasthan State.

Table 5-1 : Per Capita Income Vs Car Rajasthan

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2011	57192	591069	4.76	5.77		
2012	58441	659542	4.77	5.82	2%	
2013	61053	733916	4.79	5.87	4%	
2014	64496	814079	4.81	5.91	6%	
2015	68565	899307	4.84	5.95	6%	
2016	71324	988391	4.85	5.99	4%	
2017	73109	1095526	4.86	6.04	3%	
2018	75555	1204005	4.88	6.08	3%	4.1%

Regression analysis of same is given in figure below.

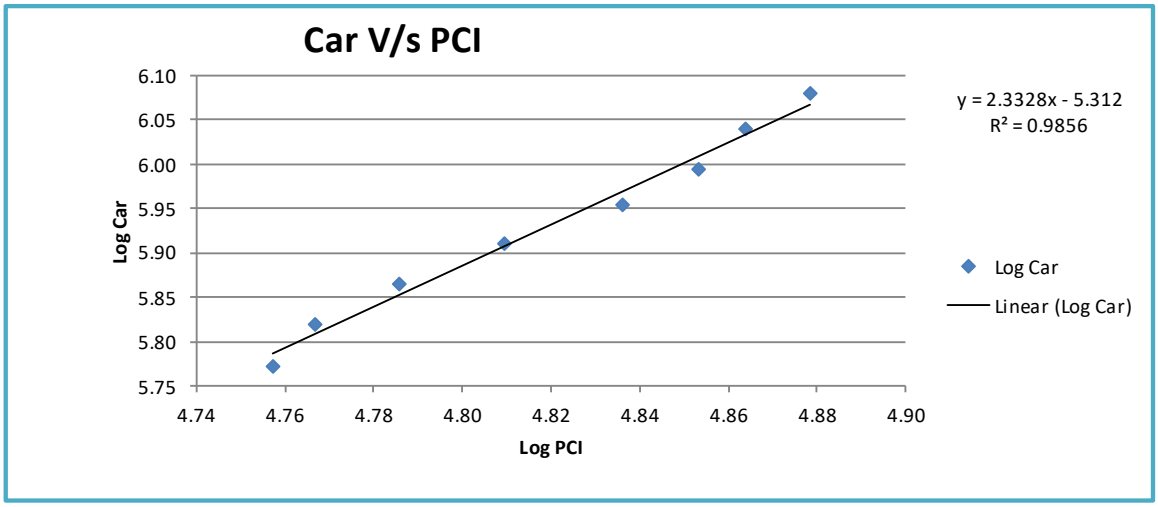


Figure 5-1 : Regression and Elasticity PCI vs. Car – Extrapolation Rajasthan

Table 5-2 : Population Vs Bus Rajasthan

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2011	68548000	83345	7.84	4.92		
2012	69687000	88616	7.84	4.95	2%	
2013	70825000	93892	7.85	4.97	2%	
2014	71963000	97650	7.86	4.99	2%	
2015	73102000	102818	7.86	5.01	2%	
2016	74240000	108680	7.87	5.04	2%	
2017	75248000	113964	7.88	5.06	1%	
2018	76256000	118301	7.88	5.07	1%	1.5%

Regression analysis of same is given in figure below.

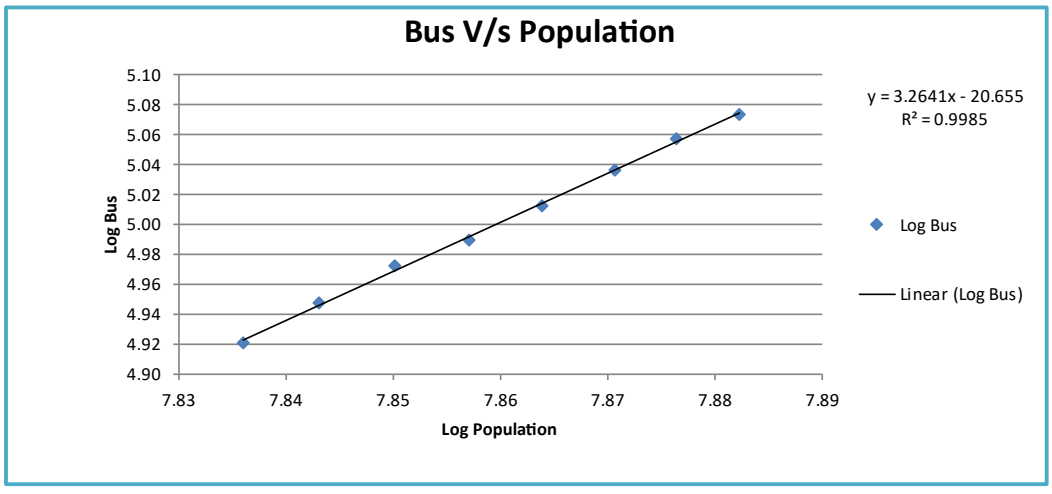


Figure 5-2 : Regression and Elasticity Population vs. Bus – Extrapolation Rajasthan

Elasticity of LCV has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-3 : Trucks Vs NSDP Rajasthan

Year	NSDP	Trucks	Log NSDP	Log LCV	NSDP Growth	Average Growth
2011	39533093	362028	7.60	5.56		
2012	40980249	401983	7.61	5.60	4%	
2013	43429222	434379	7.64	5.64	6%	
2014	46540773	472365	7.67	5.67	7%	
2015	50192151	517604	7.70	5.71	8%	
2016	52965038	561158	7.72	5.75	6%	
2017	55442912	613055	7.74	5.79	5%	
2018	58059438	665926	7.76	5.82	5%	5.7%

The following figure depicts regression analysis and extrapolation.

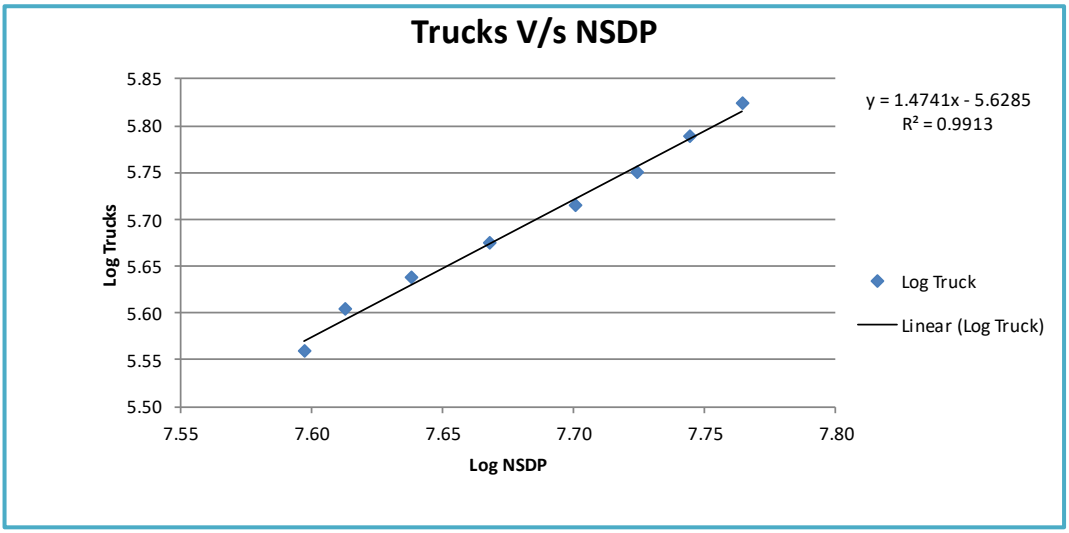


Figure 5-3 : Regression and Elasticity NSDP vs. LCV Traffic - extrapolation Rajasthan.

Elasticity of Goods Traffic has been worked out by regression analysis with NSDP. The following table represents the data and details.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-4 : Summary Regression Analysis Rajasthan

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth	Growth Elastic Model	Remarks
Rajasthan	Car/Jeep	PCI	y = 2.3328x - - 5.312	R^2 = 0.9856	2.3328	4.07%	9.49%	Good Regression
	Bus	Population	y = 3.2641x - - 20.6548	R^2 = 0.9985	3.2641	1.53%	5.01%	Good Regression
	Truck	NSDP	y = 1.4741x - - 5.6285	R^2 = 0.9913	1.4741	5.65%	8.33%	Good Regression

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Rajasthan State.

Table 5-5 : Per Capita Income Vs Car Gujarat

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	96683	1602129	4.99	6.20		
2013	96039	1771298	4.98	6.25	-1%	
2014	101424	2008748	5.01	6.30	6%	
2015	112267	2260084	5.05	6.35	11%	
2016	121512	2527537	5.08	6.40	8%	
2017	131503	2794957	5.12	6.45	8%	
2018	147787	3011656	5.17	6.48	12%	7.4%

Regression analysis of same is given in figure below.

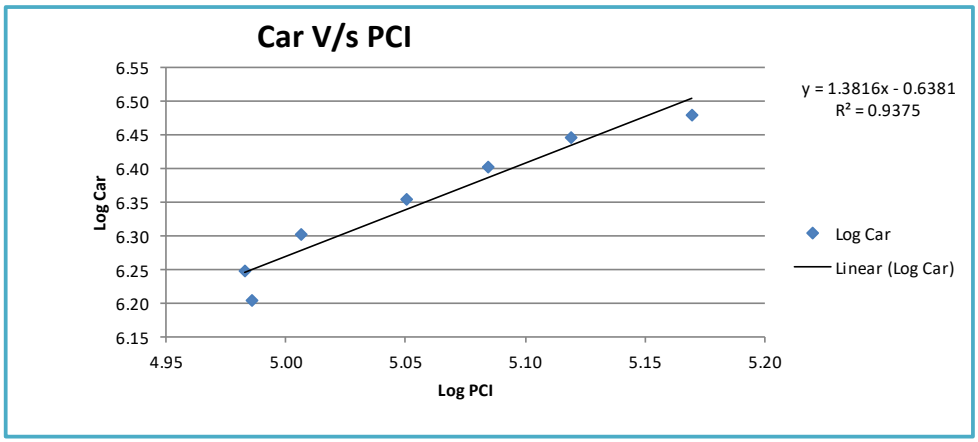


Figure 5-4 : Regression and Elasticity PCI vs. Car – Extrapolation Gujarat

Table 5-6 : Population Vs Bus Gujarat

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	61383000	70615	7.79	4.85		
2013	62327000	72998	7.79	4.86	2%	
2014	63271000	76435	7.80	4.88	2%	
2015	64214000	82734	7.81	4.92	1%	
2016	65158000	84734	7.81	4.93	1%	
2017	66084000	88734	7.82	4.95	1%	
2018	67010000	92734	7.83	4.97	1%	1.5%

Regression analysis of same is given in figure below.

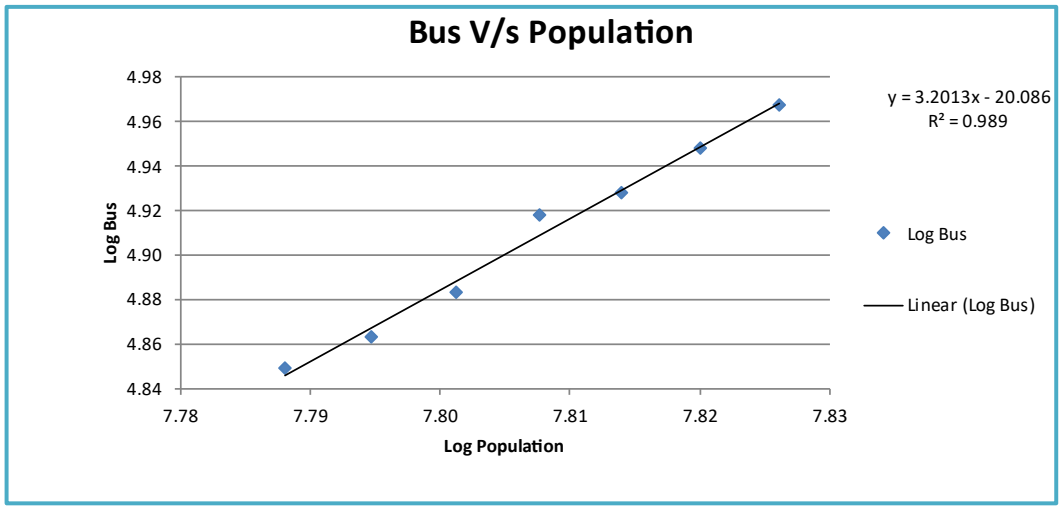


Figure 5-5 : Regression and Elasticity Population vs. Bus – Extrapolation Gujarat

Elasticity of Trucks has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-7 : Truck Vs NSDP Gujarat

Year	NSDP	Trucks	Log NSDP	Log LCV	NSDP Growth	Average Growth
2012	59665883	319207	7.78	5.50		
2013	64148881	332185	7.81	5.52	8%	
2014	70562884	352225	7.85	5.55	10%	
2015	77477522	375265	7.89	5.57	10%	
2016	84393034	396061	7.93	5.60	9%	
2017	94651119	425799	7.98	5.63	12%	

Year	NSDP	Trucks	Log NSDP	Log LCV	NSDP Growth	Average Growth
2018	103439901	457299	8.01	5.66	9%	9.6%

The following figure depicts regression analysis and extrapolation.

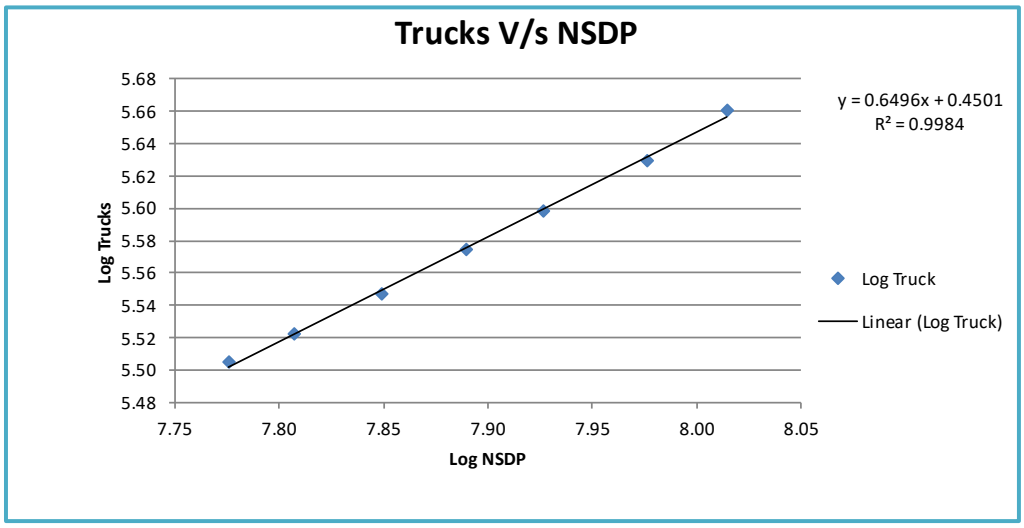


Figure 5-6 : Regression and Elasticity NSDP vs. Trucks Traffic - extrapolation Gujarat.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-8 : Summary Regression Analysis Gujarat

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth	Growth Elastic Model	Remarks
Gujarat	Car/Jeep	PCI	y = 1.3816x - - 0.6381	R^2 = 0.9375	1.4	7%	10.24%	Good Regression
	Bus	Population	y = 3.2013x - - 20.0857	R^2 = 0.989	3.2	1%	4.71%	Good Regression
	Truck	NSDP	y = 0.6496x - 0.4501	R^2 = 0.9984	0.6	10%	6.24%	Good Regression

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Haryana & Punjab State.

Table 5-9 : Per Capita Income Vs Car Haryana & Punjab

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2011	106085	989519	5.03	6.00		
2012	111780	1134616	5.05	6.05	5%	
2013	119791	1278272	5.08	6.11	7%	
2014	125032	1420621	5.10	6.15	4%	
2015	137833	1711692	5.14	6.23	10%	
2016	150259	1851788	5.18	6.27	9%	
2017	158039	1976788	5.20	6.30	5%	
2018	164976	2106788	5.22	6.32	4%	6.5%

Regression analysis of same is given in figure below.

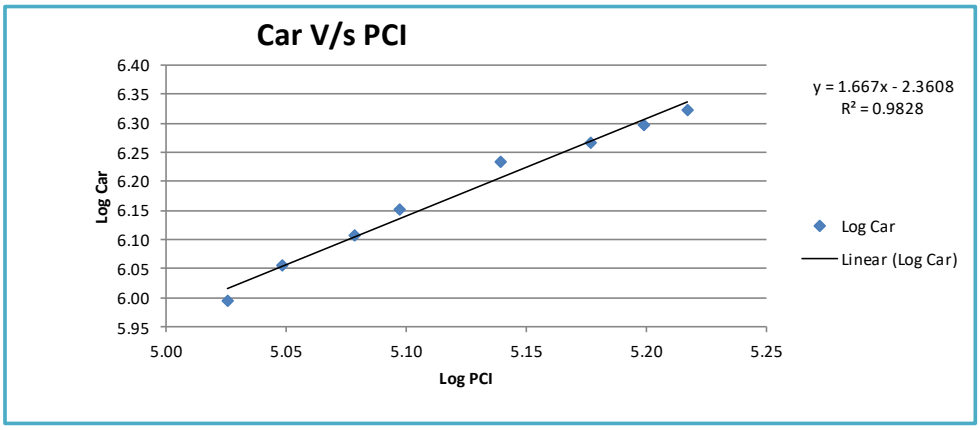


Figure 5-7 : Regression and Elasticity PCI vs. Car – Extrapolation Haryana & Punjab

Table 5-10 : Population Vs Bus Haryana & Punjab

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2011	25351000	39153	7.40	4.59		
2012	25772000	43456	7.41	4.64	2%	
2013	26193000	46558	7.42	4.67	2%	
2014	26614000	52640	7.43	4.72	2%	
2015	27034000	55781	7.43	4.75	2%	
2016	27455000	60129	7.44	4.78	2%	

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2017	27861000	63129	7.44	4.80	1%	
2018	28266000	67629	7.45	4.83	1%	1.6%

Regression analysis of same is given in figure below.

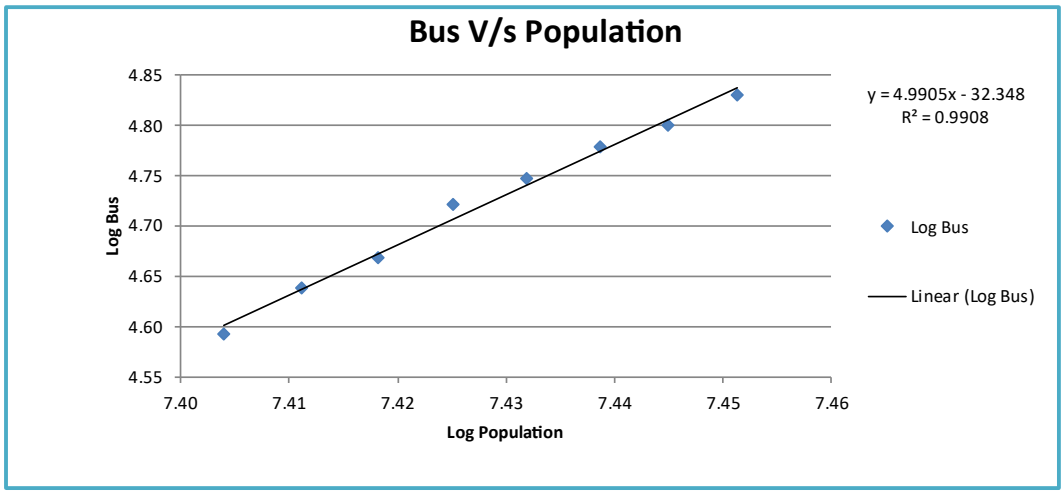


Figure 5-8 : Regression and Elasticity Population vs. Bus – Extrapolation Haryana & Punjab

Elasticity of Trucks has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-11 : Truck Vs NSDP Haryana & Punjab

Year	NSDP	Trucks	Log NSDP	Log LCV	NSDP Growth	Average Growth
2011	27115248	292735	7.43	5.47		
2012	28975622	307509	7.46	5.49	7%	
2013	31493120	327882	7.50	5.52	9%	
2014	33335925	348732	7.52	5.54	6%	
2015	37270025	367730	7.57	5.57	12%	
2016	41205461	390321	7.61	5.59	11%	
2017	43952345	425321	7.64	5.63	7%	
2018	46533095	455321	7.67	5.66	6%	8.0%

The following figure depicts regression analysis and extrapolation.

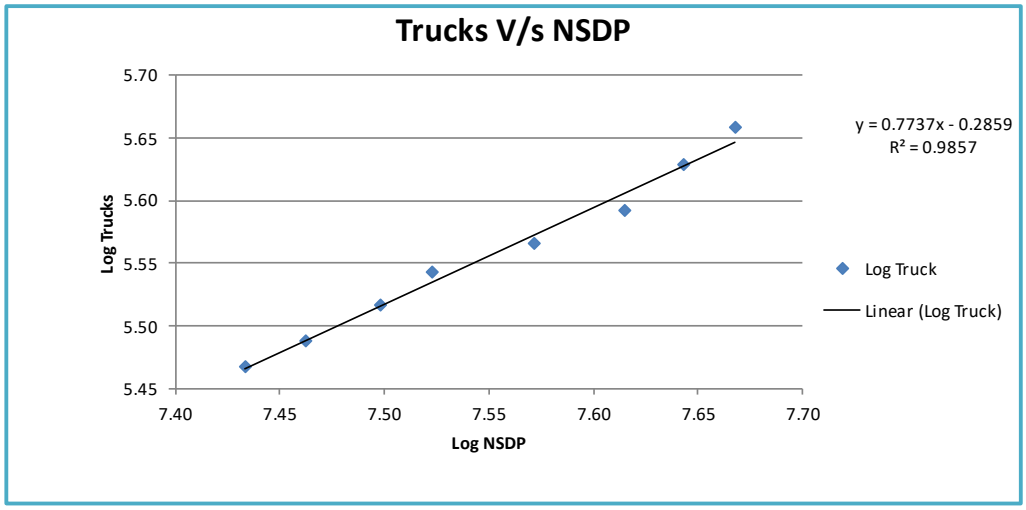


Figure 5-9 : Regression and Elasticity NSDP vs. Trucks Traffic - extrapolation Haryana & Punjab.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-12 : Summary Regression Analysis Haryana & Punjab

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth	Growth Elastic Model	Remarks
Haryana & Punjab	Car/Jeep	PCI	y = 1.667x - -2.3608	R² = 0.9828	1.6670	6.53%	10.89%	Good Regression
	Bus	Population	y = 4.9905x - -32.348	R² = 0.9908	4.9905	1.57%	7.82%	Good Regression
	Truck	NSDP	y = 0.7737x - -0.2859	R² = 0.9857	0.7737	8.04%	6.22%	Good Regression

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Uttar Pradesh State.

Table 5-13 : Per Capita Income Vs Car Uttar Pradesh

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2011	32002	1108100	4.51	6.04		
2012	32908	1205374	4.52	6.08	3%	
2013	34044	1423020	4.53	6.15	3%	
2014	34583	1572217	4.54	6.20	2%	
2015	36973	1746117	4.57	6.24	7%	
2016	40847	2027972	4.61	6.31	10%	
2017	41832	2195783	4.62	6.34	2%	
2018	43670	2439845	4.64	6.39	4%	4.6%

Regression analysis of same is given in figure below.

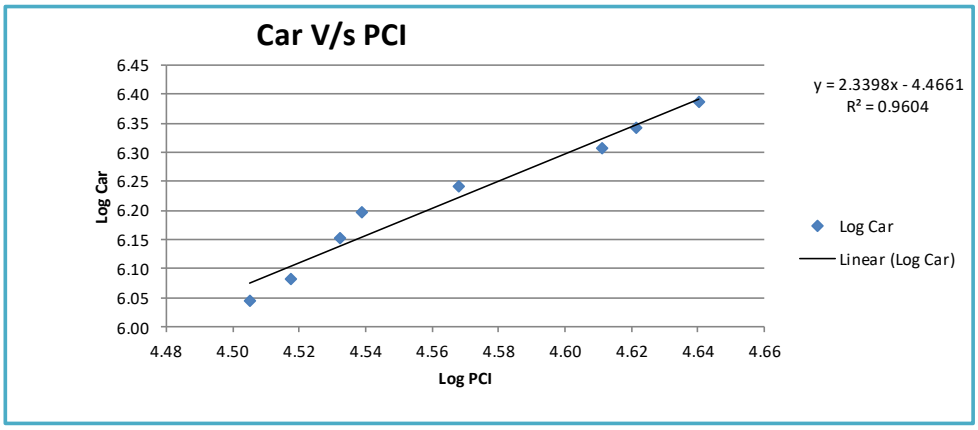


Figure 5-10 : Regression and Elasticity PCI vs. Car – Extrapolation Uttar Pradesh

Table 5-14 : Population Vs Bus Uttar Pradesh

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2011	199812000	57901	8.30	4.76		
2012	203670000	64147	8.31	4.81	2%	
2013	206322000	74389	8.31	4.87	1%	
2014	209577000	80460	8.32	4.91	2%	
2015	212832000	89127	8.33	4.95	2%	
2016	216870000	112020	8.34	5.05	2%	

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2017	219510000	112766	8.34	5.05	1%	
2018	222150000	121975	8.35	5.09	1%	1.5%

Regression analysis of same is given in figure below.

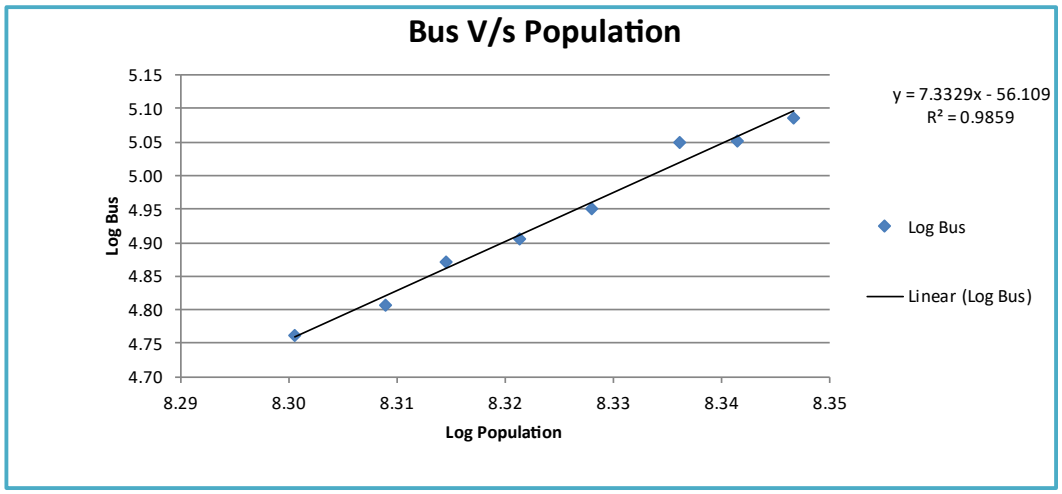


Figure 5-11 : Regression and Elasticity Population vs. Bus – Extrapolation Uttar Pradesh

Elasticity of Trucks has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-15 : Truck Vs NSDP Uttar Pradesh

Year	NSDP	Trucks	Log NSDP	Log LCV	NSDP Growth	Average Growth
2011	64513155	162813	7.81	5.21		
2012	67355218	186404	7.83	5.27	4%	
2013	70746910	202761	7.85	5.31	5%	
2014	72968630	217609	7.86	5.34	3%	
2015	79204874	245688	7.90	5.39	9%	
2016	88845325	265167	7.95	5.42	12%	
2017	92380571	307096	7.97	5.49	4%	
2018	97915937	356828	7.99	5.55	6%	6.2%

The following figure depicts regression analysis and extrapolation.

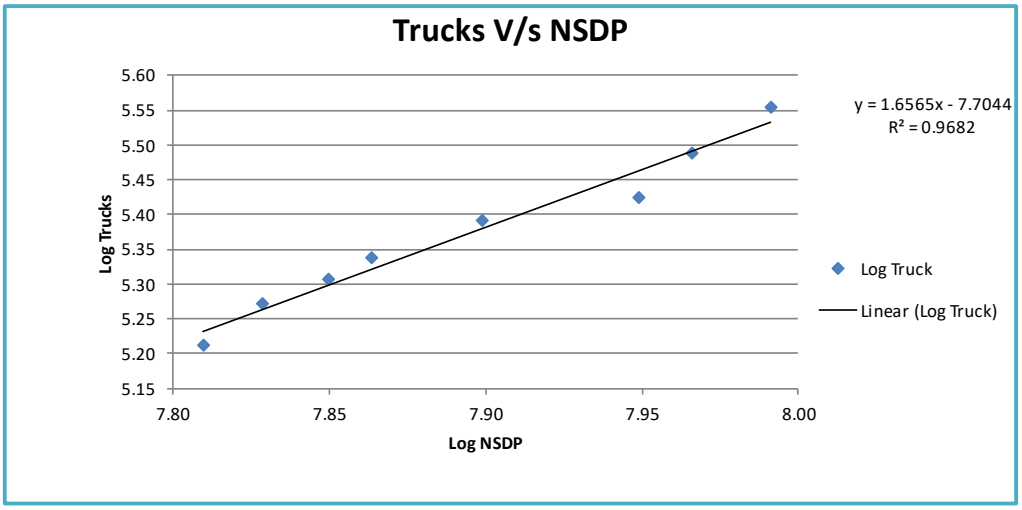


Figure 5-12 : Regression and Elasticity NSDP vs. Trucks Traffic - extrapolation Uttar Pradesh.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-16 : Summary Regression Analysis Uttar Pradesh

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth	Growth Elastic Model	Remarks
Uttar Pradesh	Car/Jeep	PCI	y = 2.3398x - - 4.4661	R² = 0.9604	2.3398	4.58%	10.72%	Good Regression
	Bus	Population	y = 7.3329x - - 56.1092	R² = 0.9859	7.3329	1.53%	11.19%	Good Regression
	Truck	NSDP	y = 1.6565x - - 7.7044	R² = 0.9682	1.6565	6.18%	10.24%	Good Regression

Table 5-17 : Results of Regression Analysis

Results of Regression Analysis					
State	**Vehicle Category**	**Independent Variable**	**Regression Equation**	**R Square**	**Elasticity Coefficient**
GUJRAT	Car/Jeep	PCI	y = 1.3816x - - 0.6381	R^2 = 0.9375	1.3816
	Bus	Population	y = 3.2013x - - 20.0857	R^2 = 0.989	3.2013
	Truck	NSDP	y = 0.6496x - 0.4501	R^2 = 0.9984	0.6496
UTTAR PRADESH	Car/Jeep	PCI	y = 2.3398x - - 4.4661	R^2 = 0.9604	2.3398
	Bus	Population	y = 7.3329x - - 56.1092	R^2 = 0.9859	7.3329
	Truck	NSDP	y = 1.6565x - - 7.7044	R^2 = 0.9682	1.6565
RAJASTHAN	Car/Jeep	PCI	y = 2.3328x - - 5.312	R^2 = 0.9856	2.3328
	Bus	Population	y = 3.2641x - - 20.6548	R^2 = 0.9985	3.2641
	Truck	NSDP	y = 1.4741x - - 5.6285	R^2 = 0.9913	1.4741
HARYANA & PUNJAB	Car/Jeep	PCI	y = 1.667x - - 2.3608	R^2 = 0.9828	1.667
	Bus	Population	y = 4.9905x - - 32.348	R^2 = 0.9908	4.9905
	Truck	NSDP	y = 0.7737x - - 0.2859	R^2 = 0.9857	0.7737

The economic model for predicting growth is a good tool, however other local, regional, and national factors should also be considered before finalizing growth factors. Considering factors such as proposed developments and other influencing economic factors, moderated growth should be considered. These factors are discussed in subsequent sections.

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trends of growth. Project stretch of Udaipur to Gujarat on NH-8 is under tolling operation with current concessionaire and has three years of tolling history from 2017-18 (Part year). As traffic data available with the project concessionaire is of less than three years, we do not have sufficient data points to be able to establish a reliable past trend of traffic growth. A minimum of about 5 -6 years' traffic data is required for establishing a reliable past trend.

5.5 Other Factors Influencing Growth

There are many factors which have an impact on traffic growth. As discussed previously these factors can be economical, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

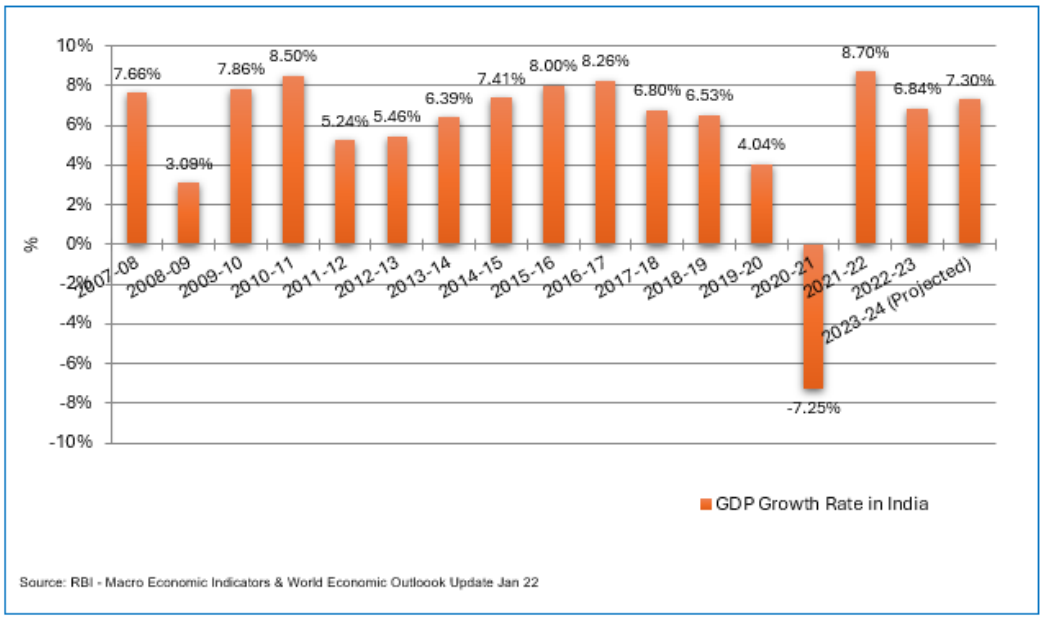


Figure 5-13 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had a slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. The government took major policy decisions including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honorable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into an opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on **Make -In- India** it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. The World Economic Outlook update also has predicted a growth rate of about 7.5 % in the year 2022-23. Recommended Growth Rates of Traffic

5.5.1 Recommended Growth Rates of Traffic for Project Stretch

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as below. The rate of growth is moderate in light of overall regional trends. Growth of multi-Axle is kept slightly higher as trend of technological advances in logistic industry favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, the rate of growth diminishes. The same growth rate is not sustainable for long. Traffic growth is suitably stepped down for future years.

Growth rates are recommended for three scenarios for sensitivity analysis namely **Optimistic, Pessimistic** and **Most Likely** with a positive and negative variation 0.5% from Most Likely case for corridor in both states.

Table 5-18 : Recommended Growth Rates Optimistic

Category / Year	FY24 - FY28	FY29 - FY33	FY34 - FY38	FY39- FY43	FY44 - FY48	FY49 - FY53
Car/Jeep/Van	8.06%	7.16%	6.13%	5.57%	5.57%	5.57%
Mini LCV	3.30%	3.22%	2.85%	2.25%	2.25%	2.25%
Bus	3.29%	2.84%	2.41%	2.21%	2.21%	2.21%
Minibus	3.29%	2.84%	2.41%	2.23%	2.23%	2.23%
LCV	3.30%	2.91%	2.59%	2.25%	2.25%	2.25%
2- Axle	2.83%	2.45%	2.19%	2.06%	2.06%	2.06%
3 - Axle	7.06%	6.28%	5.45%	4.81%	4.81%	4.81%
4 to6 Axle	7.86%	6.93%	6.00%	5.43%	5.43%	5.43%
7 and Above Axle	7.06%	6.28%	5.45%	4.81%	4.81%	4.81%

Table 5-19 : Recommended Growth Rates Pessimistic

Category / Year	FY24 - FY28	FY29 - FY33	FY34 - FY38	FY39- FY43	FY44 - FY48	FY49 - FY53
Car/Jeep/Van	7.56%	6.66%	5.63%	5.07%	5.07%	5.07%
Mini LCV	2.80%	2.72%	2.35%	1.75%	1.75%	1.75%
Bus	2.79%	2.34%	1.91%	1.71%	1.71%	1.71%
Minibus	2.79%	2.34%	1.91%	1.73%	1.73%	1.73%
LCV	2.80%	2.41%	2.09%	1.75%	1.75%	1.75%
2- Axle	2.33%	1.95%	1.69%	1.56%	1.56%	1.56%
3 - Axle	6.56%	5.78%	4.95%	4.31%	4.31%	4.31%
4 to6 Axle	7.36%	6.43%	5.50%	4.93%	4.93%	4.93%
7 and Above Axle	6.56%	5.78%	4.95%	4.31%	4.31%	4.31%

Table 5-20 : Recommended Growth Rates Most Likely

Category / Year	FY24 - FY28	FY29 - FY33	FY34 - FY38	FY39- FY43	FY44 - FY48	FY49 - FY53
Car/Jeep/Van	7.81%	6.91%	5.88%	5.32%	5.32%	5.32%
Mini LCV	3.05%	2.97%	2.60%	2.00%	2.00%	2.00%
Bus	3.04%	2.59%	2.16%	1.96%	1.96%	1.96%
Minibus	3.04%	2.59%	2.16%	1.98%	1.98%	1.98%
LCV	3.05%	2.66%	2.34%	2.00%	2.00%	2.00%
2- Axle	2.58%	2.20%	1.94%	1.81%	1.81%	1.81%
3 - Axle	6.81%	6.03%	5.20%	4.56%	4.56%	4.56%

Category / Year	FY24 - FY28	FY29 - FY33	FY34 - FY38	FY39- FY43	FY44 - FY48	FY49 - FY53
4 to6 Axle	7.61%	6.68%	5.75%	5.18%	5.18%	5.18%
7 and Above Axle	6.81%	6.03%	5.20%	4.56%	4.56%	4.56%

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in the previous section of the report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for the following three cases of growth up to concession period.

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza – Chainage 394+200 KM

(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	1682	91	226	291	223	7453	11	9977	37627
2025-26	1818	94	234	300	238	8039	12	10735	40505
2026-27	1965	97	242	309	254	8671	13	11551	43604
2027-28	2123	100	250	318	272	9352	14	12429	46940
2028-29	2275	103	257	326	289	10001	15	13266	50118
2029-30	2437	106	264	334	307	10694	16	14158	53506
2030-31	2611	109	272	343	326	11436	17	15114	57136
2031-32	2797	112	280	352	346	12228	18	16133	61006
2032-33	2997	115	288	361	368	13076	19	17224	65148
2033-34	3180	118	295	369	388	13860	20	18230	68973
2034-35	3357	121	302	377	407	14613	21	19198	72650
2035-36	3543	124	309	385	426	15405	22	20214	76511
2036-37	3740	127	316	393	446	16241	23	21286	80584
2037-38	3948	130	323	401	467	17122	24	22415	84873
2038-39	4168	133	330	410	490	18051	25	23607	89400
2039-40	4400	136	337	419	514	19031	26	24863	94171
2040-41	4645	139	345	428	538	20064	27	26186	99196
2041-42	4904	142	353	437	563	21152	28	27579	104486
2042-43	5177	145	361	446	590	22300	29	29048	110066
2043-44	5465	148	369	455	618	23511	30	30596	115948
2044-45	5769	151	377	464	647	24786	31	32225	122136
2045-46	6090	154	385	473	677	26131	32	33942	128660

Table 6-2 : Total Tollable Traffic @ Toll Plaza - Chainage 394+200 KM
(Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	1682	91	226	291	223	7453	11	9977	37627

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2025-26	1810	94	233	299	237	8002	12	10687	40321
2026-27	1946	97	240	307	252	8591	13	11446	43207
2027-28	2093	100	247	315	268	9224	14	12261	46304
2028-29	2232	103	253	321	283	9816	15	13023	49197
2029-30	2380	106	259	327	299	10448	16	13835	52282
2030-31	2539	109	265	333	317	11119	17	14699	55560
2031-32	2708	112	272	339	335	11834	18	15618	59048
2032-33	2888	115	279	346	354	12594	19	16595	62756
2033-34	3050	118	285	352	372	13287	20	17484	66136
2034-35	3204	120	290	358	388	13941	21	18322	69321
2035-36	3366	122	295	364	404	14627	22	19200	72659
2036-37	3537	124	300	370	422	15348	23	20124	76169
2037-38	3716	126	306	376	440	16104	24	21092	79847
2038-39	3904	128	312	382	459	16897	25	22107	83704
2039-40	4102	130	318	388	479	17730	26	23173	87754
2040-41	4309	132	324	394	499	18604	27	24289	91998
2041-42	4527	134	330	400	520	19520	28	25459	96444
2042-43	4756	136	336	406	543	20481	29	26687	101110
2043-44	4997	138	342	412	566	21491	30	27976	106009
2044-45	5250	140	348	418	590	22550	31	29327	111143
2045-46	5516	142	354	424	615	23661	32	30744	116527

Traffic projections for Most Likely scenario is given as under

Table 6-3 : Total Tollable Traffic @ Toll Plaza - Chainage 394+200 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	1682	91	226	291	223	7453	11	9977	37627
2025-26	1815	94	233	299	238	8020	12	10711	40410
2026-27	1956	97	240	307	254	8629	13	11496	43394
2027-28	2109	100	248	315	272	9285	14	12343	46610
2028-29	2254	103	255	323	288	9905	15	13143	49647
2029-30	2410	106	262	331	306	10568	16	13999	52894
2030-31	2576	109	269	339	324	11274	17	14908	56345
2031-32	2753	112	276	347	343	12028	18	15877	60026
2032-33	2943	115	283	355	363	12832	19	16910	63948
2033-34	3116	118	289	363	382	13570	20	17858	67550
2034-35	3281	120	295	370	400	14272	21	18759	70975
2035-36	3455	122	301	378	418	15011	22	19707	74578
2036-37	3638	125	307	386	437	15788	23	20704	78365
2037-38	3832	128	313	394	457	16605	24	21753	82347
2038-39	4035	131	319	402	477	17465	25	22854	86531
2039-40	4250	134	326	410	499	18369	26	24014	90934
2040-41	4476	137	333	418	522	19320	27	25233	95562
2041-42	4714	140	340	426	546	20320	28	26514	100426
2042-43	4964	143	347	434	571	21372	29	27860	105539
2043-44	5228	146	354	442	596	22478	30	29274	110909
2044-45	5505	149	361	450	623	23642	31	30761	116559

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2045-46	5797	152	368	458	651	24866	32	32324	122497

6.2 Modification in Concession Period

Modification is concession period due to variation in traffic is worked out as per procedure given in RFP. There are three milestones for traffic testing in the years 2028, 2033 and 2038. The working of modification in concession period is given as under for all scenarios.

- Appointed date – 28th December 2023
- Concession Period (Days) – 7300 (For 20 Years)
- Hence, Original Concession end date is – 23rd December 2043

Pessimistic Case

Sr. No	Target Date	Target Traffic	Actual Traffic	Variation in CP as per CA %	Change in CP (Days	Total Variation in CP Years
1	01-Oct-28	58741	49197	11.25%	625	
2	01-Oct-33	66539	66136	0.00%	0	**1.7**
3	01-Oct-38	84919	83704	0.00%	0	

Optimistic Case

Sr. No	Target Date	Target Traffic	Actual Traffic	Variation in CP as per CA %	Change in CP (Days	Total Variation in CP Years
1	01-Oct-28	58741	50118	9.68%	538	
2	01-Oct-33	67713	68973	0.00%	0	**1.5**
3	01-Oct-38	86419	89400	0.00%	0	

Most Likely Case

Sr. No	Target Date	Target Traffic	Actual Traffic	Variation in CP as per CA %	Change in CP (Days	Total Variation in CP Years
1	01-Oct-28	58741	49647	10.48%	583	**1.6**
2	01-Oct-33	67112	67550	0.00%	0	
3	01-Oct-38	85651	86531	0.00%	0	

Hence a positive variation of about **625 days** in concession period is expected as per traffic projections in *Pessimistic case*.

538 days in concession period is expected as per traffic projections in *Optimistic case* and **583 days** in concession period is expected as per traffic projections in *Most likely case*.

CHAPTER 7

FORECAST OF TOLL REVENUE

7.1 General

This chapter presents the tolling rate calculations, categories and toll revenue of the project.

7.2 Discount Categories

The fee schedule in the CA of Udaipur- Gujarat Border section of NH-8 is based on the old toll policy. As per the Toll Notification (Schedule - G) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent user's monthly pass would be issued at fee 30 time the single journey fee.
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travelers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: There are several categories of local discounts.
    a) Local Car Jeep Van I - Rs. 275 per month
    b) Other local Commercial at 50% of the regular single journey toll fee

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.

The formula for determining the applicable rate of fee shall be as follows:-

$$\text{Applicable rate of fee} = \text{base rate} + \text{base rate} \times \left\{ \frac{\text{WPI A-WPI B}}{\text{WPI B}} \right\} \times 0.4$$

Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2018-19. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. The following graph provides historical rate of inflation (WPI) in India. Data has been sourced from the Office of Economic Advisor web site (www.eaindustry.nic.in) WPI for year 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series.

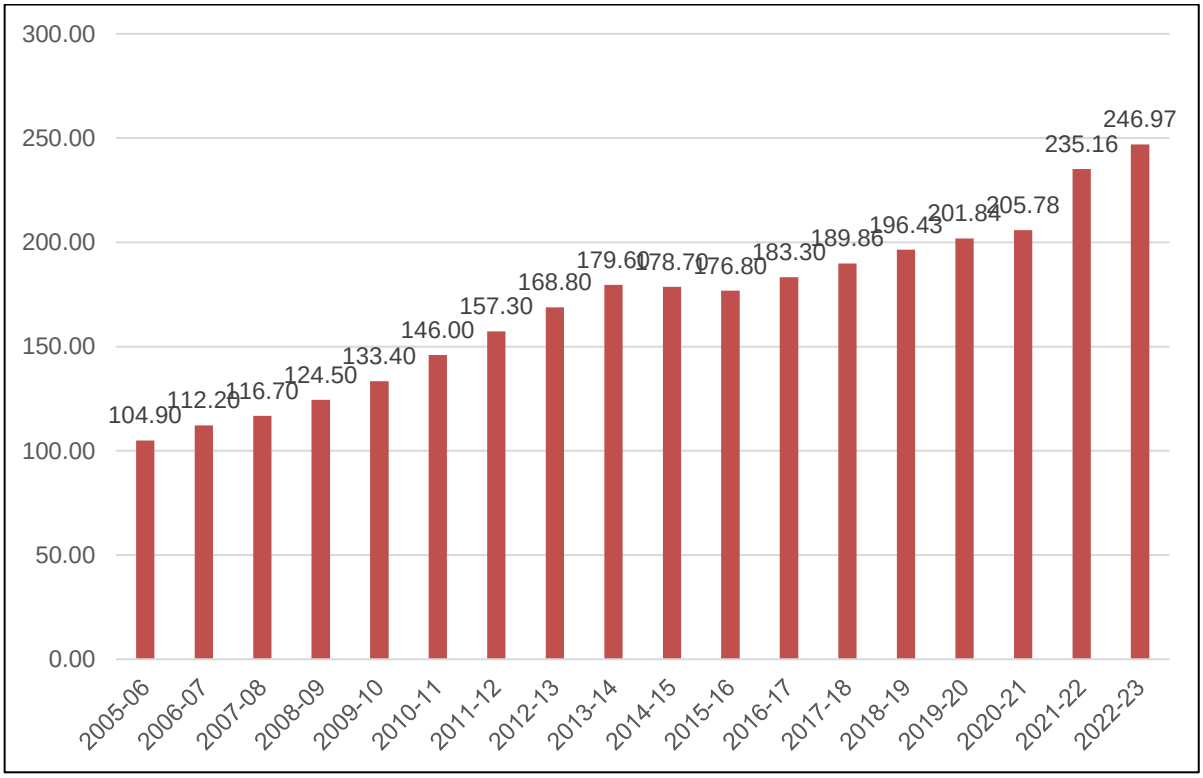


Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in the last few years is steadily growing. It grew by the range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

7.3 Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45
Oversized Vehicles (7 or more Axles)	4.20

There is no bypass or structure to be factored in for rates calculations.

Toll rates are calculated as per guidelines provided in schedule R (rounded to nearest Rs.) for the concession period and are given below.

Thus, worked out rates for various categories of vehicle and discounts are given as under

Table 7-2 : Toll Rates for Single Journey @ Km TP-394+200 KM

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial Vehicle	Multi Axle	Oversized Vehicle
2024-25	100	160	335	335	365	520	635
2025-26	100	160	335	335	365	520	635
2026-27	150	245	510	510	555	795	970
2027-28	150	245	510	510	555	795	970
2028-29	160	255	535	535	580	835	1020
2029-30	165	270	560	560	610	880	1070
2030-31	175	280	590	590	645	925	1125
2031-32	185	295	620	620	675	975	1185
2032-33	195	310	650	650	710	1025	1245
2033-34	205	325	685	685	750	1075	1310
2034-35	215	345	720	720	785	1130	1380
2035-36	225	365	760	760	830	1190	1450
2036-37	235	380	800	800	870	1255	1525
2037-38	250	400	840	840	920	1320	1605
2038-39	260	425	885	885	965	1390	1690
2039-40	275	445	935	935	1020	1465	1780
2040-41	290	470	985	985	1075	1540	1880
2041-42	305	495	1035	1035	1130	1625	1980
2042-43	325	520	1090	1090	1190	1715	2085
2043-44	340	550	1150	1150	1255	1805	2200
2044-45	360	580	1215	1215	1325	1905	2315
2045-46	380	610	1280	1280	1395	2005	2445

Table 7-3 : Toll Rates for Return Journey @ TP-394+200 KM

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial Vehicle	Multi Axle	Oversized Vehicle
2024-25	150	245	510	510	560	805	975
2025-26	150	245	510	510	560	805	975
2026-27	225	365	760	760	830	1195	1455
2027-28	225	365	760	760	830	1195	1455
2028-29	235	380	800	800	875	1255	1530
2029-30	250	400	840	840	920	1320	1605
2030-31	260	420	885	885	965	1390	1690
2031-32	275	445	930	930	1015	1460	1775
2032-33	290	465	980	980	1065	1535	1870
2033-34	305	490	1030	1030	1125	1615	1965
2034-35	320	515	1085	1085	1180	1700	2065
2035-36	335	545	1140	1140	1245	1785	2175
2036-37	355	570	1200	1200	1310	1880	2290
2037-38	375	605	1265	1265	1375	1980	2410

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial Vehicle	Multi Axle	Oversized Vehicle
2038-39	395	635	1330	1330	1450	2085	2540
2039-40	415	670	1400	1400	1530	2195	2675
2040-41	435	705	1475	1475	1610	2315	2815
2041-42	460	740	1555	1555	1695	2440	2970
2042-43	485	780	1640	1640	1785	2570	3125
2043-44	510	825	1725	1725	1885	2710	3295
2044-45	540	870	1820	1820	1985	2855	3475
2045-46	565	915	1920	1920	2095	3010	3665

Table 7-4 : Toll Rates for Monthly Pass Local @ TP-394+200 KM

Year	Car
2024-25	330
2025-26	375
2026-27	375
2027-28	390
2028-29	410
2029-30	435
2030-31	455
2031-32	480
2032-33	505
2033-34	530
2034-35	560
2035-36	585
2036-37	620
2037-38	650
2038-39	685
2039-40	720
2040-41	760
2041-42	800
2042-43	845
2043-44	890
2044-45	940
2045-46	990

Table 7-5 : Toll Rates for Monthly Pass @ TP-394+200 KM

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial Vehicle	Multi Axle	Oversized Vehicle
2024-25	3280	5300	11105	11105	12115	17410	21200
2025-26	3280	5300	11105	11105	12115	17410	21200
2026-27	5005	8085	16940	16940	18480	26565	32335
2027-28	5005	8085	16940	16940	18480	26565	32335
2028-29	5260	8495	17800	17800	19415	27910	33980
2029-30	5525	8930	18705	18705	20405	29335	35710
2030-31	5810	9385	19665	19665	21450	30835	37540
2031-32	6110	9865	20675	20675	22555	32420	39470
2032-33	6425	10375	21745	21745	23720	34095	41510

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial Vehicle	Multi Axle	Oversized Vehicle
2033-34	6755	10915	22870	22870	24950	35865	43660
2034-35	7110	11485	24060	24060	26250	37735	45935
2035-36	7480	12085	25320	25320	27625	39710	48340
2036-37	7875	12720	26650	26650	29075	41795	50880
2037-38	8290	13390	28060	28060	30610	44000	53565
2038-39	8730	14100	29545	29545	32235	46335	56405
2039-40	9195	14850	31120	31120	33950	48800	59410
2040-41	9685	15645	32785	32785	35765	51410	62585
2041-42	10205	16485	34545	34545	37685	54170	65945
2042-43	10755	17375	36405	36405	39715	57090	69500
2043-44	11335	18315	38375	38375	41860	60175	73260
2044-45	11955	19310	40455	40455	44135	63445	77235
2045-46	12605	20360	42660	42660	46540	66900	81445

7.4 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under ***Optimistic***, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

7.5 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under all scenarios at each of the toll plaza up to 2044-45 years starting from the year 2024-25 are shown in tables below.

Table 7-6 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Location / Year	Makhel Toll	Total
2024-25	153.13	**153.13**
2025-26	187.16	**187.16**
2026-27	270.71	**270.71**
2027-28	307.08	**307.08**
2028-29	344.38	**344.38**
2029-30	386.71	**386.71**
2030-31	435.20	**435.20**
2031-32	490.01	**490.01**
2032-33	547.66	**547.66**
2033-34	609.56	**609.56**
2034-35	676.05	**676.05**
2035-36	752.71	**752.71**
2036-37	832.16	**832.16**
2037-38	922.72	**922.72**
2038-39	1024.55	**1024.55**
2039-40	1138.03	**1138.03**

Location / Year	Makhel Toll	Total
2040-41	1261.37	**1261.37**
2041-42	1402.48	**1402.48**
2042-43	1555.06	**1555.06**
2043-44	1733.82	**1733.82**
2044-45	1917.59	**1917.59**
2045-46	2131.14	**2131.14**

Table 7-7 : Toll Revenue Pessimistic Scenario

(Rs. Crores)

Location / Year	Makhel Toll	Total
2024-25	153.13	**153.13**
2025-26	186.34	**186.34**
2026-27	268.27	**268.27**
2027-28	302.97	**302.97**
2028-29	338.22	**338.22**
2029-30	378.08	**378.08**
2030-31	423.50	**423.50**
2031-32	474.64	**474.64**
2032-33	528.00	**528.00**
2033-34	584.96	**584.96**
2034-35	645.64	**645.64**
2035-36	715.48	**715.48**
2036-37	787.21	**787.21**
2037-38	868.73	**868.73**
2038-39	959.95	**959.95**
2039-40	1061.28	**1061.28**
2040-41	1170.63	**1170.63**
2041-42	1295.34	**1295.34**
2042-43	1429.41	**1429.41**
2043-44	1586.11	**1586.11**
2044-45	1745.96	**1745.96**
2045-46	1931.34	**1931.34**

Table 7-8 : Toll Revenue Most Likely Scenario

(Rs. Crores)

Location / Year	Makhel Toll	Total
2024-25	153.13	**153.13**
2025-26	186.77	**186.77**
2026-27	269.49	**269.49**
2027-28	305.02	**305.02**
2028-29	341.33	**341.33**
2029-30	382.47	**382.47**

Location / Year	Makhel Toll	Total
2030-31	429.38	**429.38**
2031-32	482.35	**482.35**
2032-33	537.88	**537.88**
2033-34	597.28	**597.28**
2034-35	660.80	**660.80**
2035-36	734.02	**734.02**
2036-37	809.62	**809.62**
2037-38	895.67	**895.67**
2038-39	992.10	**992.10**
2039-40	1099.40	**1099.40**
2040-41	1215.56	**1215.56**
2041-42	1348.43	**1348.43**
2042-43	1491.70	**1491.70**
2043-44	1659.26	**1659.26**
2044-45	1830.73	**1830.73**
2045-46	2029.75	**2029.75**

CHAPTER 8

CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Samakhiyali to Santalpur of NH-27 in state of Gujarat is a four-lane national highway which is being upgraded to six lanes. Project corridor is main feeder road from North India and other parts of Gujarat and Rajasthan to major ports of Kandla and Mundra. Due to this there is considerable volume of heavy commercial vehicles on stretch. Jamnagar – Amrtisar Expressway would also add good value to project traffic as will provide faster connectivity to north India to Jamnagar refinery and also to Mundra and Kandla port. Morbi tile Industry is also a good contributor to traffic of project road. As Indian economy is poised to grow at good rate, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give a positive impact to traffic flow on the project. The following can be considered as major outcomes of the study.

a) There is a good amount of tollable traffic running on the project.

b) Project corridor has potential to witness traffic growth @ 6-8% annually in near future due to various development in area and overall development of economy.

c) The Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road.

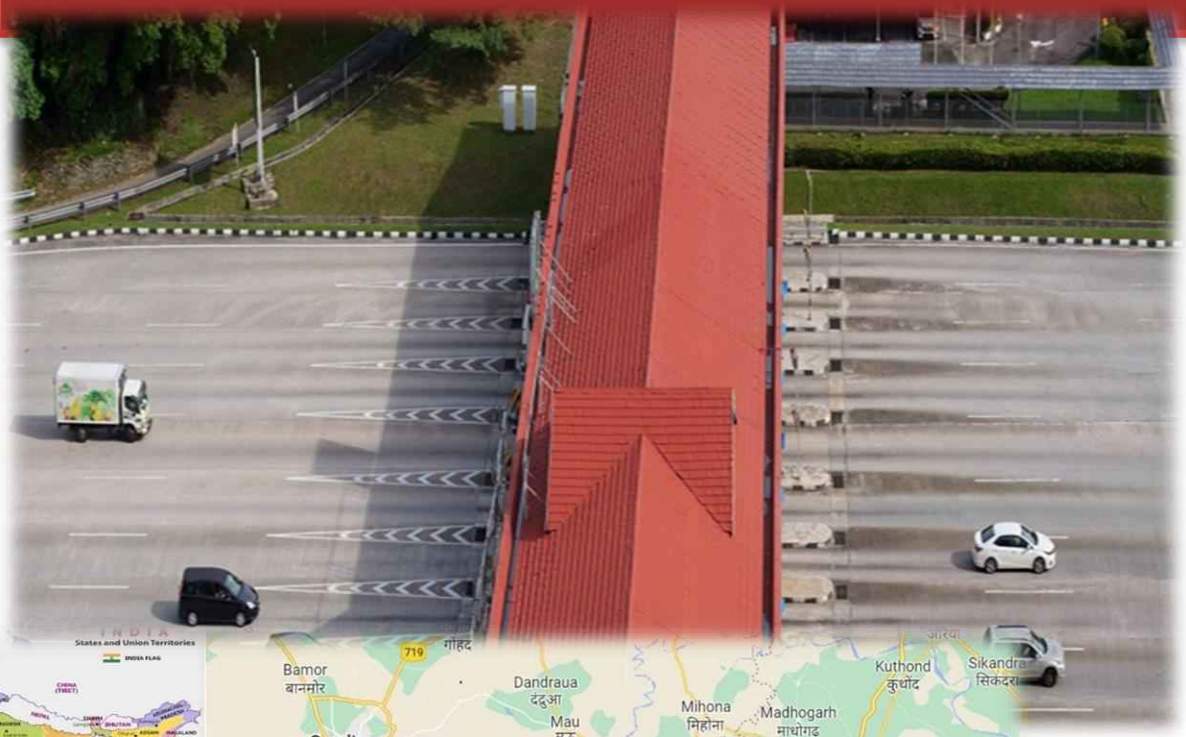
Based on the above it can be considered a stable healthy project from the traffic and revenue point of view.

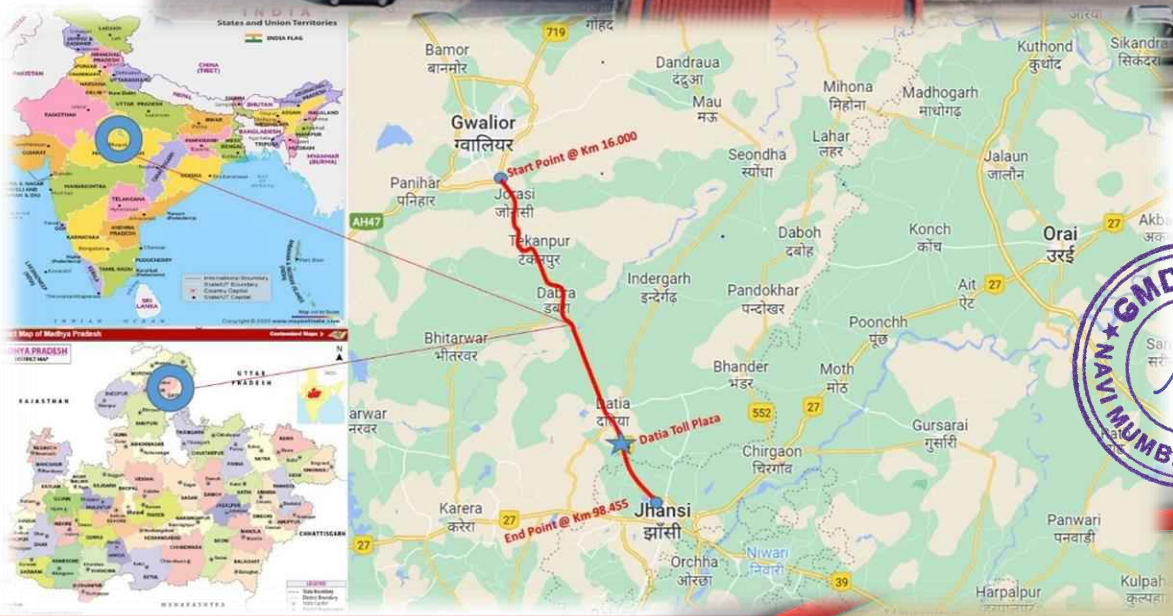


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IRB INFRASTRUCTURE TRUST

Gwalior -Jhansi section from km 0.000 to km 103.000 (revised section km 16.000 to km 98.455) of NH-75 (New NH-44) in the state of Madhya Pradesh and Uttar Pradesh (TOT Bundle -13)





GMD CONSULTANTS NAVI MUMBAI

TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

OCTOBER 2024

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GMD Adding Value

Gwalior -Jhansi section from 0.000 to km 103.000 (revised section km 16.000 to km 98.455) of NH-75 (New NH-44) in the state of Madhya Pradesh and Uttar Pradesh

(TOT Bundle -13)

TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

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OCTOBER 2024

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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic	**NHAI**	-	National Highway Authority of India
BOT	-	Build Operate Transfer	**NHDP**	-	National Highways Development Project
CAGR	-	Compound Annual Growth Rate	**NSDP**	-	Net State Domestic Product
CTV	-	Classified traffic volume	**O&M**	-	Operation & Maintenance
DBFOT	-	Design, Build, Finance, Operate & Transfer	**PCDP**	-	Per Capita Domestic Product
EME	-	Earth Moving Equipment	**PCI**	-	Per Capita Income
GDP	-	Gross Domestic Product	**PCU**	-	Passenger Car Unit
GSDP	-	Gross State Domestic Product	**PSC**	-	Pre-stressed Concrete
HCM	-	Heavy Construction Machinery	**RCC**	-	Reinforced cement concrete
HCV	-	Heavy Commercial Vehicle	**RHS**	-	Right Hand Side
HTMS	-	Highway Traffic Management System	**SH**	-	State Highway
IRC	-	Indian Road Congress	**TP**	-	Toll Plaza
IRR	-	Internal Rate of Return	**WPI**	-	Wholesale Price Index
LCV	-	Light Commercial Vehicle	**SIR**	-	Special Investment Region
LHS	-	Left Hand Side	**c.**	-	Circa
LGV	-	Light Goods Vehicle	**ROB**	-	Railway Over Bridge
MAV	-	Multi Axle Vehicle	**MDR**	-	Major District Road
MORTH	-	Ministry of Road Transport and Highways	**ODR**	-	Other District Road
NH	-	National Highway	**CA**	-	Concession Agreement
PCC	-	Plain Cement Concrete	**RMT**	-	Running Meter
CR	-	Coarse Rubble			

CHAPTER 1

INTRODUCTION

1.1 Background

The National Highways Authority of India (NHAI) introduced the Toll, Operate and Transfer (TOT) model for partnership with private developers in the road sector. Under this model, NHAI passes on the toll collection rights and operation and maintenance obligations for 20 years to the private developer against payment of upfront, one-time, lump sum concession fees quoted by the private developer as part of the comprehensive bidding process. Projects under this model are awarded as a bundle of operational national highways, which allows the investor to offset the risks of one project against another. Existing and operational roads are auctioned under the TOT model.

Under the Toll Operate and Transfer (ToT) 13 bundle, NHAI had invited tenders for selection of concessionaire for maintenance of the National Highway stretch from km 0.000 to km 103.000 (revised section km 16.000 to km 98.455) of NH-75 (New NH-44) in the state of Madhya Pradesh and Uttar Pradesh.

M/s. IRB Infrastructure Developers Limited., has been declared as the selected bidder for the project. This report is for part section of ToT bundle 13 “Gwalior to Jhansi from km 0.000 to km 103.000 (revised section km 16.000 to km 98.455) of NH-75 (New NH-44) in the state of Madhya Pradesh and Uttar Pradesh. Project Highway alignment is depicted in the following figure.

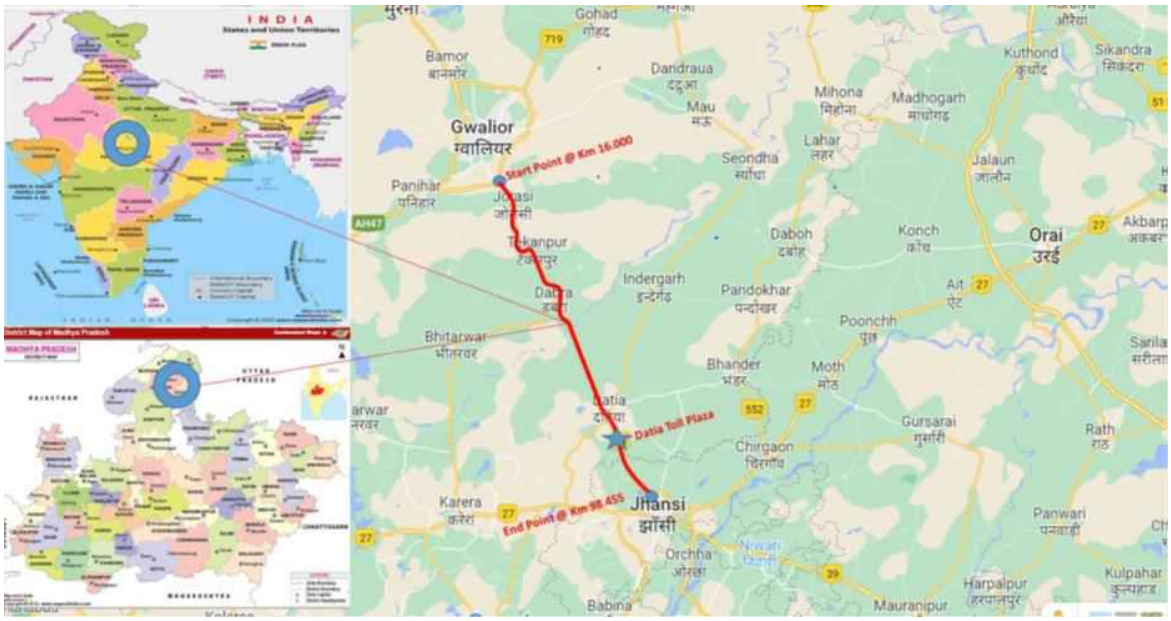


Figure 1-1: Project Stretch of ToT Bundle 13 (Part)

1.2 Objective of the Study

M/s IRB Infrastructure Developers Limited (IRB) intends to develop a traffic study report for Four Laning of Gwalior to Jhansi from km 0.000 to km 103.000 (revised section km 16.000 to km 98.455) of NH-75 (New NH-44) in the state of Madhya Pradesh and Uttar Pradesh on BOT basis. GMD Consultants have been assigned the work of conducting traffic study and developing revenue model based on traffic projections and forecast.

The year 2024-25 has been taken as the base year for projections and forecasting of traffic in the horizon year. This report fulfils part of the requirement of the assignment.

1.3 Scope of Services

The following may be referred to as broad scope of Traffic Study of Four Laning of Gwalior to Jhansi from km 0.000 to km 103.000 (revised section km 16.000 to km 98.455) of NH-75 (New NH-44) in the state of Madhya Pradesh and Uttar Pradesh.

Classified Traffic Volume Count at main toll plaza location at Toll Plaza locations. This data was supplied by the Concessionaire.

- Establishment of traffic pattern
- Working our traffic demand elasticity and growth
- Traffic forecast up to concession period.
- Preparation of revenue model up to concession period
- Any other analysis relevant to scope

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

The project stretch is a section of NH-44, which is the longest National Highway in the country, running through North, Central and South India. A major part of the project section from Gwalior to Jhansi Road lies in Gwalior and Datia district of Madhya Pradesh followed by Jhansi district. The major towns along the project corridor are Gwalior, Tekampur, Dabra, Datia and Jhansi.

Project Stretch Description

The project stretch under this study starts from km 0.000 to km 103.000 (revised section km 16.000 to km 98.455) of NH-75 (New NH-44) in the state of Madhya Pradesh and Uttar Pradesh. The length of project stretch is 82.455 km and has 4-lane configuration with single Toll Plaza (Dagrai village at ch.97.900 KM).

The following figure shows this the alignment of the project highway in the above context.

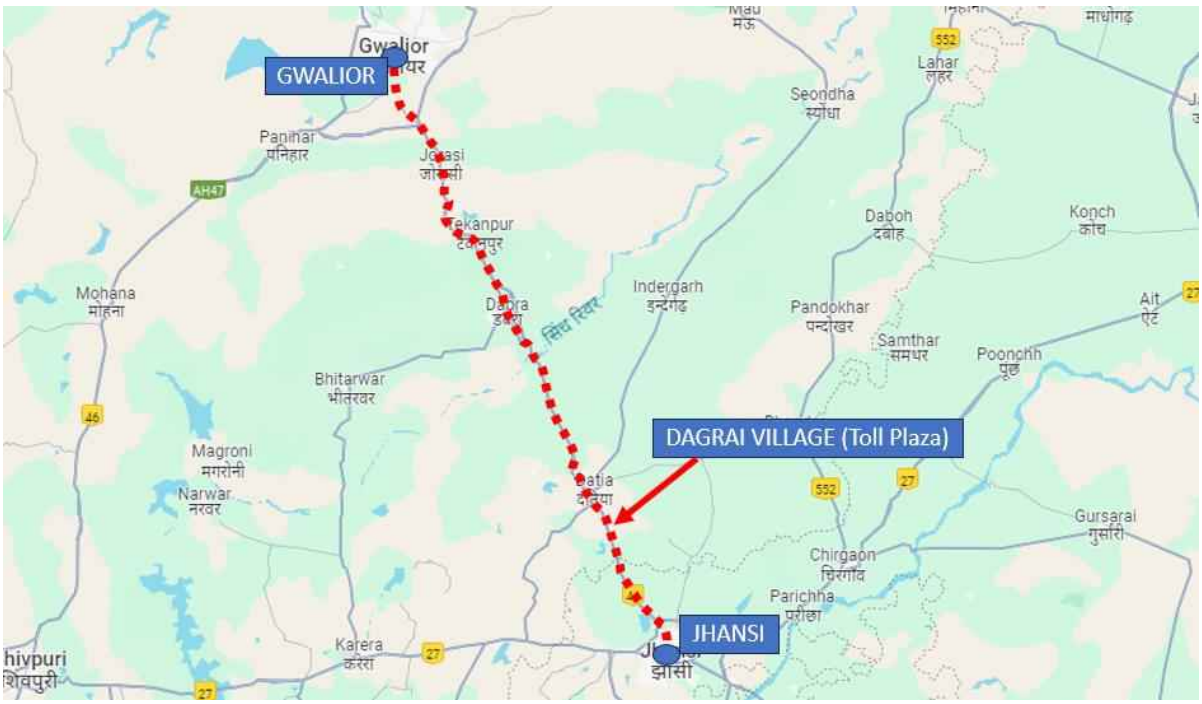


Figure 2-1 : Project Alignment with Toll Plaza

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from a client for a project.

- Classified traffic volume counts at toll plaza locations on Gwalior- Jhansi section km 0.000 to km 103.000 (revised section km 16.000 to km 98.455) of NH-75 (New NH-44), provided by Concessionaire for year 2023-24 and traffic data from April 2024 to July 2024.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project
- Establish base year traffic
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1 below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	Km 97.900 Toll Plaza at Dagrai Village	AADT from previous traffic study report for year 2023-24 & Four month from April 2024 to July 2024	AADT from previous traffic study report for year 2023-24 & Four month from April 2024 to July 2024	AADT from previous traffic study report for year 2023-24 & Four month from April 2024 to July 2024	AADT from previous traffic study report for year 2023-24 & Four month from April 2024 to July 2024	AADT from previous traffic study report for year 2023-24 & Four month from April 2024 to July 2024

Toll plaza is located in Uttar Pradesh.

3.2 Classified Traffic Volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations-based traffic survey done at project stretch.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in table below.

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)

Vehicle Type	
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since the project highway is currently under toll operation, the data collected corresponds to the category of tollable vehicles. The following are the types of vehicles as per concession agreement.

- Car / Jeep / van
- Minibus /LCV
- Bus
- Truck /
- 3 Axle commercial vehicle
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data as per traffic survey conducted at toll plaza locations. It may not represent the whole year traffic as this pertains to specific period only. Hence a seasonality factor has been applied to average traffic of current period to arrive at Annual Average Daily Traffic of base year 2024-25. Same corrected traffic is used for future projections and revenue calculations. The following table shows historical traffic on project stretch and derived Annual Average Daily Traffic (AADT) for year 2024-25.

Table 3-3 : Traffic Data at Dagrai Village Toll Plaza at Km 97.900

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2023-24	Annual Average Daily Traffic (Nos.)- 2024-25
1	Car	4865	4096
3	Minibus /LCV	558	364
4	Bus	210	170
6	Truck	1026	1390
7	3-Axle Commercial vehicle	1253	1361
8	Multi axle	1393	1694
9	Oversized Vehicles	0	4
	Total	**9,305**	**9078**

3.4 Data Analysis

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in "IRC-64-1990: Guidelines for Capacity of Roads in Rural areas". The adopted passenger car unit values (PCU) are presented in Table 3-4.

Table 3-4 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-5 : Traffic in PCU at Project Stretch

Year	Toll Plaza Location (Km)	Traffic No.	PCU	PCU Index
2023-2024	Km 97.900 Toll Plaza at Dagrai Village	9305	19438	2.09
2024-2025	Km 97.900 Toll Plaza at Dagrai Village	9078	21044	2.32

It can be observed from above that project traffic has PCU index 2 to 2.5 which is an indicator of high proportion of commercial traffic in traffic mix in project corridor. The following figure illustrates variation of PCU index at four toll plaza locations.

3.4.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.

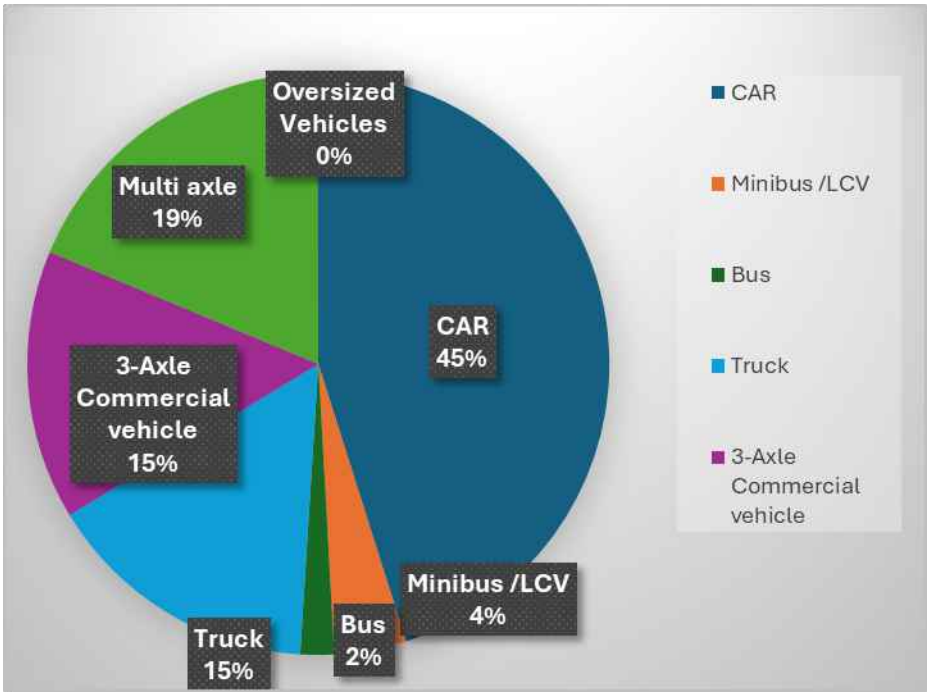


Figure 3-2: Model split of tollable vehicle @ Km 97.900

It is observed that car traffic forms about 45% of total traffic at toll plaza location KM 134.000 while multi axle commercial vehicles are about 34% of total traffic. Truck / Bus and LCV share about 17% and 4% of traffic volume respectively.

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

The following table provides numbers of vehicles falling in each of above category on base year 2024-25.

Table 3-6 : Journey Type Bifurcation of Traffic at Dagrai Village Toll Plaza KM 97.900

Sr. No	Type	Traffic Volume (Nos.)
		2024-25
1	Single Journey	6298
2	Return Journey	2672
3	Local Commercial Single Journey	68
4	Monthly Pass Local	38
5	Monthly Pass	2

It is observed that the project corridor demonstrates a similar pattern of single journey dominated mix of traffic across the entire stretch which is typical of major national highways.

3.5 Secondary Data Collection

There are several other factors which have a substantial impact on traffic patterns and growth on any project corridor. The following are some of such important factors.

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on the project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data
   a) GDP
   b) NSDP
   c) Population Growth
   d) Per Capita Income growth
   e) Industrial Growth
   f) Special Industry Potential
   g) Regional and National development vision / plan
   h) Any other relevant data

3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor. Same is discussed in subsequent chapter.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

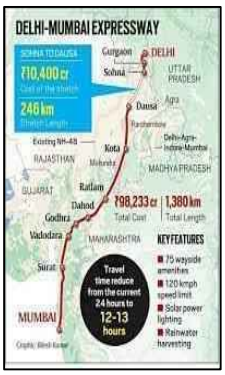
4.1 Introduction

Highway corridors behave like integrated circuit networks and more often than not every road is connected to various networks having different origins and destinations. Traffic running on these networks behaves like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network.

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc.
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Regional Network



Project road has been in existence for a long time and traffic is almost settled. However, there are few upcoming corridors which may have interest in project road catchments. These are discussed below.

Delhi – Mumbai Expressway - The access controlled greenfield expressway connects Delhi and Mumbai (up to Jawaharlal Nehru Port Trust) and passes through states of Haryana, Rajasthan, Madhya Pradesh, Gujarat and Maharashtra. DME alignment will largely cater to traffic between North of India and Gujarat/Western Maharashtra and is not likely to affect traffic on the project road which caters to traffic on NH-44 which is north south highway. Hence it is not likely to impact project road traffic.

Surat – Chennai Expressway - The alignment will largely cater to traffic between states of Gujarat and Central Maharashtra /Andhra Pradesh/ Telangana/Karnataka/Tamilnadu and is not parallel to Project Road. Therefore, it is not likely to affect traffic on the project road.

Pune – **Bangalore Expressway** – Entire catchment of this proposed expressway falls south of project road. It is not likely to affect the project road traffic.

All other major highways in the region exist and traffic is settled in the region. On the local level also, there is no formidable competing route network. Hence it is not envisaged that

there will be any major impact on project road traffic in the near future due to regional or local network developments.

CHAPTER 5

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future patterns of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

The traffic growth forecast for the project corridor of Gwalior-Jhansi from km 0.000 to km 103.000 (revised section km 16.000 to km 98.455) of NH-75 (New NH-44) has been done taking the above factors into consideration. "**IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**" is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable for projects of short durations say 5-10 years, however for long term projections it would be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-12015-Guidelines for Traffic Prediction on Rural Highways**.

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different types of vehicles. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway typically depends on a number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population

- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, In order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

$$Log (P) = k \times Log (EI) + A$$

Where,

P = *Number of Vehicles (Mode wise)*
EI = *Economic Indicator*
A = *Regression constant*
k = *Elasticity coefficient (Regression coefficient)*

The elasticity for car and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

The project corridor spreads across state of Madhya Pradesh & Uttar Pradesh. Toll plaza at Dagrai Village in the state of Uttar Pradesh. Project traffic has share of majorly states like Madhya Pradesh, Uttar Pradesh, Delhi, Haryana and Rajasthan. For elasticity calculations, working data from these states also has been analysed.

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Madhya Pradesh State.

Table 5-1 : Per Capita Income Vs Car Madhya Pradesh

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth (8 Year)
2011	38497	424644	4.59	5.63		
2012	41142	493412	4.61	5.69	7%	
2013	42548	555461	4.63	5.74	3%	
2014	44027	637626	4.64	5.80	3%	
2015	47351	820391	4.68	5.91	8%	
2016	52782	869777	4.72	5.94	11%	
2017	54829	982124	4.74	5.99	4%	
2018	57401	1087124	4.76	6.04	5%	5.9%

Regression analysis of same is given in figure below.

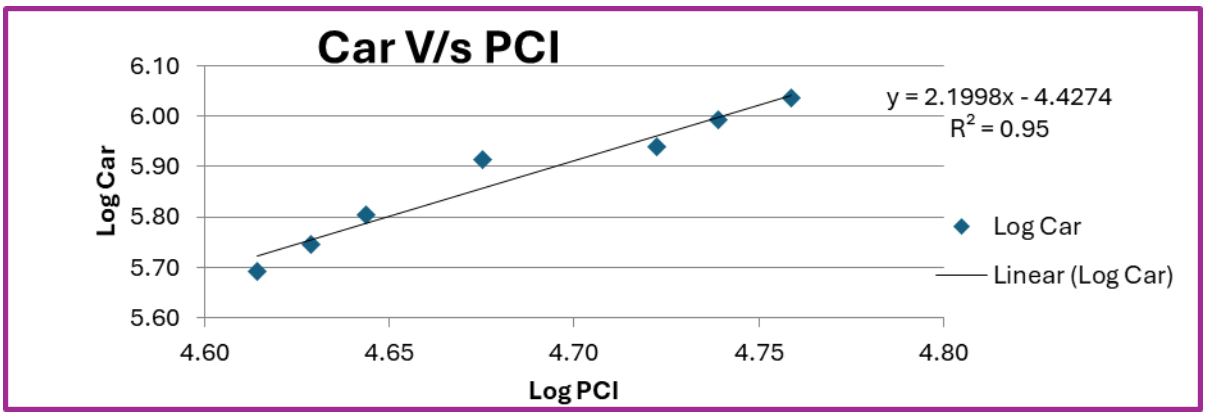


Figure 5-1 : Regression and Elasticity PCI vs. Car – Extrapolation Madhya Pradesh

Table 5-2 : Population Vs Bus Madhya Pradesh

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth (8 Year)
2011	72627000	181770	7.86	5.26		
2012	73863000	208530	7.87	5.32	2%	
2013	75099000	233569	7.88	5.37	2%	
2014	76334000	277898	7.88	5.44	2%	
2015	77570000	322227	7.89	5.51	2%	
2016	78806000	347227	7.90	5.54	2%	
2017	79948000	382227	7.90	5.58	1%	
2018	81090000	402227	7.91	5.60	1%	1.6%

Regression analysis of same is given in figure below.

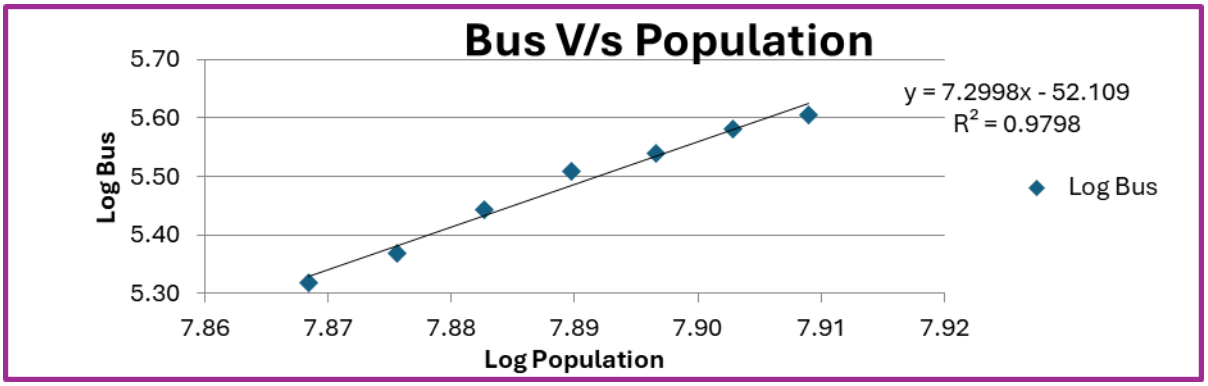


Figure 5-2 : Regression and Elasticity Population vs. Bus – Extrapolation Madhya Pradesh

Elasticity of Trucks has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-3 : LCV Vs NSDP Madhya Pradesh

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (8 Year)
2011	28237104	121916	7.45	5.09		
2012	30685334	131098	7.49	5.12	9%	
2013	32259760	137815	7.51	5.14	5%	
2014	33924690	150921	7.53	5.18	5%	
2015	37071567	177352	7.57	5.25	9%	
2016	41946525	233553	7.62	5.37	13%	
2017	44200243	289754	7.65	5.46	5%	
2018	46928896	326291	7.67	5.51	6%	7.6%

The following figure depicts regression analysis and extrapolation.

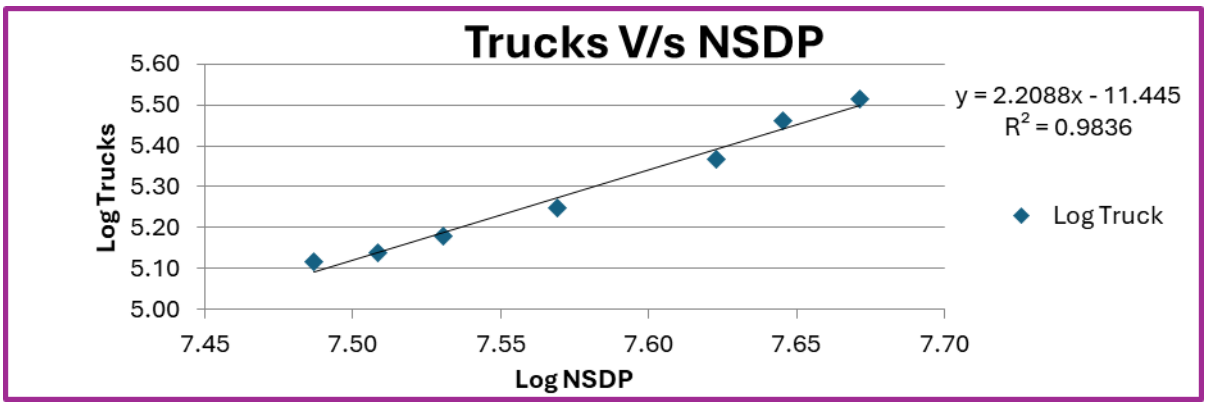


Figure 5-3 : Regression and Elasticity NSDP vs. Trucks Traffic - extrapolation Madhya Pradesh.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-4 : Summary Regression Analysis Madhya Pradesh

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth (8yrs)	Growth Elastic Model	Remarks
MADHYA PRADESH	**Car/Jeep**	PCI	y = 2.2965x - - 4.8829	R^2 = 0.9634	2.3	6%	13.57%	Good Regression
	Bus	Population	y = 7.4978x - - 53.6722	R^2 = 0.9862	7.5	2%	11.90%	Good Regression
	Truck	NSDP	y = 2.2088x - - 11.4451	R^2 = 0.9694	2.2	8%	16.70%	Good Regression

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Uttar Pradesh State.

Table 5-5 : Per Capita Income Vs Car Uttar Pradesh

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth (8 Year)
2011	32002	1108100	4.51	6.04		
2012	32908	1205374	4.52	6.08	3%	
2013	34044	1423020	4.53	6.15	3%	
2014	34583	1572217	4.54	6.20	2%	
2015	36973	1746117	4.57	6.24	7%	
2016	40847	2027972	4.61	6.31	10%	
2017	41832	2195783	4.62	6.34	2%	
2018	43670	2439845	4.64	6.39	4%	4.6%

Regression analysis of same is given in figure below.

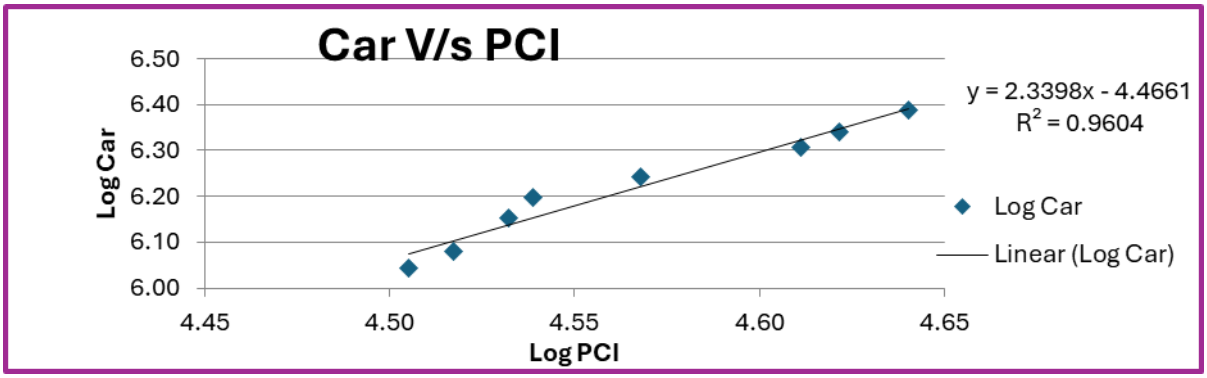


Figure 5-4 : Regression and Elasticity PCI vs. Car – Extrapolation Uttar Pradesh

Table 5-6 : Population Vs Bus Uttar Pradesh

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth (8 Year)
2011	199812000	57901	8.30	4.76		
2012	203670000	64147	8.31	4.81	2%	
2013	206322000	74389	8.31	4.87	1%	
2014	209577000	80460	8.32	4.91	2%	
2015	212832000	89127	8.33	4.95	2%	
2016	216870000	112020	8.34	5.05	2%	
2017	219510000	112766	8.34	5.05	1%	
2018	222150000	121975	8.35	5.09	1%	1.5%

Regression analysis of same is given in figure below.

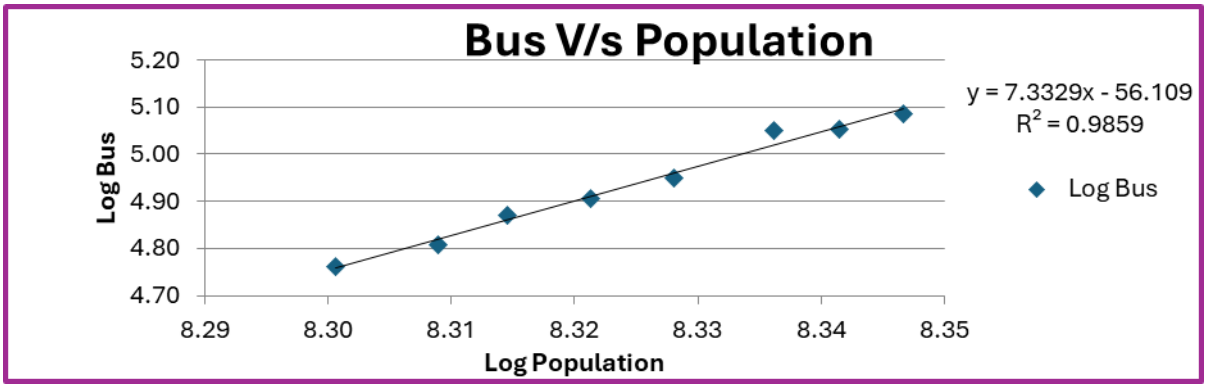


Figure 5-5 : Regression and Elasticity Population vs. Bus – Extrapolation Uttar Pradesh

Elasticity of Trucks has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-7 Trucks Vs NSDP Uttar Pradesh

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (8 Year)
2011	64513155	162813	7.81	5.21		
2012	67355218	186404	7.83	5.27	4%	
2013	70746910	202761	7.85	5.31	5%	
2014	72968630	217609	7.86	5.34	3%	
2015	79204874	245688	7.90	5.39	9%	
2016	88845325	265167	7.95	5.42	12%	
2017	92380571	307096	7.97	5.49	4%	
2018	97915937	356828	7.99	5.55	6%	6.2%

The following figure depicts regression analysis and extrapolation.

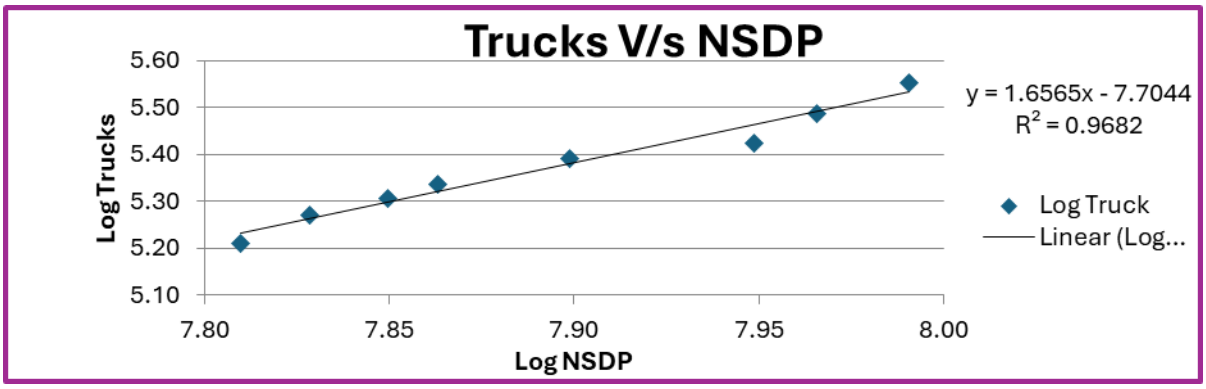


Figure 5-6 : Regression and Elasticity NSDP vs. Trucks Traffic - extrapolation Uttar Pradesh.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-8 : Summary Regression Analysis Uttar Pradesh

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth (8yrs)	Growth Elastic Model	Remarks
UTTAR PRADESH	**Car/Jeep**	PCI	y = 2.3398x - - 4.4661	R^2 = 0.9604	2.3398	4.58%	10.72%	Good Regression
	Bus	Population	y = 7.3329x - - 56.1092	R^2 = 0.9859	7.3329	1.53%	11.19%	Good Regression
	Truck	NSDP	y = 1.6565x - - 7.7044	R^2 = 0.9682	1.6565	6.18%	10.24%	Good Regression

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Delhi State.

Table 5-9 : Per Capita Income Vs Car Delhi

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth (8 Year)
2011	185001	2172069	5.27	6.34		
2012	192220	2416974	5.28	6.38	4%	
2013	200702	2568380	5.30	6.41	4%	
2014	213669	2730071	5.33	6.44	6%	
2015	233115	2986579	5.37	6.48	9%	
2016	244255	3061817	5.39	6.49	5%	
2017	252960	3087309	5.40	6.49	4%	
2018	260967	3249670	5.42	6.51	3%	5.1%

Regression analysis of same is given in figure below.

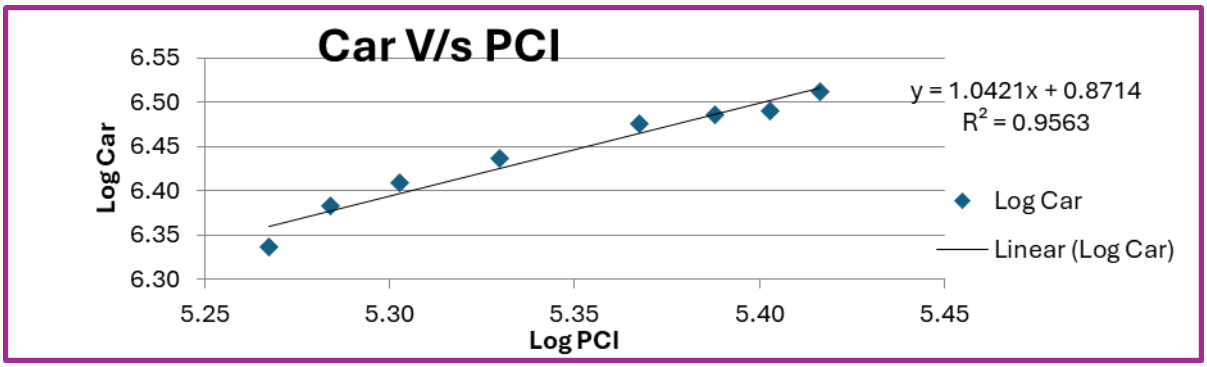


Figure 5-7 : Regression and Elasticity PCI vs. Car – Extrapolation Delhi

Table 5-10 : Population Vs Bus Delhi

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth (8 Year)
2011	16788000	20142	7.22	4.30		
2012	17166000	24642	7.23	4.39	2%	
2013	17544000	28142	7.24	4.45	2%	
2014	17921000	33342	7.25	4.52	2%	
2015	18299000	43723	7.26	4.64	2%	
2016	18677000	51823	7.27	4.71	2%	
2017	19056000	61023	7.28	4.79	2%	
2018	19435000	71043	7.29	4.85	2%	2.1%

Regression analysis of same is given in figure below.

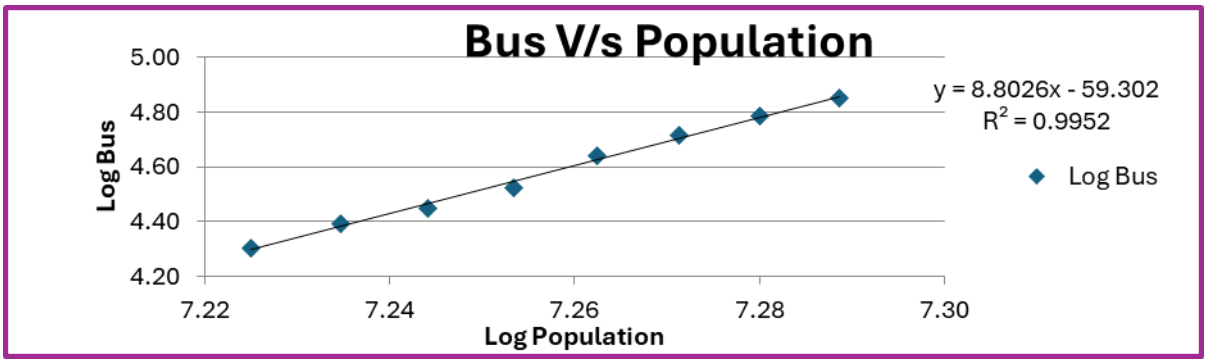


Figure 5-8 : Regression and Elasticity Population vs. Bus – Extrapolation Delhi

Elasticity of Trucks has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-11 Trucks Vs NSDP Delhi

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (8 Year)
2011	31465002	149277	7.50	5.17		
2012	33419330	157277	7.52	5.20	6%	
2013	35652751	165477	7.55	5.22	7%	
2014	38763874	174577	7.59	5.24	9%	
2015	43172959	185027	7.64	5.27	11%	
2016	46159238	196527	7.66	5.29	7%	
2017	48763115	208417	7.69	5.32	6%	

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (8 Year)
2018	51295715	220417	7.71	5.34	5%	7.2%

The following figure depicts regression analysis and extrapolation.

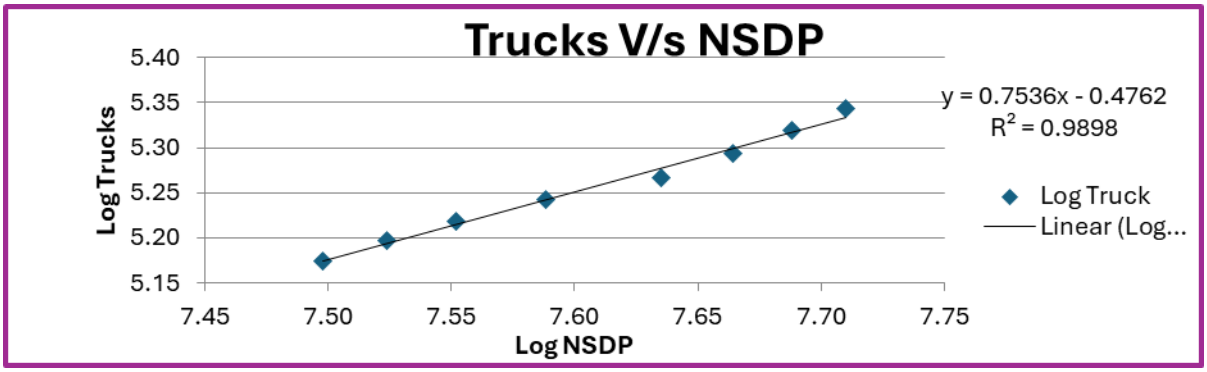


Figure 5-9 : Regression and Elasticity NSDP vs. Trucks Traffic - extrapolation Delhi.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-12 : Summary Regression Analysis Delhi

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth (8yrs)	Growth Elastic Model	Remarks
DELHI	**Car/Jeep**	PCI	y = 1.0421x - 0.8714	R^2 = 0.9563	1.0421	5.05%	5.27%	Good Regression
	Bus	Population	y = 8.8026x - - 59.3021	R^2 = 0.9952	8.8026	2.11%	18.61%	Good Regression
	Truck	NSDP	y = 0.7536x - - 0.4762	R^2 = 0.9898	0.7536	7.25%	5.46%	Good Regression

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Haryana State.

Table 5-13 : Per Capita Income Vs Car Haryana

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth (8 Year)
2011	106085	989519	5.03	6.00		
2012	111780	1602129	5.05	6.20	5%	
2013	119791	1771298	5.08	6.25	7%	
2014	125032	2008748	5.10	6.30	4%	
2015	137833	2260084	5.14	6.35	10%	
2016	150259	2527537	5.18	6.40	9%	
2017	158039	2794957	5.20	6.45	5%	
2018	164976	3011656	5.22	6.48	4%	6.5%

Regression analysis of same is given in figure below.

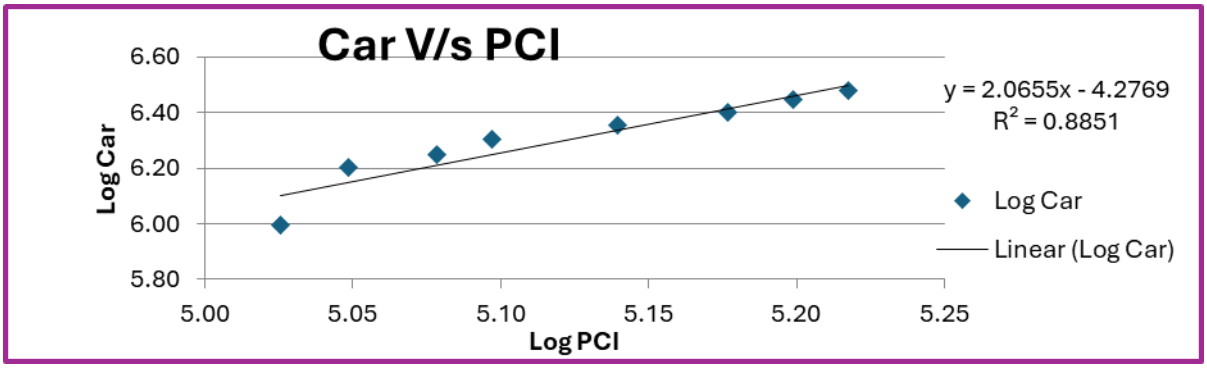


Figure 5-10 : Regression and Elasticity PCI vs. Car – Extrapolation Haryana

Table 5-14 : Population Vs Bus Haryana

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth (8 Year)
2011	25351000	39153	7.40	4.59		
2012	25772000	43456	7.41	4.64	2%	
2013	26193000	46558	7.42	4.67	2%	
2014	26614000	52640	7.43	4.72	2%	
2015	27034000	55781	7.43	4.75	2%	
2016	27455000	60129	7.44	4.78	2%	
2017	27861000	64629	7.44	4.81	1%	
2018	28266000	70229	7.45	4.85	1%	1.6%

Regression analysis of same is given in figure below.

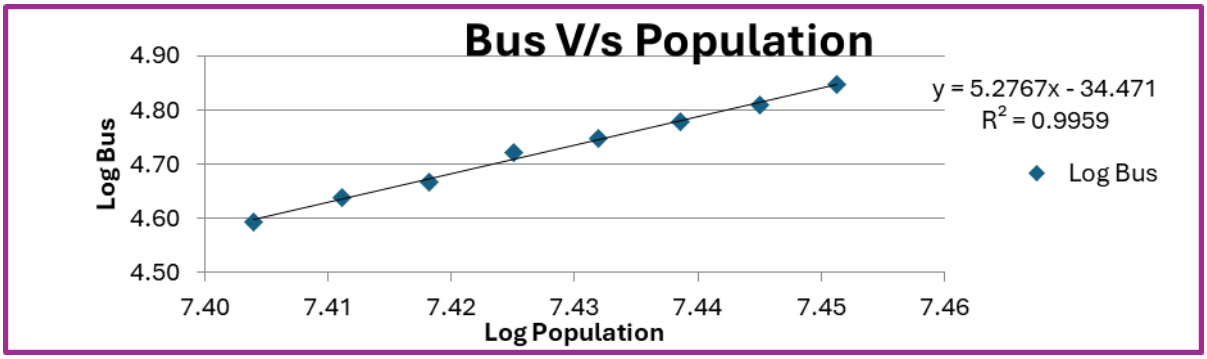


Figure 5-11 : Regression and Elasticity Population vs. Bus – Extrapolation Haryana

Elasticity of Trucks has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-15 Trucks Vs NSDP Haryana

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (8 Year)
2011	27115248	292735	7.43	5.47		
2012	28975622	307509	7.46	5.49	7%	
2013	31493120	327882	7.50	5.52	9%	
2014	33335925	348732	7.52	5.54	6%	
2015	37270025	367730	7.57	5.57	12%	
2016	41205461	390321	7.61	5.59	11%	
2017	43952345	455321	7.64	5.66	7%	
2018	46533095	550321	7.67	5.74	6%	8.0%

The following figure depicts regression analysis and extrapolation.

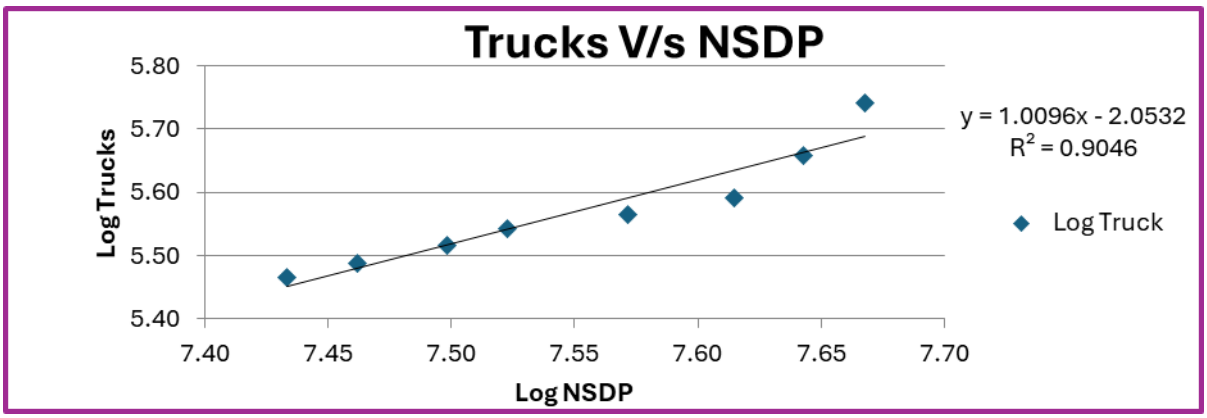


Figure 5-12 : Regression and Elasticity NSDP vs. Trucks Traffic - extrapolation Haryana.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-16 : Summary Regression Analysis Haryana

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth (8yrs)	Growth Elastic Model	Remarks
HARYANA	**Car/Jeep**	PCI	y = 2.0655x - - 4.2769	R^2 = 0.8851	2.0655	6.53%	13.49%	Good Regression
	Bus	Population	y = 5.2767x - - 34.4708	R^2 = 0.9959	5.2767	1.57%	8.27%	Good Regression
	Truck	NSDP	y = 1.0096x - - 2.0532	R^2 = 0.9046	1.0096	8.04%	8.12%	Good Regression

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Rajasthan State.

Table 5-17 : Per Capita Income Vs Car Rajasthan

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth (8 Year)
2011	57192	591069	4.76	5.77		
2012	58441	659542	4.77	5.82	2%	
2013	61053	733916	4.79	5.87	4%	
2014	64496	814079	4.81	5.91	6%	
2015	68565	899307	4.84	5.95	6%	
2016	71324	988391	4.85	5.99	4%	
2017	73109	1095526	4.86	6.04	3%	
2018	75555	1204005	4.88	6.08	3%	4.1%

Regression analysis of same is given in figure below.

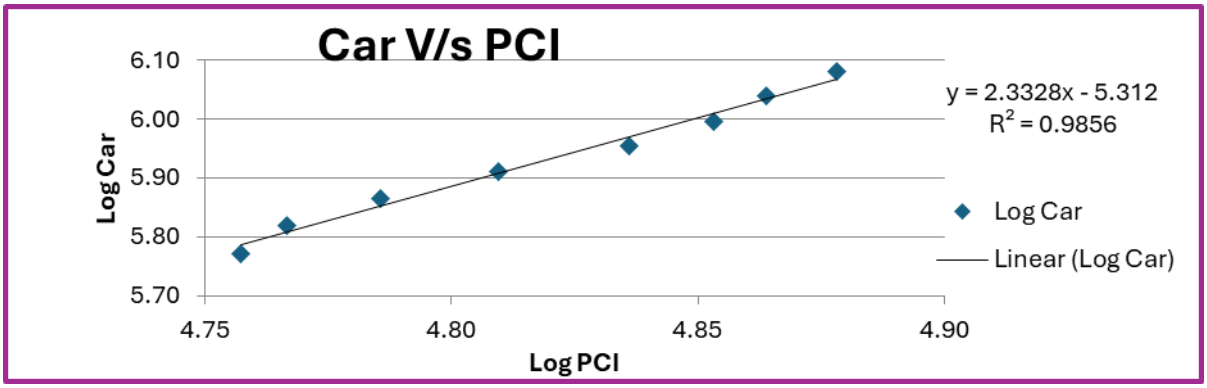


Figure 5-13 : Regression and Elasticity PCI vs. Car – Extrapolation Rajasthan

Table 5-18 : Population Vs Bus Rajasthan

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth (8 Year)
2011	68548000	83345	7.84	4.92		
2012	69687000	88616	7.84	4.95	2%	
2013	70825000	93892	7.85	4.97	2%	
2014	71963000	97650	7.86	4.99	2%	
2015	73102000	102818	7.86	5.01	2%	
2016	74240000	108680	7.87	5.04	2%	
2017	75248000	113964	7.88	5.06	1%	
2018	76256000	118301	7.88	5.07	1%	1.5%

Regression analysis of same is given in figure below.

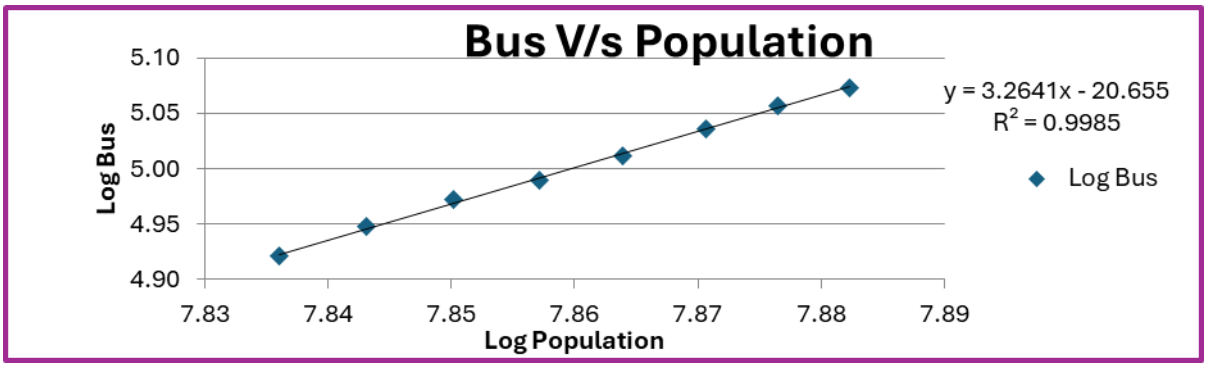


Figure 5-14 : Regression and Elasticity Population vs. Bus – Extrapolation Rajasthan

Elasticity of Trucks has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-19 Trucks Vs NSDP Rajasthan

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (8 Year)
2011	39533093	362028	7.60	5.56		
2012	40980249	401983	7.61	5.60	4%	
2013	43429222	434379	7.64	5.64	6%	
2014	46540773	472365	7.67	5.67	7%	
2015	50192151	517604	7.70	5.71	8%	
2016	52965038	561158	7.72	5.75	6%	
2017	55442912	613055	7.74	5.79	5%	
2018	58059438	665926	7.76	5.82	5%	5.7%

The following figure depicts regression analysis and extrapolation.

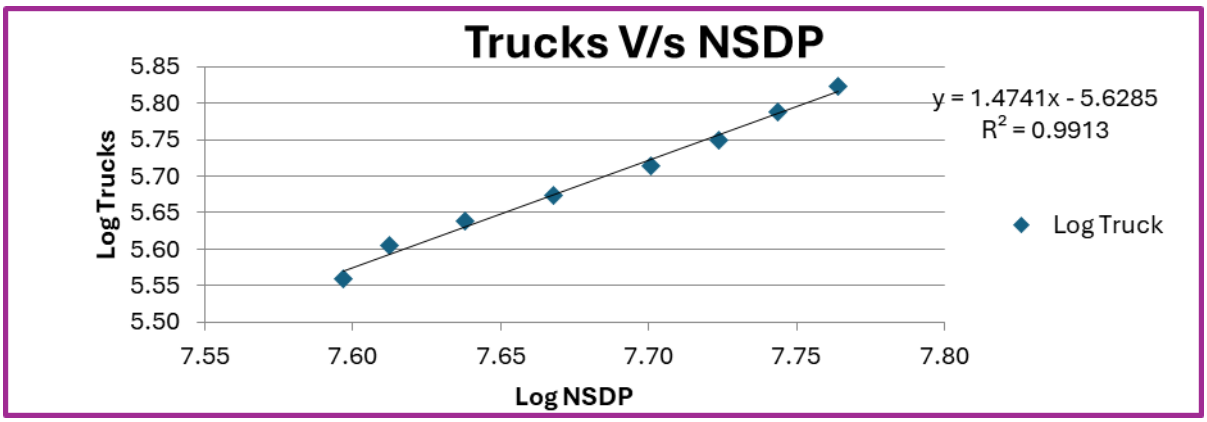


Figure 5-15 : Regression and Elasticity NSDP vs. Trucks Traffic - extrapolation Rajasthan.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-20 : Summary Regression Analysis Rajasthan

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth (8yrs)	Growth Elastic Model	Remarks
RAJASTHAN	**Car/Jeep**	PCI	y = 2.3328x - - 5.312	R^2 = 0.9856	2.3328	4.07%	9.49%	Good Regression
	Bus	Population	y = 3.2641x - - 20.6548	R^2 = 0.9985	3.2641	1.53%	5.01%	Good Regression
	Truck	NSDP	y = 1.4741x - - 5.6285	R^2 = 0.9913	1.4741	5.65%	8.33%	Good Regression

Economical model for predicting growth is good tool, however other local, regional, national factors should also be considered before finalizing growth factors. Considering factors such as proposed developments and other influencing economic factors, moderated growth should be considered. These factors are discussed in subsequent sections.

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trend of growth. Project stretch of Gwalior_ Jhansi has recently been awarded to Concessionaire. Hence credible historical data on project traffic is not available.

5.5 Other Factors Influencing Growth

There are many factors which have an impact on traffic growth. As discussed previously these factors can be economical, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

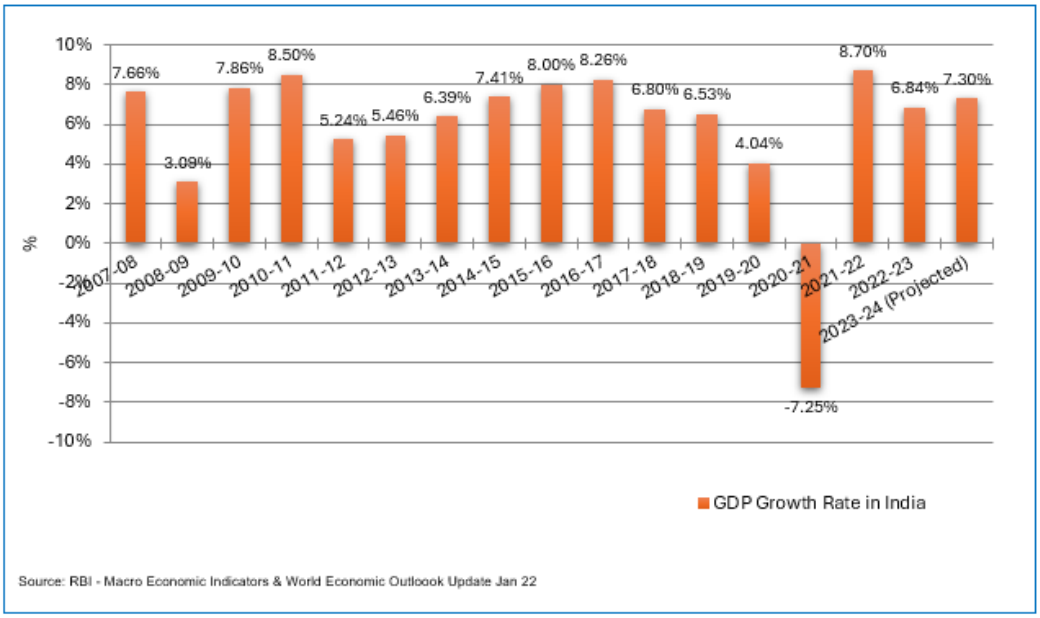


Figure 5-16 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had a slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. The government took major policy decisions including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honorable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into an opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on **Make -In- India** it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. Leading banking and financial institutions have estimated that India would keep on registering good growth in coming years and the growth in year 2023-24 is expected to be around 7.3%.

5.6 Developments along and around the Project Corridor & State

MADHYA PRADESH: Madhya Pradesh state, which is located in central India is bound on the north by Uttar Pradesh, on the east by Chhattisgarh, on the south by Maharashtra, and on the west by Gujarat and Rajasthan. It is the second largest Indian state and one of the fastest growing states in the country. At current prices, the Gross State Domestic Product (GSDP) of Madhya Pradesh is estimated at Rs.1,151,049 crore trillion (US$ 150.74 billion) in 2022-23, registering an annual growth of 10% over FY21. Between 2015-16 and 2021-22, The GSDP increased at a CAGR (in Rs.) of 13.09% from 2015-16 to 2021-22. Net State Domestic Product (NSDP) of Madhya Pradesh was about Rs. 8.27 trillion (US$ 113.94 billion) in 2020-21. Between 2015-16 and 2020-21, state's NSDP grew at a CAGR of around 11.22%

GWALIOR DISTRICT: Gwalior district is one of the fifty-two- districts of Madhya Pradesh state. Gwalior is also the administrative headquarters of this district. The population density in the district is 446 people per sq. Km. In the year 2020 the number of live births in the district was 61265 out of which 34162 where male and 27102 were females**.**

INDUSTRIAL PROFILE OF GWALIOR DISTRICT: The economy of the district is basically based on various Industrial sectors. It comprises 3 prominent industrial areas namely Sitholi, Banmore and Malanpur. Earlier the place had two main big manufacturing industries, such as Gwalior Grasim and J.C. Mills of Birlanagar.

DATIA DISTRICT: Datia district is the one of the fifty-two districts in the state of Madhya Pradesh with its admistrative headquarter located at Datia city. According to the census of the district has population of 7,86,754 out of which 420,157, are males and 3,66,597 are females.

The chief agriculture products in the district are all food grains and cotton.

UTTAR PRADESH: The state has an area of 240,928 sq kms and is the most populous state in India, with population of 199.8 million as per 2011 census with an average population density of 828 persons per sq. km. The economy of Uttar Pradesh is the third largest of all the states in India. Nominal GDP of the state for the year 2022-23 is Rs. 21.74 trillion.

It is reported that the economy of Uttar Pradesh is growing at a faster rate than the national economy at about 9%. In terms of traffic and transportation as well Uttar Pradesh is one of the leader states in India now.

- Air Connectivity: Major national & international airports connecting the rest of India, Middle East & Southeast Asian countries; Only state to have 05 International Airports (03 existing & 02 upcoming at Jewar (G. Noida & Ayodhya)
- Railway Network: Largest railway network in the country spanning over 8,949 km; 05 Railway Zones
- Inland Waterway: India's 1st Inland Waterway is operational in UP (1100 km Haldia - Varanasi tract
- Expressways: Uttar Pradesh boasts state of art expressways ensuring seamless connectivity; 13 Expressways (existing & upcoming)
- Road Network: Largest Road Network in India; 4 Lakh Km Total Road Length 11,737 Km Total National Highway

Logistics hubs emerging across UP: MMLH Dadri, MMTH Boraki, MMT Varanasi etc.

From the above it can be expected that the project corridor would serve as one of the important transportation links in the area and would contribute to the growth of the region.

JHANSI DISTRICT: Jhansi district is a district of Uttar Pradesh state with its headquarters located at Jhansi city. The district is named Jhansi after the headquarter city Jhansi. According to 2011 census the district has a population of 1998603 out of which 1057436 are males and 941167 are females. To some extent the economy of the district is based on agriculture some of its chief agriculture products are wheat, barley. pea, gram, paddy, groundnut, and different types of pulses. The foremost industries of the district are BHEL Jhansi, Heidelberg cement factory, Baidyanth factory, government cotton mill, Paricha

thermal power plant, Indian hume pipe Co.Ltd. its silk material and industries are not only famous in the country but also in the world.

5.7 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as under. Rate of growth is moderated in light of overall regional trend. Growth of Multi-Axle is kept slightly higher as trend of technological advances in logistic industry Favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, rate of growth diminishes. Same growth rate is not sustainable for long. Traffic growth has been suitably stepped down for future years.

Growth rates are recommended for three scenarios for sensitivity analysis namely **Optimistic, Pessimistic** and **Most Likely** with a positive and negative variation 0.25% from Most Likely case for corridor in both states.

5.7.1 Recommended Growth Rates of Stretch

Table 5-21 : Recommended Growth Rates Optimistic

Category / Year	FY 25-29	FY 30-34	FY 35-39	FY 40-44	FY 45-49
Car/Jeep/Van	7.90%	6.76%	5.15%	4.96%	4.29%
Mini LCV	4.87%	3.09%	2.38%	2.01%	3.22%
Bus	4.97%	3.91%	2.67%	2.45%	2.23%
Minibus	4.97%	3.91%	2.67%	2.45%	2.23%
LCV	4.54%	3.09%	2.38%	2.01%	1.82%
2- Axle	4.87%	3.56%	2.38%	2.01%	1.82%
3 - Axle	4.87%	3.56%	2.38%	2.01%	1.82%
4 to 6 Axle	5.53%	4.03%	3.09%	2.60%	2.34%
7 and Above Axle	5.53%	4.03%	3.09%	2.60%	2.34%

Table 5-22 : Recommended Growth Rates Pessimistic

Category / Year	FY 25-29	FY 30-34	FY 35-39	FY 40-44	FY 45-49
Car/Jeep/Van	7.40%	6.26%	4.65%	4.46%	3.79%
Mini LCV	4.37%	2.59%	1.88%	1.51%	2.72%
Bus	4.47%	3.41%	2.17%	1.95%	1.73%
Minibus	4.47%	3.41%	2.17%	1.95%	1.73%
LCV	4.04%	2.59%	1.88%	1.51%	1.32%
2- Axle	4.37%	3.06%	1.88%	1.51%	1.32%
3 - Axle	4.37%	3.06%	1.88%	1.51%	1.32%
4 to 6 Axle	5.03%	3.53%	2.59%	2.10%	1.84%
7 and Above Axle	5.03%	3.53%	2.59%	2.10%	1.84%

Table 5-23 : Recommended Growth Rates Most Likely

Category / Year	FY 25-29	FY 30-34	FY 35-39	FY 40-44	FY 45-49
Car/Jeep/Van	7.65%	6.51%	4.90%	4.71%	4.04%
Mini LCV	4.62%	2.84%	2.13%	1.76%	2.97%
Bus	4.72%	3.66%	2.42%	2.20%	1.98%
Minibus	4.72%	3.66%	2.42%	2.20%	1.98%
LCV	4.29%	2.84%	2.13%	1.76%	1.57%
2- Axle	4.62%	3.31%	2.13%	1.76%	1.57%
3 - Axle	4.62%	3.31%	2.13%	1.76%	1.57%
4 to 6 Axle	5.28%	3.78%	2.84%	2.35%	2.09%
7 and Above Axle	5.28%	3.78%	2.84%	2.35%	2.09%

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in the previous section of the report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for the following three cases of growth up to concession period.

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza - Chainage 97.900 KM

(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	4096	364	170	1390	1361	1694	4	9078	21044
2025-26	4420	382	178	1457	1427	1788	4	9656	22243
2026-27	4769	401	187	1528	1496	1886	4	10271	23509
2027-28	5146	420	196	1602	1568	1991	4	10927	24852
2028-29	5551	440	206	1680	1644	2101	4	11626	26274
2029-30	5926	454	214	1740	1702	2186	4	12226	27430
2030-31	6326	468	222	1802	1762	2274	4	12858	28637
2031-32	6753	482	231	1866	1824	2366	4	13526	29904
2032-33	7210	497	240	1932	1888	2461	4	14232	31228
2033-34	7697	512	249	2001	1955	2560	4	14978	32618
2034-35	8093	525	256	2049	2001	2640	4	15568	33697
2035-36	8510	538	263	2098	2048	2722	4	16183	34811
2036-37	8948	551	270	2148	2097	2806	4	16824	35965
2037-38	9409	564	277	2199	2147	2893	4	17493	37161
2038-39	9893	578	284	2251	2198	2982	4	18190	38396
2039-40	10383	589	291	2297	2242	3059	4	18865	39540
2040-41	10896	600	298	2344	2287	3139	4	19568	40727
2041-42	11437	612	305	2391	2333	3221	4	20303	41955
2042-43	12005	625	312	2439	2380	3305	4	21070	43226
2043-44	12601	638	319	2488	2428	3391	4	21869	44541

Table 6-2 : Total Tollable Traffic @ Toll Plaza - Chainage 97.900 KM (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	4096	364	170	1390	1361	1694	4	9078	21044
2025-26	4399	379	177	1451	1420	1780	4	9610	22140
2026-27	4725	395	184	1514	1481	1870	4	10173	23288
2027-28	5074	413	192	1580	1545	1964	4	10772	24501
2028-29	5449	431	201	1649	1612	2062	4	11408	25779
2029-30	5791	442	208	1699	1661	2135	4	11940	26784
2030-31	6154	453	215	1751	1712	2210	4	12499	27831
2031-32	6538	464	222	1805	1764	2288	4	13085	28921
2032-33	6948	475	229	1861	1818	2369	4	13704	30063
2033-34	7382	488	236	1918	1873	2453	4	14354	31252
2034-35	7726	497	241	1954	1908	2517	4	14847	32125
2035-36	8085	506	246	1991	1944	2583	4	15359	33029
2036-37	8461	515	251	2028	1981	2650	4	15890	33957
2037-38	8854	525	256	2066	2018	2719	4	16442	34915
2038-39	9266	535	261	2106	2056	2789	4	17017	35906
2039-40	9679	543	266	2137	2087	2848	4	17564	36798
2040-41	10110	551	271	2169	2119	2908	4	18132	37718
2041-42	10560	560	276	2201	2151	2970	4	18722	38667
2042-43	11030	569	281	2234	2184	3033	4	19335	39647
2043-44	11521	578	286	2267	2217	3097	4	19970	40653

Traffic projections for Most Likely scenario is given as under

Table 6-3 : Total Tollable Traffic @ Toll Plaza - Chainage 97.900 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	4096	364	170	1390	1361	1694	4	9078	21044
2025-26	4410	381	178	1454	1423	1784	4	9634	22193
2026-27	4748	399	186	1521	1488	1878	4	10224	23401
2027-28	5111	417	195	1592	1556	1977	4	10852	24680
2028-29	5502	436	204	1666	1627	2082	4	11521	26034
2029-30	5860	449	211	1722	1680	2161	4	12087	27115
2030-31	6241	462	218	1779	1735	2243	4	12682	28242
2031-32	6646	475	226	1838	1792	2328	4	13309	29421
2032-33	7078	489	234	1899	1851	2416	4	13971	30654
2033-34	7538	503	243	1962	1912	2507	4	14669	31943
2034-35	7908	513	248	2004	1953	2578	4	15208	32912

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2035-36	8295	524	253	2047	1995	2651	4	15769	33914
2036-37	8701	535	260	2091	2037	2726	4	16354	34953
2037-38	9128	546	267	2136	2080	2803	4	16964	36028
2038-39	9576	557	274	2182	2124	2883	4	17600	37143
2039-40	10026	567	279	2221	2162	2951	4	18210	38160
2040-41	10497	577	286	2261	2200	3021	4	18846	39216
2041-42	10991	587	293	2302	2239	3092	4	19508	40306
2042-43	11508	597	300	2343	2279	3165	4	20196	41430
2043-44	12051	607	307	2385	2319	3239	4	20912	42588

CHAPTER 7

FORECAST OF TOLL REVENUE

7.1 General

This chapter presents the tolling rate calculations, categories and toll revenue of the project.

7.2 Discount Categories

As per the Toll Notification (Schedule - G) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent users monthly pass would be issued at fee at 2/3rd rate for 50 single journey trips.
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travellers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: There are several categories of local discounts.
    a) Local Car Jeep Van - Rs. 275 per month (for locals residing within a radius of 20 kms from toll plaza)

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.

The formula for determining the applicable rate of fee shall be as follows:-

$$\text{Applicable rate of fee} = \text{base rate} + \text{base rate} \times \left\{ \frac{\text{WPI A-WPI B}}{\text{WPI B}} \right\} \times 0.4$$

Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2022-23. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. The following graph provides historical rate of inflation (WPI) in India. Data has been sourced from the Office of Economic Advisor web site (www.eaindustry.nic.in) WPI for year 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series.

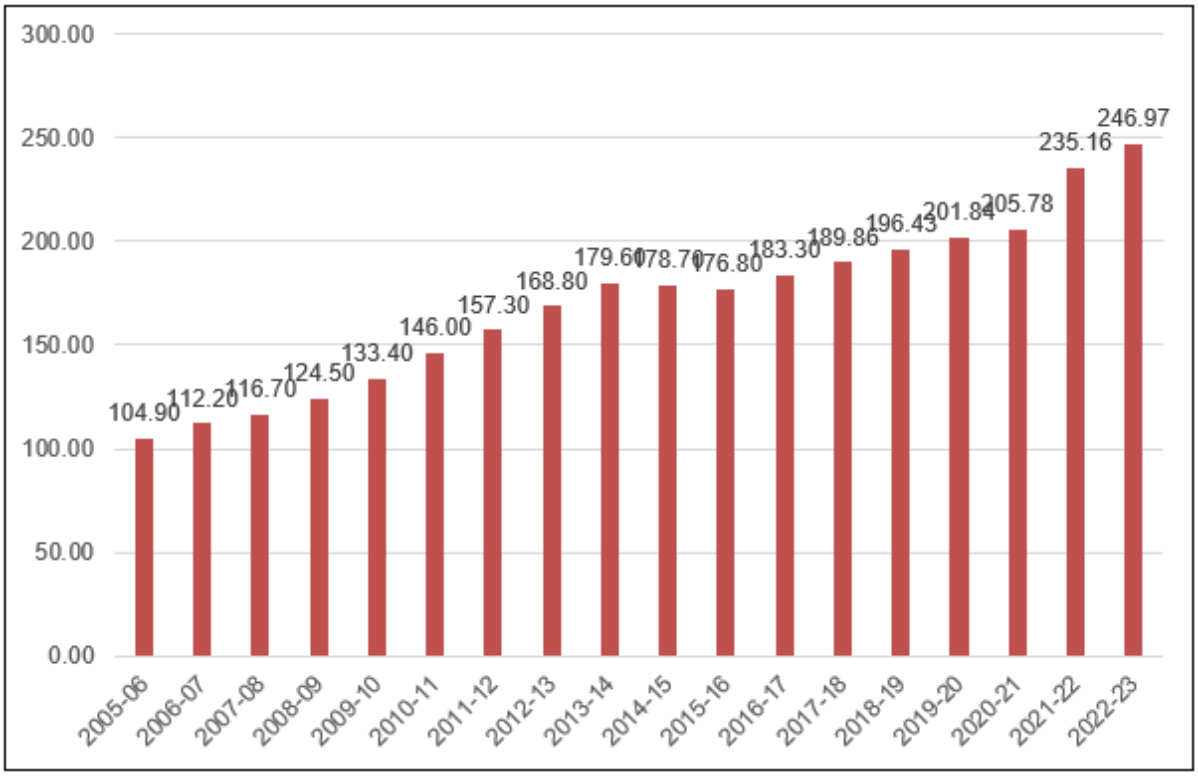


Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in the last few years is steadily growing. It grew by the range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

7.3 Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Oversized Vehicles (7 or more Axles)	4.20

These rates are then modified for as per procedure provided in guidelines of notification considering factors listed below.

- Annual revision of fee rate - @3%
- Application of WPI

Base rates have been worked out to map the current rates. These shall be updated when more details come in. Base toll rates are given below.

Table 7-2 : Toll Rates for Forecasting Year (Rs. Rupees) Single Journey @ Toll Plaza 1 – KM 97.900

Year	Car	Minibus /LCV	Bus	Truck	3 axles	Multi axle	Oversized Vehicles
2024-25	145	230	485	485	530	760	925
2025-26	150	245	510	510	555	800	975
2026-27	160	255	535	535	585	840	1025
2027-28	165	270	565	565	615	885	1075
2028-29	175	280	590	590	645	930	1130
2029-30	185	295	620	620	680	975	1190
2030-31	195	310	655	655	715	1025	1250
2031-32	205	330	690	690	750	1080	1315
2032-33	215	345	725	725	790	1135	1380
2033-34	225	365	760	760	830	1195	1455
2034-35	235	380	800	800	875	1255	1530
2035-36	250	400	845	845	920	1320	1610
2036-37	260	425	890	890	970	1390	1695
2037-38	275	445	935	935	1020	1465	1785
2038-39	290	470	985	985	1075	1545	1880
2039-40	305	495	1035	1035	1130	1625	1980
2040-41	325	520	1095	1095	1190	1715	2085
2041-42	340	550	1150	1150	1255	1805	2200
2042-43	360	580	1215	1215	1325	1905	2315
2043-44	380	610	1280	1280	1395	2005	2445

Table 7-3 : Toll Rates for Forecasting Year (Rs. Rupees) Return Journey @ Toll Plaza 1 – KM 97.900

Year	Car	Minibus /LCV	Bus	Truck	3 axle	Multi axle	Oversized Vehicles
2024-25	215	350	730	730	795	1140	1390
2025-26	225	365	765	765	835	1200	1460
2026-27	235	385	805	805	875	1260	1535
2027-28	250	405	845	845	920	1325	1610
2028-29	260	425	890	890	970	1390	1695
2029-30	275	445	935	935	1020	1465	1780
2030-31	290	470	980	980	1070	1540	1875
2031-32	305	490	1030	1030	1125	1620	1970
2032-33	320	520	1085	1085	1185	1700	2070
2033-34	335	545	1140	1140	1245	1790	2180
2034-35	355	575	1200	1200	1310	1885	2295
2035-36	375	605	1265	1265	1380	1985	2415
2036-37	395	635	1330	1330	1450	2090	2540
2037-38	415	670	1400	1400	1530	2200	2675
2038-39	435	705	1475	1475	1610	2315	2820
2039-40	460	740	1555	1555	1695	2440	2970
2040-41	485	780	1640	1640	1790	2570	3130
2041-42	510	825	1725	1725	1885	2710	3300
2042-43	540	870	1820	1820	1985	2855	3475
2043-44	565	915	1920	1920	2095	3010	3665

Table 7-4: Toll Rates for Monthly Pass Local @ Toll Plaza 1 – KM 97.900

Year	Car	Minibus /LCV
2024-25	355	355
2025-26	375	375
2026-27	390	390
2027-28	410	410
2028-29	435	435
2029-30	455	455
2030-31	480	480
2031-32	505	505
2032-33	530	530
2033-34	560	560
2034-35	585	585
2035-36	620	620
2036-37	650	650
2037-38	685	685
2038-39	720	720
2039-40	760	760
2040-41	800	800
2041-42	845	845
2042-43	890	890

Year	Car	Minibus /LCV
2043-44	940	940

Table 7-5: Toll Rates for Monthly Pass @ Toll Plaza 1 – KM 97.900

Year	Car	Minibus /LCV	Bus	Truck	3 axles	Multi axle	Oversized Vehicles
2024-25	4780	7725	16185	16185	17655	25380	30900
2025-26	5025	8115	17000	17000	18545	26660	32455
2026-27	5275	8525	17860	17860	19485	28010	34100
2027-28	5545	8955	18770	18770	20475	29430	35830
2028-29	5830	9415	19725	19725	21515	30930	37655
2029-30	6125	9895	20735	20735	22620	32515	39585
2030-31	6440	10405	21800	21800	23780	34185	41620
2031-32	6775	10940	22925	22925	25010	35955	43770
2032-33	7125	11510	24115	24115	26310	37820	46040
2033-34	7495	12110	25370	25370	27680	39790	48440
2034-35	7890	12745	26700	26700	29125	41870	50970
2035-36	8305	13415	28105	28105	30660	44070	53650
2036-37	8740	14120	29585	29585	32275	46395	56485
2037-38	9205	14870	31155	31155	33990	48855	59480
2038-39	9695	15660	32815	32815	35795	51460	62645
2039-40	10215	16500	34570	34570	37710	54210	65995
2040-41	10760	17385	36425	36425	39735	57120	69535
2041-42	11340	18320	38385	38385	41875	60195	73280
2042-43	11955	19310	40460	40460	44140	63450	77245
2043-44	12605	20360	42660	42660	46535	66895	81440

7.4 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under ***Optimistic***, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

7.5 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under all scenarios at each of the toll plaza up to 2043-44 years starting from the year 2024-25 are shown in tables below.

Table 7-6 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Location / Year	TP-01	Total
2024-25	120.19	**120.19**
2025-26	133.17	**133.17**

Location / Year	TP-01	Total
2026-27	147.82	**147.82**
2027-28	164.74	**164.74**
2028-29	181.95	**181.95**
2029-30	199.54	**199.54**
2030-31	219.02	**219.02**
2031-32	241.03	**241.03**
2032-33	263.46	**263.46**
2033-34	288.72	**288.72**
2034-35	313.36	**313.36**
2035-36	341.82	**341.82**
2036-37	370.16	**370.16**
2037-38	402.20	**402.20**
2038-39	437.33	**437.33**
2039-40	474.60	**474.60**
2040-41	514.25	**514.25**
2041-42	556.46	**556.46**
2042-43	604.78	**604.78**
2043-44	656.74	**656.74**

Table 7-7 : Toll Revenue Pessimistic Scenario

(Rs. Crores)

Location / Year	TP-01	Total
2024-25	120.19	**120.19**
2025-26	132.57	**132.57**
2026-27	146.48	**146.48**
2027-28	162.47	**162.47**
2028-29	178.57	**178.57**
2029-30	194.95	**194.95**
2030-31	213.04	**213.04**
2031-32	233.36	**233.36**
2032-33	253.90	**253.90**
2033-34	276.86	**276.86**
2034-35	298.87	**298.87**
2035-36	324.33	**324.33**
2036-37	349.46	**349.46**
2037-38	377.80	**377.80**
2038-39	408.82	**408.82**
2039-40	441.30	**441.30**
2040-41	475.67	**475.67**
2041-42	512.10	**512.10**
2042-43	553.76	**553.76**
2043-44	598.25	**598.25**

Table 7-8 : Toll Revenue Most Likely Scenario

(Rs. Crores)

Location / Year	TP-01	Total
2024-25	120.19	**120.19**
2025-26	132.87	**132.87**
2026-27	147.14	**147.14**
2027-28	163.60	**163.60**
2028-29	180.29	**180.29**
2029-30	197.26	**197.26**
2030-31	216.02	**216.02**
2031-32	237.15	**237.15**
2032-33	258.62	**258.62**
2033-34	282.70	**282.70**
2034-35	306.00	**306.00**
2035-36	332.92	**332.92**
2036-37	359.59	**359.59**
2037-38	389.70	**389.70**
2038-39	422.69	**422.69**
2039-40	457.56	**457.56**
2040-41	494.58	**494.58**
2041-42	533.90	**533.90**
2042-43	578.88	**578.88**
2043-44	627.05	**627.05**

7.6 Modification in Concession Period

Modification of the concession period shall be done on the basis of Revenue targets given in the contract for milestones 1 & 2.

Modification in concession period as per provisions of DCA and same is summarized in table for all scenarios.

Pessimistic Case

Target Point 1- March 2031									
Target Month - March 2031	**Target Revenue (Rs. Crores)**	**Calculated Revenue (Rs. Crores)**	**Difference %**	**If qualifies for Modification in Concession Period**	**Qualifying increment or shortfall**	**Change in Concession period %**	**Original Concession Period (Year)**	**Change in Concession period (Year)**	**Modified Concession Period**
TOT-13 - Gwalior to Jhansi	17	17.82	4.80%	No	-	0.00%	20.00	0.00	

Target Point 2- March 2038											
Target Month - March 2038	**Target Revenue (Rs. Crores)**	**Calculated Revenue (Rs. Crores)**	**Difference %**	**If qualifies for Modification in Concession Period**	**Qualifying increment or shortfall**	**Change in Concession period %**	**Original Concession Period (Year)**	**Change in Concession period**	**Total Change in Concession period (Year)**	**Calculated Modified Concession Period**	**Final Concession Period subject to Cap**
TOT-13 - Gwalior to Jhansi	31	31.56	1.80 %	No	-	0.00%	20.00	0.00	0.00	20.00	

Most likely Case

Target Point 1- March 2031									
Target Month - March 2031	**Target Revenue (Rs. Crores)**	**Calculated Revenue (Rs. Crores)**	**Difference %**	**If qualifies for Modification in Concession Period**	**Qualifying increment or shortfall**	**Change in Concession period %**	**Original Concession Period (Year)**	**Change in Concession period (Year)**	**Modified Concession Period**
TOT-13 - Gwalior to Jhansi	17	18.07	6.28%	No	-	0.00%	20.00	0.00	

Target Point 2- March 2038											
Target Month - March 2038	Target Revenue (Rs. Crores)	Calculated Revenue (Rs. Crores)	Difference %	If qualifies for Modification in Concession Period	Qualifying increment or shortfall	Change in Concession period %	Original Concession Period (Year)	Change in Concession period	Total Change in Concession period (Year)	Calculated Modified Concession Period	Final Concession Period subject to Cap
TOT-13 - Gwalior to Jhansi	31	32.56	5.02 %	No	-	0.00%	20.00	0.00	0.00	20.00	

Optimistic Case

Target Point 1- March 2031									
Target Month - March 2031	Target Revenue (Rs. Crores)	Calculated Revenue (Rs. Crores)	Difference %	If qualifies for Modification in Concession Period	Qualifying increment or shortfall	Change in Concession period %	Original Concession Period (Year)	Change in Concession period (Year)	Modified Concession Period
TOT-13 - Gwalior to Jhansi	17	18.32	7.77%	No	-	0.00%	20.00	0.00	

Target Point 2- March 2038											
Target Month - March 2038	Target Revenue (Rs. Crores)	Calculated Revenue (Rs. Crores)	Difference %	If qualifies for Modification in Concession Period	Qualifying increment or shortfall	Change in Concession period %	Original Concession Period (Year)	Change in Concession period	Total Change in Concession period (Year)	Calculated Modified Concession Period	Final Concession Period subject to Cap
TOT-13 - Gwalior to Jhansi	31	33.60	8.39 %	No	-	0.00%	20.00	0.00	0.00	20.00	

TOT-13 (Gwalior to Jhansi)-Modification in Concession Period						
Types of Scenarios	**Pessimistic Case**		**Most likely Case**		**Optimistic Case**	
Target Month	**Mar-31**	**Mar-38**	**Mar-31**	**Mar-38**	**Mar-31**	**Mar-38**
Target Revenue (Rs. Crores)	17	31	17	31	17	31
Calculated Revenue (Rs. Crores)	17.82	31.56	18.07	32.56	18.32	33.60
Differences %	4.80%	1.80%	6.28%	5.02%	7.77%	8.39%
If qualifies for Modification in Concession Period	No	No	No	No	No	No
Qualifying Increment or shortfall	-	-	-	-	-	-
Change in Concession period %	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Original Concession Period	20.00	20.00	20.00	20.00	20.00	20.00
Change in Concession period	0.00	0.00	0.00	0.00	0.00	0.00
Total Change in Concession period	0.00		0.00		0.00	
Calculated Modified Concession Period	20.00		20.00		20.00	
Final Concession Period subject to Cap	0.00		0.00		0.00	

Thus, there is no modification expected in concession period due to variation in revenue as per above estimates in all scenarios.

CHAPTER 8

CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Gwalior-Jhansi from km 0.000 to km 103.000 (revised section km 16.000 to km 98.455) of NH-75 (New NH-44) in the state of Madhya Pradesh and Uttar Pradesh is currently four lane road. The road is in sound condition and serves healthy traffic volumes. Project corridor is a part of the important regional network connecting Uttar Pradesh, Madhya Pradesh to Southern States and vice-versa. There are large number of townships, industrial corridors and other business establishment coming up along project corridor. As discussed, dominant portion of traffic is long route traffic, which is more sensitive towards the growth of national economy. As Indian economy is poised to grow at 7%+ post COVID-19, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give positive impact to traffic flow on project. The following can be considered as major outcomes of the study

a) There is good amount of tollable traffic running on project

b) Project corridor has potential to witness traffic growth @ 6-8% annually in near future due to various development in area and overall development of economy

c) Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road

Based on above it can be considered a stable healthy project from traffic and revenue point of view.

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Traffic Study
for
Development of an Access-Controlled Six lane (Expandable to Eight lane) Greenfield Expressway from Meerut to Prayagraj "Ganga Expressway" (Total Length- 593.947 Km) in the State of Uttar Pradesh

December 2024

T & T Consultants

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1 Introduction

1.1 Project Background

The Government of Uttar Pradesh had entrusted Uttar Pradesh Expressway Industrial Development Authority (UPEIDA) to develop a six lane access controlled Expressway extendable to eight lane from Meerut to Prayagraj under Design Build Finance Operate and Transfer (DBFOT) mode. The total length of project corridor is approximately 594 km. This length is divided in four groups and RFP cum RFQ document is invited for all four groups. IRB Infrastructure Developers Limited has appointed M/s T&T Consultants Private Limited to study the traffic revenue potential of this project.

1.2 Report Updation in 2024 with optimistic and pessimistic Scenario

In this report updation from previous version the toll rates are revised as per WPI changes and optimistic, pessimistic scenario. The table below provides these changes. The growth rate forecast remains the same as FY-2021 report. This forecast remains in acceptable range since the GDP of India in FY 24 is 173.82 lakh crore and projected GDP in this report in FY 24 is 174.4 lakh crore. The percentage difference is 0.3% which is in acceptable range. Hence growth forecast in current is report is taken same as FY 21/FY 22 report.

Table 1-1 Optimistic and Pessimistic Scenario of Analysis

Parameter	Pessimistic	Optimistic
Seasonality	-15%	10%
ADT	-15%	10%
Growth Rate	-20%	10%

1.3 Project Corridor Description

1.3.1 Districts of Project Corridor

The project corridor starts from Meerut and ends at Parayagraj passing through the districts of Meerut, Hapur, Bulandshahr, Amroha, Sambhal, Budaun, Shahjahapur, Hardoi, Unnao, Raebarelli, Pratapgarh and Prayagraj. Figure 1-1 shows the alignment of project corridor.

1.3.2 Concept of Tolling based on Entry and Exit in the Project Corridor

The total Project Corridor has 21 nodes. Nodes are entry exit points or interchange points at which the traffic could enter and exit the Project Corridor or traffic interchanges between two Groups of the Project Corridor. The division of project corridor into groups is described in Section 1.4 The nomenclature from A to U in the figure below describes these points on the project corridor. The toll fee paid by the user is based on length of section the user uses. This is described in further detail in Section 1.4.1

Figure 1-1 Districts of Project Corridor



1.3.3 Strategic Location of Project Corridor

1.3.3.1 Distance Advantage from Competing Highways

Figure 1-2 shows the project corridor and its vicinity. Old NH-24, NH-19, NH-34, Yammuna-Expressway and Agra Lucknow Expressway and NH-34 are important parallel roads to the project corridor. The project corridor shortens the distance between Merrut to Prayagraj by 74 Km from Old NH-24 and 120 km from NH-19. Figure 1-2 Shows location of project highways vis-à-vis other competing highways. In the figure it could be seen competing highways of NH-19 and old NH-24 have a curvature in the alignment while the alignment of Ganga Expressway is straight. Table 1-2 compares the distance between project corridor and important OD pairs where Ganga Expressway is shorter in length.

Table 1-2 Distance Comparison (in km) between Ganga Expressway and other alternate routes between important OD pairs

From	To	Ganga Expressway	NH-19	Old NH-24	Agra-Lucknow Expressway
Meerut	Prayagraj	620*	740	694	
Meerut	Kanpur	469	544		
Meerut	Lucknow	460		486	575
Delhi	Prayagraj	672	702		
Delhi	Lucknow	505		534	554
Northern States**	Prayagraj	737	832	831	
Northern States	Kanpur	579	638		
Northern States	Lucknow	570		623	677

*Distance from Meerut centroid to Prayagraj centroid

**Northern states means states above Delhi i.e. North Haryana, Punjab, Jammu & Kashmir. The centroid taken for distance calculation is Karnal.

1.3.3.2 Network of Expressways with Ganga Expressway

With North linkages and Eastern Linkages the Ganga Expressway gets connected from Jammu & Kashmir/Uttarakhand upto Bihar-Uttar Pradesh border. This is described in following subsections.

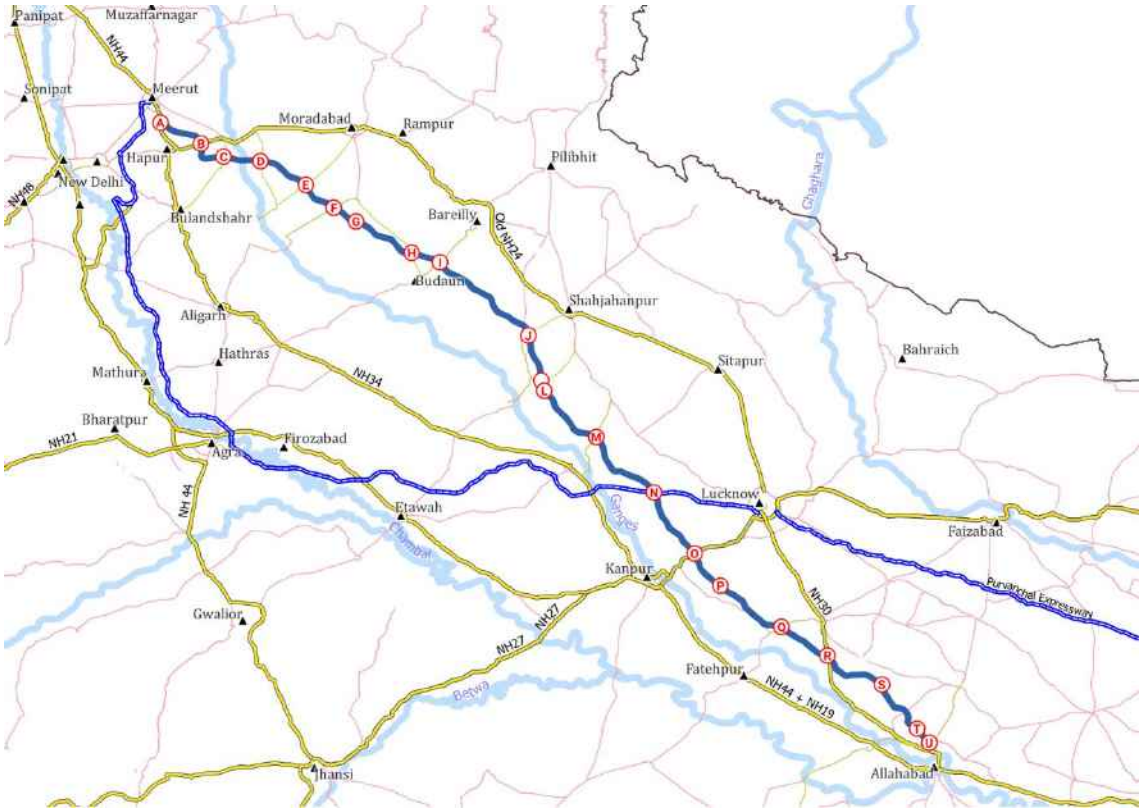
1.3.3.2.1 North Linkages of Ganga Expressway (Meerut and Hapur End)

1. Delhi-Amritsar-Katra Expressway links Katra in Jammu and Kashmir to Western Peripheral Expressway via Amritsar, Ludhiana and Jind
2. Kundli-Manesar Expressay (Western Peripheral Expressway) links to Eastern Peripheral Expressway.
3. Link of Ganga-Expressway with Eastern Peripheral Expressway links it with Ganga Expressway. The connection of Ganga Expressway become seamless with Jammu & Kashmir and Punjab.
4. Haridwar link of Ganga Expressway is also proposed that would connect Garhwal region of Uttarakhand with Ganga Expressway
5. Delhi-Dasna-Hapur is 8 lane expressway that connects Delhi to Hapur. There is one node (node B) of Ganga Expressway at Hapur.

1.3.3.2.2 Eastern Linkages of Proposed Ganga Expressway

1. The Ganga-Expressway forms a seamless connection with other existing and proposed expressways. Agra-Lucknow Expressway intersects the project corridor at node N. Through node N Ganga Expressway connects to Lucknow and further to Purvanchal Expressway and NH-27. This forms a connection to Ganga Expressway to Purvanchal region of Uttar Pradesh, North Bihar and North Eastern States. Agra-Lucknow expressway and NH-21 is also likely to feed traffic from Rajasthan to Eastern parts of India (South Bihar, Jharkhand, Odhisa) at node N.
2. It is proposed in future that Ganga-Expressway would be extended from Prayagraj upto Ballia via Varanasi. These connections will increase the network length of expressway and would complement the traffic of project corridor.

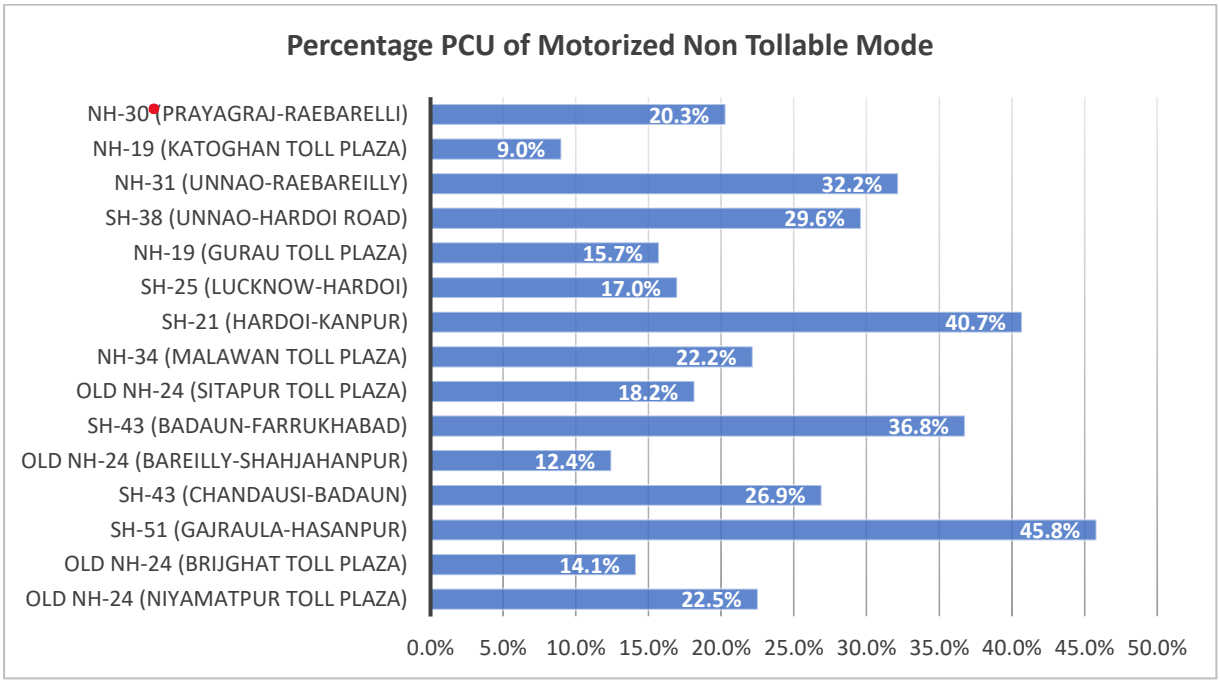
Figure 1-2 Project Corridor and Highways in the Vicinity



1.3.4 Advantage of Expressway over National Highway

The expressway because of higher design speed result in time savings of user and because of less curvatures, better riding quality, absence of non tollable modes, access control result in lower operating cost of the vehicle. All these factor are captured in Road User Cost analysis of Section 3.5. One of the significant advantages of expressway over National Highway is absence of non tollable modes like two wheeler, three wheeler, non-motorized vehicles which ply on National Highways and State Highway. In National Highways and State Highways because of ribbon development occurring along the Highways friction causing factors like non tollable increase in number. Figure 1-3 shows the percentage PCU of motorized non tollable mode at various locations of parallel highways. It could be seen that at Brijghat toll plaza and Niyamatpur Toll Plaza of old NH-24 that lie in the vicinity of project corridor the percentage contribution of PCU of non-tollable mode is 14.1% and 22.5% respectively. In the State Highways in the vicinity of Project corridor the contribution is even higher and goes as high as 45.8% at SH-51. These non tollable modes along with non motorized modes become impediment to the movement of tollable modes. Moreover there percentage share is likely to increase with growing habitation near National Highway and State Highway.

Figure 1-3 Percentage Contribution of PCU of motorized non-tollable mode



1.4 Groups of Project Corridor

The Project Corridor is divided into four groups in RFQ cum RFP documents. The following sections describes each group of Project Corridor. The tolling of the project is based on length traversed from entry and exit points. The description of group is provided in following sub sections.

1.4.1 Group 1 and Concept of Entry-Exit based Tolling

Group 1 of Project Corridor starts in district of Meerut and ends at Budaun. It starts at node A and ends at node G. The length of Group 1 is 129.7 km. Table 1-3 and Table 1-4 provides nodes, section length and tolling details of the group. As described in Section 1.3.2, the user pays toll fee based on the length of corridor the user uses. Hence the user pays the toll fee at exit points. For example if the user travels from node A to node B, the user pays toll fee at exit point B based on length of expressway and structure tollable on the relevant toll plaza . However, if the user enters at nodes of Group 1 but travels beyond Group 1 (i.e. beyond Km 137+600), there is a provision of toll collection booth at this point. This point on Package 1 is at Km 137+600 which is defined as node G on the Project Corridor.

Figure 1-4 Group 1 Project Corridor

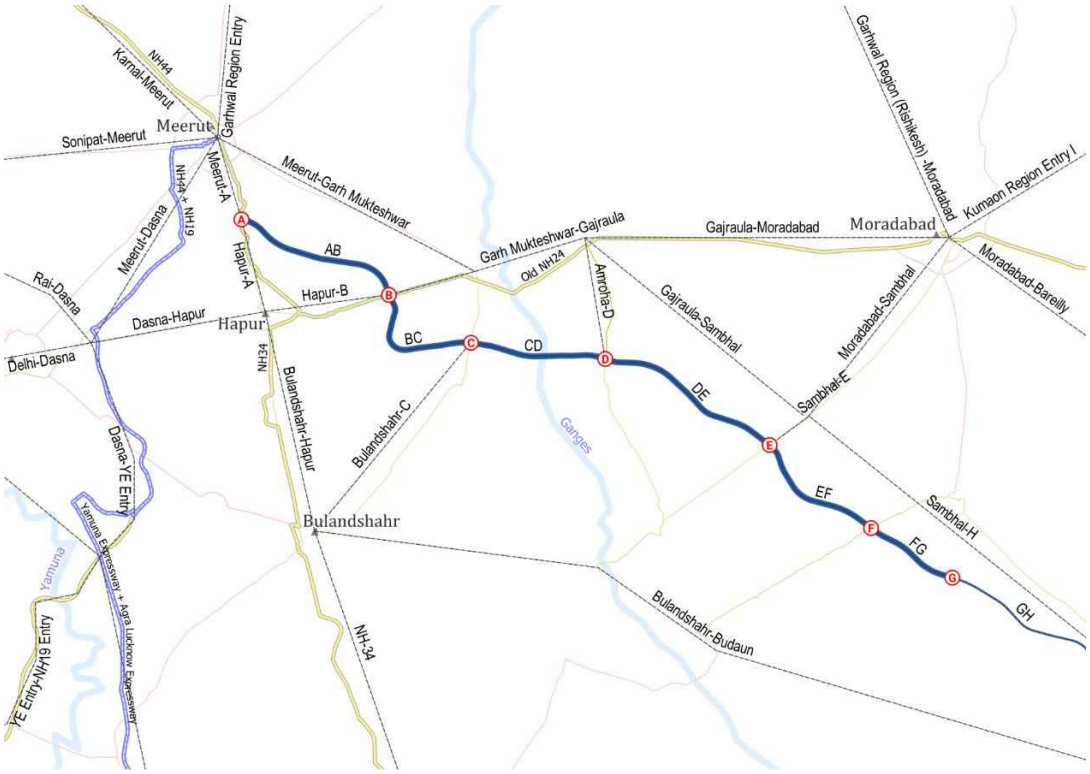


Table 1-3 Group 1 Project Stretch

SectionFrom	SectionTo	SectionFrom Code	SectionTo Code
007+900	035+270	A	B
035+270	054+640	B	C
054+640	074+181	C	D
074+181	102+427	D	E
102+427	123+288	E	F
123+288	137+600	F	G
Total Length = 129.7 km			

Table 1-4 Tolling Details of Group 1

SectionFrom Code	SectionTo Code	Location of TP (Sch R)	Length of Expressway excluding Structure in km (Sch R)	Length of Stuctures	Cost of Stuctures	Location of Structures
A	B	013+400	27.310	0.060	69.309	019+941
B	C	035+270	19.370	0.000	0.000	
C	D	054+640	18.581	0.960	299.960	066+850
D	E	074+181	28.246	0.000	0.000	
E	F	102+427	20.755	0.106	60.056	123+100
F	G	123+288	14.312	0.000	0.000	

1.4.2 Group 2

Group 2 of Project Corridor starts in district of Budaun and ends at Hardoi. It starts at node G and ends at node L. The length of Group 2 is 151.7 km. Table 1-5 and Table 1-6 provides nodes, section length and tolling details of the group.

Figure 1-5 Group 2 Project Corridor

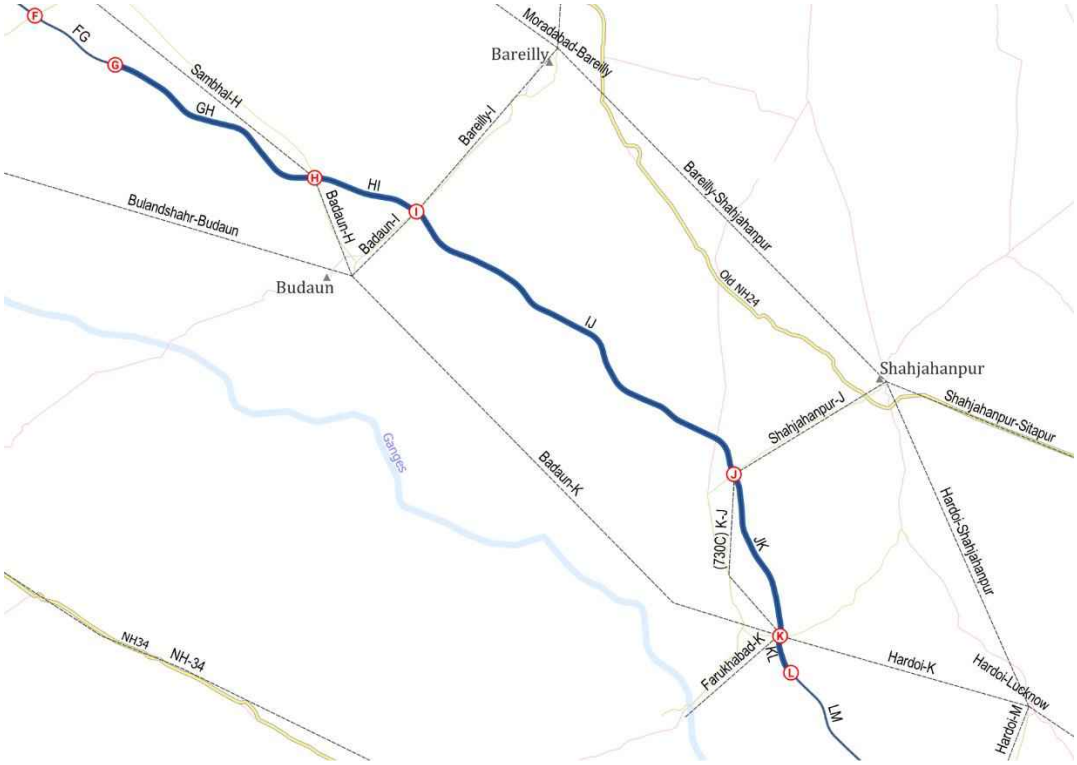


Table 1-5 Group 2 Project Stretch

SectionFrom	SectionTo	SectionFrom Code	SectionTo Code
137+600	173+454	G	H
173+454	189+394	H	I
189+394	255+167	I	J
255+167	282+845	J	K
282+845	289+300	K	L
Total Length = 151.7 km			

Table 1-6 Tolling Details of Group 2

SectionFrom Code	SectionTo Code	Location of TP (Sch R)	Length of Expressway excluding Structure in km (Sch R)	Length of Stuctures	Cost of Stuctures	Location of Structures

G	H	173+454	35.854	0.000	0.000	
H	I	189+394	15.940	0.720	50.130	207+740
I	J	255+167	64.963	0.090	229.970	217+920
J	K	282+845	27.526	0.152	56.690	238+190
K	L	289+300	6.455	0.000	0.000	

1.4.3 Group 3

Group 3 of Project Corridor starts in district of Hadoi and ends at Unnao. It starts at node L and ends at node P. The length of Group 3 is 155.7 km. Table 1-7 and Table 1-8 provides nodes, section length and tolling details of the group.

Figure 1-6 Group 3 Project Corridor

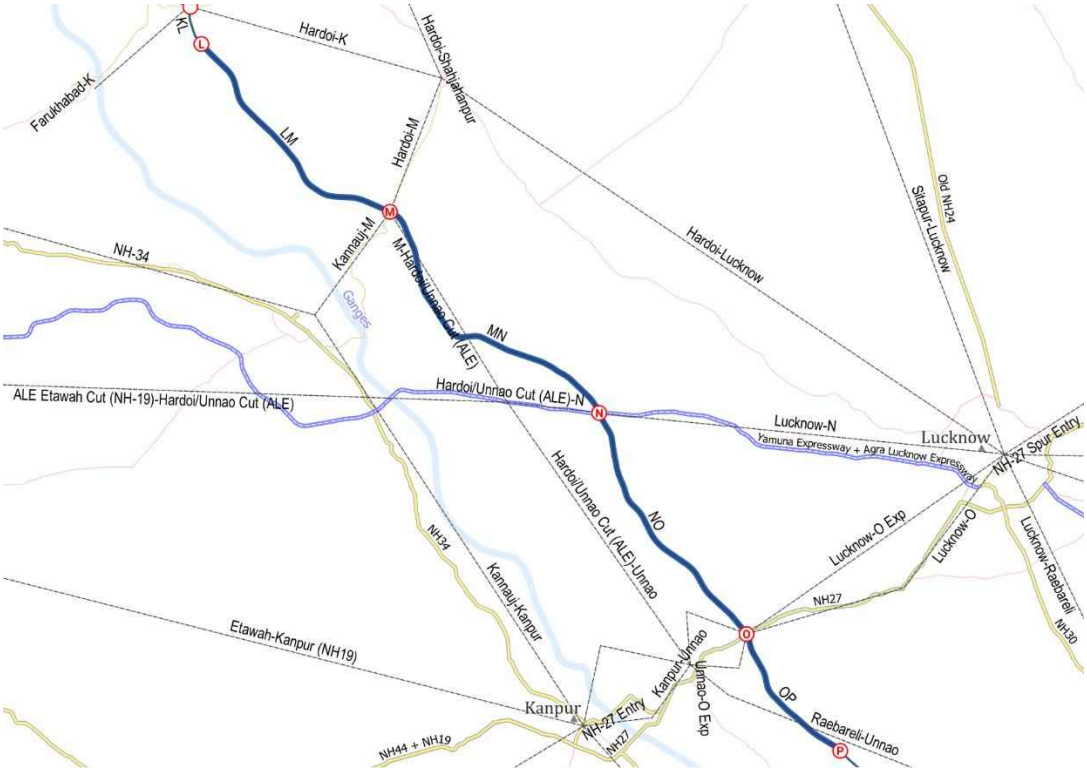


Table 1-7 Group 3 Project Stretch

SectionFrom	SectionTo	SectionFrom Code	SectionTo Code
289+300	329+945	L	M
329+945	378+136	M	N
378+136	420+932	N	O
420+932	445+000	O	P
Total Length = 155.7 km			

Table 1-8 Tolling Details of Group 3

SectionFrom Code	SectionTo Code	Location of TP (Sch R)	Length of Expressway excluding Structure in km (Sch R)	Length of Stuctures	Cost of Stuctures	Location of Structures
L	M	329+945	40.405	0.240	107.497	317+923
M	N	378+136	48.040	0.060	52.359	337+901
N	O	420+932	42.683	0.110	64.735	378+155
O	P	445+000	24.068	0.094	51.696	420+102

1.4.4 Group 4

Group 4 of Project Corridor starts in district of Unnao and ends at Prayagraj. It starts at node L and ends at node P. The length of Group 4 is 156.847 km. Table 1-9 and Table 1-10provides nodes, section length and tolling details of the group.

Figure 1-7 Group 4 Project Corridor



Table 1-9 Group 4 Project Stretch

SectionFrom	SectionTo	SectionFrom Code	SectionTo Code
445+000	487+285	P	Q
487+285	517+708	Q	R
517+708	554+951	R	S

554+951	589+700	S	T
589+700	601+847	T	U
Total Length = 156.847 km			

Table 1-10 Tolling Details of Group 4

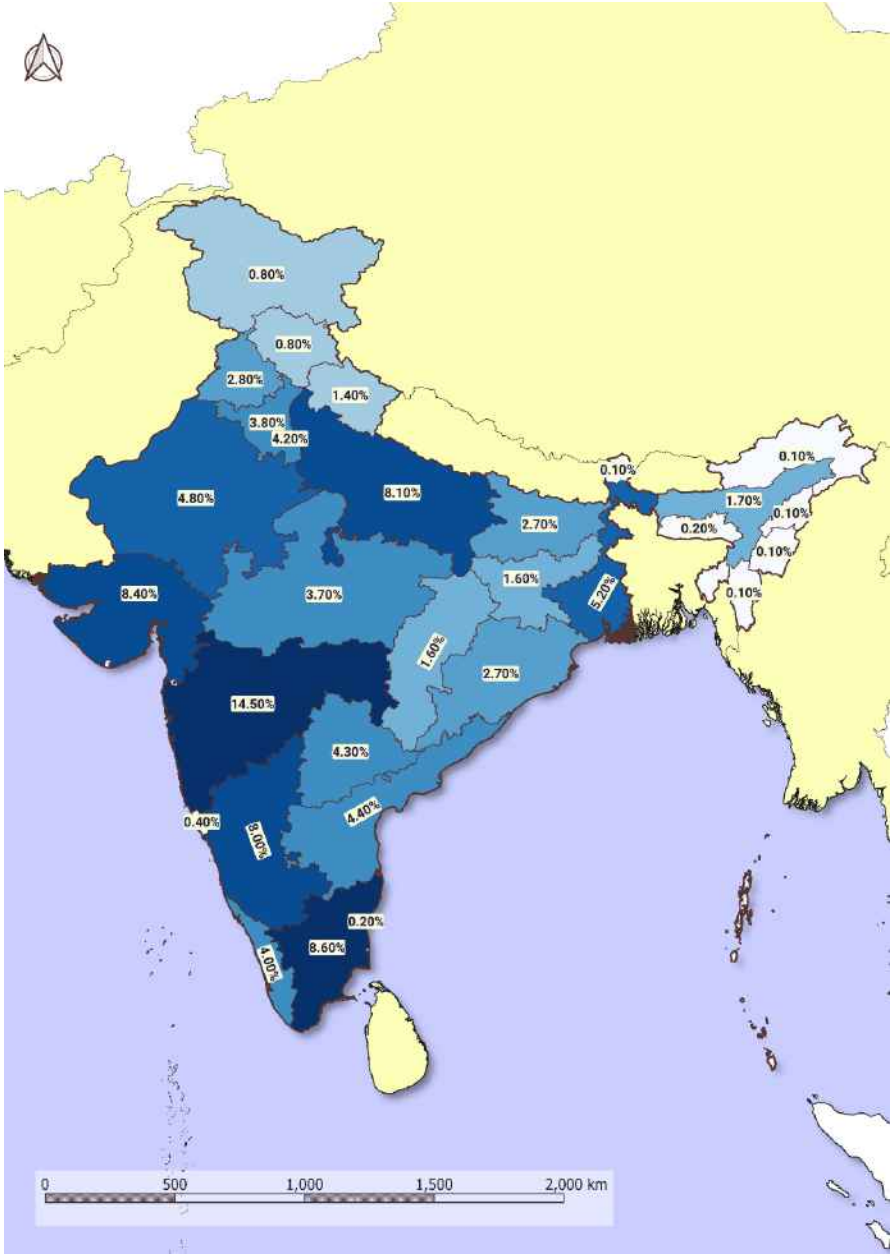
SectionFrom Code	SectionTo Code	Location of TP (Sch R)	Length of Expressway excluding Structure in km (Sch R)	Length of Stuctures	Cost of Stuctures	Location of Structures
P	Q	487+285	42.285	0.000	0.000	
Q	R	517+708	30.423	0.000	0.000	
R	S	554+951	37.243	0.000	0.000	
S	T	589+700	34.749	0.000	0.000	
T	U	601+847	12.147	0.000	0.000	

1.5 Project Influence Area

1.5.1 Socio-Economic Profile of Uttar Pradesh

The project corridor lies entirely in the state of Uttar Pradesh. In the origin Destination survey, it was found that states of Uttar Pradesh, Bihar, Jharkhand, Rajasthan, Delhi, Haryana, Punjab, Uttarakhand, Jammu and Kashmir have contribution to goods vehicle traffic. Since the entire Project lies in the state of Uttar Pradesh, the socio-economic growth of Uttar Pradesh will have major contribution in traffic growth. Northern states of Delhi, Haryana, Punjab, Uttarakhand and eastern states of Jharkhand, West Bengal, Orissa, North Eastern states would also contribute in goods traffic of the project corridor. The figure below shows the contribution of different states in GDP of India. Uttar Pradesh contributes 8.1% to GDP of India and has a population of 16.9% of total population of India.

Figure 1-8 Percentage Contribution of different states to GDP of India in year 2018-19 (base years 2011-12)



1. Table 1-11 describes the NSDP, Per Capita NSDP and Net Value Added by Primary, Secondary and tertiary sector of states of India. The state of Uttar Pradesh ranks 5th in NSDP and 4th in Net value added by secondary sector and 2nd in Net Value Added by Primary sector.

Table 1-11 NSDP, PCNSDP and contribution of Primary, Secondary and Tertiary Sector of Major States in India (base year2011-12)

Row Labels	rank	Net State Domestic Product (in crore Rs.)	Per Capita NSDP (Rs.)	Primary (in crore Rs.)	Secondary (in crore Rs.)	Tertiary (in crore Rs.)
Maharashtra	1	17,941	1,47,450	2,259	4,873	8,435

Tamil Nadu	2	10,799	1,42,941	1,188	3,459	4,896
Gujarat	3	10,369	1,53,495	1,611	3,839	3,242
Karnataka	4	10,165	1,53,276	882	2,329	5,583
Uttar Pradesh	5	9,960	44,421	2,235	2,799	4,259
West Bengal	6	6,624	67,300	1,473	1,620	3,307
Rajasthan	7	6,004	78,570	2,018	1,149	2,427
Andhra Pradesh	8	5,506	1,07,241	1,767	994	2,120
Telangana	9	5,495	1,43,618	773	935	3,110
Delhi	10	5,297	2,69,505	94	571	3,865
Kerala	11	5,133	1,48,078	379	1,270	2,890
Haryana	12	4,778	1,69,409	749	1,317	2,072
Madhya Pradesh	13	4,619	56,498	1,570	958	1,697
Punjab	14	3,548	1,15,882	862	759	1,587

2. Table 1-12 compares the socio-economic profile of districts in the vicinity of project corridor with Uttar Pradesh. Gautambudh Nagar, Lucknow and Prayagraj are top contributors in States income. The Per capita income of Gautambudh Nagar is almost 7 times states average.

Table 1-12 Socio-Economic Profile of Districts in vicinity of project corridor

Rank	District	Ratio of PCI of district with UP	Percentage contribution of State Income
1	Gautambudh Nagar	6.9	9.20%
2	Lucknow	2.7	3.60%
3	Prayagraj	2.5	3.40%
5	Meerut	2.4	3.30%
6	Kanpur Nagar	2.1	2.80%
7	Bareilly	1.9	2.50%
8	Ghaziabad	2.1	2.80%
9	Buland Shahar	1.6	2.10%
20	Badaun	1	1.30%
23	Shahjahanpur	0.9	1.30%
25	Amroha	1	1.40%
27	Unnao	0.9	1.20%
28	Hardoi	1	1.30%
37	Raebareilly	0.7	1.00%
40	Hapur	0.7	0.90%
48	Sambhal	0.7	0.90%
55	Pratapgarh	0.6	0.80%

2 Data Collection

2.1 Data collection

The data collection is mainly classified into

- Primary data collection: The primary data collection is a very important component of analysis. The aim of the primary data collection process is capture base year traffic volume counts, local traffic and spatial analysis of traffic moving in the project corridor.
- Secondary data collection: The aim of secondary data collection is to capture historical trends in traffic growth, economic parameters of Project Influence Area that drives growth, new transport projects under implementation that is likely to affect traffic in the project corridor.

The following section describes type of data collected and their source

2.1.1 Primary data collection

Primary data collection in form of Classified Volume Count (CVC) Survey and roadside origin-destination (OD) surveys. CVC and Road side OD surveys were carried out at locations shown in Figure 2-1. The schedule of surveys is described in Table 2-1. The selection of location of traffic survey were based on following criteria:

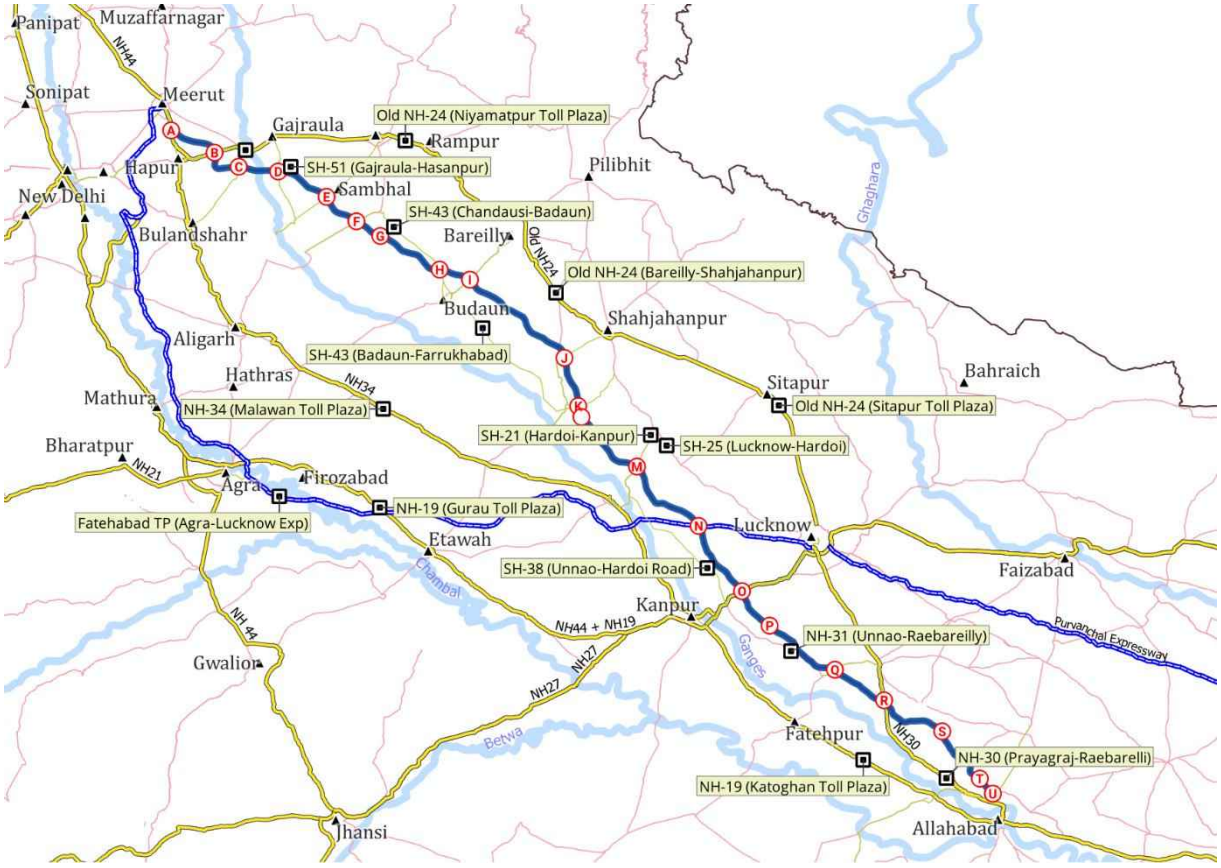
1. To capture, long distance traffic which is likely to use major part of corridor and the traffic which is moving on highways of South bank of river Ganga (NH-19, Agra-Lucknow Expressway and NH-34). Traffic moving in roads of South bank of river Ganga have origin destination pairs in Northern parts of India (Punjab, Haryana, Delhi) and Eastern part of India like Purvanchal region of Uttar Pradesh, Bihar, West Bengal, Odhisa etc. This traffic is captured at survey locations of Old NH-24, NH-19 and Agra-Lucknow Expressway.
2. The Expressway is divided into four groups and each group has entry and exit points. In order to capture sectional traffic between entry-exit points of short distances various survey locations were chosen. For example to capture traffic between districts of Badaun and Sambhal, OD survey at location of SH-43 (Chandausi-Badaun) was carried out.
3. Section 3.4 describes the method of estimating potentially divertible traffic or divertible traffic and this section gives the location of survey used in estimating potentially divertible traffic. Potentially divertible traffic or divertible means the traffic that are likely to be diverted from existing roads to proposed Ganga Expressway. For example traffic moving from Meerut to Prayagraj is captured at Old NH-24, NH-19 and Agra-Lucknow Expressway. The traffic captured at these locations from OD survey reporting Meerut and Prayagraj is potentially divertible traffic to Ganga Expressway. Likewise OD survey is used to estimate divertible traffic for different OD pairs which is described in Section 3.4. It is to be noted to derive the traffic on Ganga Expressway potentially divertible traffic and diversion percentage (derived from diversion analysis Section 3.5) is used to derive traffic on proposed Ganga Expressway. This traffic which is diverted to Ganga Expressway is defined as diverted traffic. The diverted traffic for base year (2021-22) is explained in Section 3.6.

Table 2-1 Schedule of traffic Surveys

Sno.	Location	OD Date	CVC Start Date	CVC End Date
1	Old NH-24 (Niyamatpur Toll Plaza)	09-09-2021	05-09-2021	12-09-2021
2	Old NH-24 (Brijghat Toll Plaza)	03-09-2021	05-09-2021	12-09-2021
3	SH-51 (Gajraula-Hasanpur)	21-09-202	12-09-2021	19-09-2021
4	SH-43 (Chandausi-Badaun)	17-09-2021	11-09-2021	18-09-2021

5	Old NH-24 (Bareilly-Shahjahanpur)	20-09-2021	14-09-2021	21-09-2021
6	SH-43 (Badaun-Farrukhabad)	16-09-2021	11-09-2021	18-09-2021
7	Old NH-24 (Sitapur Toll Plaza)	14-09-2021	08-09-2021	15-09-2021
8	NH-34 (Malawan Toll Plaza)	20-09-2021	15-09-2021	22-09-2021
9	SH-21 (Hardoi-Kanpur)	13-09-2021	10-09-2021	17-09-2021
10	SH-25 (Lucknow-Hardoi)	13-09-2021	10-09-2021	17-09-2021
11	Fatehabad TP (Agra-Lucknow Exp)	08-09-2021	09-09-2021	17-09-2021
12	NH-19 (Gurau Toll Plaza)	06-09-2021	06-09-2021	13-09-2021
13	SH-38 (Unnao-Hardoi Road)	17-09-2021	11-09-2021	18-09-2021
14	NH-31 (Unnao-Raebareilly)	17-09-2021	10-09-2021	17-09-2021
15	NH-19 (Katoghan Toll Plaza)	10-09-2021	08-09-2021	15-09-2021
16	NH-30 (Prayagraj-Raebarelli)	17-09-2021	09-10-2021	17-10-2021

Figure 2-1 Survey Locations



2.1.2 Secondary data collection

The secondary data collection was done to capture socio economic data like national and state domestic product, per capita income, population. Table 2-2 describes the list of documents referred their sources and its significance in parameters for which they are used.

Table 2-2 Secondary Data Sources

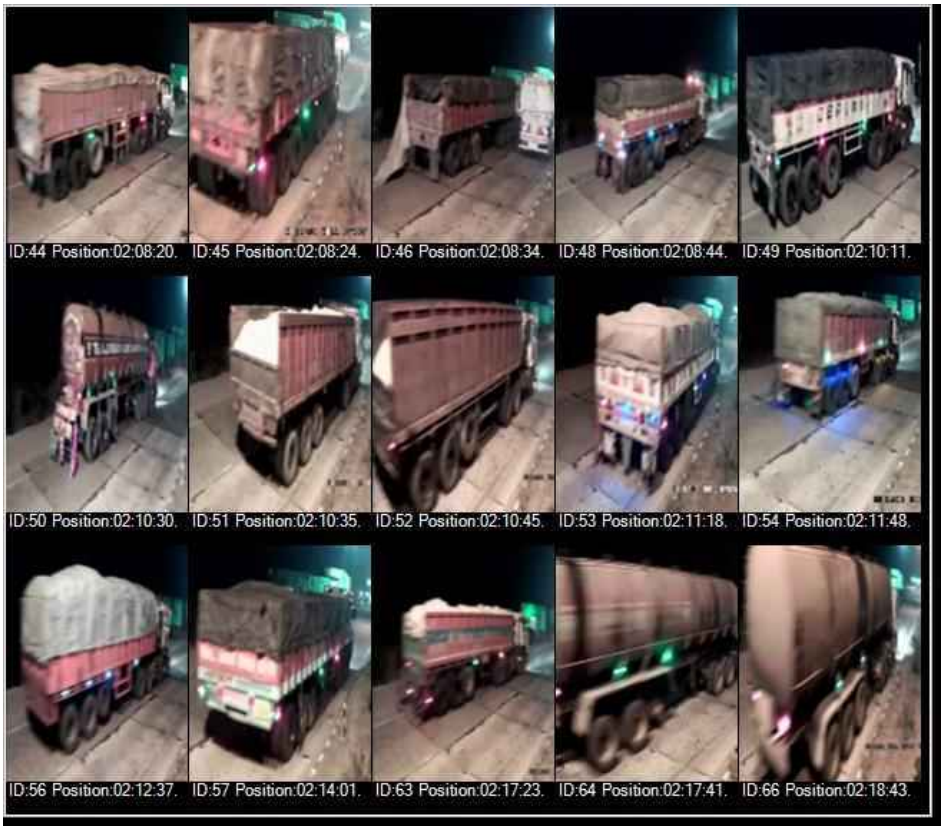
Parameters	Variables	Source	Documents referred
Elasticity of Transport Demand	Toll data Vehicle Registration data, Population, Per capita Income at county, State and Country level	Department of Planning commission, MORTH, Directorate of economics and statistics, NHAI, Central Statistical Organization	• Road Transport Year book • Socio-Economic survey • Population Projections for India and States • Toll Data
Economic Factor	NSDP, Sector-Wise GDP, for county, NSDP, State and Country level		

2.2 Traffic Survey

2.2.1 Classified Volume Count Survey

Classified Traffic Volume Count was carried out on site using a varifocal camera. The data was extracted from the video using image processing techniques. Image processing technique also produced time stamped thumbnails of each vehicle category that was used to cross check with automated counts results. A sample thumbnail of six axle truck is shown in figure below.The vehicles were classified according to the toll categories.

Figure 2-2 Sample Thumbnails of Six axle Truck



2.2.2 Origin & Destination (O-D) survey

Objective

The objective of the O-D survey was to gather information regarding travel characteristics of different users on the project road. Results of the O-D survey were used to describe the user characteristics, both of passengers and freight vehicles, such as distribution of local traffic, through traffic, trip characteristics like occasional, frequent users of corridor as well as commodity type carried by freight vehicles. Additionally, O-D survey was used to identify the geographical, spatial location of trips and project influence area of the project corridor.

Methodology

The O-D survey was carried out adopting road-side interview method as detailed in *IRC: 102-1988*. The survey was carried out for passenger and goods vehicles for 24 hours at three toll plaza locations. Trained enumerators under the supervision of transport planners collected and carried out the survey. The O-D survey of passenger modes captures characteristics like origin, destination, occupancy, trip purpose and length of trip by mode type etc. For freight modes, the survey captures characteristics like origin, destination, commodity type and frequency of trips.

2.3 PCU Values

The toll data was collected or past 10 years categories having different sizes and characteristics are to be converted into a standard equivalent unit called “Passenger Car Unit” (PCU). The PCU values (Rural Roads) as suggested in the IRC: 64 – 1990 “Guidelines for Capacity of Roads on Highway” have been adopted as given in Table 2-3.

Table 2-3 PCU factors

Fast Vehicles

Vehicle Group	PCU Factor
Car, Jeep, Van, Taxi and Utility Vehicles	1.0
Auto Rickshaw / Tempo	1.0
2 Wheelers	0.5
Mini Bus	1.5
Standard Bus	3.0
Light Commercial Vehicle (LCV)	1.5
2 – Axle Truck	3.0
3 – Axle Truck	3.0
Multi Axle Truck (Semi Articulated & Articulated)/ HCM/EME	4.5
Agriculture Tractor +Trailer	4.5
Agriculture Tractor	1.5

2.4 Traffic Volume Count Analysis

1. The Average Daily Traffic (ADT) was derived by taking out the mean of seven days for each category of vehicle. Table 2-4 and Table 2-5 provides ADT in volume and PCU at survey locations.
2. Table 2-6 provides the seasonal correction factor. The seasonal correction factor was derived from toll data of Agra Lucknow expressway The SVF values for month of September was used to convert ADT into AADT.
3. Table 2-7 and Table 2-8 provides AADT for at survey locations.
4. It is observed that highest number of cars were at Brijghat toll plaza and Niyamatpur toll plazas of NH-24. The proximity to Delhi is one of the reasons for high number of cars.
5. At all 4-6 lane National highways the MAV* vehicle is in the range of 1800 to 2900. The highest number of Multi Axle vehicles were observed at Katoghan Toll Plaza.

*4-6 Axle Truck

Table 2-4 Average Daily Traffic at Survey Locations

ADT (volume)	Old NH-24 (Niyamatpur Toll Plaza)	Old NH-24 (Brijghat Toll Plaza)	SH-51 (Gajraula-Hasanpur)	SH-43 (Chandausi-Badaun)	Old NH-24 (Bareilly-Shahjahanpur)	SH-43 (Badaun-Farrukhabad)	Old NH-24 (Sitapur Toll Plaza)	NH-34 (Malawan Toll Plaza)	SH-21 (Hardoi-Kanpur)	SH-25 (Lucknow-Hardoi)	Fatehabad TP (Agra-Lucknow Exp)	NH-19 (Gurau Toll Plaza)	SH-38 (Unnao-Hardoi Road)	NH-31 (Unnao-Raebareilly)	NH-19 (Katoghan Toll Plaza)	NH-30 (Prayagraj-Raebarelli)
Car, Jeep, Van, LMV	11,341	18,266	2,460	1,725	3,664	1,326	5,849	1,452	1,687	3,761	7,559	2,463	1,941	497	2,388	3,852
Mini Bus	68	135	7	3	27	6	24	17	6	28	28	10	13	2	8	9
Bus	1,753	2,069	206	253	679	256	925	391	256	297	802	478	190	163	328	266
LMV Goods	1,685	1,824	533	498	957	513	897	269	562	712	254	586	470	176	561	521
LCV, LGV	2,211	3,352	581	416	1,162	298	869	734	98	406	472	1,246	249	84	1,107	452
2 Axle Truck	507	466	50	98	607	276	407	589	41	185	138	919	128	57	793	262
3 Axle Truck	1,136	1,140	174	340	1,051	411	686	570	102	403	101	873	245	81	1,178	481
*MAV**	1,829	1,594	176	361	1,812	453	1,361	537	413	466	983	2,074	435	130	2,859	1,248
HCM/EME	8	26	12	5	9	6	10	12	2	6	5	5	7	9	98	20
Oversized	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SemiTollable	18,928	11,888	8,187	4,479	5,140	6,796	8,361	4,788	6,390	3,590	416	6,229	5,103	2,200	4,263	6,133
Exempted	174	206	41	19	83	27	159	54	44	130	169	65	67	20	73	112
Tollable Passenger	**13,162**	**20,470**	**2,673**	**1,981**	**4,370**	**1,588**	**6,799**	**1,860**	**1,948**	**4,086**	**8,389**	**2,951**	**2,144**	**662**	**2,724**	**4,127**
Tollable Goods	**7,376**	**8,402**	**1,526**	**1,718**	**5,597**	**1,957**	**4,229**	**2,710**	**1,217**	**2,178**	**1,954**	**5,703**	**1,534**	**537**	**6,595**	**2,984**
ALL	**39,639**	**40,966**	**12,427**	**8,196**	**15,190**	**10,368**	**19,548**	**9,412**	**9,599**	**9,984**	**10,928**	**14,948**	**8,848**	**3,420**	**13,655**	**13,356**

*4-6 Axle Truck

Table 2-5 Average Daily Traffic in PCU at Survey Locations

ADT (PCU)	Old NH-24 (Niyamatpur Toll Plaza)	Old NH-24 (Brijghat Toll Plaza)	SH-51 (Gajraula-Hasanpur)	SH-43 (Chandausi-Badaun)	Old NH-24 (Bareilly-Shahjahanpur)	SH-43 (Badaun-Farrukhabad)	Old NH-24 (Sitapur Toll Plaza)	NH-34 (Malawan Toll Plaza)	SH-21 (Hardoi-Kanpur)	SH-25 (Lucknow-Hardoi)	Fatehabad TP (Agra-Lucknow Exp)	NH-19 (Gurau Toll Plaza)	SH-38 (Unnao-Hardoi Road)	NH-31 (Unnao-Raebareilly)	NH-19 (Katoghan Toll Plaza)	NH-30 (Prayagraj-Raebarelli)
Car, Jeep, Van, LMV	11,341	18,266	2,460	1,725	3,664	1,326	5,849	1,452	1,687	3,761	7,559	2,463	1,941	497	2,388	3,852
Mini Bus	102	203	11	4	40	9	37	26	9	43	42	14	20	3	12	14
Bus	5,259	6,206	618	759	2,038	767	2,775	1,173	767	890	2,405	1,435	570	490	984	798
LMV Goods	1,685	1,824	533	498	957	513	897	269	562	712	254	586	470	176	561	521
LCV, LGV	3,316	5,027	872	624	1,743	447	1,304	1,101	147	609	708	1,870	374	126	1,660	678

2 Axle Truck	1,521	1,398	150	294	1,822	827	1,220	1,766	122	555	413	2,758	383	172	2,378	787
3 Axle Truck	3,408	3,421	522	1,019	3,153	1,233	2,057	1,710	306	1,208	304	2,618	736	244	3,533	1,443
MAV	8,232	7,173	791	1,626	8,152	2,040	6,123	2,417	1,857	2,095	4,424	9,332	1,956	584	12,866	5,615
HCM/EME	25	78	35	14	26	18	29	36	7	17	16	14	21	27	293	59
Oversized	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SemiTollable	10,878	7,806	5,527	2,552	3,198	4,365	4,818	2,946	4,035	2,214	246	4,051	2,928	1,169	2,499	3,735
Exempted	268	293	80	25	153	47	253	67	80	243	246	97	121	27	118	202
Tollable Passenger	**16,702**	**24,675**	**3,088**	**2,488**	**5,742**	**2,103**	**8,661**	**2,651**	**2,462**	**4,694**	**10,006**	**3,912**	**2,530**	**990**	**3,384**	**4,663**
Tollable Goods	**18,186**	**18,922**	**2,903**	**4,075**	**15,853**	**5,079**	**11,629**	**7,298**	**3,001**	**5,197**	**6,120**	**17,178**	**3,939**	**1,329**	**21,292**	**9,104**
ALL	**46,034**	**51,696**	**11,599**	**9,139**	**24,947**	**11,593**	**25,361**	**12,962**	**9,579**	**12,349**	**16,618**	**25,238**	**9,519**	**3,515**	**27,292**	**17,705**

Table 2-6 Seasonal Correction Factor

Month	Car, Jeep, Van, LMV	LCV, LGV	Bus	2 Axle Truck	MAV	Oversized	SemiTollable
Apr	1.047	1.265	0.965	1.327	1.182	1.200	0.980
May	1.196	1.103	1.117	1.154	1.256	1.452	1.017
Jun	0.932	0.935	1.126	1.014	1.079	1.410	1.104
Jul	1.077	0.996	1.219	1.086	1.137	0.955	1.047
Aug	1.065	1.042	1.055	1.088	1.108	1.040	0.876
Sep	**1.155**	**0.999**	**1.053**	**0.991**	**0.988**	**0.927**	**0.989**
Oct	0.977	0.831	0.938	0.762	0.840	1.174	0.880
Nov	0.803	0.850	0.779	0.760	0.858	0.865	0.806
Dec	0.876	0.865	0.840	0.848	0.805	0.661	1.089
Jan	0.980	0.959	0.942	0.868	0.823	0.903	1.320
Feb	1.010	1.176	1.129	1.241	1.087	1.080	1.149
Mar	1.017	1.192	1.027	1.283	1.108	0.888	0.944

Table 2-7Average Annual Daily Traffic at Survey Locations

AADT (volume)	Old NH-24 (Niyamatpur Toll Plaza)	Old NH-24 (Brijghat Toll Plaza)	SH-51 (Gajraula-Hasanpur)	SH-43 (Chandausi-Badaun)	Old NH-24 (Bareilly-Shahjahanpur)	SH-43 (Badaun-Farrukhabad)	Old NH-24 (Sitapur Toll Plaza)	NH-34 (Malawan Toll Plaza)	SH-21 (Hardoi-Kanpur)	SH-25 (Lucknow-Hardoi)	Fatehabad TP (Agra-Lucknow Exp)	NH-19 (Gurau Toll Plaza)	SH-38 (Unnao-Hardoi Road)	NH-31 (Unnao-Raebareilly)	NH-19 (Katoghan Toll Plaza)	NH-30 (Prayagraj-Raebarelli)
Car, Jeep, Van, LMV	13,102	21,103	2,842	1,993	4,233	1,532	6,757	1,678	1,949	4,345	8,733	2,845	2,242	574	2,758	4,450
Mini Bus	72	142	8	3	28	6	26	18	6	30	29	10	14	2	8	10
Bus	1,846	2,178	217	266	715	269	974	411	269	312	844	504	200	172	345	280
LMV Goods	1,683	1,822	533	498	956	513	896	268	561	711	254	586	470	176	560	521
LCV, LGV	2,208	3,347	581	415	1,160	298	868	733	98	406	472	1,245	249	84	1,106	451

2 Axle Truck	503	462	49	97	602	273	403	584	40	184	137	912	127	57	786	260
3 Axle Truck	1,123	1,127	172	336	1,039	406	678	563	101	398	100	863	242	80	1,164	476
MAV	1,808	1,575	174	357	1,790	448	1,345	531	408	460	972	2,049	429	128	2,826	1,233
HCM/EME	8	26	11	5	9	6	9	12	2	6	5	5	7	9	97	19
Oversized	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SemiTollable	18,729	11,763	8,101	4,432	5,086	6,725	8,273	4,737	6,323	3,552	412	6,164	5,049	2,177	4,218	6,068
Exempted	174	206	41	19	83	27	159	54	44	130	169	65	67	20	73	112
Tollable Passenger	**15,019**	**23,423**	**3,066**	**2,262**	**4,976**	**1,808**	**7,757**	**2,107**	**2,224**	**4,688**	**9,606**	**3,359**	**2,456**	**748**	**3,112**	**4,739**
Tollable Goods	**7,332**	**8,360**	**1,520**	**1,708**	**5,556**	**1,944**	**4,199**	**2,691**	**1,210**	**2,164**	**1,939**	**5,659**	**1,524**	**534**	**6,538**	**2,960**
ALL	**41,254**	**43,752**	**12,729**	**8,421**	**15,701**	**10,503**	**20,389**	**9,590**	**9,801**	**10,534**	**12,126**	**15,246**	**9,097**	**3,479**	**13,942**	**13,880**

Table 2-8 Average Annual Daily Traffic in PCU at Survey Locations

AADT (PCU)	Old NH-24 (Niyamatpur Toll Plaza)	Old NH-24 (Brijghat Toll Plaza)	SH-51 (Gajraula-Hasanpur)	SH-43 (Chandausi-Badaun)	Old NH-24 (Bareilly-Shahjahanpur)	SH-43 (Badaun-Farrukhabad)	Old NH-24 (Sitapur Toll Plaza)	NH-34 (Malawan Toll Plaza)	SH-21 (Hardoi-Kanpur)	SH-25 (Lucknow-Hardoi)	Fatehabad TP (Agra-Lucknow Exp)	NH-19 (Gurau Toll Plaza)	SH-38 (Unnao-Hardoi Road)	NH-31 (Unnao-Raebareilly)	NH-19 (Katoghan Toll Plaza)	NH-30 (Prayagraj-Raebarelli)
Car, Jeep, Van, LMV	13,102	21,103	2,842	1,993	4,233	1,532	6,757	1,678	1,949	4,345	8,733	2,845	2,242	574	2,758	4,450
Mini Bus	107	214	11	4	42	9	39	27	9	45	44	15	21	4	12	15
Bus	5,537	6,533	651	799	2,146	808	2,922	1,234	807	937	2,532	1,511	600	516	1,036	840
LMV Goods	1,683	1,822	533	498	956	513	896	268	561	711	254	586	470	176	560	521
LCV, LGV	3,312	5,021	871	623	1,741	446	1,303	1,100	146	608	707	1,867	373	126	1,658	677
2 Axle Truck	1,508	1,386	148	291	1,806	820	1,209	1,751	121	551	410	2,735	380	171	2,358	781
3 Axle Truck	3,368	3,381	516	1,007	3,116	1,219	2,033	1,690	303	1,194	301	2,588	727	241	3,492	1,427
MAV	8,136	7,089	782	1,607	8,057	2,016	6,051	2,388	1,836	2,071	4,372	9,223	1,933	577	12,716	5,550
HCM/EME	25	77	34	14	26	18	28	36	7	17	16	14	20	27	290	58
Oversized	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SemiTollable	10,764	7,724	5,469	2,525	3,165	4,319	4,767	2,915	3,993	2,191	244	4,008	2,897	1,157	2,472	3,695
Exempted	268	293	80	25	153	47	253	67	80	243	246	97	121	27	118	202
Tollable Passenger	**18,746**	**27,850**	**3,504**	**2,796**	**6,421**	**2,350**	**9,718**	**2,939**	**2,765**	**5,327**	**11,309**	**4,371**	**2,863**	**1,093**	**3,807**	**5,304**
Tollable Goods	**18,031**	**18,777**	**2,885**	**4,040**	**15,702**	**5,032**	**11,520**	**7,233**	**2,974**	**5,152**	**6,060**	**17,012**	**3,903**	**1,317**	**21,074**	**9,013**
ALL	**47,809**	**54,644**	**11,937**	**9,385**	**25,440**	**11,747**	**26,258**	**13,154**	**9,812**	**12,913**	**17,859**	**25,488**	**9,785**	**3,594**	**27,471**	**18,215**

3 Network Analysis & Potentially divertible Traffic

3.1 Introduction

Appraisal of project corridor influenced network is the significant assignment in understanding various aspects such as (i) Potential revenue threats to the project in terms of traffic diversions due to prospective network improvements, (ii) scope of prospective capacity augmentation of project corridor due to variations in level of service and prospective land use transformations. This chapter deals with following aspects.

1. Identification of project corridor influenced network
2. The macro level if network that describes the importance of corridor for long distance traffic from different parts of India.
3. The network in the vicinity of project corridor that describes movement of traffic in the vicinity of the project corridor.
4. Zoning System that divides traffic into homogeneous zone which helps to understand the movement of traffic.
5. Major contributors of different zones in the traffic.
6. Identification and assessment of potential competing alternative routes/sections (Existing and proposed) in the project network.
7. Estimating of generalized road user cost for project corridor and competing alternative routes considering level of service (Design Service Volume/Capacity).
8. Divertible traffic in base year on the project Corridor.

3.2 Tools and Software Used

The following sections describes diverted traffic on Ganga Expressway from competing Highways. In order to derive a detailed system of zones and parallel routes for OD pairs were developed forming a transportation network comprising of Ganga Expressway, its parallel roads with network characteristics of parallel route and Expressway. Network characteristics includes congestion factor, toll rates and factors that are required in estimating Road User which is explained in detail in Section 3.3, 3.4, 3.5 and 3.6. Quantum GIS software was used for developing zoning system, divertible OD pairs and network characteristics which was integrated with spreadsheets to run diversion percentage algorithm.

3.3 Zoning System

The study area is divided in homogeneous zone to carry out the traffic demand analysis.The location of OD survey was marked on GIS map and locations within the polygon of study area. The basis of zoning are as follows:

1. Criteria of Network access: This means that regions that have common access and egress point in the network is assigned one zone. For example the traffic originating from South Bihar, Odhisa, West Bengal would enter the network via Varanasi and hence they are allotted same zone.
2. Important Location with Separate Zone: The zones that are important from the point generating trips are allotted different zones though they may be accessing the corridor via same access and egress point. For example South Bihar, Odhisa and West Bengal would enter the network via Varanasi but they are allotted different zones. The Reason being Varanasi is an important location from the point of generating trips since it is one major cities of Uttar Pradesh that have direct access to the Project Corridor.

3. Districts of Project Corridor: Each districts through which project corridor passes is allotted separate zone because they lie in immediate vicinity of the project.
4. All the locations found during OD survey interview was superimposed over zone map (Figure 3-1) and locations falling in the boundary of the zone has been allotted that particular zone.

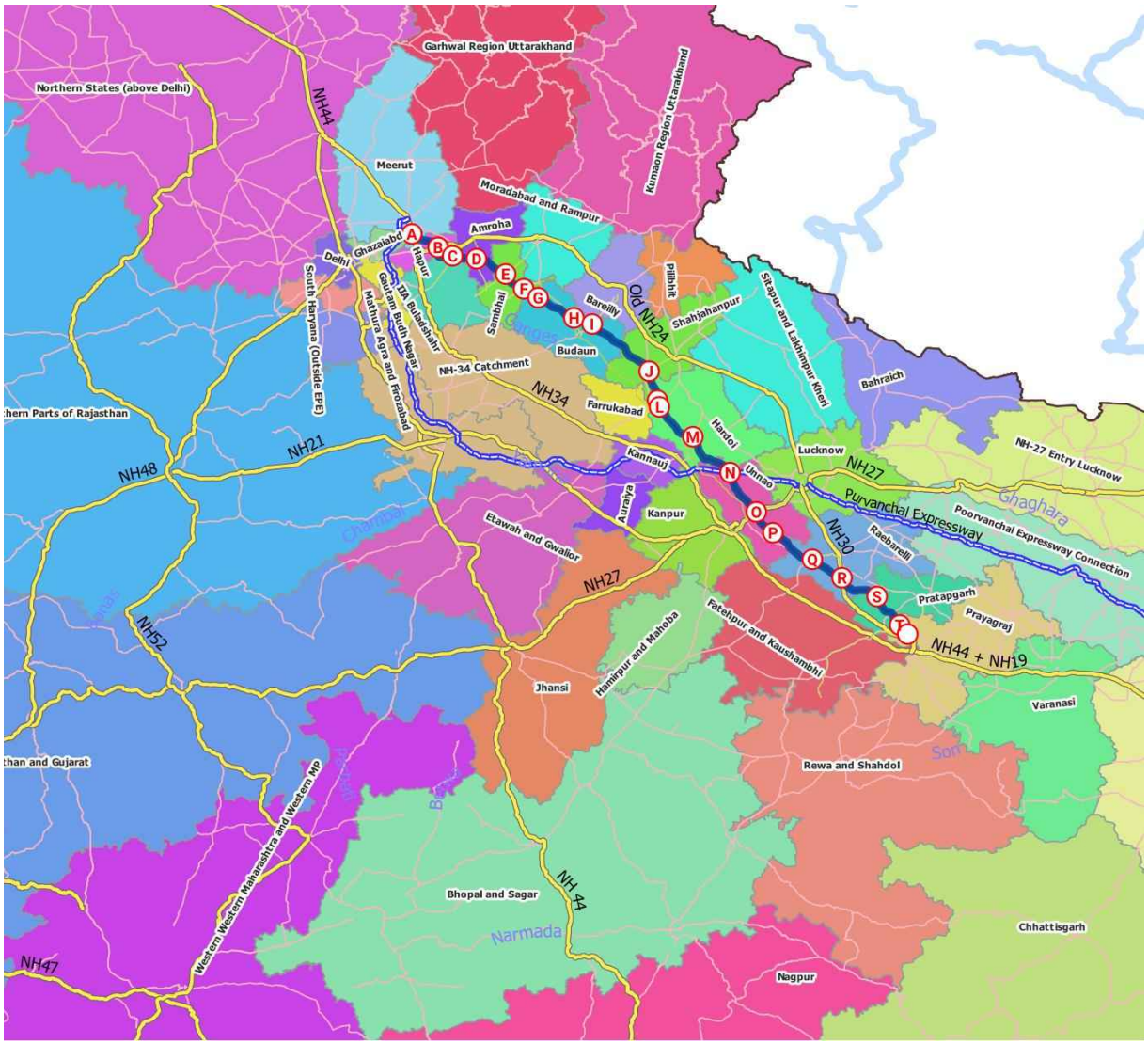
The list of zones for this study is shown in Table 3-1 and Figure 3-1.

Table 3-1 Zoning System

Sno	ZONE	Sno	ZONE
1	Amroha	26	Meerut
2	Auraiya	27	Moradabad and Rampur
3	Bahraich	28	Nagpur
4	Bareilly	29	NH-27 Entry Lucknow*
5	Bhopal and Sagar	30	NH-34 Catchment*
6	Budaun	31	North Bihar and North Eastern States
7	Chhattisgarh	32	Northern Parts of Rajasthan*
8	Delhi	33	Northern States (above Delhi)*
9	Etawah and Gwalior	34	Pilibhit
10	Farrukabad	35	Poorvanchal Expressway Connection*
11	Fatehpur and Kaushambhi	36	Pratapgarh
12	Garhwal Region Uttarakhand	37	Prayagraj
13	Gautam Budh Nagar	38	Raebarelli
14	Ghazaiabd	39	Rewa and Shahdol
15	Gurugram and Faridabad	40	Sambhal
16	Hamirpur and Mahoba	41	Shahjahanpur
17	Hapur	42	Sitapur and Lakhimpur Kheri
18	Hardoi	43	South Bihar West Bengal Jharkhand and Odhisa
19	IIA Buladshahr	44	South Haryana
20	Jhansi	45	South Rajasthan and Gujarat
21	Kannauj	46	Southern States
22	Kanpur	47	Unnao
23	Kumaon Region Uttarakhand	48	Varanasi
24	Lucknow	49	Western Maharashtra and Western MP
25	Mathura Agra and Firozabad		

* marked zones explanation
NH-27 entry Lucknow are the districts of Uttar Pradesh that uses NH-27 to reach Lucknow.
NH-34 catchment is the districts on NH-34 South of Bulandshahr and North of Kanpu, includes Aligarh, Kannauj.
The traffic from this zone is not considered for diversion to Gan
Northern parts of Rajasthan is region that uses NH-21 to reach Agra. Includes Jaipur Ajmer
Northern States (above Delhi) includes North Haryana, Punjab and Jammu & Kashmir
Poorvanchal Expressway connection includes districts of Uttar Pradesh connected with Poorvanchal Expressway

Figure 3-1 Zoning Map



3.4 Assessment of Potentially Divertible Traffic

3.4.1 Divertible Zone Pairs

In assessment of divertible zone pairs the first preliminary investigation was done through hub and spoke model in which each zone is assigned the nearest node based on aerial distance. The hub and spoke model is shown in Figure 3-2. The hub and spoke gives an estimate of likely node to be used by any zone. Since traffic moves through road the assigned node were suitably changed and pairs that were unlikely to use the corridor. This was based on the fact that distance through corridor should not be higher that 10% to 20%. The hub and spoke model gives a good indication of nodes of corridor which is used by different OD pairs. For example Lucknow zone, Poorvanchal Expressway zone, NH-27 entry zones while travelling towards North India will use Node N of the Project Corridor. The zone of South India shows an access point at node U while travelling to Northern parts of India but they were not taken as divertible zones since NH-44 is a better option available in terms of distance to reach Northern parts of India. The divertible OD zones is described in Table 3-2.

Figure 3-2 Hub and Spoke Model for Corridor

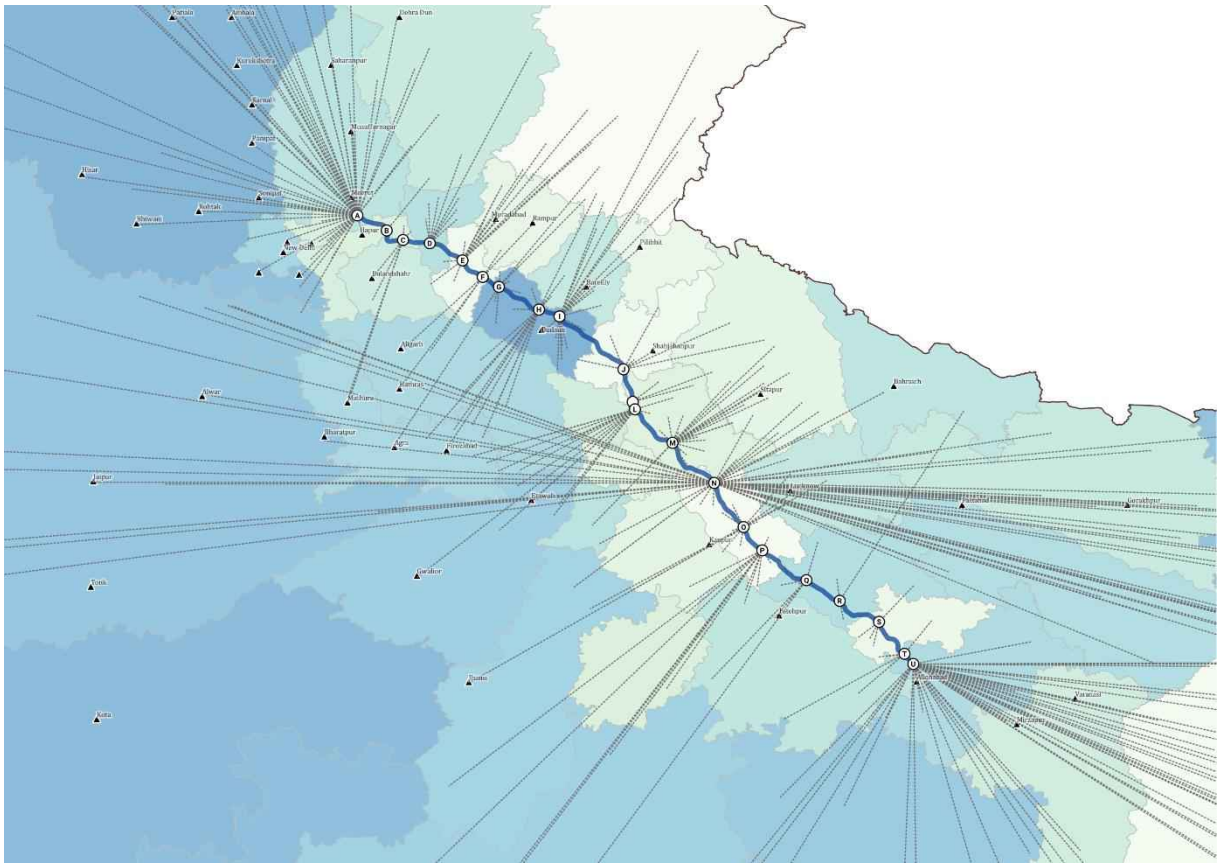


Table 3-2 Divertible Zones

Sno.	Name	Sno.	Name
1	Bareilly	17	Poorvanchal Exp Conn
2	Badaun	18	Prayagraj
3	Delhi	19	Raebarelli
4	Hapur	20	Sambhal
5	Hardoi	21	Shahjahanpur
6	IIA Buladshahr	22	South Bihar etc
7	Kanpur	23	Unnao
8	Kumaon Region Uttarakhand	24	Varanasi
9	Lucknow	25	Amroha
10	Mathura Agra and Firozabad	26	Gautam Budh Nagar
11	Meerut	27	Ghazaiabd
12	Moradabad and Rampur	28	Gurugram and Faridabad
13	NH-27 Entry Lucknow	29	Fatehpur and Kaushambhi
14	N Bihar and NE States	30	Garhwal Region Uttarakhand
15	Northern Parts of Rajasthan	31	Pilibhit
16	Northern States (above Delhi)	32	Sitapur and Lakhimpur Kheri

3.4.2 Development of Route System

Route system comprises of alternate route through which currently traffic is moving and routes traversed if the traffic moves through project corridor. 105 such routes were developed for this study. Annexure gives all the route maps developed and route code, OD pair and entry exit points in the corridor. Figure 3-3 shows the route system of traffic moving Northern states to Varanasi as an illustration. It gives following information and inputs that will be used further in analysis.

1. It gives the current route options available for traffic moving in Route 14 i.e. from Northern states to Varanasi. There are four alternatives named 14A, 14B, 14C and 14D along with project corridor.
2. It gives the entry point and exit points if the traffic moves through the project corridor. This means if the traffic moving in alternative routes moves on Project Corridor it will use entry exit points shown in figure i.e. point A and point U.
3. It gives location of survey points which is used to capture traffic moving in Route no. 14. This survey location is used further in calculating divertible OD pairs. All the traffic between the Origin Destination pairs is captured at the survey location.
4. Table 3-3 gives the route no. OD pair movement in the route and entry and exit points on the Project Corridor (if this OD pair moves on the project corridor). Route 14 shown as an illustration is marked in red.

Figure 3-3 Route 14 Map with alternatives

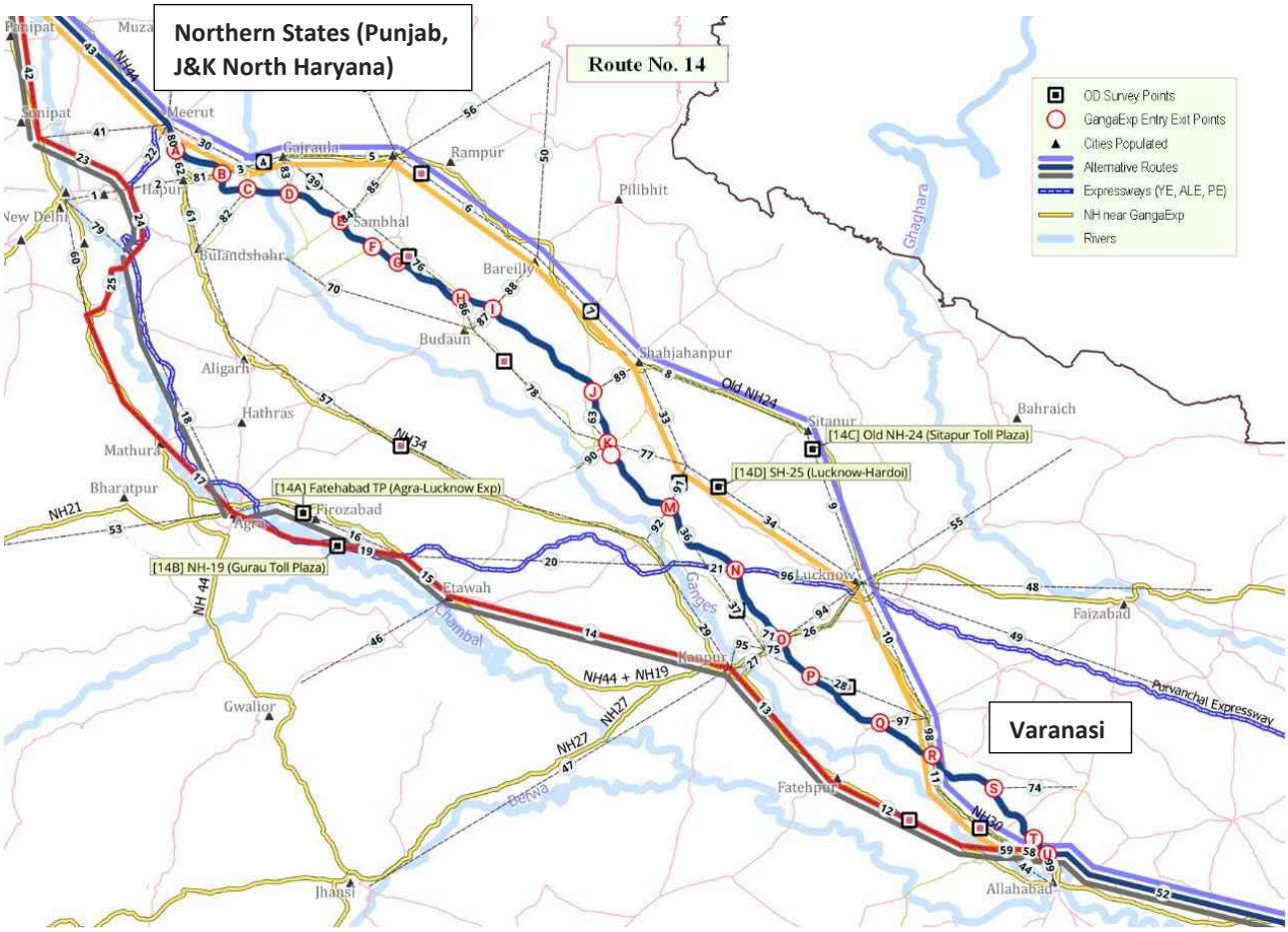


Table 3-3 Route Name, Number OD pairs served with Entry and Exit Points on Corridor

S no.	Route No.	From	To	Corridor Section (Entry-Exit)
1	2	Meerut	Prayagraj	A to U
2	3	Meerut	Varanasi	A to U
3	4	Meerut	Raebareli	A to Q
4	5	Meerut	Kanpur	A to O
5	6	Meerut	Lucknow	A to N
6	7	Meerut	Unnao	A to O
7	8	Meerut	Hardoi	A to K
8	9	Meerut	Shahjahanpur	A to J
9	10	Meerut	Bareilly	A to I
10	11	Meerut	Badaun	A to H
11	12	Meerut	Sambhal	A to E
12	13	NorthernStates	Prayagraj	A to U
13	14	NorthernStates	Varanasi	A to U
14	15	NorthernStates	Raebareli	A to Q
15	16	NorthernStates	Kanpur	A to O
16	17	NorthernStates	Unnao	A to O
17	18	NorthernStates	Lucknow	A to N
18	19	Meerut	Muradabad	A to E
19	20	Delhi	Prayagraj	B to U
20	21	Delhi	Varanasi	B to U
21	22	Delhi	Raebareli	B to Q
22	23	Delhi	Lucknow	B to N
23	24	Delhi	Kanpur	B to O
24	25	Delhi	Unnao	B to O
25	26	Delhi	Hardoi	B to K
26	27	Delhi	Shahjahanpur	B to J
27	28	Delhi	Bareilly	B to I
28	29	Delhi	Muradabad	B to E
29	30	Delhi	Sambhal	B to E
30	31	Delhi	Badaun	B to H
31	32	Amroha	Prayagraj	D to U
32	33	Amroha	Varanasi	D to U
33	34	Amroha	Raebareli	D to Q
34	35	Amroha	Lucknow	D to N
35	36	Amroha	Kanpur	D to O
36	37	Amroha	Unnao	D to O
37	38	Amroha	Hardoi	D to K
38	39	Amroha	Shahjahanpur	D to J
39	40	Amroha	Badaun	D to H
40	41	Amroha	Bareilly	D to J
41	42	Sambhal	Prayagraj	E to U
42	43	Sambhal	Varanasi	E to U

43	44	Sambhal	Raebareli	E to Q
44	45	Sambhal	Lucknow	E to N
45	46	Sambhal	Kanpur	E to O
46	47	Sambhal	Unnao	E to O
47	48	Sambhal	Hardoi	E to K
48	49	Sambhal	Shahjahanpur	E to J
49	50	Sambhal	Bareilly	E to I
50	51	Sambhal	Badaun	E to H
51	52	Moradabad	Prayagraj	E to U
52	53	Moradabad	Varanasi	E to U
53	54	Moradabad	Lucknow	E to N
54	55	Moradabad	Kanpur	E to O
55	56	Moradabad	Hardoi	E to K
56	57	Moradabad	Badaun	E to H
57	58	Bareilly	Prayagraj	I to U
58	59	Bareilly	Varanasi	I to U
59	60	Bareilly	Raebareli	I to Q
60	61	Bareilly	Kanpur	I to O
61	62	Bareilly	Unnao	I to O
62	63	Bareilly	Lucknow	I to N
63	64	Bareilly	Hardoi	I to K
64	65	Badaun	Prayagraj	I to U
65	66	Badaun	Varanasi	I to U
66	67	Badaun	Raebareli	I to Q
67	68	Badaun	Kanpur	I to O
68	69	Badaun	Lucknow	I to N
69	70	Badaun	Hardoi	I to K
70	71	Badaun	Unnao	I to O
71	72	Shahjahanpur	Prayagraj	J to U
72	73	Shahjahanpur	Varanasi	J to U
73	74	Shahjahanpur	Raebareli	J to Q
74	75	Shahjahanpur	Kanpur	J to O
75	76	Shahjahanpur	Unnao	J to O
76	77	Shahjahanpur	Lucknow	J to N
77	78	Hardoi	Prayagraj	M to U
78	79	Hardoi	Varanasi	M to U
79	80	Hardoi	Raebareli	M to Q
80	81	Hardoi	Kanpur	M to O
81	82	Hardoi	Unnao	M to O
82	83	Agra	Prayagraj	N to U
83	84	Agra	Varanasi	N to U
84	85	Lucknow	Prayagraj	O to U
85	86	Lucknow	Varanasi	O to U
86	87	Kanpur	Prayagraj	O to U
87	88	Kanpur	Varanasi	O to U
88	89	Kanpur	Raebareli	O to Q
89	90	Raebareli	Prayagraj	R to U
90	91	Raebareli	Varanasi	R to U

91	92	Hapur	Prayagraj	B to U
92	93	Hapur	Varanasi	B to U
93	94	Hapur	Lucknow	B to N
94	95	Hapur	Kanpur	B to O
95	96	Hapur	Bareilly	B to I
96	97	Hapur	Badaun	B to H
97	98	Hapur	Sambhal	B to E
98	99	Hapur	Shahjahanpur	B to J
99	100	Hapur	Hardoi	B to K
100	101	Bulandshahr	Bareilly	C to I
101	102	Bulandshahr	Lucknow	C to N
102	103	Bulandshahr	Muradabad	C to E
103	104	Bulandshahr	Sambhal	C to E
104	105	Bulandshahr	Hardoi	C to K
105	106	Bulandshahr	Shahjahanpur	C to J

5. It divides each route in sections that is used further in analysis of Road user Cost. Figure 3-4 gives the name of sections and corresponding numeric code is shown in Figure 3-3. In Road User Cost Analysis attributes of each section is assigned in terms of capacity, length roughness etc which is used as input for calculation of Road user Cost.
6. Table 3-4 Shows the sections of the Project Corridor and characteristics of the sections in terms of length, toll rate, type of Highway. Based on type of highways roughness value, capacity is used for Road User Cost Calculation.

Figure 3-4 Sections of project Corridor and Alternate Routes

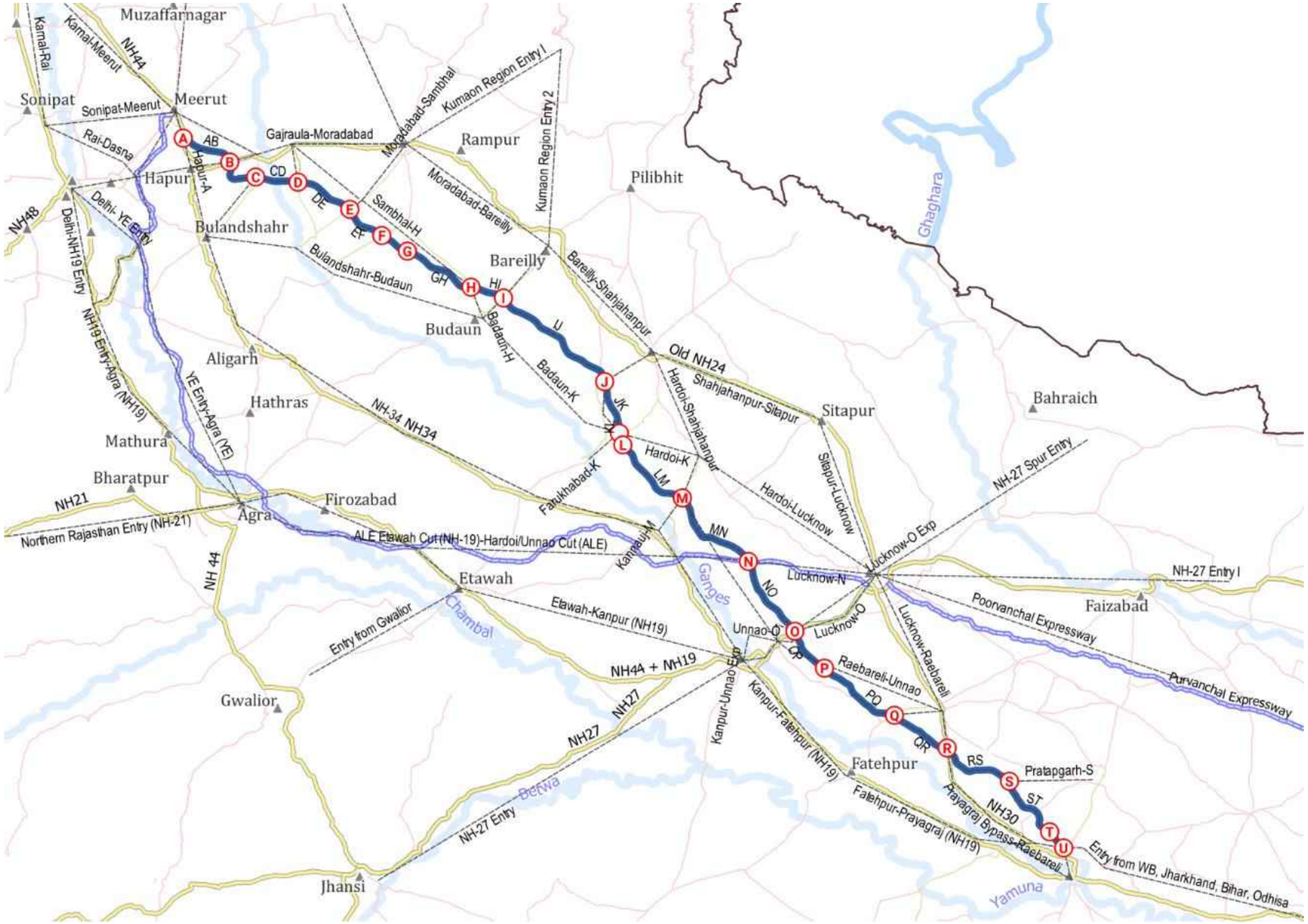


Table 3-4 Codes and Attributes of Various Road Sections

Code	Section	Length (km)	Lanes	RoadType	Toll: Car	Toll: LCV	Toll: 2Axle	Toll: 3Axle	Toll: MAV
1	Delhi-Dasna	40	Six_Lane_Expressway	Expressway	0	0	0	0	0
2	Dasna-Hapur	29	Six_Lane_Divided	NH	130	210	440	480	690
3	B-Garh Mukhteshwar	14	Four_Lane_Divided	NH	0	0	0	0	0
4	Garh Mukteshwar-Gajraula	19	Four_Lane_Divided	NH	55	90	195	210	305
5	Gajraula-Moradabad	53	Four_Lane_Divided	NH	40	65	130	145	205
6	Moradabad-Bareilly	94	Four_Lane_Divided	NH	135	205	415	630	630
7	Bareilly-Shahjahanpur	88	Four_Lane_Divided	NH	0	0	0	0	0
8	Shahjahanpur-Sitapur	86	Four_Lane_Divided	NH	0	0	0	0	0
9	Sitapur-Lucknow	88	Four_Lane_Divided	NH	45	75	155	245	245
10	Lucknow-Raebareli	79	Four_Lane_Divided	NH	95	155	325	355	510
11	Prayagraj Bypass-Raebareli	99	Two_Lane	NH	0	0	0	0	0
12	Fatehpur-Prayagraj (NH19)	107	Six_Lane_Divided	NH	55	90	185	205	295
13	Kanpur-Fatehpur (NH19)	80	Six_Lane_Divided	NH	70	115	240	260	375
14	Etawah-Kanpur (NH19)	156	Six_Lane_Divided	NH	150	235	480	525	740
15	ALE Etawah Cut (NH-19)-Etawah	30	Six_Lane_Divided	NH	0	0	0	0	0
16	Agra-ALE Etawah Cut (NH-19)	98	Six_Lane_Divided	NH	100	160	330	360	520
17	NH19 Entry-Agra (NH19)	137	Six_Lane_Divided	NH	110	180	375	590	590
18	YE Entry-Agra (YE)	168	Six_Lane_Expressway	Expressway	415	635	1,295	1,970	1,970
19	Agra (ALE)-ALE Etawah Cut (NH-19)	91	Six_Lane_Expressway	Expressway	197	309	620	949	949
20	ALE Etawah Cut (NH-19)-Hardoi/Unnao Cut (ALE)	158	Six_Lane_Expressway	Expressway	282	440	885	1,361	1,361
21	Hardoi/Unnao Cut (ALE)-N	10	Six_Lane_Expressway	Expressway	18	28	56	86	86
22	Meerut-Dasna	49	Six_Lane_Divided	NH	161	263	540	584	847
23	Rai-Dasna	53	Six_Lane_Expressway	Expressway	85	135	285	310	450
24	Dasna-YE Entry	48	Six_Lane_Expressway	Expressway	55	90	185	200	290
25	YE Entry-NH19 Entry	52	Six_Lane_Expressway	Expressway	95	150	315	345	495
26	Lucknow-O	56	Four_Lane_Divided	NH	80	130	270	295	425
27	Kanpur-Unnao	30	Four_Lane_Divided	NH	0	0	0	0	0
28	Raebareli-Unnao	95	Two_Lane	NH	0	0	0	0	0
29	Kannauj-Kanpur	79	Four_Lane_Divided	NH	0	0	0	0	0
30	Meerut-Garh Mukteshwar	44	Two_Lane	SH	0	0	0	0	0
33	Hardoi-Shahjahanpur	56	Two_Lane	SH	0	0	0	0	0
34	Hardoi-Lucknow	113	Two_Lane	SH	0	0	0	0	0
36	M-Hardoi/Unnao Cut (ALE)	34	Two_Lane	SH	0	0	0	0	0
37	Hardoi/Unnao Cut (ALE)-Unnao	54	Two_Lane	SH	0	0	0	0	0
38	Badaun-Hardoi	173	Two_Lane	SH	0	0	0	0	0
39	Gajraula-Sambhal	49	Two_Lane	SH	0	0	0	0	0
41	Sonipat-Meerut	80	Two_Lane	SH	0	0	0	0	0
42	Karnal-Rai	91	Six_Lane_Divided	NH	125	220	445	715	715
43	Karnal-Meerut	110	Four_Lane_Divided	NH	0	0	0	0	0
44	Prayagraj-EntryFatehpur	15	Six_Lane_Divided	NH	0	0	0	0	0
45	Garhwal Region (Rishikesh) -Moradabad	170	Two_Lane	SH	0	0	0	0	0
52	Entry from WB, Jharkhand, Bihar, Odhisa	24	Six_Lane_Divided	NH	96	149	311	338	480
57	NH-34	50	Two_Lane	NH	0	0	0	0	0
58	Prayagraj Bypass-U	15	Six_Lane_Divided	NH	60	93	194	211	300
59	Prayagraj Bypass	15	Six_Lane_Divided	NH	60	93	194	211	300
60	Delhi-NH19 Entry	66	Six_Lane_Divided	NH	28	42	84	84	84
61	Bulandshahr-Hapur	40	Four_Lane_Divided	NH	0	0	0	0	0
62	Hapur-A	16	Four_Lane_Divided	NH	0	0	0	0	0
63	(730C) K-J	32	Two_Lane	SH	0	0	0	0	0
70	Bulandshahr-Budaun	143	Two_Lane	SH	0	0	0	0	0

74	Pratapgarh-U	53	Two_Lane	SH	0	0	0	0	0
75	Unnao-O	11	Four_Lane_Divided	NH	0	0	0	0	0
76	Sambhal-H	68	Two_Lane	SH	0	0	0	0	0
77	Hardoi-K	44	Two_Lane	SH	0	0	0	0	0
78	Badaun-K	103	Two_Lane	SH	0	0	0	0	0
79	Delhi- YE Entry	47	Six_Lane_Expressway	Expressway	0	0	0	0	0
80	Meerut-A	15	Four_Lane_Divided	NH	0	0	0	0	0
81	Hapur-B	19	Six_Lane_Divided	NH	0	0	0	0	0
82	Bulandshahr-C	41	Two_Lane	SH	0	0	0	0	0
83	Amroha-D	22	Two_Lane	SH	0	0	0	0	0
84	Sambhal-E	8	Two_Lane	SH	0	0	0	0	0
85	Moradabad-Sambhal	37	Two_Lane	SH	0	0	0	0	0
86	Badaun-H	18	Two_Lane	SH	0	0	0	0	0
87	Badaun-I	15	Four_Lane_Divided	NH	0	0	0	0	0
88	Bareilly-I	37	Four_Lane_Divided	NH	0	0	0	0	0
89	Shahjahanpur-J	28	Two_Lane	SH	0	0	0	0	0
90	Farukhabad-K	27	Two_Lane	SH	0	0	0	0	0
91	Hardoi-M	23	Two_Lane	SH	0	0	0	0	0
92	Kannauj-M	39	Two_Lane	SH	0	0	0	0	0
96	Lucknow-N	75	Six_Lane_Expressway	Expressway	134	209	420	646	646
97	Raebareli-Q	25	Two_Lane	NH	0	0	0	0	0
98	Raebareli-R	20	Two_Lane	NH	0	0	0	0	0
99	Prayagraj-U	18	Six_Lane_Divided	NH	0	0	0	0	0
101	AB	27	Six_Lane_Expressway	Expressway	85	130	260	400	400
102	BC	19	Six_Lane_Expressway	Expressway	45	70	140	220	220
103	CD	20	Six_Lane_Expressway	Expressway	100	160	315	475	475
104	DE	28	Six_Lane_Expressway	Expressway	65	105	210	320	320
105	EF	21	Six_Lane_Expressway	Expressway	65	105	210	320	320
106	FG	14	Six_Lane_Expressway	Expressway	35	50	105	160	160
107	GH	36	Six_Lane_Expressway	Expressway	80	130	265	405	405
108	HI	17	Six_Lane_Expressway	Expressway	55	85	165	255	255
109	IJ	65	Six_Lane_Expressway	Expressway	200	315	625	965	965
110	JK	28	Six_Lane_Expressway	Expressway	80	125	255	390	390
111	KL	6	Six_Lane_Expressway	Expressway	15	25	45	75	75
112	LM	41	Six_Lane_Expressway	Expressway	120	190	385	590	590
113	MN	48	Six_Lane_Expressway	Expressway	125	200	400	620	620
114	NO	43	Six_Lane_Expressway	Expressway	115	185	370	570	570
115	OP	24	Six_Lane_Expressway	Expressway	70	110	225	345	345
116	PQ	42	Six_Lane_Expressway	Expressway	95	155	310	480	480
117	QR	30	Six_Lane_Expressway	Expressway	70	110	225	345	345
118	RS	37	Six_Lane_Expressway	Expressway	85	135	275	425	425
119	ST	35	Six_Lane_Expressway	Expressway	80	125	255	395	395
120	TU	12	Six_Lane_Expressway	Expressway	30	45	90	140	140

3.4.3 Conversion of Divertible OD Matrix into Node Matrix of Project Corridor

The next step is estimation of node matrix from OD matrix obtained from field surveys. As discussed in previous section route system is developed. Each divertible OD pair is assigned a route. For example Route 14 is assigned to OD pair Northern States and Varanasi and same route no. 14 is assigned to OD pair of Northern States and South Bihar. Table 3-5 shows the routes assigned to each divertible OD pair. The routes and code assigned is defined in the Annexure.

Table 3-5 Routes Assigned to Divertible OD Pairs

	Bareilly	Badaun	Delhi	Hapur	Hardoi	IIA Buladshahr	Kanpur	Kumaon Region Uttarakhand	Lucknow	Mathura Agra and Firozabad	Meerut	Moradabad and Rampur	NH-27 Entry Lucknow	N Bihar and NE States	Northern Parts of Rajasthan	Northern States (above Delhi)	Poorvanchal Exp Conn	Prayagraj	Raebarelli	Sambhal	Shahjahanpur	South Bihar etc	Unnao	Varanasi	Amroha	Gautam Budh Nagar	Ghaziabad	Gurugram and Faridabad	Fatehpur and Kaushambhi	Garhwal Region Uttarakhand	Pilibhit	Sitapur and Lakhimpur Kheri
Bareilly		0	28	96	64	101	61	0	63	0	10	0	63	63	0	10	63	58	60	50	0	59	62	59	41	28	28	28	61	0	0	0
Badaun	0		31	97	70	0	68	0	69	0	11	0	69	69	0	11	69	65	67	51	0	66	71	66	40	31	31	31	68	0	0	0
Delhi	28	31		0	26	0	24	0	23	0	0	29	23	23	0	0	23	20	22	30	27	21	25	21	0	0	0	0	24	0	28	27
Hapur	96	97	0		100	0	95	0	94	0	0	0	94	94	0	0	94	92	0	98	99	93	1	93	0	0	0	0	95	0	96	99
Hardoi	64	70	26	100		105	81	0	0	0	8	56	0	0	0	8	0	78	80	48	49	79	82	79	38	26	26	26	95	8	0	0
IIA Buladshahr	101	0	0	0	105		0	0	102	0	0	0	102	102	0	0	102	0	0	104	106	0	0	0	0	0	0	0	0	0	0	0
Kanpur	61	68	24	95	81	0		61	0	0	5	55	0	0	0	16	0	87	89	46	75	88	0	88	36	24	24	24	0	5	75	0
Kumaon Region Uttarakhand	0	0	0	0	0	0	61		63	0	0	0	63	63	0	0	63	58	60	0	0	59	62	59	0	0	0	0	61	0	0	0
Lucknow	63	69	23	94	0	102	0	63		0	6	54	0	0	0	18	0	87	0	45	77	86	0	86	35	23	23	23	0	6	0	0
Mathura Agra and Firozabad	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	83	0	0	0	84	0	84	0	0	0	0	0	0	0	0
Meerut	10	11	0	0	8	0	5	0	6	0		19	6	6	0	0	6	2	4	12	9	3	7	3	0	0	0	0	5	0	10	0
Moradabad and Rampur	0	0	29	0	56	0	55	0	54	0	19		54	54	0	19	54	52	0	0	0	53	0	53	0	29	29	29	55	0	0	0
NH-27 Entry Lucknow	63	69	23	94	0	102	0	63	0	0	6	54		0	0	18	0	0	0	45	77	0	0	0	35	23	23	23	0	6	0	0
N Bihar and NE States	63	69	23	94	0	102	0	63	0	0	6	54	0		0	18	0	0	0	45	77	0	0	0	35	23	23	23	0	6	0	0
Northern Parts of Rajasthan	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	83	0	0	0	84	0	84	0	0	0	0	0	0	0	0
Northern States (above Delhi)	10	11	0	0	8	0	16	0	18	0	0	19	18	18	0		18	13	15	12	9	14	17	14	0	0	0	0	0	0	0	0
Poorvanchal Exp Conn	63	69	23	94	0	102	0	63	0	0	6	54	0	0	0	18		0	0	45	77	0	0	0	35	23	23	23	0	6	0	0
Prayagraj	58	65	20	92	78	0	87	58	87	83	2	52	0	0	83	13	0		90	42	72	0	87	0	32	20	20	20	0	2	0	0
Raebarelli	60	67	22	0	80	0	89	60	0	0	4	0	0	0	0	15	0	90		44	74	0	89	0	34	22	22	22	0	4	0	0
Sambhal	50	51	30	98	48	104	46	0	45	0	12	0	45	45	0	12	45	42	44		49	43	47	43	0	30	30	30	46	0	0	0
Shahjahanpur	0	0	27	99	49	106	75	0	77	0	9	0	77	77	0	9	77	72	74	49		73	76	73	39	27	27	27	75	9	0	0
South Bihar etc	59	66	21	93	79	0	88	59	86	84	3	53	0	0	84	14	0	0	0	43	73		0	0	33	21	21	21	0	3	0	0
Unnao	62	71	25	1	82	0	0	62	0	0	7	0	0	0	0	17	0	87	89	47	76	0		88	0	25	25	25	0	7	0	0
Varanasi	59	66	21	93	79	0	88	59	86	84	3	53	0	0	84	14	0	0	0	43	73	0	88		33	21	21	21	0	3	0	0
Amroha	41	40	0	0	38	0	36	0	35	0	0	0	35	35	0	0	35	32	34	0	39	33	0	33		0	0	0	36	0	0	0
Gautam Budh Nagar	28	31	0	0	26	0	24	0	23	0	0	29	23	23	0	0	23	20	22	30	27	21	25	21	0		0	0	24	0	0	0
Ghaziabd	28	31	0	0	26	0	24	0	23	0	0	29	23	23	0	0	23	20	22	30	27	21	25	21	0	0		0	24	0	0	0
Gurugram and Faridabad	28	31	0	0	26	0	24	0	23	0	0	29	23	23	0	0	23	20	22	30	27	21	25	21	0	0	0		24	0	0	0
Fatehpur and Kaushambhi	61	68	24	95	95	0	0	61	0	0	5	55	0	0	0	0	0	0	0	46	75	0	0	0	36	24	24	24		5	0	0
Garhwal Region Uttarakhand	0	0	0	0	8	0	5	0	6	0	0	0	6	6	0	0	6	2	4	0	9	3	7	3	0	0	0	0	5		0	0
Pilibhit	0	0	28	96	0	0	75	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
Sitapur and Lakhimpur Kheri	0	0	27	99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Since the route system gives the entry and exit points of divertible OD pair, this OD pair gets converted into node pair when assigned to Project corridor. Nodes of project corridor means the entry and exit point of Project Corridor (in this case from point A to U as shown in the route map). The traffic moving in each parallel route is captured at survey locations described in route map. This OD pair is converted into Node Matrix of divertible traffic. For example all the OD pairs moving in different routes having an entry point at A and U is captured in the matrix at intersection cell of row containing A and column containing U. The node matrix of divertible traffic for entire Expressway for each mode is shown from Table 3-6 to Table 3-10. This node matrix was converted into Groupwise divertible node matrix for each mode and is shown from Table 3-11 to Table 3-15. This divertible traffic is candidate traffic that is considered for diversion.

Table 3-6 Divertible Node Matrix of Car

AADT	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
A	0	0	0	0	379	0	0	24	84	0	0	0	0	91	12	0	0	0	0	0	24
B	0	0	0	0	2,064	0	0	24	290	122	27	0	0	619	344	0	0	0	0	0	146
C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D	0	0	0	0	0	0	0	81	0	217	0	0	0	97	0	0	0	0	0	0	0
E	722	1,830	0	0	0	0	0	341	0	0	0	0	0	290	0	0	0	0	0	0	24
F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H	108	263	0	0	738	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
I	143	676	24	0	0	0	0	0	0	0	60	0	0	84	68	0	8	0	0	0	15
J	0	15	0	97	0	0	0	0	0	0	0	0	0	217	22	0	5	0	0	0	0
K	9	27	0	0	0	0	0	0	61	0	0	0	0	0	0	0	0	0	0	0	0
L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	113	0	0	0	0	0	0
N	165	1,402	0	24	72	0	0	0	137	36	0	0	0	0	0	0	0	0	0	0	85
O	66	592	0	24	72	0	0	0	53	12	0	0	122	0	0	0	136	0	0	0	595
P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Q	5	0	0	24	0	0	0	0	0	0	0	0	0	0	90	0	0	0	0	0	0
R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	234
S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U	12	279	0	0	0	0	0	0	15	7	0	0	69	73	487	0	0	584	0	0	0

Table 3-7 Divertible Node Matrix of Bus

AADT	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
A	0	0	0	0	63	0	0	30	11	2	0	0	0	21	5	0	0	0	0	0	27
B	0	0	0	0	190	0	0	34	302	29	4	0	0	89	56	0	5	0	0	0	58
C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D	0	0	0	0	0	0	0	2	0	11	0	0	0	0	0	0	0	0	0	0	0
E	147	314	0	0	0	0	0	66	0	0	0	0	0	9	4	0	0	0	0	0	0
F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H	2	60	0	2	46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
I	17	154	0	0	2	0	0	0	0	0	7	0	0	14	23	0	0	0	0	0	2
J	0	29	0	22	0	0	0	0	0	0	0	0	0	2	4	0	0	0	0	0	0
K	0	7	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	0	0	0	0	0	0
N	15	161	0	2	22	0	0	0	15	6	0	0	0	0	0	0	0	0	0	0	59
O	5	95	0	0	0	0	0	0	19	6	0	0	61	0	0	0	52	0	0	0	75
P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Q	0	1	0	2	0	0	0	0	0	0	0	0	0	0	72	0	0	0	0	0	0
R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U	24	72	0	0	0	0	0	0	0	2	0	0	0	21	120	0	0	0	0	0	0

Table 3-8 Divertible Node Matrix of LCV

AADT	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
A	0	0	0	0	39	0	0	46	34	0	0	0	0	65	26	0	2	0	0	0	77
B	0	0	0	0	276	0	0	23	166	6	7	0	0	137	102	0	0	0	0	0	55
C	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0
D	0	0	0	0	0	0	0	0	0	43	0	0	0	0	0	0	0	0	0	0	0
E	199	206	3	0	0	0	0	47	36	0	0	0	0	0	7	0	0	0	0	0	0
F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H	23	23	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
I	34	130	7	0	22	0	0	0	0	0	6	0	0	50	50	0	0	0	0	0	25
J	11	25	6	58	0	0	0	0	0	0	0	0	0	43	11	0	0	0	0	0	0
K	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39	0	0	0	0	0	0
N	61	103	5	7	0	0	0	0	38	9	0	0	0	0	0	0	0	0	0	0	42
O	31	94	0	0	0	0	0	0	44	0	0	0	10	0	0	0	17	0	0	0	173
P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Q	4	4	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0
R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23
S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U	39	95	0	0	7	0	0	0	0	4	0	0	4	24	380	0	0	0	0	0	0

Table 3-9 Divertible Node Matrix of 3 Axle Truck

AADT	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
A	0	0	0	0	38	0	0	5	24	0	0	0	0	62	2	0	0	0	0	0	104
B	0	0	0	0	80	0	0	0	63	0	0	0	0	61	30	0	0	0	0	0	64
C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D	0	0	0	0	0	0	0	0	0	22	0	0	0	3	0	0	0	0	0	0	3
E	36	51	0	0	0	0	0	0	22	0	0	0	0	13	0	0	0	0	0	0	13
F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H	5	14	0	2	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
I	14	50	3	0	3	0	0	0	0	0	7	0	0	109	28	0	0	0	0	0	34
J	0	12	0	6	0	0	0	0	0	0	0	0	0	16	7	0	0	0	0	0	3
K	4	6	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0
L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0
N	31	89	0	6	6	0	0	0	17	5	0	0	0	0	0	0	0	0	0	0	46
O	36	40	0	0	0	0	0	0	52	2	0	0	6	0	0	0	29	0	0	0	112
P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Q	3	0	0	0	0	0	0	0	3	0	0	0	0	0	11	0	0	0	0	0	0
R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U	67	78	0	3	22	0	0	0	9	3	0	0	2	36	264	0	0	15	0	0	0

Table 3-10 Divertible Node Matrix of MAV

AADT	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
A	0	0	0	0	58	0	0	0	5	0	1	0	0	112	34	0	0	0	0	0	541
B	0	0	0	0	92	0	0	5	81	5	0	0	0	66	48	0	5	0	0	0	123
C	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0
D	0	0	0	0	0	0	0	0	0	22	0	0	0	4	0	0	0	0	0	0	7
E	66	53	0	0	0	0	0	19	22	0	0	0	0	33	0	0	0	0	0	0	15
F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H	24	3	0	6	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
I	18	33	4	0	0	0	0	0	0	0	11	0	0	79	31	0	0	0	0	0	42
J	0	5	0	26	0	0	0	0	0	0	0	0	0	23	14	0	0	0	0	0	10
K	10	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	3
N	94	154	0	0	7	0	0	0	53	20	0	0	0	0	0	0	0	0	0	0	242
O	47	75	0	0	0	0	0	0	63	25	0	0	3	0	0	0	20	0	0	0	180
P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Q	0	0	0	0	0	0	0	0	0	6	0	0	0	0	5	0	0	0	0	0	0
R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U	319	180	0	4	7	0	0	0	72	3	0	0	3	133	421	0	0	34	0	0	0

Table 3-11 Groupwise Divertible Node Matrix for Car

Group 1

Car	A	B	C	D	E	F	G*
A	0	0	0	0	379	0	235
B	0	0	0	0	2,064	0	1,571
C	0	0	0	0	0	0	0
D	0	0	0	0	0	0	394
E	722	1,830	0	0	0	0	655
F	0	0	0	0	0	0	0
G	509	3,254	24	169	883	0	0

Group 2

Car	G	H	I	J	K	L
G	0	470	373	339	27	1,646
H	1,109	0	0	0	0	0
I	843	0	0	0	60	175
J	112	0	0	0	0	244
K	37	0	61	0	0	0
L	2,739	0	206	55	0	0

Group 3

car	L	M	N	O	P
L	0	0	1,397	446	223
M	0	0	0	113	0
N	1,836	0	0	0	85
O	820	122	0	0	731
P	343	69	73	576	0

Group 4

Car	P	Q	R	S	T	U
P	0	149	0	0	0	890
Q	119	0	0	0	0	0
R	0	0	0	0	0	234
S	0	0	0	0	0	0
T	0	0	0	0	0	0
U	943	0	584	0	0	0

*The node point G is the interchange point between Group 1 and Group 2. The node matrix described in Table 3-6 to Table 3-10 is converted into Group matrix. The traffic entering/exiting beyond G from A, B,C,D, E and F is added to get the traffic at G.

Table 3-12 Groupwise Divertible Node Matrix for Bus

Group 1

Bus	A	B	C	D	E	F	G
A	0	0	0	0	63	0	97
B	0	0	0	0	190	0	577
C	0	0	0	0	0	0	0
D	0	0	0	0	0	0	14
E	147	314	0	0	0	0	80
F	0	0	0	0	0	0	0
G	64	579	0	29	71	0	0

Group 2

Bus	G	H	I	J	K	L
G	0	133	313	42	4	275
H	111	0	0	0	0	0
I	174	0	0	0	7	39
J	51	0	0	0	0	6
K	7	0	5	0	0	0
L	400	0	34	14	0	0

Group 3

Bus	G	H	I	J	K	L
G	0	133	313	42	4	275
H	111	0	0	0	0	0
I	174	0	0	0	7	39
J	51	0	0	0	0	6
K	7	0	5	0	0	0
L	400	0	34	14	0	0

Group 4

Bus	P	Q	R	S	T	U
P	0	57	0	0	0	222
Q	75	0	0	0	0	0
R	0	0	0	0	0	0
S	0	0	0	0	0	0
T	0	0	0	0	0	0
U	239	0	0	0	0	0

Table 3-13 Groupwise Divertible Node Matrix for LCV

Group 1

LCV	A	B	C	D	E	F	G
A	0	0	0	0	39	0	250
B	0	0	0	0	276	0	496
C	0	0	0	0	0	0	7
D	0	0	0	0	0	0	43
E	199	206	3	0	0	0	90
F	0	0	0	0	0	0	0
G	203	474	18	65	36	0	0

Group 2

LCV	G	H	I	J	K	L
G	0	116	244	50	7	471
H	53	0	0	0	0	0
I	193	0	0	0	6	126
J	101	0	0	0	0	55
K	0	0	0	0	0	0
L	450	0	82	13	0	0

Group 3

LCV	L	M	N	O	P
L	0	0	297	197	159
M	0	0	0	39	0
N	223	0	0	0	42
O	169	10	0	0	190
P	153	4	24	400	0

Group 4

LCV	P	Q	R	S	T	U
P	0	19	0	0	0	373
Q	28	0	0	0	0	0
R	0	0	0	0	0	23
S	0	0	0	0	0	0
T	0	0	0	0	0	0
U	553	0	0	0	0	0

Table 3-14 Groupwise Divertible Node Matrix for 2 Axle Truck

Group 1

2 Axle Truck	A	B	C	D	E	F	G
A	0	0	0	0	4	0	106
B	0	0	0	0	21	0	205
C	0	0	0	0	0	0	0
D	0	0	0	0	0	0	17
E	8	35	0	0	0	0	28
F	0	0	0	0	0	0	0
G	132	229	0	14	27	0	0

Group 2

2 Axle Truck	G	H	I	J	K	L
G	0	27	22	8	0	299
H	20	0	0	0	0	0
I	20	0	0	0	4	68
J	17	0	0	0	0	19
K	19	0	7	0	0	0
L	326	0	49	3	0	0

Group 3

2 Axle Truck	L	M	N	O	P
L	0	0	182	66	137
M	0	0	0	5	1
N	153	0	0	0	46
O	87	1	0	0	78
P	140	1	35	284	0

Group 4

2 Axle Truck	P	Q	R	S	T	U
P	0	20	0	0	0	243
Q	12	0	0	0	0	0
R	0	0	0	0	0	10
S	0	0	0	0	0	0
T	0	0	0	0	0	0
U	448	0	0	0	0	0

Table 3-15 Groupwise Divertible Node Matrix for 3 Axle Truck

Group 1

3 Axle Truck	A	B	C	D	E	F	G
A	0	0	0	0	38	0	196
B	0	0	0	0	80	0	218
C	0	0	0	0	0	0	0
D	0	0	0	0	0	0	28
E	36	51	0	0	0	0	47
F	0	0	0	0	0	0	0
G	161	290	3	17	48	0	0

Group 3

3 Axle Truck	L	M	N	O	P
L	0	0	264	67	222
M	0	0	0	10	0
N	155	0	0	0	46
O	131	6	0	0	141
P	189	2	36	276	0

Group 2

3 Axle Truck	G	H	I	J	K	L
G	0	5	109	22	0	354
H	37	0	0	0	0	0
I	71	0	0	0	7	171
J	19	0	0	0	0	27
K	11	0	6	0	0	0
L	383	0	82	11	0	0

Group 4

3 Axle Truck	P	Q	R	S	T	U
P	0	29	0	0	0	379
Q	17	0	0	0	0	0
R	0	0	0	0	0	5
S	0	0	0	0	0	0
T	0	0	0	0	0	0
U	486	0	15	0	0	0

Table 3-16Groupwise Divertible Node Matrix for MAV

Group 1

MAV	A	B	C	D	E	F	G
A	0	0	0	0	58	0	694
B	0	0	0	0	92	0	332
C	0	0	0	0	0	0	11
D	0	0	0	0	0	0	33
E	66	53	0	0	0	0	89
F	0	0	0	0	0	0	0
G	512	451	4	35	60	0	0

Group 2

MAV	G	H	I	J	K	L
G	0	25	119	27	1	988
H	78	0	0	0	0	0
I	55	0	0	0	11	152
J	31	0	0	0	0	47
K	10	0	5	0	0	0
L	888	0	187	54	0	0

Group 3

MAV	L	M	N	O	P
L	0	0	316	127	743
M	0	0	0	4	3
N	328	0	0	0	242
O	210	3	0	0	200
P	591	3	133	426	0

Group 4

MAV	P	Q	R	S	T	U
P	0	25	0	0	0	1,163
Q	11	0	0	0	0	0
R	0	0	0	0	0	9
S	0	0	0	0	0	0
T	0	0	0	0	0	0
U	1,141	0	34	0	0	0

3.5 Estimation of Road User Cost and Diversion Percentage

This section is divided into two subsections. The first subsection provides the methodology for Road User Cost and diversion analysis. The second subsection provides the Road User Cost and Diversion Percentage.

3.5.1 Methodology for Road User Cost Analysis and Divertible Traffic

RUC analysis includes both monetary and non-monetary impacts. Monetary impacts include the vehicle operation cost, value of time, traffic accident costs, as well as vehicle emissions costs. Non-monetary impacts may include undesirable impacts to ecology and environment, increased noise, or impacts to local businesses as a result of construction activities. RUC calculations primarily make use of monetary impacts; other impacts are often neglected due to the difficulty of quantifying their effects. Road User Cost (RUC) is the primary input for estimating the percentage of diversion. In this study, Road user cost for potential route option between the O-D pairs has been estimated as per the guidelines suggested by IRC SP 30-2019. Road user cost comprises of following components such as

- Vehicle operation cost (VOC) in Rs/km
    - Uncongested condition
    - Congested condition
- Value of time (VOT) in Rs/km

The generic expression for estimating RUC is as follows

$$RUC_m^i = VOC_m^i + VOT_m^i \quad \text{Eq. 1}$$

Where, RUC is Road user cost for i^{th} route by a particular type of mode (m), VOC is vehicle operation cost for i^{th} route by a particular type of mode (m); VOT is Value of Time through i^{th} route by a particular type of mode (m);

Following parameters are required for RUC analysis:

1. Identifying appropriate alternate route by detailed network Analysis. Based on the rating analysis.
    - Number of habitations passed
    - Length of habitations: Visually
    - No: of intersections at habitations
    - Construction points at habitations
2. Identifying the congestion points in the Road Network based on the rating
3. Type of the carriageway with number of lanes for each section
4. Rise/Fall of the carriageway of existing corridors for each section
5. Roughness of the carriageway in terms of International Roughness Index (IRI) value for each section of corridor.
6. Traffic volume counts on the existing roads (Project corridor& alternate routes influencing project corridor)
7. Estimating Travel time by speed and delay survey on the existing corridors for each section
8. Distance related congestion factors of the existing roads (Project corridor & alternate routes influencing project corridor)
9. Time related congestion factors of the existing roads (Project corridor & alternate routes influencing project corridor)

Each component of RUC for each mode and each route has been calculated and the corresponding parameters considered as shown in Table 3-17.

Table 3-17 Inputs considered for RUC analysis

Description of RUC component	Parameters/Inputs considered for RUC analysis
Vehicle Operating Cost (VOC), Rs/Km	Project Corridor influence Network Elements Such as • Length of the Route/Road Section in Km • Category of Route (National Highway/State Highway. • Rise/Fall of the carriageway of existing corridors for each section (Based on visual inspection of Network). • Roughness of the carriageway in terms of International Roughness Index (IRI) value for each section of corridor (Based on visual inspection of Network). The value of 3000 is taken for SH and 2000 for SH. • Volume/Design Capacity (V/C) values for Project corridor (based on Traffic volume counts). • Volume/Design Capacity (V/C) values for alternate routes (Considered based on visual inspection of alternate routes in project influence network). • Distance related congestion factors of the existing roads (Project corridor & alternate routes influencing project corridor) for uncongested and Congested conditions. • Time related congestion factors of the existing roads (Project corridor & alternate routes influencing project corridor).
Value of Time, Rs/Km	VOT values are adopted for each mode according to the RF and Roughness values from IRC SP 30-2019.
Additional user cost (Toll Cost, Rs/Km)	Toll rates have been adopted as per the Toll information system, NHAI database.

VOC for each mode and each route considered for O-D Pair has been estimated for two distinct conditions as discussed in proceeding sections i.e. Uncongested and congested conditions of each route. Distance related and Time related congestion factors have been calculated for Uncongested and congested conditions to calculate Vehicle operation costs. Following are the generic expressions considered for estimating vehicle operating costs.

For Uncongested condition,

$$VOC_{mode}^{RF,\ IRI} = DRCF_{mode}^{Lanes} + TRCF_{mode}^{Lanes}$$

Where, VOC of a mode at a Particular Rise/Fall and IRI values of 2/4 lane road in Rs/Km; DRCF= Distance related congestion factors; TRCF= Time related congestion factors

$$DRCF_{mode}^{Lanes} = \sum Fuel,\ \ Lubricants, Tyre, Spare\ Parts, Maintenance\ Labour$$

$$TRCF_{mode}^{Lanes} = \sum Depreciation,\ \ Fixed\ Costs, Value\ of\ passenger\ time\ or\ value\ of\ commodity, wages\ of\ Crew$$

The costs for DRCF and TRCF components of each mode has been adopted from the tables suggested in the Annex-D (Clause 6.6), Page No. 86 IRC SP 30-2019 to calculate VOC in uncongested condition for each mode of selected alternate route choice. The DRCF and TRCF component values considered for economic cost of operation for all modes. These costs of DRCF and TRCF components are calibrated to

current 2021 price levels by applying Wholesale price indices. The detailed VOC values for uncongested condition for the selected O-D Pairs is calculated.

For Congested condition,

$$VOC_{mode}^{Lanes} = DRCF_{mode}^{Lanes} + TRCF_{mode}^{Lanes}$$

$$DRCF_{mode}^{Lanes} = a + b\left(\frac{V}{C}\right)$$

$$TRCF_{mode}^{Lanes} = a + b\left(\frac{V}{C}\right)$$

Where, VOC of a mode of 2/4 lane road in Rs/Km; DRCF= Distance related congestion factors; TRCF= Time related congestion factors; a & b are regression coefficients; V= Practical traffic volume/capacity of selected route section and C= Design capacity of selected route section.

The V/C values considered in this study are based on the Peak hour traffic volumes. Based on these V/C values of a selected route section, DRCF and TRCF values are calculated for each mode and further, VOC for congested condition has been calculated as per the above equation.

Final VOC for a section of road and mode

Thus based on the DRCF and TRCF values for both congested and uncongested conditions, the final DRCF, TRCF and VOC values for each mode and project section is calculated as per the expression shown below. The VOC values for congested condition and final VOC values for the selected O-D Pairs and its corresponding route options are calculated.

$$Final\ DRCF_{mode}^{Lanes} = Uncongested\ DRCF_{mode}^{Lanes} \times Congested\ DRCF_{mode}^{Lanes}$$

$$Final\ TRCF_{mode}^{Lanes} = Uncongested\ TRCF_{mode}^{Lanes} \times Congested\ TRCF_{mode}^{Lanes}$$

$$Final\ VOC_{mode}^{Lanes} = Final\ DRCF_{mode}^{Lanes} + Final\ TRCF_{mode}^{Lanes}$$

Estimation of Road user Cost

Road use cost for each mode and each route considered for O-D Pair has been estimated per km and entire length of the road section based on the VOC values and Toll cost to be paid by the user as per the equation as discussed in the preceding section. The generic equation has been modified as follows for this study since the accident cost data is not available.

$$RUC_m^i = VOC_m^i + VOT_m^i + Toll\ Cost_m^i$$

The equation used to calculate divertible traffic is shown in table below.

Mode	Cost Ratio Interval	Equations
Busses & Trucks	<0.750	$\%\ Div = 100 - \left(\frac{CR}{0.75}\right)0.500$
	$0.750 \leq CR \leq 1.250$	$\%\ Div = 95 - \left(\frac{CR - 0.75}{0.5}\right)90$
	$1.250 \leq CR \leq 2.00$	$\%\ Div = \left(\frac{2 - CR}{0.750}\right)5$

3.5.2 Road User Cost and Diversion Percentages of Routes

1. As descried in Section 3.4.2 and Figure 3-4 the project corridor and alternative routes are divided into sections and based on the attributes of section like number of lanes, roughness, type of road (NH, SH, Expressway), length, toll rate, volume and capacity the Road User Cost of each section is calculated. The Road User Cost of sections are described in Table 3-18.

Table 3-18 Road Use Cost of sections of Project Corridor and Competitor Routes

Code	Section	Car	LCV	2Axle	3Axle	MAV
1	Delhi-Dasna	1,038	1,407	1,827	3,186	3,186
2	Dasna-Hapur	1,020	1,857	2,068	4,525	4,735
3	B-Garh Mukhteshwar	302	656	866	1,463	1,463
4	Garh Mukteshwar-Gajraula	531	1,315	1,855	2,984	3,079
5	Gajraula-Moradabad	1,233	2,903	3,916	6,483	6,543
6	Moradabad-Bareilly	2,331	5,588	7,634	12,697	12,697
7	Bareilly-Shahjahanpur	1,881	3,683	4,843	8,326	8,326
8	Shahjahanpur-Sitapur	1,847	4,018	5,303	8,954	8,954
9	Sitapur-Lucknow	1,932	3,804	5,058	8,658	8,658
10	Lucknow-Raebareli	1,792	3,533	4,766	7,965	8,120
11	Prayagraj Bypass-Raebareli	1,979	5,434	5,490	11,863	11,863
12	Fatehpur-Prayagraj (NH19)	2,740	4,318	3,510	10,460	10,550
13	Kanpur-Fatehpur (NH19)	2,081	3,037	2,237	6,752	6,867
14	Etawah-Kanpur (NH19)	4,559	7,446	6,571	17,019	17,234
15	ALE Etawah Cut (NH-19)-Etawah	753	1,100	759	2,462	2,462
16	Agra-ALE Etawah Cut (NH-19)	2,639	4,842	4,869	13,083	13,243
17	NH19 Entry-Agra (NH19)	3,756	5,637	4,354	12,459	12,459
18	YE Entry-Agra (YE)	4,916	6,731	9,155	15,295	15,295
19	Agra (ALE)-ALE Etawah Cut (NH-19)	2,533	3,493	4,793	8,304	8,304
20	ALE Etawah Cut (NH-19)-Hardoi/Unnao Cut (ALE)	4,302	5,964	8,191	14,345	14,345
21	Hardoi/Unnao Cut (ALE)-N	272	377	518	908	908
22	Meerut-Dasna	1,409	2,478	2,593	6,461	6,724
23	Rai-Dasna	1,427	1,974	2,710	4,611	4,751
24	Dasna-YE Entry	1,287	1,779	2,412	4,149	4,239
25	YE Entry-NH19 Entry	1,414	1,958	2,699	4,572	4,722
26	Lucknow-O	1,514	3,875	5,366	8,813	8,943
27	Kanpur-Unnao	647	1,406	1,856	3,134	3,134
28	Raebareli-Unnao	1,610	3,758	4,168	7,255	7,255
29	Kannauj-Kanpur	1,705	3,708	4,894	8,264	8,264
30	Meerut-Garh Mukteshwar	1,048	3,193	3,043	7,525	7,525
33	Hardoi-Shahjahanpur	1,329	4,049	3,859	9,543	9,543
34	Hardoi-Lucknow	2,173	5,598	5,846	11,877	11,877
36	M-Hardoi/Unnao Cut (ALE)	803	2,446	2,331	5,764	5,764
37	Hardoi/Unnao Cut (ALE)-Unnao	1,001	2,494	2,655	5,162	5,162
38	Badaun-Hardoi	4,121	12,554	11,965	29,588	29,588
39	Gajraula-Sambhal	930	2,373	2,492	4,997	4,997
41	Sonipat-Meerut	1,906	5,806	5,533	13,682	13,682
42	Karnal-Rai	4,032	10,787	14,494	31,495	31,495
43	Karnal-Meerut	2,371	5,157	6,806	11,493	11,493

44	Prayagraj-EntryFatehpur	376	550	379	1,231	1,231
45	Garhwal Region (Rishikesh) -Moradabad	4,050	12,337	11,758	29,075	29,075
52	Entry from WB, Jharkhand, Bihar, Odhisa	812	1,993	2,663	6,140	6,282
58	Prayagraj Bypass-U	507	1,245	1,665	3,838	3,926
59	Prayagraj Bypass	507	1,245	1,665	3,838	3,926
60	Delhi-NH19 Entry	2,026	3,666	3,586	8,885	8,885
61	Bulandshahr-Hapur	862	1,875	2,475	4,179	4,179
62	Hapur-A	353	769	1,015	1,713	1,713
63	(730C) K-J	769	2,343	2,233	5,522	5,522
70	Bulandshahr-Budaun	3,406	10,377	9,890	24,457	24,457
74	Pratapgarh-U	1,263	3,846	3,666	9,064	9,064
75	Unnao-O	237	516	681	1,149	1,149
76	Sambhal-H	1,258	3,118	3,329	6,431	6,431
77	Hardoi-K	1,041	3,171	3,022	7,474	7,474
78	Badaun-K	1,956	4,977	5,234	10,468	10,468
79	Delhi- YE Entry	1,220	1,653	2,147	3,744	3,744
80	Meerut-A	323	703	928	1,567	1,567
81	Hapur-B	464	678	468	1,518	1,518
82	Bulandshahr-C	981	2,990	2,850	7,046	7,046
83	Amroha-D	524	1,597	1,522	3,763	3,763
84	Sambhal-E	191	581	553	1,368	1,368
85	Moradabad-Sambhal	881	2,685	2,559	6,328	6,328
86	Badaun-H	429	1,306	1,245	3,079	3,079
87	Badaun-I	313	680	897	1,515	1,515
88	Bareilly-I	797	1,735	2,289	3,866	3,866
89	Shahjahanpur-J	665	2,025	1,930	4,772	4,772
90	Farukhabad-K	643	1,959	1,867	4,618	4,618
91	Hardoi-M	427	1,065	1,134	2,205	2,205
92	Kannauj-M	929	2,830	2,697	6,670	6,670
96	Lucknow-N	2,042	2,831	3,888	6,809	6,809
97	Raebareli-Q	586	1,808	1,715	4,236	4,236
98	Raebareli-R	469	1,447	1,372	3,389	3,389
99	Prayagraj-U	452	660	455	1,477	1,477
57	NH-34	948	2,481	2,575	5,243	5,243

2. Once the sectional road user cost is calculated then the road user cost of all the 105 routes are calculated. In each route the road user cost for each mode is calculated via Project Corridor and alternate routes. The diversion percentage is calculated from alternative route to Project Corridor. In routes where the alternative is more than 1 the average road user cost is considered for diversion percentage. The diversion percentage is capped to 90% if it exceeds 90%.

3.6 Diverted Traffic on Project Corridor in Base Year

The diversion percentage was applied on divertible OD pairs and traffic was assigned to the project corridor through the developed route system. The mode wise node matrix of diverted traffic on Project Corridor is shown from Table 3-19 to Table 3-24. The mode wise and package wise matrix is shown from Table 3-25 to Table 3-30.

Table 3-19 Diverted Node Matrix on the Project Corridor of Cars

AADT	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
A	0	0	0	0	35	0	0	6	27	0	0	0	0	63	9	0	0	0	0	0	16
B	0	0	0	0	729	0	0	8	124	57	16	0	0	331	178	0	0	0	0	0	88
C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D	0	0	0	0	0	0	0	10	0	56	0	0	0	32	0	0	0	0	0	0	0
E	78	649	0	0	0	0	0	110	0	0	0	0	0	51	0	0	0	0	0	0	9
F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H	27	103	0	0	237	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
I	46	285	14	0	0	0	0	0	0	0	10	0	0	8	16	0	2	0	0	0	6
J	0	7	0	25	0	0	0	0	0	0	0	0	0	66	3	0	1	0	0	0	0
K	6	16	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0
L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0
N	111	741	0	8	13	0	0	0	13	11	0	0	0	0	0	0	0	0	0	0	45
O	50	303	0	10	18	0	0	0	12	2	0	0	13	0	0	0	9	0	0	0	237
P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Q	3	0	0	9	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0
R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	137
S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U	7	170	0	0	0	0	0	0	6	2	0	0	27	37	187	0	0	343	0	0	0

Table 3-20 Diverted Node Matrix on the Project Corridor of Bus

AADT	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
A	0	0	0	0	32	0	0	17	9	2	0	0	0	19	4	0	0	0	0	0	21
B	0	0	0	0	90	0	0	20	246	25	4	0	0	62	5	0	3	0	0	0	16
C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0
E	60	146	0	0	0	0	0	3	0	0	0	0	0	5	2	0	0	0	0	0	0
F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H	1	36	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
I	14	128	0	0	2	0	0	0	0	0	1	0	0	4	11	0	0	0	0	0	2
J	0	25	0	16	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
K	0	6	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0	0
N	13	111	0	2	12	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	7
O	4	5	0	0	0	0	0	0	8	2	0	0	17	0	0	0	2	0	0	0	1
P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Q	0	1	0	2	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0
R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U	19	13	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0

Table 3-21 Diverted Node Matrix on the Project Corridor of LCV

AADT	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
A	0	0	0	0	28	0	0	36	27	0	0	0	0	57	21	0	1	0	0	0	65
B	0	0	0	0	128	0	0	16	119	5	6	0	0	103	56	0	0	0	0	0	37
C	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
D	0	0	0	0	0	0	0	0	0	26	0	0	0	0	0	0	0	0	0	0	0
E	112	120	2	0	0	0	0	22	30	0	0	0	0	0	5	0	0	0	0	0	0
F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H	18	16	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
I	27	93	5	0	18	0	0	0	0	0	3	0	0	25	35	0	0	0	0	0	19
J	9	18	5	35	0	0	0	0	0	0	0	0	0	18	7	0	0	0	0	0	0
K	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	0	0	0	0	0	0
N	53	77	4	5	0	0	0	0	19	4	0	0	0	0	0	0	0	0	0	0	25
O	26	53	0	0	0	0	0	0	31	0	0	0	7	0	0	0	5	0	0	0	80
P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Q	3	2	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0
R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U	33	66	0	0	5	0	0	0	0	3	0	0	3	15	155	0	0	0	0	0	0

Table 3-22 Diverted Node Matrix on the Project Corridor of 2 Axle Truck

AADT	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
A	0	0	0	0	2	0	0	2	2	0	0	0	0	22	8	0	2	0	0	0	49
B	0	0	0	0	10	0	0	2	14	0	0	0	0	58	2	0	0	0	0	0	10
C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D	0	0	0	0	0	0	0	0	0	6	0	0	0	4	0	0	0	0	0	0	2
E	3	18	0	0	0	0	0	1	3	0	0	0	0	3	0	0	0	0	0	0	0
F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H	0	5	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
I	10	5	0	0	3	0	0	0	0	0	0	0	0	15	2	0	0	0	0	0	12
J	1	9	0	4	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
K	12	2	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
N	35	59	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	5
O	22	3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0	1
P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Q	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U	29	13	0	5	8	0	0	0	12	0	0	0	0	4	10	0	0	0	0	0	0

Table 3-23 Diverted Node Matrix on the Project Corridor of 3 Axle Truck

AADT	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
A	0	0	0	0	15	0	0	4	21	0	0	0	0	56	1	0	0	0	0	0	93
B	0	0	0	0	24	0	0	0	47	0	0	0	0	48	14	0	0	0	0	0	45
C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D	0	0	0	0	0	0	0	0	0	11	0	0	0	2	0	0	0	0	0	0	3
E	20	24	0	0	0	0	0	0	20	0	0	0	0	6	0	0	0	0	0	0	9
F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H	4	9	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
I	13	38	3	0	3	0	0	0	0	0	3	0	0	38	20	0	0	0	0	0	26
J	0	9	0	3	0	0	0	0	0	0	0	0	0	2	4	0	0	0	0	0	3
K	4	5	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0
N	28	70	0	4	2	0	0	0	6	1	0	0	0	0	0	0	0	0	0	0	26
O	33	18	0	0	0	0	0	0	38	1	0	0	4	0	0	0	1	0	0	0	47
P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Q	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U	61	56	0	3	16	0	0	0	7	3	0	0	2	22	113	0	0	13	0	0	0

Table 3-24 Diverted Node Matrix on the Project Corridor of MAV*

AADT	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
A	0	0	0	0	31	0	0	0	5	0	1	0	0	101	31	0	0	0	0	0	487
B	0	0	0	0	26	0	0	4	60	4	0	0	0	52	22	0	3	0	0	0	88
C	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0
D	0	0	0	0	0	0	0	0	0	12	0	0	0	2	0	0	0	0	0	0	6
E	35	20	0	0	0	0	0	3	20	0	0	0	0	14	0	0	0	0	0	0	11
F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H	19	2	0	2	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
I	16	25	3	0	0	0	0	0	0	0	2	0	0	21	23	0	0	0	0	0	32
J	0	4	0	14	0	0	0	0	0	0	0	0	0	3	8	0	0	0	0	0	8
K	9	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3
N	85	121	0	0	3	0	0	0	14	2	0	0	0	0	0	0	0	0	0	0	151
O	42	35	0	0	0	0	0	0	44	14	0	0	2	0	0	0	1	0	0	0	76
P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Q	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U	287	127	0	3	5	0	0	0	56	2	0	0	3	82	199	0	0	31	0	0	0

*4-6 Axle Truck

Table 3-25 Groupwise Diverted Matrix of Car

Group 1

Car	A	B	C	D	E	F	G
A	0	0	0	0	35	0	120
B	0	0	0	0	729	0	803
C	0	0	0	0	0	0	0
D	0	0	0	0	0	0	98
E	78	649	0	0	0	0	170
F	0	0	0	0	0	0	0
G	250	1,626	14	52	268	0	0

Group 2

Car	G	H	I	J	K	L
G	0	134	151	113	16	777
H	367	0	0	0	0	0
I	345	0	0	0	10	32
J	32	0	0	0	0	70
K	22	0	9	0	0	0
L	1,443	0	31	15	0	0

Group 3

Car	L	M	N	O	P
L	0	0	552	206	121
M	0	0	0	11	0
N	897	0	0	0	45
O	393	13	0	0	246
P	198	27	37	192	0

Group 4

Car	P	Q	R	S	T	U
P	0	11	0	0	0	401
Q	18	0	0	0	0	0
R	0	0	0	0	0	137
S	0	0	0	0	0	0
T	0	0	0	0	0	0
U	437	0	343	0	0	0

Table 3-26 Groupwise Diverted Matrix of Bus

Group 1

Bus	A	B	C	D	E	F	G
A	0	0	0	0	32	0	71
B	0	0	0	0	90	0	380
C	0	0	0	0	0	0	0
D	0	0	0	0	0	0	8
E	60	146	0	0	0	0	10
F	0	0	0	0	0	0	0
G	51	324	0	20	16	0	0

Group 2

Bus	G	H	I	J	K	L
G	0	41	255	34	4	135
H	40	0	0	0	0	0
I	143	0	0	0	1	17
J	41	0	0	0	0	1
K	6	0	1	0	0	0
L	181	0	13	4	0	0

Group 3

Bus	L	M	N	O	P
L	0	0	90	23	41
M	0	0	0	17	0
N	143	0	0	0	7
O	19	17	0	0	3
P	36	0	2	3	0

Group 4

Bus	P	Q	R	S	T	U
P	0	5	0	0	0	46
Q	6	0	0	0	0	0
R	0	0	0	0	0	0
S	0	0	0	0	0	0
T	0	0	0	0	0	0
U	35	0	0	0	0	0

Table 3-27 Groupwise Diverted Matrix of LCV

Group 1

LCV	A	B	C	D	E	F	G
A	0	0	0	0	28	0	208
B	0	0	0	0	128	0	341
C	0	0	0	0	0	0	5
D	0	0	0	0	0	0	26
E	112	120	2	0	0	0	58
F	0	0	0	0	0	0	0
G	169	326	14	40	27	0	0

Group 2

LCV	G	H	I	J	K	L
G	0	74	182	31	6	346
H	37	0	0	0	0	0
I	145	0	0	0	3	79
J	67	0	0	0	0	25
K	0	0	0	0	0	0
L	327	0	50	7	0	0

Group 3

LCV	L	M	N	O	P
L	0	0	203	125	122
M	0	0	0	27	0
N	161	0	0	0	25
O	109	7	0	0	85
P	113	3	15	161	0

Group 4

LCV	P	Q	R	S	T	U
P	0	7	0	0	0	226
Q	12	0	0	0	0	0
R	0	0	0	0	0	20
S	0	0	0	0	0	0
T	0	0	0	0	0	0
U	280	0	0	0	0	0

Table 3-28 Groupwise Diverted Matrix of 2 Axle Truck

Group 1

2 Axle Truck	A	B	C	D	E	F	G
A	0	0	0	0	2	0	85
B	0	0	0	0	10	0	86
C	0	0	0	0	0	0	0
D	0	0	0	0	0	0	13
E	3	18	0	0	0	0	6
F	0	0	0	0	0	0	0
G	110	96	0	11	12	0	0

Group 2

2 Axle Truck	G	H	I	J	K	L
G	0	5	18	6	0	161
H	5	0	0	0	0	0
I	17	0	0	0	0	29
J	14	0	0	0	0	3
K	16	0	1	0	0	0
L	177	0	23	0	0	0

Group 3

2 Axle Truck	L	M	N	O	P
L	0	0	103	12	78
M	0	0	0	1	1
N	102	0	0	0	5
O	28	0	0	0	2
P	70	0	4	10	0

Group 4

2 Axle Truck	P	Q	R	S	T	U
P	0	3	0	0	0	83
Q	4	0	0	0	0	0
R	0	0	0	0	0	9
S	0	0	0	0	0	0
T	0	0	0	0	0	0
U	82	0	0	0	0	0

Table 3-29 Groupwise Diverted Matrix of 3 Axle Truck

Group 1

3 Axle Truck	A	B	C	D	E	F	G
A	0	0	0	0	15	0	175
B	0	0	0	0	24	0	153
C	0	0	0	0	0	0	0
D	0	0	0	0	0	0	16
E	20	24	0	0	0	0	35
F	0	0	0	0	0	0	0
G	144	205	3	11	23	0	0

Group 2

3 Axle Truck	G	H	I	J	K	L
G	0	4	87	11	0	277
H	16	0	0	0	0	0
I	56	0	0	0	3	84
J	13	0	0	0	0	9
K	9	0	1	0	0	0
L	293	0	52	5	0	0

Group 3

3 Axle Truck	L	M	N	O	P
L	0	0	151	39	179
M	0	0	0	6	0
N	111	0	0	0	26
O	90	4	0	0	48
P	148	2	22	114	0

Group 4

3 Axle Truck	P	Q	R	S	T	U
P	0	1	0	0	0	253
Q	4	0	0	0	0	0
R	0	0	0	0	0	4
S	0	0	0	0	0	0
T	0	0	0	0	0	0
U	283	0	13	0	0	0

Table 3-30 Groupwise Diverted Matrix of Multi Axle Vehicle

Group 1

MAV	A	B	C	D	E	F	G
A	0	0	0	0	31	0	625
B	0	0	0	0	26	0	233
C	0	0	0	0	0	0	9
D	0	0	0	0	0	0	21
E	35	20	0	0	0	0	47
F	0	0	0	0	0	0	0
G	457	313	3	18	14	0	0

Group 2

MAV	L	M	N	O	P
L	0	0	192	84	636
M	0	0	0	3	3
N	225	0	0	0	151
O	135	2	0	0	77
P	483	3	82	199	0

Group 3

MAV	G	H	I	J	K	L
G	0	6	93	16	1	817
H	29	0	0	0	0	0
I	44	0	0	0	2	76
J	18	0	0	0	0	18
K	9	0	1	0	0	0
L	708	0	115	20	0	0

Group 4

MAV	P	Q	R	S	T	U
P	0	4	0	0	0	863
Q	2	0	0	0	0	0
R	0	0	0	0	0	8
S	0	0	0	0	0	0
T	0	0	0	0	0	0
U	765	0	31	0	0	0

3.7 Impact of Eastern Dedicated Freight Corridor

The Eastern Dedicated Frieght corridor passes through Ludhiana, Meerut, Bulandhahr, Kanpur, Prayagraj upto Dankuni. It runs in close vicinity of the project corridor. However, it is unlikely to have diversion from project corridor and instead the growth of DFC corridor is likely to increase the induced traffic in the project corridor. The reasons are as follows:

1. DFC is more likely to carry bulk commodities like oil and container traffic of heavy haulage trucks. Separate vehicle counts were carried out for container traffic and tankers at Old NH-24 (Brijghat Toll Plaza) and NH-19 (Katoghan Toll Plaza). Brijghat Toll Plaza is on North bank of river Ganga and Katoghan Toll Plaza is on South Bank of river Ganga (near Prayagraj). Less than 5% of 4-6 Axle trucks are container trucks at both plazas. Less than 7.5% 4-6 axle trucks are tanker at both plazas. At NH-19 (Katoghan Plaza) the tanker traffic is 2.5%.

Table 3-31Container Traffic

Container Traffic	Old NH-24 (Brijghat Toll Plaza)	NH-19 (Katoghan Toll Plaza)
Day 1 Counts	43	57
Day 2 Counts	44	60
Day 3 Counts	79	54
ADT of Container	55	57
ADT of MAV (4-6 Axle Truck)	1594	2859
Percentage Container of MAV	3.5%	2.0%

Table 3-32 Tanker Traffic

Tanker	Old NH-24 (Brijghat Toll Plaza)	NH-19 (Katoghan Toll Plaza)
Day 1 Counts	89	108
Day 2 Counts	117	41
Day 3 Counts	146	69
ADT of Tanker	117	73
ADT of MAV (4-6 Axle Truck)	1594	2859
Percentage Tanker Traffic	7.4%	2.5%

2. Eastern DFC is likely to induce growth on the Project Corridor as it is likely to push industrialization in the vicinity of the project corridor. It could be seen that all major Highways having high volume of traffic has parallel rail lines which is evident from the both eastern DFC and traditional rail line runs parallel to GT road (NH-19) and Western DFC and traditional rail line runs parallel to NH-8.

4 Traffic Forecasting

4.1 Methodology

Transport demand elasticity method is used to forecast traffic for horizon year. In this method the elasticity of growth of vehicles with respect to economic factor is calculated for the base year. Under this method the growth of vehicles is taken as independent variable and economic factor is taken as dependent variable. Once the elasticity is calculated the economic factor is projected, and using the calculated elasticity values the growth rate is established. The detailed methodology is as follows:

The Generic Equation both for passenger and freight vehicles is as follows

$$G = f(F, E)$$

where,

G= Growth rate of Traffic

F= Growth of Economic Factor

E= Elasticity. Elasticity of Transport Demand

Estimation of CAGR for Passenger and Freight Vehicles:

Estimation of Cumulative Annual Average Growth Rate based on vehicle data/time series data by using ln-ln regression for interpreting elasticity. The generic equation is as follows:

Equation 4-1

$$Y_i = B_1 + B_0 lnX_i$$

where,

B_1 = Intercept;

B_0 = Regression coefficient (elasticity); and

$\ln X_i$= Annual growth rate of each mode.

Estimation of Economic factor (F) for Base Years

The economic factor of Passenger vehicles

Equation 4-2

$$\mathrm{F_{Passenger}} = \left(1 + \sum_i PIA_i \times G_{p_i})\right) \times \left(1 + \sum_i PIA_i \times CAGR_{PCNSDP_i}\right) - 1$$

$\mathrm{F_{Passenger}}$: Economic Factor of Passenger Vehicles

G_{p_i} : Growth rate of Population of ith state

$CAGR_{PCNSDP_i}$: CAGR of Percapita Net State Domestic Product of ith state

$\mathrm{PIA_i}$: Percentage contribution of ith State

The economic factor of Freight Vehicles

For freight vehicles, CAGR of freight vehicles (based on toll data and registration data) and economic indicator (NSDP/DDP) are calculated. For economic indicator and for growth of registered vehicles the weights are based on the PIA which is essentially trip generating and trip attracting locations (i.e. origin and destination of trips).

Equation 4-3

$$\mathbf{F_{Freight}} = \sum_{i} \boldsymbol{PIA_i} \times \boldsymbol{CAGR_{sNSDP_i}}$$

where,

$F_{Freight}$: Economic Factor of Freight Vehicles
PIA_i : Project influence area of each mode
$CAGR_{NSDP/DDP}$: CAGR of Net State Domestic Product of PIA states or PIA districts

Estimation of elasticity for Base Year

Passenger vehicles

For calculating the elasticity of each for the Base year the generic equation is as follows

Equation 4-4

$$E_{Passenger\ Vehicle} = \frac{CAGR_{Passenger\ Vehicles}}{F_{Passenger}}$$

where,

$E_{Passenger\ Vehicles}$: Base year Elasticity of Passenger vehicles;
$G_{p(PIA_i)} =$: Urban Population growth rate;
$CAGR_{PCNSDP(PIA_i)}$: CAGR of Per capita Net State Domestic Product/ PNDDP for each PIA

Freight Vehicles

Elasticity for Freight Vehicles,

Equation 4-5

$$E_{Freight\ Vehicle} = \frac{CAGR_{Freight\ Vehicles}}{CAGR_{NSDP(PIA)_i}}$$

where,

$E_{Freight\ Vehicles}$: Base year Elasticity of Freight vehicles
G : Growth rate of vehicles;

$CAGR_{NSDP(PIA_i)}$: CAGR of Net State Domestic Product/ DDP for each PIA

Forecasting of Economic Factor

The growth rate of economic factor of both Passenger and freight vehicles for the horizon years is projected by correlating the Weighted PCNSDP/PCNDDP (for Passenger vehicles) data and Weighted NSDP (Freight vehicles) data with GDP growth rate through ln-ln regression analysis.

Equation 4-6

For Passenger vehicles:

$$PCNSDP/PCNDDP_i = B_1 + B_0 \ln GDP_i$$

where,

$PCNSDP/PCNDDP\ is$

B_1 is Intercept;

B_0 is Regression coefficient (elasticity); and

GDP_i is Gross Domestic Product of India.

Equation 4-7

For Freight vehicles:

$$DDP/NSDP_i = B_1 + B_0 \ln GDP_i$$

where,

$DDP/NSDP_i$ is District Domestic Product/Net State Domestic Product

B_1 is Intercept;

B_0 is Regression coefficient (elasticity); and

GDP_i is Gross Domestic Product of India.

Forecasting of traffic growth rates

Based on the elasticity values calculated and projected economic factor, traffic growth rate is derived.

4.2 Traffic Growth Rates for Project Corridor

Section 4.1 describes the methodology to estimate growth rates of the Project Corridor. The following steps and inputs are required to estimate the growth rates.

1. Project Influence Area of the Project Corridor.
2. Growth rate of Economic factor for goods and passenger vehicles.
3. CAGR of each vehicle category for which growth rate is to be estimated.
4. Base year elasticity for each vehicle category as defined in Equation 4-4 and Equation 4-5.
5. Forecasting of Economic Factor for each vehicle type.
6. Forecasting of growth rates.

All these steps are described in subsequent sections.

4.2.1 Project Influence Area

The Project Influence Area (PIA) is derived from origin Destination Survey. PIA gives the contribution of different states in traffic of the Project Corridor. The PIA for each mode is determined by the following Equation:

$$PIA_j = \left(\frac{{}^{n_{O_i}}/_{S_j} + {}^{n_{D_i}}/_{S_j}}{2 \times AADT_j} \right) \times 100$$

Where

PIA_j , is Project Influence Area of j_{th} mode

n_{O_i} , is number of occurrences in origin of i_{th} state in the samples of OD survey

n_{D_i} , is number of occurrences in destination of i_{th} state samples of OD survey

S_j , is the sampling rate of j_{th} mode

$AADT_j$, is AADT of j_{th} mode*

However, In this project growth rate is calculated based on the Origin and destination of each vehicle. This means if the vehicle moves from Delhi to Uttar Pradesh the PIA is 50% Uttar Pradesh and 50% Delhi. The weight of economic factor is 50% of NSDP of Uttar Pradesh and 50% of NSDP of Delhi.

4.2.2 Growth Rate of Economic Factor

1. Equation 4-2 and Equation 4-3 defines Economic factor of goods vehicles and passenger vehicles. In order to estimate the economic factor $CAGR_{NSDP}$, $CAGR_{NSDP}$, $CAGR_{NSDP}$ and G_p is required to be estimated.
2. Log-Linear regression method is adopted to calculate $CAGR_{NSDP}$, $CAGR_{PCNSDP}$, and G_p of PIA states.
3. Table 4-1, Table 4-2 and Table 4-3 gives $CAGR_{NSDP}$, $CAGR_{PCNSDP}$, and G_p and R^2 value for PIA states.

Table 4-1 CAGR and R^2 of NSDP/GDP of PIA states using Log-Linear Regression Model (2011-2018)

	CAGR	R-Square
India (GDP)	7.0%	0.9958
Uttar Pradesh	6.6%	0.9822
Delhi	7.6%	0.9969
Bihar	6.2%	0.9673
Haryana	8.6%	0.9964
Jharkhand	5.7%	0.9412
Punjab	5.8%	0.9902
Rajasthan	6.3%	0.9969
Uttarakhand	8.0%	0.9976
West Bengal	5.3%	0.97

Table 4-2 CAGR and R^2 of PCNSDP/PCNDP of PIA states using Log-Linear Regression Model

	CAGR	R-Square
India (Percapita NNI)	5.6%	0.9916
Uttar Pradesh	5.0%	0.9697
Delhi	5.7%	0.9935
Bihar	4.5%	0.9443
Haryana	7.1%	0.9947
Jharkhand	4.0%	0.8884
Punjab	4.4%	0.997
Rajasthan	4.8%	0.9947
Uttarakhand	3.9%	0.9965
West Bengal	4.2%	0.9546

Table 4-3 CAGR of Population of PIA states

Urban Population Growth Rate	2011-2019
India	2.3%
Uttar Pradesh	2.2%
Delhi	2.3%
Gujarat	2.7%
Haryana	3.2%
Maharastra	1.7%
Punjab	1.9%
Rajasthan	2.1%
Uttarakhand	2.8%

4.2.3 CAGR of Passenger and Goods Vehicles

In the absence of time series of toll data vehicle registration data was used to calculate the growth rate. Following steps were used to derive CAGR of vehicle growth:

1. Road Transport Years book classifies goods vehicle in three categories namely LMV goods, Trucks and Lorries and Multi Axle/articulated vehicles. The CAGR of Multi Axle Vehicles and Trucks of neighboring states of Uttar Pradesh is shown in Table 4-4 and Table 4-5

Table 4-4 CAGR of Multi Axle Vehicles neighboring states of Uttar Pradesh

MAV	Bihar	Chhattisgarh	Haryana	Madhya Pradesh	Nagaland*	Uttar Pradesh	Cumalative
2011-12	1,899	17,356	75,220	31,026	26,560	47,938	1,99,999
2012-13	3,478	19,867	78,566	35,566	29,696	58,937	2,26,110
2013-14	4,703	21,541	80,950	40,201	32,629	65,271	2,45,295
2014-15	6,403	23,587	83,771	46,065	36,131	73,249	2,69,206
2015-16	7,889	27,177	87,397	52,082	41,918	84,790	3,01,253
2016-17	8,955	29,836	90,055	56,327	49,387	96,916	3,31,476
2017-18	10,372	32,601	93,090	61,702	54,973	1,07,464	3,60,202
2018-19	11,695	35,606	96,196	66,915	61,254	1,18,869	3,90,535
2019-20	12,964	38,415	99,129	71,859	67,699	1,30,229	4,20,295
	27.10%	10.40%	3.50%	11.10%	12.40%	13.30%	9.73%

*Nagaland is not a neighboring states but vehicles registered in Nagaland were observed during OD survey

Source: Series publication Road Transport Year Book, MORTH and SIAM

Table 4-5 CAGR of Trucks (LCV and 2 Axle Trucks) of neighboring states of Uttar Pradesh

Trucks	Bihar	Chhattisgarh	Haryana	Madhya Pradesh	Nagaland*	Rajasthan	Uttar Pradesh	Cumalative
2011-12	83,191	73,712	2,17,515	90,890	57,448	3,62,028	1,14,875	9,99,659
2012-13	86,276	77,648	2,28,943	94,632	61,190	4,01,963	1,26,795	10,77,447
2013-14	89,656	82,577	2,46,932	95,640	62,198	4,34,359	1,35,145	11,46,507
2014-15	93,551	87,021	2,64,961	96,958	63,516	4,72,345	1,44,663	12,23,015
2015-16	99,254	92,290	2,80,333	1,05,389	71,947	5,17,584	1,57,531	13,24,328
2016-17	1,06,932	97,736	3,00,266	1,14,801	81,359	5,61,138	1,72,989	14,35,221
2017-18	1,12,691	1,02,789	3,18,044	1,21,188	87,746	6,03,398	1,85,604	15,31,460
2018-19	1,19,071	1,08,045	3,35,738	1,29,265	95,823	6,47,082	1,99,251	16,34,275
2019-20	1,25,676	1,13,297	3,54,207	1,37,223	1,03,781	6,90,248	2,13,157	17,37,589
	5.30%	5.50%	6.30%	5.30%	7.70%	8.40%	8.00%	7.15%

*Nagaland is not a neighboring states but vehicles registered in Nagaland were observed during OD survey

Source: Series publication Road Transport Yearbook, MORTH and SIAM

2. The CAGR of cars, buses and LMV goods for the state of Uttar Pradesh is shown in Table 4-6.

Table 4-6 CAGR of cars buses and LMV Goods in the state of Uttar Pradesh

	Cars	LMV Goods/Pick up	Bus
2011-12	13,67,795	1,76,164	34,428
2012-13	15,23,603	1,95,194	40,501
2013-14	17,79,146	2,65,025	45,607
2014-15	21,61,533	2,94,022	51,866
2015-16	24,34,850	3,16,815	57,939
2016-17	27,11,405	3,59,769	75,309
2017-18	29,26,367	3,97,753	83,656
2018-19	31,42,671	4,34,763	92,617
2019-20	33,56,210	4,72,088	1,02,014
CAGR	12%	13%	15%

Source: Road Transport Year Book, SIAM, UP Government website

4.2.4 Elasticity of transport Demand

Based on Consultants experience and growth rates of economic factor and vehicle registration the following elasticity is adopted for horizon year forecast

Table 4-7 Elasticity Adopted of different Vehicle Types

	2022-26	2027-31	2032-36	2037-41	2042-46	2047-51	2051-56
Car	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Mini Bus	0.70	0.63	0.63	0.63	0.63	0.63	0.63
Bus	0.70	0.63	0.63	0.63	0.63	0.63	0.63
Pickup	1.13	1.01	1.01	1.01	1.01	1.01	1.01
LCV	0.82	0.74	0.74	0.74	0.74	0.74	0.74
2 Axle Truck	0.89	0.80	0.80	0.80	0.80	0.80	0.80
3 Axle Truck	0.53	0.47	0.47	0.53	0.53	0.53	0.53
MAV	1.20	1.08	1.08	1.08	1.08	1.08	1.08

4.2.5 Forecasting of Economic Factor

The forecasting of Economic Factor involves two important steps:

1. Forecasting the GDP of India and its growth rate up to horizon year.
2. Developing a relationship between available NSDP, PCNSP data of PIA states with GDP of India. Using this relationship the growth rate of economic factor of PIA states is predicted.

The subsection describes the above two steps

4.2.5.1 Forecasting of GDP Growth of India

1. Table 4-8 shows the forecasted GDP published by OECD.

Table 4-8 Forecasted GDP Growth as per OECD forecast and National Rail Plan

Year	GDP growth	Year	GDP Growth	Year	GDP growth
2018	6.98%	**2030**	5.30%	**2042**	3.99%
2019	7.59%	**2031**	5.16%	**2043**	3.92%
2020	7.72%	**2032**	5.03%	**2044**	3.84%
2021	7.30%	**2033**	4.91%	**2045**	3.77%
2022	6.92%	**2034**	4.79%	**2046**	3.70%
2023	6.59%	**2035**	4.68%	**2047**	3.63%
2024	6.32%	**2036**	4.56%	**2048**	3.56%
2025	6.10%	**2037**	4.46%	**2049**	3.50%
2026	5.91%	**2038**	4.36%	**2050**	3.43%
2027	5.74%	**2039**	4.26%		
2028	5.58%	**2040**	4.17%		
2029	5.44%	**2041**	4.08%		

Source: National Rail Plan, 2020

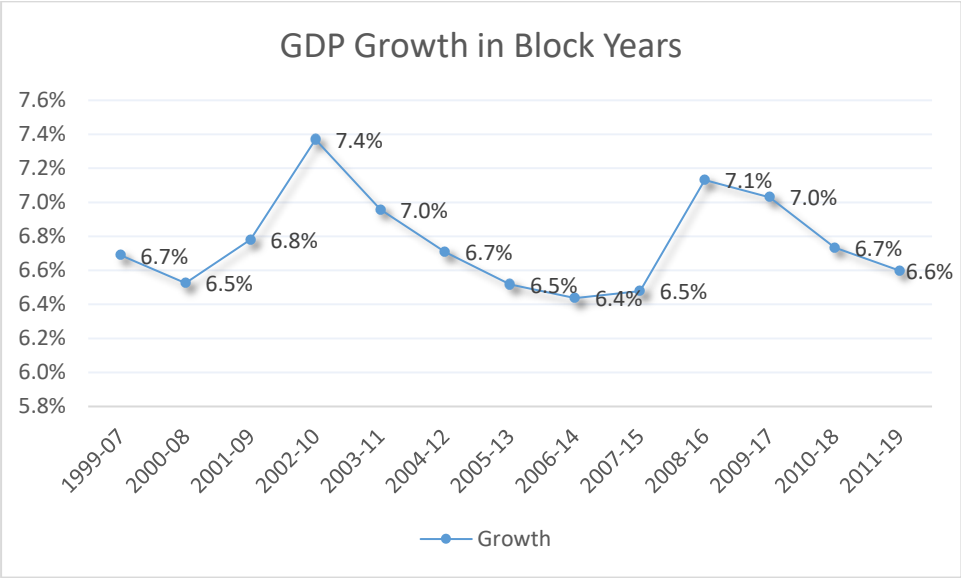
2. However, with the onset of COVID world economy has shown a contraction. Reserve Bank of India published a report dated 7th April 2021 that have forecasted depression in 2020-21 and growth in 2021-22.

Table 4-9 RBI Forecast for GDP depression and growth in 2020-21 and 2021-22

Year	RBI Forecast
2020-21	-7.50%
2021-22	11.00%

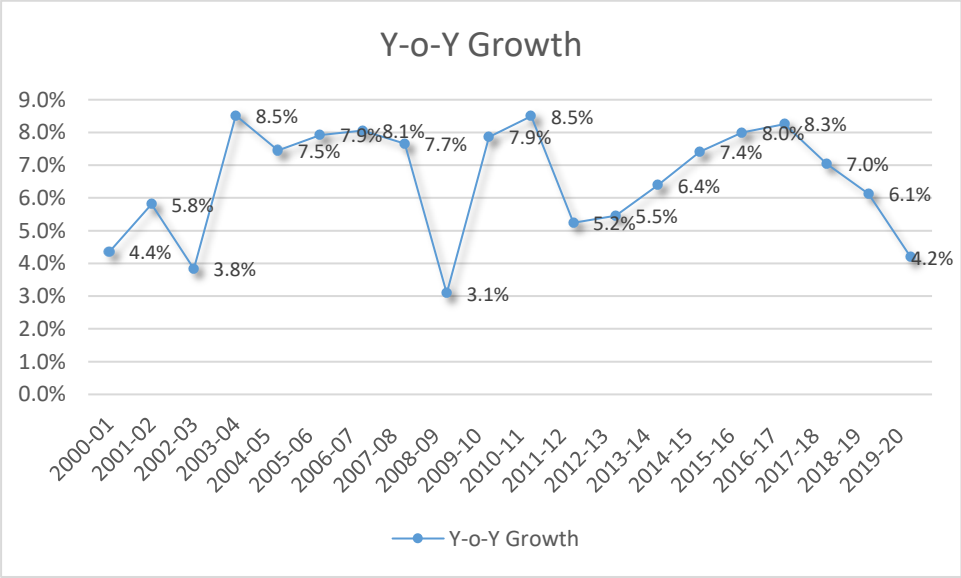
3. Figure 4-1 shows GDP growth in different block years. In block of 8 years the highest GDP growth that has occurred is 7.4%.

Figure 4-1 GDP Growth in block years



Source: Central Statistical Organization

Figure 4-2 Year-to-Year (Y-o-Y) GDP Growth of India

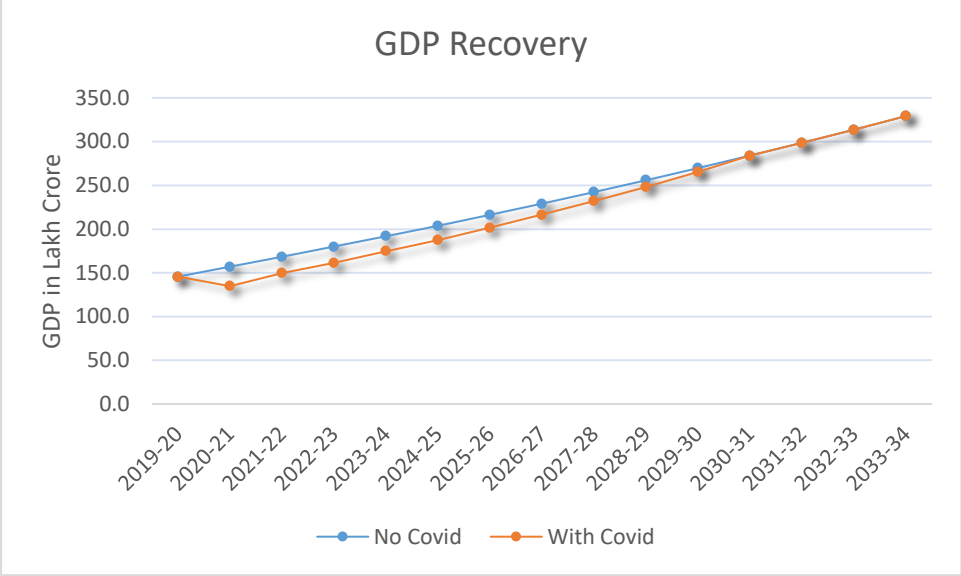


Source: Central Statistical Organization

4. Future forecast for GDP is based on following assumptions:

a. GDP will show a V shape recovery (refer Figure 4-3) and the GDP achieved by OECD forecast without COVID would be achieved by 2033-34.
b. Post 2033-34 the GDP growth is assumed to be same as the forecast OECD.

Figure 4-3 V-Shape Recovery of GDP



c. The GDP table with and without COVID is shown in Table 4-10.
d. The GDP growth forecasted for future block years is shown in Table 4-11.

Table 4-10 GDP Growth table with and without COVID

Year	No Covid Growth Growth	No Covid	With Covid growth	With Covid
2019-20		145.7		145.7
2020-21	7.72%	156.9	**-7.50%**	134.7
2021-22	7.30%	168.4	**11.00%**	149.6
2022-23	6.92%	180.0	8.00%	161.5
2023-24	**6.59%**	**191.9**	**8.00%**	**174.4**
2024-25	6.32%	204.0	7.50%	187.5
2025-26	6.10%	216.4	7.50%	201.6
2026-27	5.91%	229.2	7.50%	216.7
2027-28	5.74%	242.4	7.00%	231.9
2028-29	5.58%	255.9	7.00%	248.1
2029-30	5.44%	269.8	7.00%	265.5
2030-31	5.30%	284.1	7.03%	284.1
2031-32	5.16%	298.8	5.16%	298.8
2032-33	5.03%	313.8	5.03%	313.8
2033-34	4.91%	329.2	4.91%	329.2
2034-35	4.79%	345.0	4.79%	345.0
2035-36	4.68%	361.2	4.68%	361.2
2036-37	4.56%	377.6	4.56%	377.6

2037-38	4.46%	394.5	4.46%	394.5
2038-39	4.36%	411.7	4.36%	411.7
2039-40	4.26%	429.2	4.26%	429.2
2040-41	4.17%	447.1	4.17%	447.1
2041-42	4.08%	465.3	4.08%	465.3
2042-43	3.99%	483.9	3.99%	483.9
2043-44	3.92%	502.9	3.92%	502.9
2044-45	3.84%	522.2	3.84%	522.2
2045-46	3.77%	541.9	3.77%	541.9
2046-47	3.70%	561.9	3.70%	561.9
2047-48	3.63%	582.3	3.63%	582.3
2048-49	3.56%	603.1	3.56%	603.1
2049-50	3.50%	624.2	3.50%	624.2
2050-51	3.43%	645.6	3.43%	645.6
2051-52	3.43%	667.7	3.43%	667.7

Table 4-11 GDP Growth in block years

Block Year	GDP Growth
2022-2026	7.7%
2027-2031	6.6%
2032-2036	4.8%
2037-2041	4.3%
2042-2046	3.8%
2047-2051	3.5%

Forecasting OF NSDP AND PCNSDP of PIA STATES

1. Log-Log regression between GDP of India and NSDP of PIA states from FY-2011-12 to 2019-20 is carried out to derive a relationship between growth of GDP of India and growth of NSDP of PIA states. Table 4-12 provides the regression analysis of PIA states.

Based on this regression equation and predicted GDP growth as described

2. Table 4-11, NSDP growth rate is predicted in the following manner.

$$\text{Ln}\, NSDP_{year_i} = 0.9538 \ln GDP_{year_i} - 2.0995 \qquad R^2 = 0.9892$$

Using the above equation NSDP growth rate is determined in the following manner

$$\frac{NSDP_{year_{i+1}} - NSDP_{year_i}}{NSDP_{year_i}} = e^{1.1379 \ln \frac{GDP_{year_{i+1}}}{GDP_{year_i}}} - 1$$

$$G_{NSDP} = e^{0.9538 \ln(1+G_{GDP})} - 1$$

where

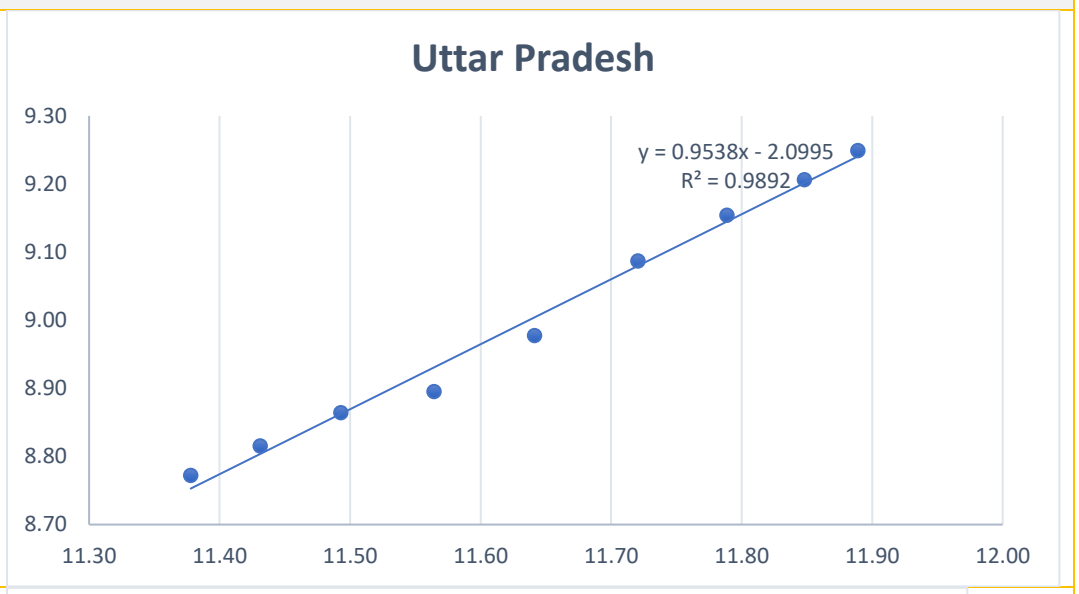
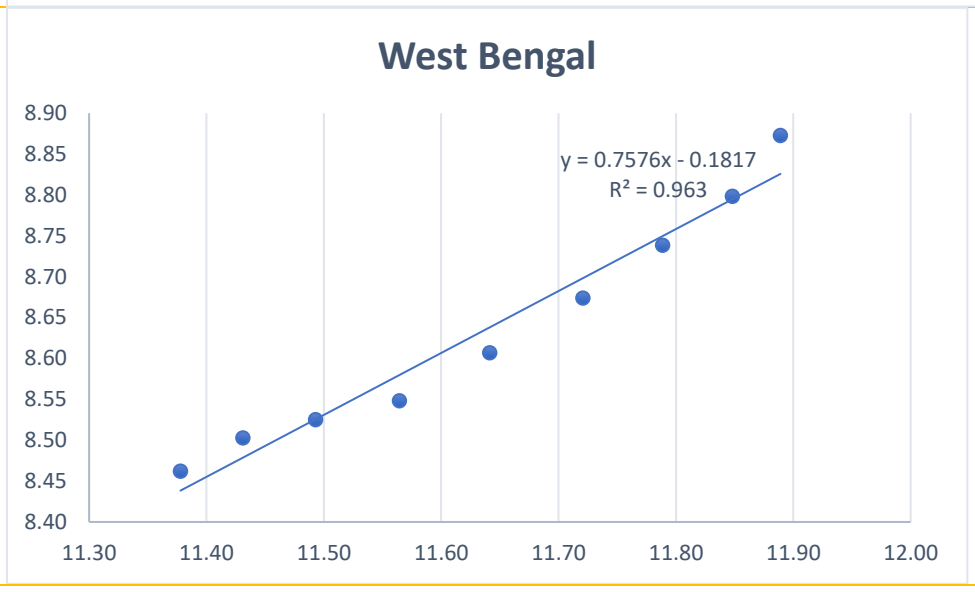
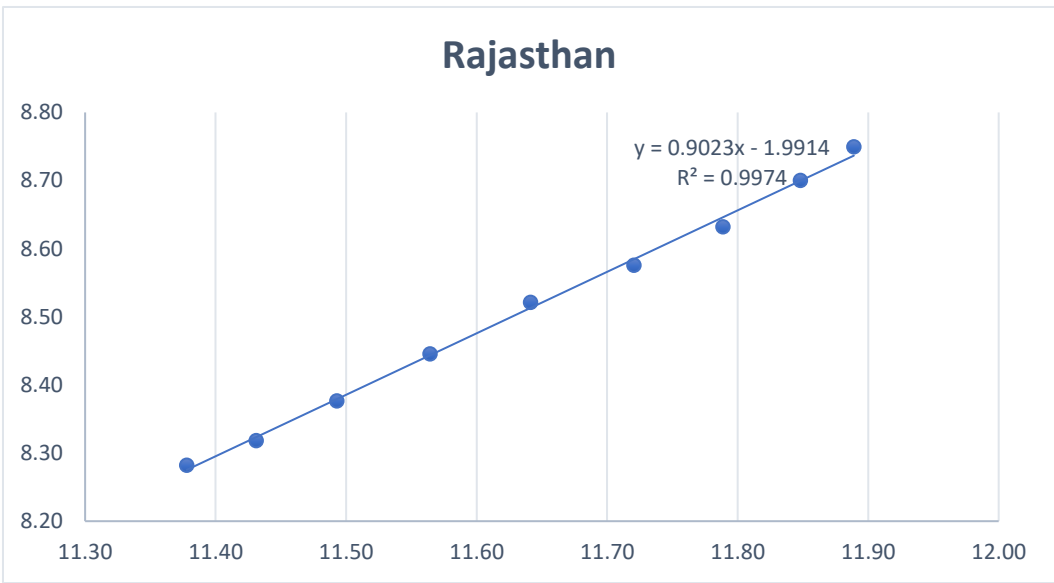
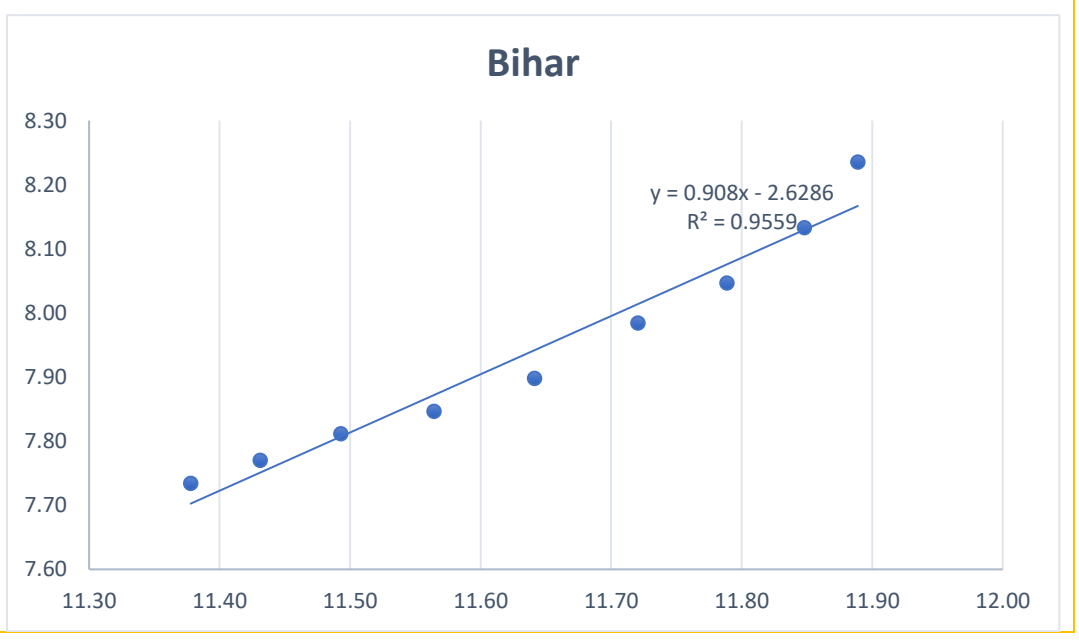
$$G_{NSDP} = Growth\ Rate\ of\ NSDP\ of\ the\ state$$

$$NSDP_{year_i} = NSDP\ of\ year_i$$

$$GDP_{year_i} = GDP\ of\ year_i$$

3. The β value for relationship between the GDP and NSDP in the above step is 0.9538. This β value is used for prediction of horizon year NSDP of PIA states
4. Table 4-12 describes the regression equation with β value and equation to predict growth rate of NSDP of PIA states.
5. Table 4-13 and Table 4-14 describes the β value of NSDP and PCNSDP states .

Table 4-12 Log-Log Regression of growth of NSDP of States (dependent variable) versus GDP of India (Independent variable)

Name of the State	Growth Rate Equation of NSDP	Log-Log Regression
Uttar Pradesh	$G_{NSDP} = e^{0.9538 \ln(1+G_{GDP})} - 1$	
West Bengal	$G_{NSDP} = e^{0.7576 \ln(1+G_{GDP})} - 1$	
Rajasthan	$G_{NSDP} = e^{0.9023 \ln(1+G_{GDP})} - 1$	
Bihar	$G_{NSDP} = e^{0.908 \ln(1+G_{GDP})} - 1$	

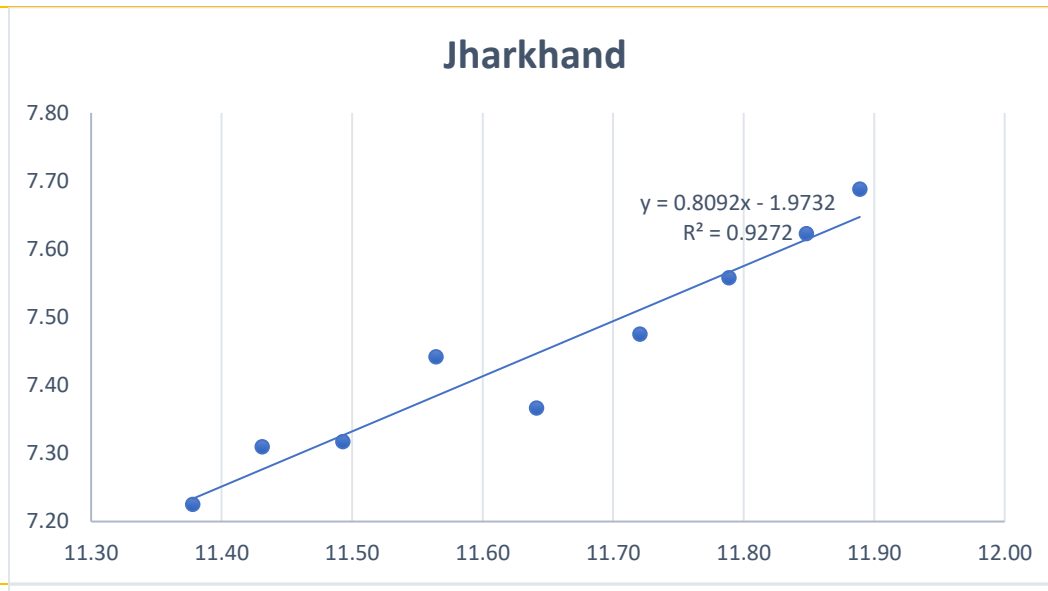
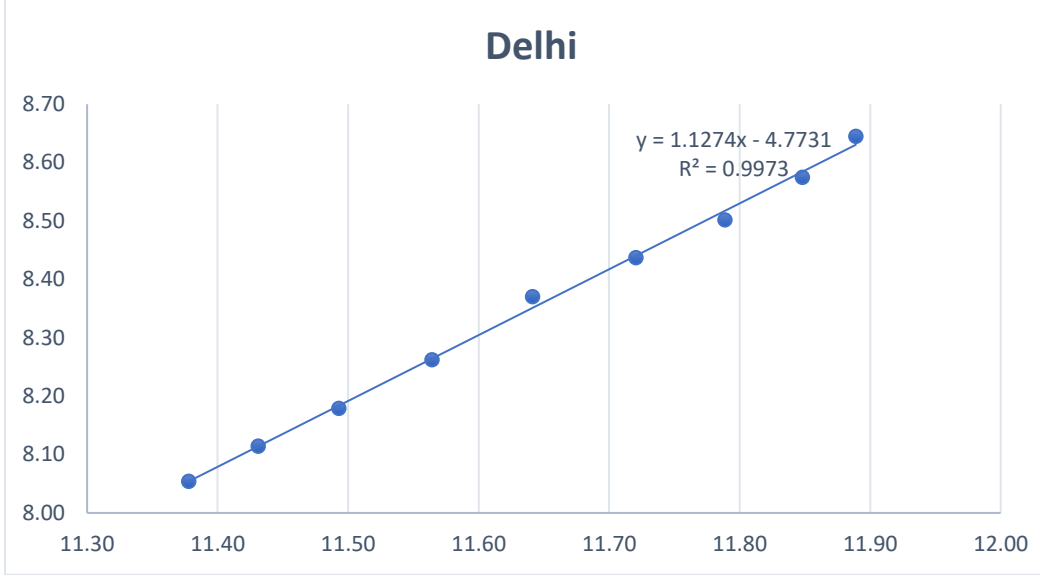
Jharkhand	$G_{NSDP} = e^{0.8029 \ln(1+G_{GDP})} - 1$	
Delhi	$G_{NSDP} = e^{1.1274 \ln(1+G_{GDP})} - 1$	

Table 4-13 β value for Log-Log Regression of growth of NSDP of States (dependent variable) versus GDP of India (independent variable)

NSDP	β	R-Square
Uttar Pradesh	0.9583	0.9892
Delhi	1.1274	0.9973
Bihar	1.02875	0.9532
Haryana	1.2268	0.9977
Jharkhand	1.01416	0.9979
Madhya Pradesh	1.0645	0.9929
Punjab	0.8356	0.9952
Rajasthan	0.9023	0.9974
Uttarakhand	1.1093	0.9988
West Bengal	0.9652	0.9838

Table 4-14 β value for Log-Log Regression of growth of PCNSDP of States (dependent variable) versus GDP of India (independent variable)

PCNSDP	β	R-Square
Uttar Pradesh	0.7293	0.9801
Delhi	0.825	0.9959
Bihar	0.8655	0.9449
Haryana	1.0189	0.9972
Jharkhand	0.90279	0.9971
Madhya Pradesh	0.8381	0.9985
Punjab	0.6434	0.9943
Rajasthan	0.6905	0.9966
Uttarakhand	0.9171	0.9985

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6. The forecasted NSDP, PCNSDP and urban population growth of PIA states is shown in table below. The β value of states have been moderated to make future growth in line with national growth.

Table 4-15 Forecasted NSDP of PIA States

	2022-26	2027-31	2032-36	2037-21	2042-46	2047-51	2051-56
Uttar Pradesh	7.0%	6.4%	5.3%	4.7%	4.0%	3.5%	3.2%
Delhi	8.3%	7.5%	5.4%	4.8%	4.3%	4.0%	3.6%
Bihar	7.5%	6.8%	4.9%	4.4%	4.0%	3.6%	3.3%
Haryana	9.0%	8.2%	5.9%	5.3%	4.7%	4.3%	3.9%
Jharkhand	7.4%	6.7%	4.9%	4.3%	3.9%	3.6%	3.2%
Punjab	6.1%	5.5%	4.0%	3.6%	3.2%	2.9%	2.6%
Rajasthan	6.6%	6.0%	4.3%	3.8%	3.5%	3.2%	2.8%
Uttarakhand	8.1%	7.4%	5.3%	4.7%	4.3%	3.9%	3.5%
West Bengal	7.1%	6.4%	4.6%	4.1%	3.7%	3.4%	3.0%
Rest of India	7.3%	6.6%	4.8%	4.3%	3.8%	3.5%	3.2%

Table 4-16 Forecasted PCNSDP of PIA states

PCNSDP Growth	2022-26	2027-31	2032-36	2037-21	2042-46	2047-51	2051-56
Uttar Pradesh	5.3%	4.8%	4.9%	4.3%	3.9%	3.6%	3.2%
Delhi	6.0%	5.4%	3.9%	3.5%	3.2%	2.9%	2.6%
Bihar	6.3%	5.7%	4.1%	3.7%	3.3%	3.0%	2.7%
Haryana	7.5%	6.8%	4.9%	4.3%	3.9%	3.6%	3.2%
Jharkhand	6.6%	6.0%	4.3%	3.8%	3.5%	3.2%	2.8%
Punjab	4.6%	4.2%	3.1%	2.7%	2.5%	2.2%	2.0%
Rajasthan	5.0%	4.5%	3.3%	2.9%	2.6%	2.4%	2.2%
Uttarakhand	6.7%	6.1%	4.4%	3.9%	3.5%	3.2%	2.9%
West Bengal	5.9%	5.4%	3.9%	3.5%	3.1%	2.9%	2.6%
Rest of India	6.0%	5.4%	4.1%	3.6%	3.3%	3.0%	2.7%

Table 4-17 Forecasted urban population growth rates of PIA states

Population Growth	2022-26	2027-31	2032-36	2037-21	2042-46	2047-51	2051-56
Uttar Pradesh	1.6%	1.3%	1.1%	1.1%	1.0%	0.9%	0.8%
Delhi	1.9%	1.8%	1.6%	1.5%	1.5%	1.3%	1.2%
Bihar	1.9%	1.6%	1.5%	1.4%	1.3%	1.2%	1.1%
Haryana	2.6%	2.3%	2.1%	2.0%	1.9%	1.7%	1.5%
Jharkhand	1.9%	1.6%	1.5%	1.4%	1.3%	1.2%	1.1%
Punjab	1.5%	1.3%	1.2%	1.1%	1.1%	1.0%	0.9%
Rajasthan	1.6%	1.4%	1.3%	1.2%	1.1%	1.0%	0.9%
Uttarakhand	2.8%	2.7%	2.7%	2.6%	2.5%	2.4%	2.1%
West Bengal	1.9%	1.6%	1.5%	1.4%	1.3%	1.2%	1.1%
Rest of India	1.9%	1.6%	1.5%	1.4%	1.3%	1.2%	1.1%

4.2.6 Forecasting of Growth Rates

In calculating the traffic for horizon year the growth is calculated based on individual OD pairs. For example if the origin and destination is Delhi and Uttar Pradesh the growth rate is calculated as product of mean of economic factor of both states and elasticity value described in Table 4-7. This growth rate is input directly to OD pairs and horizon year traffic is calculated. The growth rates of different vehicle type commuting between different OD pairs is shown in Table below.

Table 4-18 Origin Destination wise Growth rate of Car

Origin	Destination	2022-26	2027-31	2032-36	2037-41	2042-46	2047-51	2051-56	2056-61
Uttar Pradesh	Uttar Pradesh	7.9%	7.0%	6.8%	6.1%	5.6%	5.1%	4.6%	4.6%
Uttar Pradesh	Delhi	8.5%	7.6%	6.6%	5.9%	5.4%	4.9%	4.4%	4.4%
Uttar Pradesh	Bihar	8.6%	7.7%	6.6%	6.0%	5.4%	4.9%	4.4%	4.4%
Uttar Pradesh	Haryana	9.7%	8.7%	7.4%	6.7%	6.1%	5.6%	5.0%	5.0%
Uttar Pradesh	Jharkhand	8.7%	7.8%	6.7%	6.0%	5.5%	5.0%	4.5%	4.5%
Uttar Pradesh	Madhya Pradesh	8.5%	7.6%	6.5%	5.9%	5.4%	4.9%	4.4%	4.4%
Uttar Pradesh	Punjab	7.4%	6.6%	5.8%	5.3%	4.8%	4.4%	3.9%	3.9%
Uttar Pradesh	Rajasthan	7.7%	6.8%	6.0%	5.4%	4.9%	4.5%	4.0%	4.0%
Uttar Pradesh	Uttarakhand	9.3%	8.5%	7.4%	6.8%	6.2%	5.7%	5.1%	5.1%
Uttar Pradesh	West Bengal	8.4%	7.5%	6.5%	5.8%	5.3%	4.8%	4.4%	4.4%
Uttar Pradesh	Rest of India	8.4%	7.5%	6.6%	5.9%	5.4%	4.9%	4.4%	4.4%
Delhi	Bihar	9.2%	8.3%	6.3%	5.7%	5.3%	4.8%	4.3%	4.3%
Delhi	Jharkhand	9.3%	8.4%	6.4%	5.8%	5.3%	4.8%	4.4%	4.4%
Delhi	Madhya Pradesh	9.1%	8.2%	6.3%	5.7%	5.2%	4.7%	4.2%	4.2%
Delhi	Rajasthan	8.3%	7.5%	5.7%	5.2%	4.8%	4.3%	3.9%	3.9%
Delhi	Uttarakhand	9.9%	9.1%	7.2%	6.6%	6.0%	5.6%	5.0%	5.0%
Delhi	West Bengal	9.0%	8.1%	6.2%	5.6%	5.1%	4.7%	4.2%	4.2%
Delhi	Rest of India	9.0%	8.1%	6.3%	5.7%	5.2%	4.7%	4.3%	4.3%
Bihar	Haryana	10.4%	9.4%	7.2%	6.5%	6.0%	5.4%	4.9%	4.9%
Bihar	Madhya Pradesh	9.2%	8.3%	6.3%	5.7%	5.2%	4.7%	4.3%	4.3%
Bihar	Punjab	8.2%	7.3%	5.6%	5.1%	4.6%	4.2%	3.8%	3.8%
Bihar	Rajasthan	8.4%	7.5%	5.8%	5.2%	4.8%	4.3%	3.9%	3.9%
Bihar	Uttarakhand	10.1%	9.2%	7.2%	6.6%	6.1%	5.6%	5.0%	5.0%
Bihar	West Bengal	9.1%	8.2%	6.2%	5.6%	5.2%	4.7%	4.2%	4.2%
Bihar	Rest of India	9.1%	8.2%	6.3%	5.7%	5.2%	4.8%	4.3%	4.3%
Haryana	Jharkhand	10.6%	9.5%	7.3%	6.6%	6.0%	5.5%	4.9%	4.9%
Haryana	Madhya Pradesh	10.3%	9.3%	7.1%	6.4%	5.9%	5.3%	4.8%	4.8%
Haryana	Punjab	9.3%	8.4%	6.4%	5.8%	5.3%	4.8%	4.3%	4.3%
Haryana	Rajasthan	9.5%	8.6%	6.6%	6.0%	5.5%	5.0%	4.5%	4.5%
Haryana	Uttarakhand	11.2%	10.2%	8.0%	7.3%	6.7%	6.2%	5.6%	5.6%
Haryana	West Bengal	10.2%	9.2%	7.0%	6.4%	5.8%	5.3%	4.8%	4.8%
Haryana	Rest of India	10.3%	9.2%	7.1%	6.5%	5.9%	5.4%	4.8%	4.8%
Jharkhand	Madhya Pradesh	9.4%	8.4%	6.4%	5.8%	5.3%	4.8%	4.3%	4.3%
Jharkhand	Punjab	8.3%	7.5%	5.7%	5.2%	4.7%	4.3%	3.9%	3.9%

Jharkhand	Rajasthan	8.6%	7.7%	5.9%	5.3%	4.9%	4.4%	4.0%	4.0%
Jharkhand	Uttarakhand	10.2%	9.4%	7.3%	6.7%	6.1%	5.6%	5.1%	5.1%
Jharkhand	West Bengal	9.3%	8.3%	6.3%	5.7%	5.2%	4.8%	4.3%	4.3%
Jharkhand	Rest of India	9.3%	8.4%	6.4%	5.8%	5.3%	4.8%	4.4%	4.4%
Madhya Pradesh	Punjab	8.0%	7.2%	5.5%	5.0%	4.6%	4.2%	3.7%	3.7%
Madhya Pradesh	Uttarakhand	10.0%	9.1%	7.1%	6.5%	6.0%	5.5%	5.0%	5.0%
Madhya Pradesh	West Bengal	9.0%	8.1%	6.2%	5.6%	5.1%	4.6%	4.2%	4.2%
Madhya Pradesh	Rest of India	9.0%	8.1%	6.3%	5.7%	5.2%	4.7%	4.2%	4.2%
Punjab	Rajasthan	7.3%	6.5%	5.0%	4.5%	4.1%	3.8%	3.4%	3.4%
Punjab	Uttarakhand	8.9%	8.2%	6.4%	5.9%	5.4%	5.0%	4.5%	4.5%
Punjab	West Bengal	7.9%	7.2%	5.4%	4.9%	4.5%	4.1%	3.7%	3.7%
Punjab	Rest of India	8.0%	7.2%	5.6%	5.0%	4.6%	4.2%	3.8%	3.8%
Rajasthan	Uttarakhand	9.2%	8.4%	6.6%	6.1%	5.6%	5.1%	4.6%	4.6%
Rajasthan	West Bengal	8.2%	7.4%	5.6%	5.1%	4.7%	4.2%	3.8%	3.8%
Rajasthan	Rest of India	8.2%	7.4%	5.7%	5.2%	4.8%	4.3%	3.9%	3.9%
Uttarakhand	West Bengal	9.9%	9.0%	7.1%	6.5%	5.9%	5.5%	4.9%	4.9%
Uttarakhand	Rest of India	9.9%	9.1%	7.2%	6.6%	6.0%	5.5%	5.0%	5.0%
West Bengal	West Bengal	8.9%	8.0%	6.1%	5.5%	5.0%	4.6%	4.1%	4.1%
West Bengal	Rest of India	8.9%	8.0%	6.2%	5.6%	5.1%	4.7%	4.2%	4.2%
Rest of India	Rest of India	9.0%	8.1%	6.3%	5.7%	5.2%	4.7%	4.3%	4.3%

Table 4-19 Origin Destination wise Growth rate of Bus

Origin	Destination	2022-26	2027-31	2032-36	2037-41	2042-46	2047-51	2051-56	2056-61
Uttar Pradesh	Uttar Pradesh	4.9%	3.9%	3.8%	3.4%	3.1%	2.9%	2.6%	2.6%
Uttar Pradesh	Delhi	5.3%	4.2%	3.7%	3.3%	3.0%	2.8%	2.5%	2.5%
Uttar Pradesh	Bihar	5.3%	4.3%	3.7%	3.3%	3.0%	2.8%	2.5%	2.5%
Uttar Pradesh	Haryana	6.0%	4.9%	4.1%	3.8%	3.4%	3.1%	2.8%	2.8%
Uttar Pradesh	Jharkhand	5.4%	4.4%	3.8%	3.4%	3.1%	2.8%	2.5%	2.5%
Uttar Pradesh	Madhya Pradesh	5.3%	4.2%	3.7%	3.3%	3.0%	2.7%	2.5%	2.5%
Uttar Pradesh	Punjab	4.6%	3.7%	3.3%	2.9%	2.7%	2.4%	2.2%	2.2%
Uttar Pradesh	Rajasthan	4.8%	3.8%	3.4%	3.0%	2.8%	2.5%	2.3%	2.3%
Uttar Pradesh	Uttarakhand	5.8%	4.8%	4.2%	3.8%	3.5%	3.2%	2.9%	2.9%
Uttar Pradesh	West Bengal	5.2%	4.2%	3.6%	3.3%	3.0%	2.7%	2.4%	2.4%
Uttar Pradesh	Rest of India	5.2%	4.2%	3.7%	3.3%	3.0%	2.8%	2.5%	2.5%
Delhi	Bihar	5.7%	4.6%	3.5%	3.2%	2.9%	2.7%	2.4%	2.4%
Delhi	Jharkhand	5.8%	4.7%	3.6%	3.3%	3.0%	2.7%	2.4%	2.4%
Delhi	Madhya Pradesh	5.6%	4.6%	3.5%	3.2%	2.9%	2.6%	2.4%	2.4%
Delhi	Rajasthan	5.2%	4.2%	3.2%	2.9%	2.7%	2.4%	2.2%	2.2%
Delhi	Uttarakhand	6.2%	5.1%	4.0%	3.7%	3.4%	3.1%	2.8%	2.8%
Delhi	West Bengal	5.6%	4.5%	3.5%	3.1%	2.9%	2.6%	2.4%	2.4%
Delhi	Rest of India	5.6%	4.6%	3.5%	3.2%	2.9%	2.7%	2.4%	2.4%
Bihar	Haryana	6.5%	5.3%	4.0%	3.6%	3.3%	3.0%	2.7%	2.7%
Bihar	Madhya Pradesh	5.7%	4.6%	3.5%	3.2%	2.9%	2.6%	2.4%	2.4%
Bihar	Punjab	5.1%	4.1%	3.1%	2.8%	2.6%	2.4%	2.1%	2.1%

Bihar	Rajasthan	5.2%	4.2%	3.2%	2.9%	2.7%	2.4%	2.2%	2.2%
Bihar	Uttarakhand	6.3%	5.2%	4.0%	3.7%	3.4%	3.1%	2.8%	2.8%
Bihar	West Bengal	5.7%	4.6%	3.5%	3.2%	2.9%	2.6%	2.4%	2.4%
Bihar	Rest of India	5.7%	4.6%	3.6%	3.2%	2.9%	2.7%	2.4%	2.4%
Haryana	Jharkhand	6.6%	5.3%	4.1%	3.7%	3.4%	3.1%	2.8%	2.8%
Haryana	Madhya Pradesh	6.4%	5.2%	4.0%	3.6%	3.3%	3.0%	2.7%	2.7%
Haryana	Punjab	5.8%	4.7%	3.6%	3.3%	3.0%	2.7%	2.4%	2.4%
Haryana	Rajasthan	5.9%	4.8%	3.7%	3.3%	3.1%	2.8%	2.5%	2.5%
Haryana	Uttarakhand	7.0%	5.7%	4.5%	4.1%	3.8%	3.5%	3.1%	3.1%
Haryana	West Bengal	6.4%	5.2%	3.9%	3.6%	3.3%	3.0%	2.7%	2.7%
Haryana	Rest of India	6.4%	5.2%	4.0%	3.6%	3.3%	3.0%	2.7%	2.7%
Jharkhand	Madhya Pradesh	5.8%	4.7%	3.6%	3.2%	3.0%	2.7%	2.4%	2.4%
Jharkhand	Punjab	5.2%	4.2%	3.2%	2.9%	2.6%	2.4%	2.2%	2.2%
Jharkhand	Rajasthan	5.3%	4.3%	3.3%	3.0%	2.7%	2.5%	2.2%	2.2%
Jharkhand	Uttarakhand	6.4%	5.2%	4.1%	3.7%	3.4%	3.2%	2.8%	2.8%
Jharkhand	West Bengal	5.8%	4.7%	3.5%	3.2%	2.9%	2.7%	2.4%	2.4%
Jharkhand	Rest of India	5.8%	4.7%	3.6%	3.3%	3.0%	2.7%	2.4%	2.4%
Madhya Pradesh	Punjab	5.0%	4.1%	3.1%	2.8%	2.6%	2.3%	2.1%	2.1%
Madhya Pradesh	Uttarakhand	6.2%	5.1%	4.0%	3.7%	3.4%	3.1%	2.8%	2.8%
Madhya Pradesh	West Bengal	5.6%	4.5%	3.4%	3.1%	2.9%	2.6%	2.3%	2.3%
Madhya Pradesh	Rest of India	5.6%	4.5%	3.5%	3.2%	2.9%	2.6%	2.4%	2.4%
Punjab	Rajasthan	4.5%	3.6%	2.8%	2.5%	2.3%	2.1%	1.9%	1.9%
Punjab	Uttarakhand	5.6%	4.6%	3.6%	3.3%	3.0%	2.8%	2.5%	2.5%
Punjab	West Bengal	4.9%	4.0%	3.1%	2.8%	2.5%	2.3%	2.1%	2.1%
Punjab	Rest of India	5.0%	4.0%	3.1%	2.8%	2.6%	2.3%	2.1%	2.1%
Rajasthan	Uttarakhand	5.7%	4.7%	3.7%	3.4%	3.1%	2.9%	2.6%	2.6%
Rajasthan	West Bengal	5.1%	4.1%	3.2%	2.9%	2.6%	2.4%	2.1%	2.1%
Rajasthan	Rest of India	5.1%	4.1%	3.2%	2.9%	2.7%	2.4%	2.2%	2.2%
Uttarakhand	West Bengal	6.1%	5.1%	4.0%	3.6%	3.3%	3.1%	2.8%	2.8%
Uttarakhand	Rest of India	6.2%	5.1%	4.0%	3.7%	3.4%	3.1%	2.8%	2.8%
West Bengal	West Bengal	5.5%	4.5%	3.4%	3.1%	2.8%	2.6%	2.3%	2.3%
West Bengal	Rest of India	5.6%	4.5%	3.5%	3.1%	2.9%	2.6%	2.4%	2.4%
Rest of India	Rest of India	5.6%	4.5%	3.5%	3.2%	2.9%	2.7%	2.4%	2.4%

Table 4-20 Origin Destination wise Growth rate of LCV

Origin	Destination	2022-26	2027-31	2032-36	2037-41	2042-46	2047-51	2051-56	2056-61
Uttar Pradesh	Uttar Pradesh	5.7%	4.7%	3.9%	3.5%	3.0%	2.6%	2.3%	2.3%
Uttar Pradesh	Delhi	6.3%	5.1%	3.9%	3.5%	3.1%	2.8%	2.5%	2.5%
Uttar Pradesh	Bihar	6.0%	4.9%	3.8%	3.4%	2.9%	2.6%	2.4%	2.4%
Uttar Pradesh	Haryana	6.6%	5.4%	4.1%	3.7%	3.2%	2.9%	2.6%	2.6%
Uttar Pradesh	Jharkhand	5.9%	4.8%	3.7%	3.3%	2.9%	2.6%	2.3%	2.3%
Uttar Pradesh	Madhya Pradesh	6.1%	5.0%	3.8%	3.4%	3.0%	2.7%	2.4%	2.4%
Uttar Pradesh	Punjab	5.4%	4.4%	3.4%	3.0%	2.7%	2.4%	2.1%	2.1%
Uttar Pradesh	Rajasthan	5.6%	4.5%	3.5%	3.1%	2.8%	2.5%	2.2%	2.2%
Uttar Pradesh	Uttarakhand	6.2%	5.1%	3.9%	3.5%	3.1%	2.7%	2.5%	2.5%
Uttar Pradesh	West Bengal	5.8%	4.7%	3.7%	3.2%	2.9%	2.5%	2.3%	2.3%
Uttar Pradesh	Rest of India	5.9%	4.8%	3.7%	3.3%	2.9%	2.6%	2.3%	2.3%
Delhi	Bihar	6.5%	5.3%	3.8%	3.4%	3.1%	2.8%	2.5%	2.5%
Delhi	Jharkhand	6.4%	5.3%	3.8%	3.4%	3.0%	2.8%	2.5%	2.5%
Delhi	Madhya Pradesh	6.6%	5.4%	3.9%	3.5%	3.1%	2.8%	2.6%	2.6%
Delhi	Rajasthan	6.1%	5.0%	3.6%	3.2%	2.9%	2.6%	2.4%	2.4%
Delhi	Uttarakhand	6.7%	5.5%	4.0%	3.5%	3.2%	2.9%	2.6%	2.6%
Delhi	West Bengal	6.3%	5.1%	3.7%	3.3%	3.0%	2.7%	2.4%	2.4%
Delhi	Rest of India	6.4%	5.2%	3.8%	3.4%	3.0%	2.8%	2.5%	2.5%
Bihar	Haryana	6.8%	5.5%	4.0%	3.6%	3.2%	2.9%	2.6%	2.6%
Bihar	Madhya Pradesh	6.3%	5.1%	3.7%	3.3%	3.0%	2.7%	2.4%	2.4%
Bihar	Punjab	5.6%	4.6%	3.3%	2.9%	2.6%	2.4%	2.2%	2.2%
Bihar	Rajasthan	5.8%	4.7%	3.4%	3.0%	2.7%	2.5%	2.2%	2.2%
Bihar	Uttarakhand	6.4%	5.2%	3.8%	3.4%	3.0%	2.8%	2.5%	2.5%
Bihar	West Bengal	6.0%	4.9%	3.5%	3.1%	2.8%	2.6%	2.3%	2.3%
Bihar	Rest of India	6.1%	5.0%	3.6%	3.2%	2.9%	2.6%	2.4%	2.4%
Haryana	Jharkhand	6.8%	5.5%	4.0%	3.5%	3.2%	2.9%	2.6%	2.6%
Haryana	Madhya Pradesh	6.9%	5.6%	4.1%	3.6%	3.3%	3.0%	2.7%	2.7%
Haryana	Punjab	6.2%	5.1%	3.7%	3.3%	2.9%	2.7%	2.4%	2.4%
Haryana	Rajasthan	6.4%	5.2%	3.8%	3.4%	3.0%	2.8%	2.5%	2.5%
Haryana	Uttarakhand	7.0%	5.8%	4.1%	3.7%	3.3%	3.0%	2.7%	2.7%
Haryana	West Bengal	6.6%	5.4%	3.9%	3.5%	3.1%	2.8%	2.6%	2.6%
Haryana	Rest of India	6.7%	5.5%	4.0%	3.5%	3.2%	2.9%	2.6%	2.6%
Jharkhand	Madhya Pradesh	6.2%	5.1%	3.7%	3.3%	3.0%	2.7%	2.4%	2.4%
Jharkhand	Punjab	5.5%	4.5%	3.3%	2.9%	2.6%	2.4%	2.2%	2.2%
Jharkhand	Rajasthan	5.7%	4.7%	3.4%	3.0%	2.7%	2.5%	2.2%	2.2%
Jharkhand	Uttarakhand	6.4%	5.2%	3.8%	3.3%	3.0%	2.8%	2.5%	2.5%
Jharkhand	West Bengal	5.9%	4.8%	3.5%	3.1%	2.8%	2.6%	2.3%	2.3%
Jharkhand	Rest of India	6.0%	4.9%	3.6%	3.2%	2.9%	2.6%	2.3%	2.3%
Madhya Pradesh	Punjab	5.7%	4.6%	3.4%	3.0%	2.7%	2.5%	2.2%	2.2%
Madhya Pradesh	Uttarakhand	6.5%	5.3%	3.9%	3.4%	3.1%	2.8%	2.5%	2.5%
Madhya Pradesh	West Bengal	6.1%	5.0%	3.6%	3.2%	2.9%	2.6%	2.4%	2.4%
Madhya Pradesh	Rest of India	6.2%	5.1%	3.7%	3.3%	2.9%	2.7%	2.4%	2.4%

Punjab	Rajasthan	5.2%	4.2%	3.1%	2.7%	2.5%	2.2%	2.0%	2.0%
Punjab	Uttarakhand	5.8%	4.8%	3.4%	3.1%	2.8%	2.5%	2.3%	2.3%
Punjab	West Bengal	5.4%	4.4%	3.2%	2.8%	2.5%	2.3%	2.1%	2.1%
Punjab	Rest of India	5.5%	4.5%	3.2%	2.9%	2.6%	2.4%	2.1%	2.1%
Rajasthan	Uttarakhand	6.0%	4.9%	3.6%	3.2%	2.9%	2.6%	2.3%	2.3%
Rajasthan	West Bengal	5.6%	4.6%	3.3%	2.9%	2.6%	2.4%	2.2%	2.2%
Rajasthan	Rest of India	5.7%	4.6%	3.4%	3.0%	2.7%	2.5%	2.2%	2.2%
Uttarakhand	West Bengal	6.2%	5.1%	3.7%	3.3%	2.9%	2.7%	2.4%	2.4%
Uttarakhand	Rest of India	6.3%	5.2%	3.7%	3.3%	3.0%	2.7%	2.5%	2.5%
West Bengal	West Bengal	5.8%	4.7%	3.4%	3.0%	2.7%	2.5%	2.2%	2.2%
West Bengal	Rest of India	5.9%	4.8%	3.5%	3.1%	2.8%	2.5%	2.3%	2.3%
Rest of India	Rest of India	6.0%	4.9%	3.5%	3.1%	2.8%	2.6%	2.3%	2.3%

Table 4-21 Origin Destination wise Growth rate of 2 Axle Truck

Origin	Destination	2022-26	2027-31	2032-36	2037-41	2042-46	2047-51	2051-56	2056-61
Uttar Pradesh	Uttar Pradesh	6.3%	5.1%	4.2%	3.8%	3.2%	2.8%	2.5%	2.5%
Uttar Pradesh	Delhi	6.8%	5.6%	4.3%	3.8%	3.4%	3.0%	2.7%	2.7%
Uttar Pradesh	Bihar	6.5%	5.3%	4.1%	3.7%	3.2%	2.9%	2.6%	2.6%
Uttar Pradesh	Haryana	7.2%	5.8%	4.5%	4.0%	3.5%	3.1%	2.8%	2.8%
Uttar Pradesh	Jharkhand	6.4%	5.3%	4.1%	3.6%	3.2%	2.8%	2.6%	2.6%
Uttar Pradesh	Madhya Pradesh	6.6%	5.4%	4.2%	3.7%	3.3%	2.9%	2.6%	2.6%
Uttar Pradesh	Punjab	5.8%	4.8%	3.7%	3.3%	2.9%	2.6%	2.3%	2.3%
Uttar Pradesh	Rajasthan	6.1%	5.0%	3.9%	3.4%	3.0%	2.7%	2.4%	2.4%
Uttar Pradesh	Uttarakhand	6.8%	5.5%	4.3%	3.8%	3.3%	3.0%	2.7%	2.7%
Uttar Pradesh	West Bengal	6.3%	5.1%	4.0%	3.5%	3.1%	2.8%	2.5%	2.5%
Uttar Pradesh	Rest of India	6.4%	5.2%	4.0%	3.6%	3.2%	2.8%	2.5%	2.5%
Delhi	Bihar	7.1%	5.8%	4.2%	3.7%	3.3%	3.0%	2.7%	2.7%
Delhi	Jharkhand	7.0%	5.7%	4.1%	3.7%	3.3%	3.0%	2.7%	2.7%
Delhi	Madhya Pradesh	7.2%	5.9%	4.2%	3.8%	3.4%	3.1%	2.8%	2.8%
Delhi	Rajasthan	6.6%	5.4%	3.9%	3.5%	3.1%	2.9%	2.6%	2.6%
Delhi	Uttarakhand	7.3%	6.0%	4.3%	3.8%	3.5%	3.2%	2.8%	2.8%
Delhi	West Bengal	6.8%	5.6%	4.0%	3.6%	3.2%	3.0%	2.7%	2.7%
Delhi	Rest of India	7.0%	5.7%	4.1%	3.7%	3.3%	3.0%	2.7%	2.7%
Bihar	Haryana	7.4%	6.0%	4.4%	3.9%	3.5%	3.2%	2.9%	2.9%
Bihar	Madhya Pradesh	6.8%	5.6%	4.0%	3.6%	3.2%	3.0%	2.7%	2.7%
Bihar	Punjab	6.1%	5.0%	3.6%	3.2%	2.9%	2.6%	2.4%	2.4%
Bihar	Rajasthan	6.3%	5.1%	3.7%	3.3%	3.0%	2.7%	2.5%	2.5%
Bihar	Uttarakhand	7.0%	5.7%	4.1%	3.7%	3.3%	3.0%	2.7%	2.7%
Bihar	West Bengal	6.5%	5.3%	3.8%	3.4%	3.1%	2.8%	2.5%	2.5%
Bihar	Rest of India	6.6%	5.4%	3.9%	3.5%	3.1%	2.9%	2.6%	2.6%
Haryana	Jharkhand	7.4%	6.0%	4.3%	3.9%	3.5%	3.2%	2.9%	2.9%
Haryana	Madhya Pradesh	7.5%	6.1%	4.4%	3.9%	3.6%	3.2%	2.9%	2.9%
Haryana	Punjab	6.8%	5.5%	4.0%	3.5%	3.2%	2.9%	2.6%	2.6%
Haryana	Rajasthan	7.0%	5.7%	4.1%	3.7%	3.3%	3.0%	2.7%	2.7%

Haryana	Uttarakhand	7.7%	6.3%	4.5%	4.0%	3.6%	3.3%	3.0%	3.0%
Haryana	West Bengal	7.2%	5.9%	4.2%	3.8%	3.4%	3.1%	2.8%	2.8%
Haryana	Rest of India	7.3%	6.0%	4.3%	3.8%	3.4%	3.1%	2.8%	2.8%
Jharkhand	Madhya Pradesh	6.8%	5.6%	4.0%	3.6%	3.2%	2.9%	2.6%	2.6%
Jharkhand	Punjab	6.0%	4.9%	3.6%	3.2%	2.9%	2.6%	2.3%	2.3%
Jharkhand	Rajasthan	6.3%	5.1%	3.7%	3.3%	3.0%	2.7%	2.4%	2.4%
Jharkhand	Uttarakhand	7.0%	5.7%	4.1%	3.6%	3.3%	3.0%	2.7%	2.7%
Jharkhand	West Bengal	6.5%	5.3%	3.8%	3.4%	3.1%	2.8%	2.5%	2.5%
Jharkhand	Rest of India	6.6%	5.4%	3.9%	3.5%	3.1%	2.8%	2.6%	2.6%
Madhya Pradesh	Punjab	6.2%	5.1%	3.7%	3.3%	2.9%	2.7%	2.4%	2.4%
Madhya Pradesh	Uttarakhand	7.1%	5.8%	4.2%	3.7%	3.4%	3.1%	2.8%	2.8%
Madhya Pradesh	West Bengal	6.6%	5.4%	3.9%	3.5%	3.1%	2.9%	2.6%	2.6%
Madhya Pradesh	Rest of India	6.8%	5.5%	4.0%	3.5%	3.2%	2.9%	2.6%	2.6%
Punjab	Rajasthan	5.7%	4.6%	3.3%	3.0%	2.7%	2.4%	2.2%	2.2%
Punjab	Uttarakhand	6.4%	5.2%	3.7%	3.3%	3.0%	2.7%	2.5%	2.5%
Punjab	West Bengal	5.9%	4.8%	3.5%	3.1%	2.8%	2.5%	2.3%	2.3%
Punjab	Rest of India	6.0%	4.9%	3.5%	3.1%	2.8%	2.6%	2.3%	2.3%
Rajasthan	Uttarakhand	6.6%	5.4%	3.9%	3.5%	3.1%	2.8%	2.6%	2.6%
Rajasthan	West Bengal	6.1%	5.0%	3.6%	3.2%	2.9%	2.6%	2.4%	2.4%
Rajasthan	Rest of India	6.2%	5.1%	3.7%	3.3%	2.9%	2.7%	2.4%	2.4%
Uttarakhand	West Bengal	6.8%	5.5%	4.0%	3.6%	3.2%	2.9%	2.6%	2.6%
Uttarakhand	Rest of India	6.9%	5.6%	4.1%	3.6%	3.3%	3.0%	2.7%	2.7%
West Bengal	West Bengal	6.3%	5.1%	3.7%	3.3%	3.0%	2.7%	2.4%	2.4%
West Bengal	Rest of India	6.4%	5.2%	3.8%	3.4%	3.0%	2.8%	2.5%	2.5%
Rest of India	Rest of India	6.5%	5.3%	3.9%	3.4%	3.1%	2.8%	2.5%	2.5%

Table 4-22 Origin Destination wise Growth rate of 3 Axle Truck

Origin	Destination	2022-26	2027-31	2032-36	2037-41	2042-46	2047-51	2051-56	2056-61
Uttar Pradesh	Uttar Pradesh	3.7%	3.0%	2.5%	2.5%	2.1%	1.9%	1.7%	1.7%
Uttar Pradesh	Delhi	4.0%	3.3%	2.5%	2.5%	2.2%	2.0%	1.8%	1.8%
Uttar Pradesh	Bihar	3.8%	3.1%	2.4%	2.4%	2.1%	1.9%	1.7%	1.7%
Uttar Pradesh	Haryana	4.2%	3.5%	2.7%	2.6%	2.3%	2.1%	1.9%	1.9%
Uttar Pradesh	Jharkhand	3.8%	3.1%	2.4%	2.4%	2.1%	1.9%	1.7%	1.7%
Uttar Pradesh	Madhya Pradesh	3.9%	3.2%	2.5%	2.4%	2.1%	1.9%	1.7%	1.7%
Uttar Pradesh	Punjab	3.4%	2.8%	2.2%	2.2%	1.9%	1.7%	1.5%	1.5%
Uttar Pradesh	Rajasthan	3.6%	2.9%	2.3%	2.3%	2.0%	1.8%	1.6%	1.6%
Uttar Pradesh	Uttarakhand	4.0%	3.3%	2.5%	2.5%	2.2%	2.0%	1.8%	1.8%
Uttar Pradesh	West Bengal	3.7%	3.0%	2.3%	2.3%	2.0%	1.8%	1.6%	1.6%
Uttar Pradesh	Rest of India	3.8%	3.1%	2.4%	2.4%	2.1%	1.9%	1.7%	1.7%
Delhi	Bihar	4.2%	3.4%	2.5%	2.4%	2.2%	2.0%	1.8%	1.8%
Delhi	Jharkhand	4.1%	3.4%	2.4%	2.4%	2.2%	2.0%	1.8%	1.8%
Delhi	Madhya Pradesh	4.2%	3.5%	2.5%	2.5%	2.2%	2.0%	1.8%	1.8%
Delhi	Rajasthan	3.9%	3.2%	2.3%	2.3%	2.1%	1.9%	1.7%	1.7%
Delhi	Uttarakhand	4.3%	3.5%	2.6%	2.5%	2.3%	2.1%	1.9%	1.9%

Delhi	West Bengal	4.0%	3.3%	2.4%	2.4%	2.1%	1.9%	1.7%	1.7%
Delhi	Rest of India	4.1%	3.4%	2.4%	2.4%	2.2%	2.0%	1.8%	1.8%
Bihar	Haryana	4.4%	3.6%	2.6%	2.5%	2.3%	2.1%	1.9%	1.9%
Bihar	Madhya Pradesh	4.0%	3.3%	2.4%	2.4%	2.1%	1.9%	1.7%	1.7%
Bihar	Punjab	3.6%	2.9%	2.1%	2.1%	1.9%	1.7%	1.6%	1.6%
Bihar	Rajasthan	3.7%	3.0%	2.2%	2.2%	2.0%	1.8%	1.6%	1.6%
Bihar	Uttarakhand	4.1%	3.4%	2.4%	2.4%	2.2%	2.0%	1.8%	1.8%
Bihar	West Bengal	3.8%	3.1%	2.3%	2.2%	2.0%	1.8%	1.7%	1.7%
Bihar	Rest of India	3.9%	3.2%	2.3%	2.3%	2.1%	1.9%	1.7%	1.7%
Haryana	Jharkhand	4.3%	3.5%	2.6%	2.5%	2.3%	2.1%	1.9%	1.9%
Haryana	Madhya Pradesh	4.4%	3.6%	2.6%	2.6%	2.3%	2.1%	1.9%	1.9%
Haryana	Punjab	4.0%	3.3%	2.3%	2.3%	2.1%	1.9%	1.7%	1.7%
Haryana	Rajasthan	4.1%	3.4%	2.4%	2.4%	2.2%	2.0%	1.8%	1.8%
Haryana	Uttarakhand	4.5%	3.7%	2.7%	2.6%	2.4%	2.2%	2.0%	2.0%
Haryana	West Bengal	4.2%	3.5%	2.5%	2.5%	2.2%	2.0%	1.8%	1.8%
Haryana	Rest of India	4.3%	3.5%	2.5%	2.5%	2.3%	2.1%	1.9%	1.9%
Jharkhand	Madhya Pradesh	4.0%	3.3%	2.4%	2.3%	2.1%	1.9%	1.7%	1.7%
Jharkhand	Punjab	3.6%	2.9%	2.1%	2.1%	1.9%	1.7%	1.5%	1.5%
Jharkhand	Rajasthan	3.7%	3.0%	2.2%	2.2%	1.9%	1.8%	1.6%	1.6%
Jharkhand	Uttarakhand	4.1%	3.4%	2.4%	2.4%	2.2%	2.0%	1.8%	1.8%
Jharkhand	West Bengal	3.8%	3.1%	2.3%	2.2%	2.0%	1.8%	1.6%	1.6%
Jharkhand	Rest of India	3.9%	3.2%	2.3%	2.3%	2.0%	1.9%	1.7%	1.7%
Madhya Pradesh	Punjab	3.7%	3.0%	2.2%	2.1%	1.9%	1.8%	1.6%	1.6%
Madhya Pradesh	Uttarakhand	4.2%	3.4%	2.5%	2.4%	2.2%	2.0%	1.8%	1.8%
Madhya Pradesh	West Bengal	3.9%	3.2%	2.3%	2.3%	2.1%	1.9%	1.7%	1.7%
Madhya Pradesh	Rest of India	4.0%	3.3%	2.4%	2.3%	2.1%	1.9%	1.7%	1.7%
Punjab	Rajasthan	3.3%	2.7%	2.0%	1.9%	1.8%	1.6%	1.4%	1.4%
Punjab	Uttarakhand	3.7%	3.1%	2.2%	2.2%	2.0%	1.8%	1.6%	1.6%
Punjab	West Bengal	3.5%	2.8%	2.0%	2.0%	1.8%	1.7%	1.5%	1.5%
Punjab	Rest of India	3.5%	2.9%	2.1%	2.1%	1.9%	1.7%	1.5%	1.5%
Rajasthan	Uttarakhand	3.9%	3.2%	2.3%	2.3%	2.0%	1.9%	1.7%	1.7%
Rajasthan	West Bengal	3.6%	2.9%	2.1%	2.1%	1.9%	1.7%	1.6%	1.6%
Rajasthan	Rest of India	3.7%	3.0%	2.2%	2.1%	1.9%	1.8%	1.6%	1.6%
Uttarakhand	West Bengal	4.0%	3.3%	2.4%	2.3%	2.1%	1.9%	1.7%	1.7%
Uttarakhand	Rest of India	4.1%	3.3%	2.4%	2.4%	2.1%	2.0%	1.8%	1.8%
West Bengal	West Bengal	3.7%	3.0%	2.2%	2.2%	2.0%	1.8%	1.6%	1.6%
West Bengal	Rest of India	3.8%	3.1%	2.2%	2.2%	2.0%	1.8%	1.6%	1.6%
Rest of India	Rest of India	3.9%	3.1%	2.3%	2.2%	2.0%	1.9%	1.7%	1.7%

Table 4-23 Origin Destination wise Growth rate of Multi Axle Vehicle (MAV)

Origin	Destination	2022-26	2027-31	2032-36	2037-41	2042-46	2047-51	2051-56	2056-61
Uttar Pradesh	Uttar Pradesh	8.4%	6.9%	5.7%	5.1%	4.4%	3.8%	3.4%	3.4%
Uttar Pradesh	Delhi	9.2%	7.5%	5.8%	5.1%	4.5%	4.0%	3.6%	3.6%
Uttar Pradesh	Bihar	8.7%	7.1%	5.5%	4.9%	4.3%	3.8%	3.5%	3.5%

Uttar Pradesh	Haryana	9.6%	7.9%	6.0%	5.4%	4.7%	4.2%	3.8%	3.8%
Uttar Pradesh	Jharkhand	8.7%	7.1%	5.5%	4.9%	4.3%	3.8%	3.4%	3.4%
Uttar Pradesh	Madhya Pradesh	8.9%	7.3%	5.6%	5.0%	4.4%	3.9%	3.5%	3.5%
Uttar Pradesh	Punjab	7.8%	6.4%	5.0%	4.5%	3.9%	3.5%	3.1%	3.1%
Uttar Pradesh	Rajasthan	8.1%	6.7%	5.2%	4.6%	4.0%	3.6%	3.2%	3.2%
Uttar Pradesh	Uttarakhand	9.1%	7.4%	5.7%	5.1%	4.5%	4.0%	3.6%	3.6%
Uttar Pradesh	West Bengal	8.4%	6.9%	5.3%	4.8%	4.2%	3.7%	3.4%	3.4%
Uttar Pradesh	Rest of India	8.6%	7.0%	5.4%	4.8%	4.3%	3.8%	3.4%	3.4%
Delhi	Bihar	9.5%	7.7%	5.6%	5.0%	4.5%	4.1%	3.7%	3.7%
Delhi	Jharkhand	9.4%	7.7%	5.6%	4.9%	4.5%	4.1%	3.7%	3.7%
Delhi	Madhya Pradesh	9.7%	7.9%	5.7%	5.1%	4.6%	4.2%	3.7%	3.7%
Delhi	Rajasthan	8.9%	7.3%	5.3%	4.7%	4.2%	3.8%	3.5%	3.5%
Delhi	Uttarakhand	9.9%	8.0%	5.8%	5.2%	4.7%	4.2%	3.8%	3.8%
Delhi	West Bengal	9.2%	7.5%	5.4%	4.8%	4.3%	4.0%	3.6%	3.6%
Delhi	Rest of India	9.4%	7.6%	5.5%	4.9%	4.4%	4.0%	3.6%	3.6%
Bihar	Haryana	9.9%	8.1%	5.9%	5.2%	4.7%	4.3%	3.9%	3.9%
Bihar	Madhya Pradesh	9.2%	7.5%	5.4%	4.8%	4.3%	4.0%	3.6%	3.6%
Bihar	Punjab	8.2%	6.7%	4.8%	4.3%	3.9%	3.5%	3.2%	3.2%
Bihar	Rajasthan	8.5%	6.9%	5.0%	4.4%	4.0%	3.7%	3.3%	3.3%
Bihar	Uttarakhand	9.4%	7.7%	5.5%	4.9%	4.4%	4.1%	3.7%	3.7%
Bihar	West Bengal	8.8%	7.1%	5.2%	4.6%	4.1%	3.8%	3.4%	3.4%
Bihar	Rest of India	8.9%	7.3%	5.3%	4.7%	4.2%	3.8%	3.5%	3.5%
Haryana	Jharkhand	9.9%	8.1%	5.8%	5.2%	4.7%	4.3%	3.8%	3.8%
Haryana	Madhya Pradesh	10.1%	8.3%	6.0%	5.3%	4.8%	4.4%	3.9%	3.9%
Haryana	Punjab	9.1%	7.4%	5.3%	4.8%	4.3%	3.9%	3.5%	3.5%
Haryana	Rajasthan	9.4%	7.7%	5.5%	4.9%	4.4%	4.0%	3.6%	3.6%
Haryana	Uttarakhand	10.3%	8.4%	6.1%	5.4%	4.9%	4.4%	4.0%	4.0%
Haryana	West Bengal	9.7%	7.9%	5.7%	5.1%	4.6%	4.2%	3.7%	3.7%
Haryana	Rest of India	9.8%	8.0%	5.8%	5.1%	4.6%	4.2%	3.8%	3.8%
Jharkhand	Madhya Pradesh	9.1%	7.5%	5.4%	4.8%	4.3%	3.9%	3.5%	3.5%
Jharkhand	Punjab	8.1%	6.6%	4.8%	4.3%	3.8%	3.5%	3.2%	3.2%
Jharkhand	Rajasthan	8.4%	6.9%	5.0%	4.4%	4.0%	3.6%	3.3%	3.3%
Jharkhand	Uttarakhand	9.3%	7.6%	5.5%	4.9%	4.4%	4.0%	3.6%	3.6%
Jharkhand	West Bengal	8.7%	7.1%	5.1%	4.6%	4.1%	3.8%	3.4%	3.4%
Jharkhand	Rest of India	8.8%	7.2%	5.2%	4.6%	4.2%	3.8%	3.4%	3.4%
Madhya Pradesh	Punjab	8.3%	6.8%	4.9%	4.4%	3.9%	3.6%	3.2%	3.2%
Madhya Pradesh	Uttarakhand	9.6%	7.8%	5.6%	5.0%	4.5%	4.1%	3.7%	3.7%
Madhya Pradesh	West Bengal	8.9%	7.3%	5.3%	4.7%	4.2%	3.8%	3.5%	3.5%
Madhya Pradesh	Rest of India	9.1%	7.4%	5.3%	4.8%	4.3%	3.9%	3.5%	3.5%
Punjab	Rajasthan	7.6%	6.2%	4.5%	4.0%	3.6%	3.3%	3.0%	3.0%
Punjab	Uttarakhand	8.5%	7.0%	5.0%	4.5%	4.0%	3.7%	3.3%	3.3%
Punjab	West Bengal	7.9%	6.4%	4.7%	4.1%	3.7%	3.4%	3.1%	3.1%
Punjab	Rest of India	8.0%	6.6%	4.7%	4.2%	3.8%	3.5%	3.1%	3.1%
Rajasthan	Uttarakhand	8.8%	7.2%	5.2%	4.6%	4.2%	3.8%	3.4%	3.4%
Rajasthan	West Bengal	8.2%	6.7%	4.8%	4.3%	3.9%	3.5%	3.2%	3.2%
Rajasthan	Rest of India	8.3%	6.8%	4.9%	4.4%	3.9%	3.6%	3.2%	3.2%
Uttarakhand	West Bengal	9.1%	7.4%	5.4%	4.8%	4.3%	3.9%	3.5%	3.5%

Uttarakhand	Rest of India	9.3%	7.6%	5.5%	4.9%	4.4%	4.0%	3.6%	3.6%
West Bengal	West Bengal	8.5%	6.9%	5.0%	4.4%	4.0%	3.7%	3.3%	3.3%
West Bengal	Rest of India	8.6%	7.0%	5.1%	4.5%	4.1%	3.7%	3.4%	3.4%
Rest of India	Rest of India	8.8%	7.2%	5.2%	4.6%	4.2%	3.8%	3.4%	3.4%

4.2.7 Apparent Growth Rate For Group 1

Apparent growth rate is growth of traffic from $(n+1)^{th}$ year and n^{th} year. The traffic in all the years are derived using the growth rate described in above section and from this derived traffic entry and exit growth rate is derived. This is called apparent growth which is the growth at a particular entry exit pair. The table below shows apparent growth rate at entry-exit pairs whose traffic was non-zero in the base year. The last row gives the average growth rate of for a particular year.

Table 4-24 Apparent Growth Rate of Car (Entry-Exit wise)

Entry Point	Exit Point	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
A	E	7.95%	7.95%	7.96%	7.96%	7.96%	7.05%	7.06%	7.06%	7.06%	7.06%	6.84%	6.84%
A	G	8.41%	8.42%	8.43%	8.44%	8.44%	7.53%	7.54%	7.55%	7.55%	7.56%	6.89%	6.90%
B	E	8.30%	8.30%	8.30%	8.30%	8.30%	7.43%	7.43%	7.43%	7.43%	7.43%	6.64%	6.64%
B	G	8.42%	8.42%	8.42%	8.42%	8.43%	7.55%	7.55%	7.55%	7.55%	7.55%	6.61%	6.61%
D	G	7.86%	7.86%	7.86%	7.86%	7.86%	6.96%	6.96%	6.96%	6.96%	6.96%	6.83%	6.83%
E	A	8.38%	8.39%	8.40%	8.40%	8.41%	7.48%	7.49%	7.49%	7.50%	7.51%	6.98%	6.98%
E	B	8.20%	8.21%	8.21%	8.21%	8.21%	7.32%	7.32%	7.32%	7.32%	7.33%	6.72%	6.72%
E	G	7.90%	7.90%	7.90%	7.90%	7.90%	7.00%	7.00%	7.00%	7.00%	7.00%	6.81%	6.81%
G	A	8.73%	8.73%	8.74%	8.75%	8.75%	7.83%	7.83%	7.84%	7.85%	7.85%	7.04%	7.05%
G	B	8.33%	8.33%	8.33%	8.34%	8.34%	7.45%	7.45%	7.45%	7.46%	7.46%	6.69%	6.69%
G	C	7.86%	7.86%	7.86%	7.86%	7.86%	6.96%	6.96%	6.96%	6.96%	6.96%	6.83%	6.83%
G	D	7.86%	7.86%	7.86%	7.86%	7.86%	6.96%	6.96%	6.96%	6.96%	6.96%	6.83%	6.83%
G	E	7.86%	7.86%	7.86%	7.86%	7.86%	6.96%	6.96%	6.96%	6.96%	6.96%	6.83%	6.83%
Avg.		8.16%	8.16%	8.16%	8.17%	8.17%	7.27%	7.27%	7.27%	7.27%	7.27%	6.81%	6.81%

Apparent Growth Rate of Car (Entry-Exit wise)

Entry Point	Exit Point	2034-35	2035-36	2036-37	2037-38	2038-39	2039-40	2040-41	2041-42	2042-43	2043-44	2044-45	2045-46
A	E	6.84%	6.84%	6.84%	6.16%	6.16%	6.16%	6.16%	6.16%	5.61%	5.61%	5.61%	5.61%
A	G	6.90%	6.90%	6.90%	6.24%	6.24%	6.24%	6.24%	6.25%	5.70%	5.70%	5.70%	5.70%
B	E	6.64%	6.64%	6.64%	6.00%	6.00%	6.00%	6.00%	6.00%	5.47%	5.47%	5.47%	5.47%
B	G	6.61%	6.61%	6.61%	5.97%	5.97%	5.97%	5.97%	5.97%	5.45%	5.45%	5.45%	5.45%
D	G	6.83%	6.83%	6.83%	6.15%	6.15%	6.15%	6.15%	6.15%	5.60%	5.60%	5.60%	5.60%
E	A	6.98%	6.98%	6.99%	6.30%	6.30%	6.30%	6.30%	6.31%	5.75%	5.75%	5.75%	5.75%
E	B	6.72%	6.72%	6.72%	6.07%	6.07%	6.07%	6.07%	6.07%	5.53%	5.53%	5.53%	5.53%
E	G	6.81%	6.81%	6.81%	6.14%	6.14%	6.14%	6.14%	6.14%	5.59%	5.59%	5.59%	5.59%
G	A	7.05%	7.05%	7.05%	6.37%	6.38%	6.38%	6.38%	6.38%	5.82%	5.83%	5.83%	5.83%

G	B	6.69%	6.69%	6.69%	6.04%	6.04%	6.04%	6.04%	6.04%	5.51%	5.51%	5.51%	5.51%
G	C	6.83%	6.83%	6.83%	6.15%	6.15%	6.15%	6.15%	6.15%	5.60%	5.60%	5.60%	5.60%
G	D	6.83%	6.83%	6.83%	6.15%	6.15%	6.15%	6.15%	6.15%	5.60%	5.60%	5.60%	5.60%
G	E	6.83%	6.83%	6.83%	6.15%	6.15%	6.15%	6.15%	6.15%	5.60%	5.60%	5.60%	5.60%
Avg.		6.81%	6.81%	6.81%	6.14%	6.14%	6.15%	6.15%	6.15%	5.60%	5.60%	5.60%	5.60%

Apparent Growth Rate of Car (Entry-Exit wise)

Entry Point	Exit Point	2046-47	2047-48	2048-49	2049-50	2050-51	2051-52	2052-53	2053-54	2054-55	2055-56	2056-57	2057-58
A	E	5.61%	5.11%	5.11%	5.11%	5.11%	5.11%	4.59%	4.59%	4.59%	4.59%	4.59%	4.59%
A	G	5.71%	5.19%	5.20%	5.20%	5.20%	5.20%	4.68%	4.68%	4.68%	4.68%	4.68%	4.68%
B	E	5.47%	4.97%	4.97%	4.97%	4.97%	4.97%	4.47%	4.47%	4.47%	4.47%	4.47%	4.47%
B	G	5.45%	4.96%	4.96%	4.96%	4.96%	4.96%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%
D	G	5.60%	5.09%	5.09%	5.09%	5.09%	5.09%	4.58%	4.58%	4.58%	4.58%	4.58%	4.58%
E	A	5.75%	5.23%	5.23%	5.23%	5.23%	5.23%	4.71%	4.71%	4.71%	4.71%	4.71%	4.71%
E	B	5.53%	5.03%	5.03%	5.03%	5.03%	5.03%	4.52%	4.53%	4.53%	4.53%	4.53%	4.53%
E	G	5.59%	5.08%	5.08%	5.08%	5.08%	5.08%	4.57%	4.57%	4.57%	4.57%	4.57%	4.57%
G	A	5.83%	5.31%	5.31%	5.31%	5.31%	5.31%	4.78%	4.78%	4.78%	4.78%	4.78%	4.78%
G	B	5.51%	5.01%	5.01%	5.01%	5.01%	5.01%	4.51%	4.51%	4.51%	4.51%	4.51%	4.51%
G	C	5.60%	5.09%	5.09%	5.09%	5.09%	5.09%	4.58%	4.58%	4.58%	4.58%	4.58%	4.58%
G	D	5.60%	5.09%	5.09%	5.09%	5.09%	5.09%	4.58%	4.58%	4.58%	4.58%	4.58%	4.58%
G	E	5.60%	5.09%	5.09%	5.09%	5.09%	5.09%	4.58%	4.58%	4.58%	4.58%	4.58%	4.58%
Avg.		5.60%	5.10%	5.10%	5.10%	5.10%	5.10%	4.58%	4.58%	4.59%	4.59%	4.59%	4.59%

Table 4-25 Apparent Growth Rate of Bus (Entry-Exit wise)

Entry Point	Exit Point	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
A	E	4.90%	4.90%	4.90%	4.90%	4.91%	3.91%	3.91%	3.91%	3.91%	3.91%	3.81%	3.81%
A	G	5.26%	5.27%	5.27%	5.27%	5.28%	4.23%	4.24%	4.24%	4.24%	4.24%	3.87%	3.87%
B	E	5.24%	5.24%	5.24%	5.24%	5.24%	4.23%	4.23%	4.23%	4.23%	4.23%	3.69%	3.69%
B	G	5.23%	5.23%	5.23%	5.24%	5.24%	4.22%	4.22%	4.22%	4.22%	4.22%	3.69%	3.69%
D	G	4.89%	4.89%	4.89%	4.89%	4.89%	3.90%	3.90%	3.90%	3.90%	3.90%	3.82%	3.82%
E	A	4.92%	4.92%	4.92%	4.92%	4.92%	3.92%	3.92%	3.92%	3.92%	3.92%	3.83%	3.83%
E	B	5.21%	5.21%	5.21%	5.21%	5.21%	4.20%	4.20%	4.20%	4.20%	4.20%	3.70%	3.70%
E	G	4.89%	4.89%	4.89%	4.89%	4.89%	3.90%	3.90%	3.90%	3.90%	3.90%	3.82%	3.82%
G	A	5.17%	5.17%	5.17%	5.17%	5.18%	4.16%	4.16%	4.16%	4.16%	4.16%	3.68%	3.69%
G	B	5.21%	5.21%	5.21%	5.21%	5.21%	4.19%	4.20%	4.20%	4.20%	4.20%	3.71%	3.71%
G	D	4.89%	4.89%	4.89%	4.89%	4.89%	3.90%	3.90%	3.90%	3.90%	3.90%	3.82%	3.82%
G	E	4.89%	4.89%	4.89%	4.89%	4.89%	3.90%	3.90%	3.90%	3.90%	3.90%	3.82%	3.82%
Avg.		5.06%	5.06%	5.06%	5.06%	5.06%	4.05%	4.05%	4.06%	4.06%	4.06%	3.77%	3.77%

Apparent Growth Rate of Bus (Entry-Exit wise)

Entry Point	Exit Point	2034-35	2035-36	2036-37	2037-38	2038-39	2039-40	2040-41	2041-42	2042-43	2043-44	2044-45	2045-46
A	E	3.81%	3.81%	3.81%	3.43%	3.43%	3.43%	3.43%	3.43%	3.12%	3.12%	3.12%	3.12%
A	G	3.87%	3.88%	3.88%	3.50%	3.50%	3.50%	3.50%	3.50%	3.19%	3.19%	3.19%	3.19%
B	E	3.69%	3.69%	3.69%	3.33%	3.33%	3.33%	3.33%	3.33%	3.04%	3.04%	3.04%	3.04%
B	G	3.69%	3.69%	3.69%	3.34%	3.34%	3.34%	3.34%	3.34%	3.04%	3.04%	3.04%	3.04%
D	G	3.82%	3.82%	3.82%	3.44%	3.44%	3.44%	3.44%	3.44%	3.13%	3.13%	3.13%	3.13%
E	A	3.83%	3.83%	3.83%	3.45%	3.45%	3.45%	3.45%	3.45%	3.14%	3.14%	3.14%	3.14%
E	B	3.70%	3.70%	3.70%	3.34%	3.34%	3.34%	3.34%	3.34%	3.05%	3.05%	3.05%	3.05%
E	G	3.82%	3.82%	3.82%	3.44%	3.44%	3.44%	3.44%	3.44%	3.13%	3.13%	3.13%	3.13%
G	A	3.69%	3.69%	3.69%	3.33%	3.33%	3.33%	3.34%	3.34%	3.04%	3.05%	3.05%	3.05%
G	B	3.71%	3.71%	3.71%	3.35%	3.35%	3.35%	3.35%	3.35%	3.05%	3.05%	3.05%	3.05%
G	D	3.82%	3.82%	3.82%	3.44%	3.44%	3.44%	3.44%	3.44%	3.13%	3.13%	3.13%	3.13%
G	E	3.82%	3.82%	3.82%	3.44%	3.44%	3.44%	3.44%	3.44%	3.13%	3.13%	3.13%	3.13%
Avg.		3.77%	3.77%	3.77%	3.40%	3.40%	3.40%	3.40%	3.40%	3.10%	3.10%	3.10%	3.10%

Apparent Growth Rate of Bus (Entry-Exit wise)

Entry Point	Exit Point	2046-47	2047-48	2048-49	2049-50	2050-51	2051-52	2052-53	2053-54	2054-55	2055-56	2056-57	2057-58
A	E	3.12%	2.84%	2.84%	2.84%	2.84%	2.84%	2.56%	2.56%	2.56%	2.56%	2.56%	2.56%
A	G	3.19%	2.91%	2.91%	2.91%	2.91%	2.91%	2.62%	2.62%	2.62%	2.62%	2.62%	2.62%
B	E	3.04%	2.76%	2.76%	2.76%	2.76%	2.76%	2.48%	2.48%	2.48%	2.48%	2.48%	2.48%
B	G	3.04%	2.77%	2.77%	2.77%	2.77%	2.77%	2.49%	2.49%	2.49%	2.49%	2.49%	2.49%
D	G	3.13%	2.85%	2.85%	2.85%	2.85%	2.85%	2.56%	2.56%	2.56%	2.56%	2.56%	2.56%
E	A	3.14%	2.86%	2.86%	2.86%	2.86%	2.86%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%
E	B	3.05%	2.77%	2.77%	2.77%	2.77%	2.77%	2.49%	2.49%	2.49%	2.49%	2.49%	2.49%
E	G	3.13%	2.85%	2.85%	2.85%	2.85%	2.85%	2.56%	2.56%	2.56%	2.56%	2.56%	2.56%
G	A	3.05%	2.77%	2.77%	2.77%	2.77%	2.78%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
G	B	3.05%	2.78%	2.78%	2.78%	2.78%	2.78%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
G	D	3.13%	2.85%	2.85%	2.85%	2.85%	2.85%	2.56%	2.56%	2.56%	2.56%	2.56%	2.56%
G	E	3.13%	2.85%	2.85%	2.85%	2.85%	2.85%	2.56%	2.56%	2.56%	2.56%	2.56%	2.56%
Avg.		3.10%	2.82%	2.82%	2.82%	2.82%	2.82%	2.54%	2.54%	2.54%	2.54%	2.54%	2.54%

Table 4-26 Apparent Growth Rate of LCV (Entry-Exit wise)

Entry Point	Exit Point	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
A	E	5.91%	5.91%	5.92%	5.92%	5.92%	4.83%	4.83%	4.83%	4.83%	4.83%	3.87%	3.87%
A	G	5.95%	5.95%	5.95%	5.96%	5.96%	4.86%	4.87%	4.87%	4.87%	4.87%	3.78%	3.78%
B	E	5.90%	5.90%	5.90%	5.90%	5.90%	4.82%	4.82%	4.82%	4.82%	4.82%	3.91%	3.91%
B	G	6.21%	6.21%	6.21%	6.21%	6.21%	5.07%	5.07%	5.07%	5.07%	5.07%	3.93%	3.93%
C	G	5.74%	5.74%	5.74%	5.74%	5.74%	4.69%	4.69%	4.69%	4.69%	4.69%	3.89%	3.89%
D	G	5.74%	5.74%	5.74%	5.74%	5.74%	4.69%	4.69%	4.69%	4.69%	4.69%	3.89%	3.89%
E	A	5.90%	5.90%	5.90%	5.90%	5.90%	4.82%	4.82%	4.82%	4.82%	4.82%	3.93%	3.93%
E	B	6.03%	6.03%	6.03%	6.03%	6.03%	4.92%	4.92%	4.93%	4.93%	4.93%	3.92%	3.92%
E	C	5.74%	5.74%	5.74%	5.74%	5.74%	4.69%	4.69%	4.69%	4.69%	4.69%	3.89%	3.89%
E	G	5.74%	5.74%	5.74%	5.74%	5.74%	4.69%	4.69%	4.69%	4.69%	4.69%	3.89%	3.89%
G	A	6.13%	6.13%	6.13%	6.14%	6.14%	5.01%	5.01%	5.01%	5.02%	5.02%	3.89%	3.89%
G	B	6.13%	6.13%	6.13%	6.14%	6.14%	5.01%	5.01%	5.01%	5.01%	5.01%	3.91%	3.91%
G	C	5.74%	5.74%	5.74%	5.74%	5.74%	4.69%	4.69%	4.69%	4.69%	4.69%	3.89%	3.89%
G	D	5.74%	5.74%	5.74%	5.74%	5.74%	4.69%	4.69%	4.69%	4.69%	4.69%	3.89%	3.89%
G	E	5.74%	5.74%	5.74%	5.74%	5.74%	4.69%	4.69%	4.69%	4.69%	4.69%	3.89%	3.89%
Avg.		5.89%	5.89%	5.89%	5.89%	5.89%	4.81%	4.81%	4.81%	4.81%	4.81%	3.89%	3.89%

Apparent Growth Rate of LCV (Entry-Exit wise)

Entry Point	Exit Point	2034-35	2035-36	2036-37	2037-38	2038-39	2039-40	2040-41	2041-42	2042-43	2043-44	2044-45	2045-46
A	E	3.87%	3.87%	3.88%	3.45%	3.45%	3.45%	3.45%	3.45%	3.00%	3.00%	3.00%	3.00%
A	G	3.78%	3.78%	3.78%	3.37%	3.37%	3.37%	3.37%	3.37%	2.96%	2.96%	2.96%	2.96%
B	E	3.91%	3.91%	3.91%	3.48%	3.48%	3.48%	3.48%	3.48%	3.02%	3.02%	3.02%	3.02%
B	G	3.93%	3.93%	3.93%	3.50%	3.50%	3.50%	3.50%	3.50%	3.08%	3.08%	3.08%	3.08%
C	G	3.89%	3.89%	3.89%	3.46%	3.46%	3.46%	3.46%	3.46%	2.98%	2.98%	2.98%	2.98%
D	G	3.89%	3.89%	3.89%	3.46%	3.46%	3.46%	3.46%	3.46%	2.98%	2.98%	2.98%	2.98%
E	A	3.93%	3.93%	3.93%	3.50%	3.50%	3.50%	3.50%	3.50%	3.03%	3.03%	3.03%	3.03%
E	B	3.92%	3.92%	3.92%	3.49%	3.49%	3.49%	3.49%	3.49%	3.04%	3.04%	3.04%	3.04%
E	C	3.89%	3.89%	3.89%	3.46%	3.46%	3.46%	3.46%	3.46%	2.98%	2.98%	2.98%	2.98%
E	G	3.89%	3.89%	3.89%	3.46%	3.46%	3.46%	3.46%	3.46%	2.98%	2.98%	2.98%	2.98%
G	A	3.89%	3.89%	3.89%	3.46%	3.46%	3.46%	3.46%	3.46%	3.04%	3.04%	3.05%	3.05%
G	B	3.91%	3.91%	3.91%	3.48%	3.48%	3.48%	3.48%	3.48%	3.05%	3.05%	3.05%	3.05%
G	C	3.89%	3.89%	3.89%	3.46%	3.46%	3.46%	3.46%	3.46%	2.98%	2.98%	2.98%	2.98%
G	D	3.89%	3.89%	3.89%	3.46%	3.46%	3.46%	3.46%	3.46%	2.98%	2.98%	2.98%	2.98%
G	E	3.89%	3.89%	3.89%	3.46%	3.46%	3.46%	3.46%	3.46%	2.98%	2.98%	2.98%	2.98%
Avg.		3.89%	3.89%	3.89%	3.46%	3.46%	3.46%	3.46%	3.46%	3.00%	3.00%	3.01%	3.01%

Apparent Growth Rate of LCV (Entry-Exit wise)

Entry Point	Exit Point	2046-47	2047-48	2048-49	2049-50	2050-51	2051-52	2052-53	2053-54	2054-55	2055-56	2056-57	2057-58
A	E	3.00%	2.64%	2.64%	2.64%	2.64%	2.64%	2.38%	2.38%	2.38%	2.38%	2.38%	2.38%
A	G	2.96%	2.64%	2.64%	2.64%	2.64%	2.64%	2.37%	2.37%	2.38%	2.38%	2.38%	2.38%
B	E	3.02%	2.64%	2.64%	2.64%	2.64%	2.64%	2.38%	2.38%	2.38%	2.38%	2.38%	2.38%
B	G	3.08%	2.74%	2.74%	2.74%	2.74%	2.74%	2.47%	2.47%	2.47%	2.47%	2.47%	2.47%
C	G	2.98%	2.59%	2.59%	2.59%	2.59%	2.59%	2.33%	2.33%	2.33%	2.33%	2.33%	2.33%
D	G	2.98%	2.59%	2.59%	2.59%	2.59%	2.59%	2.33%	2.33%	2.33%	2.33%	2.33%	2.33%
E	A	3.03%	2.65%	2.65%	2.65%	2.65%	2.65%	2.39%	2.39%	2.39%	2.39%	2.39%	2.39%
E	B	3.04%	2.68%	2.69%	2.69%	2.69%	2.69%	2.42%	2.42%	2.42%	2.42%	2.42%	2.42%
E	C	2.98%	2.59%	2.59%	2.59%	2.59%	2.59%	2.33%	2.33%	2.33%	2.33%	2.33%	2.33%
E	G	2.98%	2.59%	2.59%	2.59%	2.59%	2.59%	2.33%	2.33%	2.33%	2.33%	2.33%	2.33%
G	A	3.05%	2.71%	2.71%	2.71%	2.71%	2.71%	2.44%	2.44%	2.44%	2.44%	2.44%	2.44%
G	B	3.05%	2.71%	2.71%	2.71%	2.71%	2.71%	2.44%	2.44%	2.44%	2.44%	2.44%	2.44%
G	C	2.98%	2.59%	2.59%	2.59%	2.59%	2.59%	2.33%	2.33%	2.33%	2.33%	2.33%	2.33%
G	D	2.98%	2.59%	2.59%	2.59%	2.59%	2.59%	2.33%	2.33%	2.33%	2.33%	2.33%	2.33%
G	E	2.98%	2.59%	2.59%	2.59%	2.59%	2.59%	2.33%	2.33%	2.33%	2.33%	2.33%	2.33%
Avg.		3.01%	2.64%	2.64%	2.64%	2.64%	2.64%	2.37%	2.37%	2.37%	2.37%	2.37%	2.37%

Table 4-27 Apparent Growth Rate of 2 Axle Truck (Entry-Exit wise)

Entry Point	Exit Point	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
A	E	6.25%	6.25%	6.25%	6.25%	6.25%	5.10%	5.10%	5.10%	5.10%	5.10%	4.24%	4.24%
A	G	6.70%	6.70%	6.70%	6.70%	6.70%	5.47%	5.48%	5.48%	5.48%	5.48%	4.13%	4.13%
B	E	6.56%	6.56%	6.56%	6.56%	6.56%	5.36%	5.36%	5.36%	5.36%	5.36%	4.28%	4.28%
B	G	6.76%	6.76%	6.76%	6.76%	6.76%	5.52%	5.52%	5.52%	5.52%	5.52%	4.27%	4.27%
D	G	6.30%	6.30%	6.30%	6.30%	6.30%	5.14%	5.14%	5.14%	5.14%	5.14%	4.21%	4.21%
E	A	6.47%	6.47%	6.47%	6.47%	6.47%	5.28%	5.29%	5.29%	5.29%	5.29%	4.30%	4.30%
E	B	6.49%	6.49%	6.49%	6.49%	6.49%	5.30%	5.30%	5.30%	5.30%	5.30%	4.27%	4.27%
E	G	6.25%	6.25%	6.25%	6.25%	6.25%	5.10%	5.10%	5.10%	5.10%	5.10%	4.24%	4.24%
G	A	6.66%	6.67%	6.67%	6.67%	6.67%	5.45%	5.45%	5.45%	5.45%	5.46%	4.14%	4.14%
G	B	6.75%	6.75%	6.75%	6.75%	6.75%	5.51%	5.51%	5.52%	5.52%	5.52%	4.26%	4.26%
G	D	6.30%	6.30%	6.30%	6.30%	6.30%	5.15%	5.15%	5.15%	5.15%	5.15%	4.21%	4.21%
G	E	6.42%	6.42%	6.42%	6.42%	6.42%	5.25%	5.25%	5.25%	5.25%	5.25%	4.14%	4.14%
Avg.		6.49%	6.49%	6.49%	6.49%	6.49%	5.30%	5.30%	5.30%	5.30%	5.31%	4.22%	4.22%

Apparent Growth Rate of 2 Axle Truck (Entry-Exit wise)

Entry Point	Exit Point	2034-35	2035-36	2036-37	2037-38	2038-39	2039-40	2040-41	2041-42	2042-43	2043-44	2044-45	2045-46
A	E	4.24%	4.24%	4.24%	3.77%	3.77%	3.77%	3.77%	3.77%	3.24%	3.24%	3.24%	3.24%
A	G	4.13%	4.13%	4.13%	3.68%	3.68%	3.68%	3.68%	3.68%	3.27%	3.27%	3.27%	3.27%
B	E	4.28%	4.28%	4.28%	3.81%	3.81%	3.81%	3.81%	3.81%	3.32%	3.32%	3.32%	3.32%
B	G	4.27%	4.27%	4.27%	3.80%	3.80%	3.80%	3.80%	3.80%	3.34%	3.34%	3.34%	3.34%
D	G	4.21%	4.21%	4.21%	3.75%	3.75%	3.75%	3.75%	3.75%	3.24%	3.24%	3.24%	3.24%
E	A	4.30%	4.30%	4.30%	3.83%	3.83%	3.83%	3.83%	3.83%	3.32%	3.32%	3.32%	3.32%
E	B	4.27%	4.27%	4.27%	3.80%	3.80%	3.80%	3.80%	3.80%	3.30%	3.30%	3.30%	3.30%
E	G	4.24%	4.24%	4.24%	3.77%	3.77%	3.77%	3.77%	3.77%	3.24%	3.24%	3.24%	3.24%
G	A	4.14%	4.14%	4.14%	3.68%	3.69%	3.69%	3.69%	3.69%	3.27%	3.27%	3.27%	3.27%
G	B	4.26%	4.26%	4.26%	3.79%	3.79%	3.79%	3.79%	3.79%	3.34%	3.34%	3.34%	3.34%
G	D	4.21%	4.21%	4.21%	3.75%	3.75%	3.75%	3.75%	3.75%	3.24%	3.24%	3.24%	3.24%
G	E	4.14%	4.14%	4.14%	3.68%	3.68%	3.68%	3.68%	3.68%	3.22%	3.22%	3.22%	3.22%
Avg.		4.22%	4.22%	4.22%	3.76%	3.76%	3.76%	3.76%	3.76%	3.28%	3.28%	3.28%	3.28%

Apparent Growth Rate of 2 Axle Truck (Entry-Exit wise)

Entry Point	Exit Point	2046-47	2047-48	2048-49	2049-50	2050-51	2051-52	2052-53	2053-54	2054-55	2055-56	2056-57	2057-58
A	E	3.24%	2.82%	2.82%	2.82%	2.82%	2.82%	2.54%	2.54%	2.54%	2.54%	2.54%	2.54%
A	G	3.27%	2.94%	2.94%	2.94%	2.94%	2.94%	2.65%	2.65%	2.65%	2.65%	2.65%	2.65%
B	E	3.32%	2.92%	2.92%	2.92%	2.92%	2.92%	2.63%	2.63%	2.63%	2.63%	2.63%	2.63%
B	G	3.34%	2.98%	2.98%	2.98%	2.98%	2.98%	2.68%	2.68%	2.68%	2.68%	2.68%	2.68%
D	G	3.24%	2.83%	2.83%	2.83%	2.83%	2.83%	2.55%	2.55%	2.55%	2.55%	2.55%	2.55%
E	A	3.32%	2.91%	2.91%	2.91%	2.91%	2.91%	2.62%	2.62%	2.62%	2.62%	2.62%	2.62%
E	B	3.30%	2.90%	2.90%	2.90%	2.90%	2.90%	2.61%	2.61%	2.61%	2.61%	2.61%	2.61%
E	G	3.24%	2.82%	2.82%	2.82%	2.82%	2.82%	2.54%	2.54%	2.54%	2.54%	2.54%	2.54%
G	A	3.27%	2.94%	2.94%	2.94%	2.94%	2.94%	2.64%	2.64%	2.65%	2.65%	2.65%	2.65%
G	B	3.34%	2.98%	2.98%	2.98%	2.98%	2.98%	2.68%	2.68%	2.68%	2.68%	2.68%	2.68%
G	D	3.24%	2.83%	2.83%	2.83%	2.83%	2.83%	2.55%	2.55%	2.55%	2.55%	2.55%	2.55%
G	E	3.22%	2.85%	2.85%	2.85%	2.85%	2.85%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%
Avg.		3.28%	2.89%	2.89%	2.89%	2.89%	2.89%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%

Table 4-28 Apparent Growth Rate of 3 Axle Truck (Entry-Exit wise)

Entry Point	Exit Point	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
A	E	3.70%	3.70%	3.70%	3.70%	3.70%	3.02%	3.02%	3.02%	3.02%	3.02%	2.46%	2.46%
A	G	3.86%	3.86%	3.86%	3.86%	3.86%	3.15%	3.15%	3.15%	3.15%	3.15%	2.40%	2.40%
B	E	3.78%	3.78%	3.78%	3.79%	3.79%	3.09%	3.09%	3.09%	3.09%	3.09%	2.51%	2.51%
B	G	3.99%	3.99%	3.99%	3.99%	3.99%	3.26%	3.26%	3.26%	3.26%	3.26%	2.50%	2.50%

D	G	3.71%	3.71%	3.71%	3.71%	3.71%	3.03%	3.03%	3.03%	3.03%	3.03%	2.49%	2.49%
E	A	3.79%	3.79%	3.79%	3.79%	3.79%	3.09%	3.09%	3.09%	3.10%	3.10%	2.48%	2.48%
E	B	3.81%	3.81%	3.81%	3.81%	3.81%	3.11%	3.11%	3.11%	3.11%	3.11%	2.51%	2.51%
E	G	3.71%	3.71%	3.71%	3.71%	3.71%	3.03%	3.03%	3.03%	3.03%	3.03%	2.49%	2.49%
G	A	3.85%	3.85%	3.85%	3.85%	3.85%	3.15%	3.15%	3.15%	3.15%	3.15%	2.41%	2.41%
G	B	3.97%	3.97%	3.97%	3.97%	3.97%	3.24%	3.24%	3.24%	3.24%	3.24%	2.51%	2.51%
G	C	3.69%	3.69%	3.69%	3.69%	3.69%	3.01%	3.01%	3.01%	3.01%	3.01%	2.50%	2.50%
G	D	3.71%	3.71%	3.71%	3.71%	3.71%	3.03%	3.03%	3.03%	3.03%	3.03%	2.48%	2.48%
G	E	3.72%	3.72%	3.72%	3.72%	3.72%	3.04%	3.04%	3.04%	3.04%	3.04%	2.41%	2.41%
Avg.		3.79%	3.79%	3.79%	3.79%	3.79%	3.10%	3.10%	3.10%	3.10%	3.10%	2.47%	2.47%

Apparent Growth Rate of 3 Axle Truck (Entry-Exit wise)

Entry Point	Exit Point	2034-35	2035-36	2036-37	2037-38	2038-39	2039-40	2040-41	2041-42	2042-43	2043-44	2044-45	2045-46
A	E	2.46%	2.46%	2.46%	2.43%	2.43%	2.43%	2.43%	2.43%	2.11%	2.11%	2.11%	2.11%
A	G	2.40%	2.40%	2.40%	2.37%	2.37%	2.37%	2.37%	2.37%	2.10%	2.10%	2.10%	2.10%
B	E	2.51%	2.51%	2.51%	2.48%	2.48%	2.48%	2.48%	2.48%	2.15%	2.15%	2.15%	2.15%
B	G	2.50%	2.50%	2.50%	2.47%	2.47%	2.47%	2.47%	2.47%	2.18%	2.18%	2.18%	2.18%
D	G	2.49%	2.49%	2.49%	2.46%	2.46%	2.46%	2.46%	2.46%	2.12%	2.12%	2.12%	2.12%
E	A	2.48%	2.48%	2.48%	2.45%	2.45%	2.45%	2.45%	2.45%	2.13%	2.13%	2.13%	2.13%
E	B	2.51%	2.51%	2.51%	2.49%	2.49%	2.49%	2.49%	2.49%	2.16%	2.16%	2.16%	2.16%
E	G	2.49%	2.49%	2.49%	2.46%	2.46%	2.46%	2.46%	2.46%	2.13%	2.13%	2.13%	2.13%
G	A	2.41%	2.41%	2.41%	2.38%	2.39%	2.39%	2.39%	2.39%	2.11%	2.11%	2.11%	2.11%
G	B	2.51%	2.51%	2.51%	2.48%	2.48%	2.48%	2.48%	2.48%	2.18%	2.18%	2.18%	2.18%
G	C	2.50%	2.50%	2.50%	2.47%	2.47%	2.47%	2.47%	2.47%	2.13%	2.13%	2.13%	2.13%
G	D	2.48%	2.48%	2.48%	2.45%	2.45%	2.45%	2.45%	2.45%	2.12%	2.12%	2.12%	2.12%
G	E	2.41%	2.41%	2.41%	2.38%	2.38%	2.38%	2.38%	2.38%	2.08%	2.08%	2.08%	2.08%
Avg.		2.47%	2.47%	2.47%	2.45%	2.45%	2.45%	2.45%	2.45%	2.13%	2.13%	2.13%	2.13%

Apparent Growth Rate of 3 Axle Truck (Entry-Exit wise)

Entry Point	Exit Point	2046-47	2047-48	2048-49	2049-50	2050-51	2051-52	2052-53	2053-54	2054-55	2055-56	2056-57	2057-58
A	E	2.11%	1.85%	1.85%	1.85%	1.85%	1.85%	1.66%	1.66%	1.66%	1.66%	1.66%	1.66%
A	G	2.10%	1.89%	1.89%	1.89%	1.89%	1.89%	1.70%	1.70%	1.70%	1.70%	1.70%	1.70%
B	E	2.15%	1.88%	1.89%	1.89%	1.89%	1.89%	1.70%	1.70%	1.70%	1.70%	1.70%	1.70%
B	G	2.18%	1.95%	1.95%	1.95%	1.95%	1.95%	1.75%	1.75%	1.75%	1.75%	1.75%	1.75%
D	G	2.12%	1.86%	1.86%	1.86%	1.86%	1.86%	1.67%	1.67%	1.67%	1.67%	1.67%	1.67%
E	A	2.13%	1.88%	1.88%	1.88%	1.88%	1.88%	1.69%	1.69%	1.69%	1.69%	1.69%	1.69%
E	B	2.16%	1.89%	1.89%	1.89%	1.89%	1.89%	1.70%	1.70%	1.70%	1.70%	1.70%	1.70%
E	G	2.13%	1.85%	1.85%	1.85%	1.85%	1.85%	1.67%	1.67%	1.67%	1.67%	1.67%	1.67%
G	A	2.11%	1.89%	1.89%	1.89%	1.89%	1.89%	1.70%	1.70%	1.70%	1.70%	1.70%	1.70%

G	B	2.18%	1.95%	1.95%	1.95%	1.95%	1.95%	1.75%	1.75%	1.75%	1.75%	1.75%	1.75%
G	C	2.13%	1.85%	1.85%	1.85%	1.85%	1.85%	1.67%	1.67%	1.67%	1.67%	1.67%	1.67%
G	D	2.12%	1.85%	1.85%	1.85%	1.85%	1.85%	1.67%	1.67%	1.67%	1.67%	1.67%	1.67%
G	E	2.08%	1.84%	1.84%	1.84%	1.84%	1.84%	1.66%	1.66%	1.66%	1.66%	1.66%	1.66%
Avg.		2.13%	1.88%	1.88%	1.88%	1.88%	1.88%	1.69%	1.69%	1.69%	1.69%	1.69%	1.69%

Table 4-29Apparent Growth Rate of MAV (4-6 Axle Truck) (Entry-Exit wise)

Entry Point	Exit Point	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
A	E	8.58%	8.58%	8.58%	8.58%	8.59%	7.01%	7.01%	7.02%	7.02%	7.02%	5.72%	5.72%
A	G	8.37%	8.37%	8.38%	8.38%	8.39%	6.85%	6.85%	6.86%	6.86%	6.86%	5.24%	5.24%
B	E	8.76%	8.76%	8.77%	8.77%	8.77%	7.16%	7.16%	7.16%	7.17%	7.17%	5.77%	5.77%
B	G	9.07%	9.07%	9.07%	9.07%	9.08%	7.41%	7.41%	7.41%	7.41%	7.41%	5.69%	5.69%
C	G	8.40%	8.40%	8.40%	8.40%	8.40%	6.86%	6.86%	6.86%	6.86%	6.86%	5.70%	5.70%
D	G	8.50%	8.50%	8.50%	8.50%	8.50%	6.94%	6.94%	6.94%	6.94%	6.94%	5.64%	5.64%
E	A	9.09%	9.09%	9.09%	9.10%	9.10%	7.43%	7.44%	7.44%	7.44%	7.45%	5.81%	5.81%
E	B	8.62%	8.62%	8.62%	8.63%	8.63%	7.04%	7.05%	7.05%	7.05%	7.05%	5.73%	5.73%
E	G	8.46%	8.46%	8.46%	8.46%	8.46%	6.91%	6.91%	6.91%	6.91%	6.91%	5.65%	5.65%
G	A	8.46%	8.47%	8.47%	8.48%	8.48%	6.93%	6.93%	6.94%	6.94%	6.94%	5.29%	5.29%
G	B	9.20%	9.20%	9.21%	9.21%	9.21%	7.52%	7.52%	7.52%	7.52%	7.52%	5.71%	5.71%
G	C	8.40%	8.40%	8.40%	8.40%	8.40%	6.86%	6.86%	6.86%	6.86%	6.86%	5.70%	5.70%
G	D	8.46%	8.46%	8.46%	8.46%	8.46%	6.90%	6.90%	6.90%	6.90%	6.90%	5.66%	5.66%
G	E	8.49%	8.49%	8.49%	8.49%	8.49%	6.93%	6.93%	6.93%	6.93%	6.94%	5.61%	5.61%
Avg.		8.63%	8.63%	8.64%	8.64%	8.64%	7.05%	7.06%	7.06%	7.06%	7.06%	5.64%	5.64%

Apparent Growth Rate of MAV (4-6 Axle Truck) (Entry-Exit wise)

Entry Point	Exit Point	2034-35	2035-36	2036-37	2037-38	2038-39	2039-40	2040-41	2041-42	2042-43	2043-44	2044-45	2045-46
A	E	5.72%	5.72%	5.72%	5.09%	5.09%	5.09%	5.09%	5.10%	4.41%	4.41%	4.41%	4.41%
A	G	5.24%	5.24%	5.24%	4.67%	4.67%	4.67%	4.67%	4.67%	4.13%	4.14%	4.14%	4.14%
B	E	5.77%	5.77%	5.77%	5.13%	5.13%	5.13%	5.13%	5.13%	4.46%	4.46%	4.46%	4.46%
B	G	5.69%	5.69%	5.69%	5.06%	5.06%	5.06%	5.06%	5.06%	4.47%	4.47%	4.47%	4.47%
C	G	5.70%	5.70%	5.70%	5.07%	5.07%	5.07%	5.07%	5.07%	4.36%	4.36%	4.36%	4.36%
D	G	5.64%	5.64%	5.64%	5.02%	5.02%	5.02%	5.02%	5.02%	4.35%	4.35%	4.35%	4.35%
E	A	5.81%	5.81%	5.81%	5.17%	5.17%	5.17%	5.18%	5.18%	4.54%	4.54%	4.55%	4.55%
E	B	5.73%	5.73%	5.73%	5.10%	5.10%	5.10%	5.10%	5.10%	4.42%	4.42%	4.42%	4.42%
E	G	5.65%	5.65%	5.65%	5.03%	5.03%	5.03%	5.03%	5.03%	4.34%	4.34%	4.34%	4.34%
G	A	5.29%	5.29%	5.29%	4.71%	4.71%	4.71%	4.72%	4.72%	4.18%	4.18%	4.18%	4.18%
G	B	5.71%	5.71%	5.71%	5.08%	5.08%	5.09%	5.09%	5.09%	4.50%	4.50%	4.50%	4.50%
G	C	5.70%	5.70%	5.70%	5.07%	5.07%	5.07%	5.07%	5.07%	4.36%	4.36%	4.36%	4.36%
G	D	5.66%	5.66%	5.66%	5.04%	5.04%	5.04%	5.04%	5.04%	4.35%	4.35%	4.35%	4.35%
G	E	5.61%	5.61%	5.61%	4.99%	4.99%	5.00%	5.00%	5.00%	4.33%	4.33%	4.33%	4.33%
Avg.		5.64%	5.64%	5.64%	5.02%	5.02%	5.02%	5.02%	5.02%	4.37%	4.37%	4.37%	4.37%

Apparent Growth Rate of MAV (4-6 Axle Truck) (Entry-Exit wise)

Entry Point	Exit Point	2046-47	2047-48	2048-49	2049-50	2050-51	2051-52	2052-53	2053-54	2054-55	2055-56	2056-57	2057-58
A	E	4.41%	3.86%	3.86%	3.86%	3.86%	3.86%	3.48%	3.48%	3.48%	3.48%	3.48%	3.48%
A	G	4.14%	3.71%	3.71%	3.71%	3.71%	3.71%	3.34%	3.34%	3.34%	3.34%	3.34%	3.35%
B	E	4.46%	3.92%	3.92%	3.92%	3.92%	3.92%	3.53%	3.53%	3.53%	3.53%	3.53%	3.53%
B	G	4.47%	3.99%	3.99%	4.00%	4.00%	4.00%	3.60%	3.60%	3.60%	3.60%	3.60%	3.60%
C	G	4.36%	3.79%	3.79%	3.79%	3.79%	3.79%	3.41%	3.41%	3.41%	3.41%	3.41%	3.41%
D	G	4.35%	3.81%	3.81%	3.81%	3.81%	3.81%	3.43%	3.43%	3.43%	3.43%	3.43%	3.43%
E	A	4.55%	4.04%	4.04%	4.04%	4.04%	4.04%	3.64%	3.64%	3.64%	3.64%	3.64%	3.64%
E	B	4.42%	3.87%	3.87%	3.87%	3.87%	3.87%	3.48%	3.48%	3.48%	3.48%	3.48%	3.48%
E	G	4.34%	3.80%	3.80%	3.80%	3.80%	3.80%	3.42%	3.42%	3.42%	3.42%	3.42%	3.42%
G	A	4.18%	3.75%	3.75%	3.75%	3.75%	3.75%	3.38%	3.38%	3.38%	3.38%	3.38%	3.38%
G	B	4.50%	4.04%	4.04%	4.04%	4.04%	4.04%	3.64%	3.64%	3.64%	3.64%	3.64%	3.64%
G	C	4.36%	3.79%	3.79%	3.79%	3.79%	3.79%	3.41%	3.41%	3.41%	3.41%	3.41%	3.41%
G	D	4.35%	3.80%	3.80%	3.80%	3.80%	3.80%	3.42%	3.42%	3.42%	3.42%	3.42%	3.42%
G	E	4.33%	3.80%	3.80%	3.80%	3.80%	3.80%	3.42%	3.42%	3.42%	3.42%	3.42%	3.42%
Avg.		4.37%	3.86%	3.86%	3.86%	3.86%	3.86%	3.47%	3.47%	3.47%	3.47%	3.47%	3.47%

5 Forecasted AADT and Revenue Forecast for Group 1

5.1 Groupwise Forecasted Entry-Exit AADT

1. The base year diverted traffic forms and input to horizon year AADT forecast.
2. Using the base year diverted traffic and growth rates between OD pairs described in the preceding chapter the horizon year mode wise sectional AADT is forecasted. 2% of induced traffic is added to the calculated AADT from the year 2025-26 to 2039-40 and 1% of induced traffic is added thereafter. The reasons for introducing induced traffic is explained in Section 5.1.1. The adopted growth rate for this project has been on conservative side which is described in Section 5.1.2.
3. The following section provides mode wise entry-exit AADT for base year and horizon year for Group 1.

5.1.1 Induced Traffic

Induced traffic/developmental traffic is defined as additional traffic that is likely to be generated when a new Transportation Infrastructure is built. A 2% induced traffic is added over normal growth. This traffic is generated on account of new infrastructure which is over and above the normal growth.To understand the induced traffic as against normal growth please refer to the following extract from World Bank Report on China's High Speed Rail Development authored by Martha Lawrence, Richard Bullock, and Zimung Li. This report was published post development of High-Speed Rail (HSR) in China.

"In addition to its direct economic benefits, HSR has played an important role in promoting regional economic and macroeconomic development. The HSR services have generated many new trips, for both business and leisure. The business trips are in principle associated with the development of larger and better-connected markets, which in turn should promote regional development for the areas served by the new services. Interviews with both passengers and businesses confirm that HSR services have significantly increased mobility and interaction between urban centers. With about 50 percent of riders traveling for business purposes, for a total ridership of 1.7 billion passengers per year, over 850 million new opportunities are created to connect, trade, and exchange ideas each year—compared to the situation prior to the HSR—leading to additional economic activity, innovation, and increased productivity."

5.1.2 Conservative Estimate of Growth Adopted

1. In current study the total diverted traffic of cars on the project corridor is 4,892 (Table 3-19). This is the result of diverted traffic based on cost benefit analysis described in Section 3.5 and 3.6. However, in adjoining highways the at Old NH-24 ON Brijghat Plaza and Niyamatpur Plaza the total number of cars is 21,103 and 13,102 (Table 2-7). In horizon years the development of new infrastructure (Ganga Expressway) in the vicinity of the Highways with increasing congestion on parallel roads would increase the traffic of car over and above normal growth.
2. In case of MAV the elasticity value for growth adopted is 1.2 and further decreasing to 1.08 in horizon years (Table 4-7). This is a conservative estimate of elasticity because the growth of registered MAV is more than 10% in Uttar Pradesh and neighboring states (except Haryana, Table 4-5). The growth of vehicle registration of MAV is 13.3% in the state of Uttar Pradesh. It is to be noted that three axle truck is counted as MAV in vehicle registration data but in this traffic study MAV only means 4-6 axle truck. The traffic report has been further

conservative in adopting elasticity value of 0.53 decreasing to 0.47 in case of 3 axle truck. With NSDP growth in the range of 6-7% the elasticity value is expected to be around 1.5 for MAV but it has been adopted as 1.2 for 4-6 axle truck and 0.57 for Three Axle truck.

3. In parallel Highways the competitive advantage in terms of road user cost would decrease when compared to Ganga Expressway because of following reasons:
    a. Increase in congestion is expected to be more in parallel highways because of growth of tollable modes as well as non tollable modes. This is described in Section 1.3.4.
    b. The annual revision of toll rates for National Highways has a fixed factor of 3% + 40% of WPI increase. However, Ganga Expressway toll rate revision is based only on 40% of WPI increase. Therefore the rate of increase of toll rate of competing National Highways will be higher than Ganga Expressway.

The entry-exit MAV traffic for most likely scenario for horizon years is shown in table below. The traffic in this format is calculated for all modes and all scenarios. This is used as an input in the financial model.

Table 5-1 Most Likely Scenario MAV Traffic Entry-Exit wise

Entry	Exit	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
A	B	0	0	0	0	0	0	0	0	0	0
A	C	0	0	0	0	0	0	0	0	0	0
A	D	0	0	0	0	0	0	0	0	0	0
A	E	27	29	32	34	37	40	43	46	49	53
A	F	0	0	0	0	0	0	0	0	0	0
A	G	548	597	650	699	752	809	870	936	995	1,058
B	A	0	0	0	0	0	0	0	0	0	0
B	C	0	0	0	0	0	0	0	0	0	0
B	D	0	0	0	0	0	0	0	0	0	0
B	E	23	25	27	29	31	34	36	39	42	45
B	F	0	0	0	0	0	0	0	0	0	0
B	G	208	227	248	268	290	313	339	366	390	416
C	A	0	0	0	0	0	0	0	0	0	0
C	B	0	0	0	0	0	0	0	0	0	0
C	D	0	0	0	0	0	0	0	0	0	0
C	E	0	0	0	0	0	0	0	0	0	0
C	F	0	0	0	0	0	0	0	0	0	0
C	G	8	9	9	10	11	12	12	13	14	15
D	A	0	0	0	0	0	0	0	0	0	0
D	B	0	0	0	0	0	0	0	0	0	0
D	C	0	0	0	0	0	0	0	0	0	0
D	E	0	0	0	0	0	0	0	0	0	0
D	F	0	0	0	0	0	0	0	0	0	0
D	G	18	20	22	23	25	27	29	31	33	36
E	A	31	34	37	40	43	47	51	55	59	63
E	B	18	19	21	23	25	26	28	31	33	35
E	C	0	0	0	0	0	0	0	0	0	0
E	D	0	0	0	0	0	0	0	0	0	0

E	F	0	0	0	0	0	0	0	0	0	0
E	G	41	45	49	53	57	61	66	71	75	80
F	A	0	0	0	0	0	0	0	0	0	0
F	B	0	0	0	0	0	0	0	0	0	0
F	C	0	0	0	0	0	0	0	0	0	0
F	D	0	0	0	0	0	0	0	0	0	0
F	E	0	0	0	0	0	0	0	0	0	0
F	G	0	0	0	0	0	0	0	0	0	0
G	A	402	438	477	514	553	595	641	690	734	780
G	B	280	307	336	363	393	425	459	497	530	565
G	C	3	3	3	3	4	4	4	4	5	5
G	D	16	18	19	21	22	24	26	28	30	31
G	E	13	14	15	16	18	19	20	22	23	25
G	F	0	0	0	0	0	0	0	0	0	0

Entry	Exit	2034-35	2035-36	2036-37	2037-38	2038-39	2039-40	2040-41	2041-42	2042-43	2043-44
A	B	0	0	0	0	0	0	0	0	0	0
A	C	0	0	0	0	0	0	0	0	0	0
A	D	0	0	0	0	0	0	0	0	0	0
A	E	56	60	64	68	72	77	81	85	88	93
A	F	0	0	0	0	0	0	0	0	0	0
A	G	1,124	1,194	1,269	1,343	1,421	1,503	1,575	1,650	1,722	1,797
B	A	0	0	0	0	0	0	0	0	0	0
B	C	0	0	0	0	0	0	0	0	0	0
B	D	0	0	0	0	0	0	0	0	0	0
B	E	48	51	54	58	61	65	69	72	75	79
B	F	0	0	0	0	0	0	0	0	0	0
B	G	444	473	505	535	568	603	634	666	697	729
C	A	0	0	0	0	0	0	0	0	0	0
C	B	0	0	0	0	0	0	0	0	0	0
C	D	0	0	0	0	0	0	0	0	0	0
C	E	0	0	0	0	0	0	0	0	0	0
C	F	0	0	0	0	0	0	0	0	0	0
C	G	16	17	18	20	21	22	23	24	25	27
D	A	0	0	0	0	0	0	0	0	0	0
D	B	0	0	0	0	0	0	0	0	0	0
D	C	0	0	0	0	0	0	0	0	0	0
D	E	0	0	0	0	0	0	0	0	0	0
D	F	0	0	0	0	0	0	0	0	0	0
D	G	38	40	43	46	48	51	54	57	59	62
E	A	67	71	76	81	86	91	96	101	105	110
E	B	37	40	42	45	48	51	53	56	59	61
E	C	0	0	0	0	0	0	0	0	0	0
E	D	0	0	0	0	0	0	0	0	0	0
E	F	0	0	0	0	0	0	0	0	0	0
E	G	86	91	97	103	109	116	122	128	134	140

F	A	0	0	0	0	0	0	0	0	0	0
F	B	0	0	0	0	0	0	0	0	0	0
F	C	0	0	0	0	0	0	0	0	0	0
F	D	0	0	0	0	0	0	0	0	0	0
F	E	0	0	0	0	0	0	0	0	0	0
F	G	0	0	0	0	0	0	0	0	0	0
G	A	829	882	937	992	1,050	1,111	1,165	1,221	1,274	1,330
G	B	603	643	686	728	773	820	862	906	948	992
G	C	5	6	6	7	7	7	8	8	8	9
G	D	34	36	38	40	43	46	48	50	53	55
G	E	26	28	30	32	34	36	38	40	41	43
G	F	0	0	0	0	0	0	0	0	0	0

Entry	Exit	2044-45	2045-46	2046-47	2047-48	2048-49	2049-50	2050-51	2051-52	2052-53	2053-54
A	B	0	0	0	0	0	0	0	0	0	0
A	C	0	0	0	0	0	0	0	0	0	0
A	D	0	0	0	0	0	0	0	0	0	0
A	E	97	101	106	110	115	119	124	129	134	139
A	F	0	0	0	0	0	0	0	0	0	0
A	G	1,874	1,956	2,041	2,122	2,207	2,295	2,387	2,482	2,574	2,669
B	A	0	0	0	0	0	0	0	0	0	0
B	C	0	0	0	0	0	0	0	0	0	0
B	D	0	0	0	0	0	0	0	0	0	0
B	E	82	86	90	94	98	102	106	111	115	119
B	F	0	0	0	0	0	0	0	0	0	0
B	G	762	798	834	870	906	945	985	1,026	1,066	1,108
C	A	0	0	0	0	0	0	0	0	0	0
C	B	0	0	0	0	0	0	0	0	0	0
C	D	0	0	0	0	0	0	0	0	0	0
C	E	0	0	0	0	0	0	0	0	0	0
C	F	0	0	0	0	0	0	0	0	0	0
C	G	28	29	30	32	33	34	36	37	38	40
D	A	0	0	0	0	0	0	0	0	0	0
D	B	0	0	0	0	0	0	0	0	0	0
D	C	0	0	0	0	0	0	0	0	0	0
D	E	0	0	0	0	0	0	0	0	0	0
D	F	0	0	0	0	0	0	0	0	0	0
D	G	65	68	71	74	77	80	83	86	90	93
E	A	116	121	127	132	138	144	150	156	162	169
E	B	64	67	70	73	76	79	82	86	89	92
E	C	0	0	0	0	0	0	0	0	0	0
E	D	0	0	0	0	0	0	0	0	0	0
E	F	0	0	0	0	0	0	0	0	0	0
E	G	146	153	160	166	173	180	187	195	202	210
F	A	0	0	0	0	0	0	0	0	0	0
F	B	0	0	0	0	0	0	0	0	0	0

F	C	0	0	0	0	0	0	0	0	0	0
F	D	0	0	0	0	0	0	0	0	0	0
F	E	0	0	0	0	0	0	0	0	0	0
F	G	0	0	0	0	0	0	0	0	0	0
G	A	1,388	1,448	1,512	1,573	1,636	1,702	1,770	1,842	1,910	1,981
G	B	1,038	1,087	1,137	1,185	1,236	1,289	1,344	1,401	1,456	1,513
G	C	9	10	10	11	11	11	12	12	13	13
G	D	57	60	63	65	68	71	74	77	80	83
G	E	45	47	49	51	53	56	58	60	63	65
G	F	0	0	0	0	0	0	0	0	0	0

Entry	Exit	2054-55	2055-56	2056-57	2057-58	2058-59	2059-60	2060-61	2061-62
A	B	0	0	0	0	0	0	0	0
A	C	0	0	0	0	0	0	0	0
A	D	0	0	0	0	0	0	0	0
A	E	145	150	156	162	168	174	181	188
A	F	0	0	0	0	0	0	0	0
A	G	2,767	2,870	2,976	3,086	3,200	3,318	3,441	3,568
B	A	0	0	0	0	0	0	0	0
B	C	0	0	0	0	0	0	0	0
B	D	0	0	0	0	0	0	0	0
B	E	124	129	134	139	144	150	156	162
B	F	0	0	0	0	0	0	0	0
B	G	1,151	1,196	1,243	1,291	1,342	1,394	1,449	1,505
C	A	0	0	0	0	0	0	0	0
C	B	0	0	0	0	0	0	0	0
C	D	0	0	0	0	0	0	0	0
C	E	0	0	0	0	0	0	0	0
C	F	0	0	0	0	0	0	0	0
C	G	41	43	45	46	48	50	52	54
D	A	0	0	0	0	0	0	0	0
D	B	0	0	0	0	0	0	0	0
D	C	0	0	0	0	0	0	0	0
D	E	0	0	0	0	0	0	0	0
D	F	0	0	0	0	0	0	0	0
D	G	97	100	104	108	112	116	121	125
E	A	175	182	189	197	204	212	221	230
E	B	96	100	103	107	112	116	120	125
E	C	0	0	0	0	0	0	0	0
E	D	0	0	0	0	0	0	0	0
E	F	0	0	0	0	0	0	0	0
E	G	218	226	235	244	253	262	272	282
F	A	0	0	0	0	0	0	0	0
F	B	0	0	0	0	0	0	0	0
F	C	0	0	0	0	0	0	0	0
F	D	0	0	0	0	0	0	0	0

F	E	0	0	0	0	0	0	0	0
F	G	0	0	0	0	0	0	0	0
G	A	2,055	2,132	2,211	2,294	2,379	2,468	2,560	2,655
G	B	1,573	1,635	1,699	1,766	1,836	1,908	1,983	2,061
G	C	14	14	15	15	16	17	17	18
G	D	86	89	92	96	99	103	107	111
G	E	67	70	72	75	78	81	84	87
G	F	0	0	0	0	0	0	0	0

5.2 Estimation of Entry-Exit Toll Rates

1. The gazette notification of Government of Uttar Pradesh provides per km base rate for expressway and base rate of structures based on the cost of structure. This forms an input to the toll rate calculation for each vehicle type. The base rate of expressway is provided in table below

Table 5-2 Base Rate of Expressway according to Gazette Notification

Toll Rates for Expressway excluding the length of Structures / Bypass	Base rate of Fee per Km (in rupees) based on the Wholesale price index(WPI) of week ending on December 2016 (WPI 343.32) for the year 2017-18
Car, Jeep, Van, LMV	2.20
Mini Bus	3.50
Bus	7.05
LMV Goods	2.20
LCV, LGV	3.50
2 Axle Truck	7.05
3 Axle Truck	10.85
MAV	10.85
HCM/EME	10.85
Oversized	13.85
SemiTollable	1.10

2. Table 5-3 provides the section length and details of structures for tolling.

Table 5-3 Group 1 Expressway Section Length and Structure Details

SectionFrom Code	SectionTo Code	Location of TP (Sch R)	Length of Expressway excluding Structure in km (Sch R)	Length of Stuctures	Cost of Stuctures	Location of Structures
A	B	013+400	27.310	0.060	69.309	019+941
B	C	035+270	19.370	0.000	0.000	
C	D	054+640	18.581	0.960	299.960	066+850

D	E	074+181	28.246	0.000	0.000	
E	F	102+427	20.755	0.106	60.056	123+100
F	G	123+288	14.312	0.000	0.000	

The entry-exit single entry MAV toll rate for most likely scenario for horizon years is shown in table below. The toll rate in this format is calculated for all modes and all scenarios and for return and monthly passes. This is used as an inpurt in the financial model.

Table 5-4 MAV Single Entry Toll Rate

Entry	Exit	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
A	B	435	445	455	465	470	480	490	500	515	525
A	C	965	985	1,005	1,025	1,045	1,070	1,090	1,110	1,135	1,160
A	D	1,200	1,220	1,245	1,270	1,295	1,320	1,350	1,375	1,405	1,440
A	E	1,640	1,675	1,705	1,740	1,770	1,810	1,845	1,885	1,925	1,970
A	F	1,895	1,935	1,970	2,010	2,050	2,095	2,135	2,180	2,225	2,280
A	G	2,075	2,115	2,155	2,200	2,240	2,290	2,335	2,385	2,435	2,495
B	A	435	445	455	465	470	480	490	500	515	525
B	C	530	540	550	560	575	585	595	610	625	640
B	D	760	775	790	805	820	840	855	875	895	915
B	E	1,205	1,225	1,250	1,275	1,300	1,330	1,355	1,385	1,415	1,445
B	F	1,460	1,490	1,520	1,550	1,580	1,610	1,645	1,680	1,715	1,755
B	G	1,640	1,670	1,705	1,735	1,770	1,810	1,845	1,885	1,925	1,970
C	A	965	985	1,005	1,025	1,045	1,070	1,090	1,110	1,135	1,160
C	B	530	540	550	560	575	585	595	610	625	640
C	D	520	530	540	550	565	575	585	600	610	625
C	E	965	980	1,000	1,020	1,040	1,065	1,085	1,105	1,130	1,155
C	F	1,220	1,245	1,270	1,295	1,320	1,345	1,375	1,405	1,435	1,465
C	G	1,400	1,425	1,455	1,480	1,510	1,545	1,575	1,605	1,640	1,680
D	A	1,200	1,220	1,245	1,270	1,295	1,320	1,350	1,375	1,405	1,440
D	B	760	775	790	805	820	840	855	875	895	915
D	C	520	530	540	550	565	575	585	600	610	625
D	E	440	450	460	470	480	490	495	510	520	530
D	F	700	715	725	740	755	775	785	805	820	840
D	G	875	895	910	930	945	970	985	1,010	1,030	1,055
E	A	1,640	1,675	1,705	1,740	1,770	1,810	1,845	1,885	1,925	1,970
E	B	1,205	1,225	1,250	1,275	1,300	1,330	1,355	1,385	1,415	1,445
E	C	965	980	1,000	1,020	1,040	1,065	1,085	1,105	1,130	1,155
E	D	440	450	460	470	480	490	495	510	520	530
E	F	350	355	365	370	375	385	395	400	410	420
E	G	525	535	550	560	570	580	595	605	620	635
F	A	1,895	1,935	1,970	2,010	2,050	2,095	2,135	2,180	2,225	2,280
F	B	1,460	1,490	1,520	1,550	1,580	1,610	1,645	1,680	1,715	1,755
F	C	1,220	1,245	1,270	1,295	1,320	1,345	1,375	1,405	1,435	1,465
F	D	700	715	725	740	755	775	785	805	820	840
F	E	350	355	365	370	375	385	395	400	410	420
F	G	175	180	185	190	190	195	200	205	210	215

G	A	2,075	2,115	2,155	2,200	2,240	2,290	2,335	2,385	2,435	2,495
G	B	1,640	1,670	1,705	1,735	1,770	1,810	1,845	1,885	1,925	1,970
G	C	1,400	1,425	1,455	1,480	1,510	1,545	1,575	1,605	1,640	1,680
G	D	875	895	910	930	945	970	985	1,010	1,030	1,055
G	E	525	535	550	560	570	580	595	605	620	635
G	F	175	180	185	190	190	195	200	205	210	215

Entry	Exit	2034-35	2035-36	2036-37	2037-38	2038-39	2039-40	2040-41	2041-42	2042-43	2043-44
A	B	535	550	560	575	590	600	620	635	650	665
A	C	1,190	1,215	1,245	1,270	1,300	1,335	1,370	1,405	1,440	1,475
A	D	1,475	1,505	1,540	1,575	1,615	1,650	1,695	1,740	1,780	1,825
A	E	2,015	2,065	2,110	2,155	2,210	2,260	2,320	2,380	2,440	2,500
A	F	2,335	2,385	2,440	2,495	2,555	2,615	2,685	2,755	2,825	2,890
A	G	2,550	2,610	2,670	2,725	2,795	2,860	2,935	3,010	3,085	3,160
B	A	535	550	560	575	590	600	620	635	650	665
B	C	655	670	680	695	715	730	750	770	790	810
B	D	935	960	980	1,000	1,025	1,050	1,075	1,105	1,130	1,160
B	E	1,480	1,515	1,545	1,580	1,620	1,660	1,705	1,745	1,790	1,835
B	F	1,795	1,840	1,880	1,920	1,965	2,015	2,070	2,120	2,175	2,225
B	G	2,015	2,060	2,105	2,155	2,205	2,260	2,320	2,380	2,435	2,495
C	A	1,190	1,215	1,245	1,270	1,300	1,335	1,370	1,405	1,440	1,475
C	B	655	670	680	695	715	730	750	770	790	810
C	D	640	655	670	685	700	720	740	755	775	795
C	E	1,185	1,210	1,240	1,265	1,295	1,330	1,365	1,400	1,435	1,470
C	F	1,500	1,535	1,570	1,605	1,645	1,680	1,730	1,770	1,815	1,860
C	G	1,720	1,760	1,795	1,835	1,880	1,925	1,980	2,030	2,080	2,130
D	A	1,475	1,505	1,540	1,575	1,615	1,650	1,695	1,740	1,780	1,825
D	B	935	960	980	1,000	1,025	1,050	1,075	1,105	1,130	1,160
D	C	640	655	670	685	700	720	740	755	775	795
D	E	545	555	570	580	595	610	625	640	660	675
D	F	860	880	900	920	940	965	990	1,015	1,040	1,065
D	G	1,080	1,105	1,130	1,155	1,180	1,210	1,240	1,275	1,305	1,335
E	A	2,015	2,065	2,110	2,155	2,210	2,260	2,320	2,380	2,440	2,500
E	B	1,480	1,515	1,545	1,580	1,620	1,660	1,705	1,745	1,790	1,835
E	C	1,185	1,210	1,240	1,265	1,295	1,330	1,365	1,400	1,435	1,470
E	D	545	555	570	580	595	610	625	640	660	675
E	F	430	440	450	460	470	480	495	505	520	530
E	G	650	660	680	690	710	725	745	765	785	805
F	A	2,335	2,385	2,440	2,495	2,555	2,615	2,685	2,755	2,825	2,890
F	B	1,795	1,840	1,880	1,920	1,965	2,015	2,070	2,120	2,175	2,225
F	C	1,500	1,535	1,570	1,605	1,645	1,680	1,730	1,770	1,815	1,860
F	D	860	880	900	920	940	965	990	1,015	1,040	1,065
F	E	430	440	450	460	470	480	495	505	520	530
F	G	220	225	230	235	240	245	250	260	265	270
G	A	2,550	2,610	2,670	2,725	2,795	2,860	2,935	3,010	3,085	3,160
G	B	2,015	2,060	2,105	2,155	2,205	2,260	2,320	2,380	2,435	2,495

G	C	1,720	1,760	1,795	1,835	1,880	1,925	1,980	2,030	2,080	2,130
G	D	1,080	1,105	1,130	1,155	1,180	1,210	1,240	1,275	1,305	1,335
G	E	650	660	680	690	710	725	745	765	785	805
G	F	220	225	230	235	240	245	250	260	265	270

Entry	Exit	2044-45	2045-46	2046-47	2047-48	2048-49	2049-50	2050-51	2051-52	2052-53	2053-54
A	B	685	700	720	740	760	780	805	830	850	875
A	C	1,515	1,555	1,595	1,640	1,685	1,735	1,785	1,835	1,885	1,945
A	D	1,875	1,925	1,975	2,035	2,085	2,145	2,205	2,270	2,335	2,405
A	E	2,565	2,635	2,705	2,785	2,855	2,935	3,020	3,110	3,195	3,295
A	F	2,970	3,050	3,130	3,220	3,305	3,400	3,495	3,595	3,695	3,810
A	G	3,245	3,335	3,425	3,520	3,615	3,715	3,825	3,935	4,040	4,165
B	A	685	700	720	740	760	780	805	830	850	875
B	C	830	855	875	900	925	950	980	1,005	1,035	1,065
B	D	1,190	1,225	1,255	1,290	1,325	1,365	1,405	1,445	1,485	1,530
B	E	1,885	1,935	1,985	2,040	2,095	2,155	2,215	2,280	2,345	2,415
B	F	2,285	2,350	2,410	2,480	2,545	2,615	2,690	2,770	2,845	2,935
B	G	2,565	2,635	2,705	2,780	2,855	2,935	3,020	3,105	3,190	3,290
C	A	1,515	1,555	1,595	1,640	1,685	1,735	1,785	1,835	1,885	1,945
C	B	830	855	875	900	925	950	980	1,005	1,035	1,065
C	D	815	835	860	885	910	935	960	990	1,015	1,045
C	E	1,505	1,550	1,590	1,635	1,680	1,725	1,775	1,825	1,875	1,935
C	F	1,910	1,965	2,015	2,070	2,125	2,185	2,250	2,315	2,380	2,450
C	G	2,190	2,250	2,305	2,370	2,435	2,505	2,575	2,650	2,725	2,805
D	A	1,875	1,925	1,975	2,035	2,085	2,145	2,205	2,270	2,335	2,405
D	B	1,190	1,225	1,255	1,290	1,325	1,365	1,405	1,445	1,485	1,530
D	C	815	835	860	885	910	935	960	990	1,015	1,045
D	E	690	710	730	750	770	790	815	840	860	890
D	F	1,095	1,125	1,155	1,185	1,220	1,250	1,290	1,325	1,365	1,405
D	G	1,370	1,410	1,445	1,490	1,530	1,570	1,615	1,660	1,710	1,760
E	A	2,565	2,635	2,705	2,785	2,855	2,935	3,020	3,110	3,195	3,295
E	B	1,885	1,935	1,985	2,040	2,095	2,155	2,215	2,280	2,345	2,415
E	C	1,505	1,550	1,590	1,635	1,680	1,725	1,775	1,825	1,875	1,935
E	D	690	710	730	750	770	790	815	840	860	890
E	F	545	560	575	595	610	625	645	660	680	700
E	G	825	845	870	895	920	945	970	1,000	1,025	1,060
F	A	2,970	3,050	3,130	3,220	3,305	3,400	3,495	3,595	3,695	3,810
F	B	2,285	2,350	2,410	2,480	2,545	2,615	2,690	2,770	2,845	2,935
F	C	1,910	1,965	2,015	2,070	2,125	2,185	2,250	2,315	2,380	2,450
F	D	1,095	1,125	1,155	1,185	1,220	1,250	1,290	1,325	1,365	1,405
F	E	545	560	575	595	610	625	645	660	680	700
F	G	280	285	295	300	310	320	325	335	345	355
G	A	3,245	3,335	3,425	3,520	3,615	3,715	3,825	3,935	4,040	4,165
G	B	2,565	2,635	2,705	2,780	2,855	2,935	3,020	3,105	3,190	3,290
G	C	2,190	2,250	2,305	2,370	2,435	2,505	2,575	2,650	2,725	2,805
G	D	1,370	1,410	1,445	1,490	1,530	1,570	1,615	1,660	1,710	1,760

G	E	825	845	870	895	920	945	970	1,000	1,025	1,060
G	F	280	285	295	300	310	320	325	335	345	355

Entry	Exit	2054-55	2055-56	2056-57	2057-58	2058-59	2059-60	2060-61	2061-62
A	B	900	930	955	985	1,015	1,050	1,080	1,115
A	C	2,000	2,060	2,120	2,185	2,250	2,320	2,395	2,470
A	D	2,475	2,550	2,620	2,705	2,785	2,875	2,965	3,060
A	E	3,385	3,490	3,590	3,705	3,815	3,935	4,060	4,185
A	F	3,920	4,040	4,155	4,285	4,415	4,550	4,695	4,845
A	G	4,285	4,415	4,540	4,685	4,825	4,980	5,135	5,295
B	A	900	930	955	985	1,015	1,050	1,080	1,115
B	C	1,095	1,130	1,160	1,200	1,235	1,275	1,315	1,355
B	D	1,570	1,620	1,665	1,720	1,770	1,825	1,885	1,945
B	E	2,485	2,560	2,635	2,715	2,800	2,885	2,980	3,070
B	F	3,015	3,110	3,195	3,300	3,400	3,505	3,615	3,730
B	G	3,380	3,485	3,585	3,700	3,810	3,930	4,055	4,180
C	A	2,000	2,060	2,120	2,185	2,250	2,320	2,395	2,470
C	B	1,095	1,130	1,160	1,200	1,235	1,275	1,315	1,355
C	D	1,075	1,110	1,140	1,175	1,210	1,250	1,290	1,330
C	E	1,990	2,050	2,110	2,175	2,240	2,310	2,385	2,460
C	F	2,520	2,600	2,670	2,755	2,840	2,930	3,020	3,115
C	G	2,885	2,975	3,060	3,155	3,250	3,355	3,460	3,570
D	A	2,475	2,550	2,620	2,705	2,785	2,875	2,965	3,060
D	B	1,570	1,620	1,665	1,720	1,770	1,825	1,885	1,945
D	C	1,075	1,110	1,140	1,175	1,210	1,250	1,290	1,330
D	E	915	940	970	1,000	1,030	1,060	1,095	1,130
D	F	1,445	1,490	1,530	1,580	1,625	1,680	1,730	1,785
D	G	1,810	1,865	1,920	1,980	2,040	2,105	2,170	2,240
E	A	3,385	3,490	3,590	3,705	3,815	3,935	4,060	4,185
E	B	2,485	2,560	2,635	2,715	2,800	2,885	2,980	3,070
E	C	1,990	2,050	2,110	2,175	2,240	2,310	2,385	2,460
E	D	915	940	970	1,000	1,030	1,060	1,095	1,130
E	F	720	745	765	790	810	840	865	890
E	G	1,090	1,120	1,155	1,190	1,225	1,265	1,305	1,345
F	A	3,920	4,040	4,155	4,285	4,415	4,550	4,695	4,845
F	B	3,015	3,110	3,195	3,300	3,400	3,505	3,615	3,730
F	C	2,520	2,600	2,670	2,755	2,840	2,930	3,020	3,115
F	D	1,445	1,490	1,530	1,580	1,625	1,680	1,730	1,785
F	E	720	745	765	790	810	840	865	890
F	G	365	380	390	400	415	425	440	455
G	A	4,285	4,415	4,540	4,685	4,825	4,980	5,135	5,295
G	B	3,380	3,485	3,585	3,700	3,810	3,930	4,055	4,180
G	C	2,885	2,975	3,060	3,155	3,250	3,355	3,460	3,570
G	D	1,810	1,865	1,920	1,980	2,040	2,105	2,170	2,240
G	E	1,090	1,120	1,155	1,190	1,225	1,265	1,305	1,345
G	F	365	380	390	400	415	425	440	455

5.3 Forecasted Toll Revenue and PCU for Group 1

1. The toll rates and forecasted AADT forms an input to revenue estimate for base year and horizon years. Section 5.1 provides the entry-exit AADT for base and horizon years and Section 5.2 provides entry-exit wise toll rates for base and horizon years.
2. In revenue calculation 90% of vehicles are assumed to single entry, 7% as return pass and 3% as monthly pass.
3. The following sections provide revenue estimates for base year and horizon years.
4. The growth rates adopted for calculation of AADT and revenue is based on average value of apparent growth rate described in Section 4.2.7. The tables (Table 4-24 to Table 4-29) in Section 4.2.7 also gives average value of growth rate for each financial year. This average growth is applied on base year and future year with induced growth as defined in 5.1.1 to obtain AADT and revenue in the financial model. It may be noted that there is negligible difference in AADT provided in previous section which is based on actual values of apparent growth rates (entry-exit wise) and AADT of financial model. The five-year average of growth rate used in financial model is shown in Table 5-5. After obtaining traffic from this growth rate induced traffic is applied.

Table 5-5 Growth Rate of financial Model

	Car, Jeep, Van, LMV	Bus	LCV, LGV	2 Axle Truck	3 Axle Truck	MAV
2022-23 to 2026-27	8.16%	5.06%	5.89%	6.49%	3.79%	8.64%
2027-28 to 2031-32	7.27%	4.06%	4.81%	5.30%	3.10%	7.06%
2032-33 to 2036-37	6.81%	3.77%	3.89%	4.22%	2.47%	5.64%
2037-38 to 2041-42	6.15%	3.40%	3.46%	3.76%	2.45%	5.02%
2042-43 to 2046-47	5.60%	3.10%	3.01%	3.28%	2.13%	4.37%
2047-48 to 2051-52	5.10%	2.82%	2.64%	2.89%	1.88%	3.86%
2052-53 to 2056-57	4.59%	2.54%	2.37%	2.60%	1.69%	3.47%
2057-58 to 2061-62	4.59%	2.54%	2.37%	2.61%	1.69%	3.47%

5. The revenue and PCU forecast was done for three scenarios namely optimistic, pessimistic and most likely. The variation of parameters based from most liley scenario based on which optimistic and pessimistic scenarios were calculated is shown in table below.

Parameter	Pessimistic	Optimistic
Seasonality	-15%	10%
ADT	-15%	10%
Growth Rate	-20%	10%

6. The revenue forecast for most likely, pessimistic and optimistic scenario is shown in tables below.

Table 5-6 Annual Revenue in crores for most likely scenario

Most Likely	Car, Jeep, Van, LMV	Bus	LCV, LGV	2 Axle Truck	3 Axle Truck	MAV	Total Revenue
2024-25	66	51	35	22	57	155	387
2025-26	74	56	39	24	62	175	430
2026-27	83	61	43	27	67	198	479
2027-28	93	66	47	30	72	221	530
2028-29	104	72	51	33	77	245	581
2029-30	116	78	56	36	83	274	642
2030-31	132	84	61	39	89	305	710
2031-32	147	92	67	43	95	340	787
2032-33	163	99	72	47	102	374	856
2033-34	180	108	78	51	109	412	937
2034-35	203	116	85	56	116	452	1,028
2035-36	224	126	92	60	124	498	1,127
2036-37	251	136	100	66	133	547	1,233
2037-38	276	147	107	71	142	598	1,341
2038-39	308	158	116	77	152	655	1,466
2039-40	338	171	125	83	162	717	1,601
2040-41	373	183	135	90	172	779	1,732
2041-42	411	196	144	96	183	846	1,878
2042-43	448	210	154	103	193	913	2,021
2043-44	492	224	164	110	204	985	2,185
2044-45	538	239	175	118	216	1,066	2,352
2045-46	586	255	188	126	229	1,153	2,538
2046-47	642	273	200	135	243	1,247	2,740
2047-48	699	291	214	144	257	1,344	2,957
2048-49	767	311	227	155	272	1,447	3,179
2049-50	833	332	243	165	287	1,560	3,420
2050-51	913	354	258	177	304	1,684	3,690
2051-52	987	378	277	189	322	1,816	3,979
2052-53	1,074	402	294	201	340	1,949	4,260
2053-54	1,169	429	314	215	360	2,099	4,586
2054-55	1,270	457	333	229	381	2,256	4,926
2055-56	1,379	488	355	245	403	2,429	5,313
2056-57	1,503	519	378	261	426	2,610	5,697
2057-58	1,641	555	404	280	451	2,814	6,144
2058-59	1,779	592	429	299	478	3,028	6,604
2059-60	1,938	632	459	319	506	3,264	7,138
2060-61	2,105	675	489	341	536	3,518	7,665
2061-62	2,291	719	522	365	568	3,790	8,254

Table 5-7 Annual Revenue in crores for pessimistic scenario

Pessimistic	Car, Jeep, Van, LMV	Bus	LCV, LGV	2 Axle Truck	3 Axle Truck	MAV	Total Revenue
2024-25	45	36	25	15	40	107	268
2025-26	50	39	27	17	43	119	295
2026-27	55	42	29	18	46	132	324
2027-28	61	45	32	20	49	145	354
2028-29	68	49	34	22	53	159	384
2029-30	74	52	37	24	56	176	419
2030-31	83	56	40	26	60	193	458
2031-32	92	61	43	28	64	212	502
2032-33	100	65	47	30	68	231	541
2033-34	109	70	50	32	73	252	586
2034-35	122	75	54	35	77	274	636
2035-36	133	81	58	38	82	298	691
2036-37	147	87	62	41	87	324	748
2037-38	160	93	67	44	93	351	807
2038-39	176	100	72	47	99	381	874
2039-40	191	107	77	50	105	413	946
2040-41	208	114	82	54	111	445	1,014
2041-42	227	121	87	57	118	479	1,089
2042-43	245	128	93	61	124	512	1,163
2043-44	266	136	98	65	130	548	1,247
2044-45	288	145	104	69	137	588	1,331
2045-46	310	154	111	73	145	631	1,424
2046-47	336	163	118	78	153	677	1,525
2047-48	363	173	125	83	161	724	1,633
2048-49	394	184	132	88	170	774	1,742
2049-50	424	195	140	94	179	828	1,860
2050-51	460	207	149	100	189	887	1,991
2051-52	492	220	159	106	199	949	2,131
2052-53	531	233	167	112	209	1,012	2,265
2053-54	573	247	178	119	221	1,083	2,422
2054-55	617	262	188	127	233	1,155	2,583
2055-56	665	278	200	135	246	1,236	2,766
2056-57	718	295	211	143	259	1,319	2,945
2057-58	777	314	225	152	273	1,413	3,153
2058-59	835	333	238	162	288	1,510	3,366
2059-60	902	354	253	172	304	1,617	3,612
2060-61	971	376	269	183	322	1,731	3,851
2061-62	1,048	399	285	194	339	1,852	4,117

Table 5-8 Annual Revenue in crores for optimistic scenario

Optimistic	Car, Jeep, Van, LMV	Bus	LCV, LGV	2 Axle Truck	3 Axle Truck	MAV	Total Revenue
2024-25	81	63	43	27	70	192	477
2025-26	92	69	48	30	76	219	535
2026-27	104	76	53	34	82	249	599
2027-28	118	83	59	37	88	280	667
2028-29	132	90	64	41	95	313	736
2029-30	148	98	70	45	103	352	817
2030-31	170	106	77	50	111	394	909
2031-32	192	116	85	55	119	443	1,013
2032-33	213	126	92	60	128	489	1,108
2033-34	237	137	100	66	137	541	1,218
2034-35	269	149	109	72	147	598	1,343
2035-36	299	161	120	78	157	661	1,480
2036-37	338	175	129	86	168	731	1,627
2037-38	373	190	140	93	180	802	1,778
2038-39	418	205	152	101	193	883	1,953
2039-40	461	222	164	110	207	971	2,142
2040-41	513	239	177	119	220	1,060	2,328
2041-42	569	257	191	128	234	1,156	2,535
2042-43	623	275	204	137	248	1,253	2,741
2043-44	687	295	218	148	263	1,357	2,975
2044-45	756	315	233	158	279	1,474	3,216
2045-46	828	338	251	170	297	1,602	3,485
2046-47	910	363	269	183	315	1,739	3,779
2047-48	996	388	288	196	334	1,882	4,094
2048-49	1,099	415	306	210	353	2,034	4,417
2049-50	1,199	444	328	225	374	2,200	4,771
2050-51	1,320	476	350	242	397	2,383	5,168
2051-52	1,434	509	376	259	422	2,581	5,595
2052-53	1,567	543	400	277	446	2,778	6,011
2053-54	1,713	580	428	296	473	3,003	6,494
2054-55	1,870	621	455	317	500	3,237	7,000
2055-56	2,039	663	487	340	531	3,497	7,577
2056-57	2,232	708	519	363	562	3,771	8,155
2057-58	2,447	758	556	389	596	4,079	8,827
2058-59	2,665	811	593	417	632	4,405	9,523
2059-60	2,916	868	635	447	671	4,764	10,330
2060-61	3,181	929	679	479	712	5,152	11,133
2061-62	3,477	993	725	513	756	5,569	12,033

7. The pcu forecast for most likely, pessimistic and optimistic scenario is shown in tables below.

Table 5-9 PCU forecast for most likely scenario

Entry+Exit_Point	A	B	C	D	E	F	G	Average PCU
2024-25	10,795	15,359	131	807	6,179	0	23,720	8,142
2025-26	11,824	16,784	143	879	6,740	0	25,952	8,903
2026-27	12,954	18,346	157	957	7,353	0	28,402	9,739
2027-28	14,020	19,849	170	1,031	7,946	0	30,734	10,536
2028-29	15,177	21,480	184	1,111	8,589	0	33,265	11,401
2029-30	16,433	23,251	199	1,198	9,286	0	36,012	12,340
2030-31	17,795	25,173	215	1,292	10,041	0	38,994	13,359
2031-32	19,275	27,261	233	1,393	10,860	0	42,232	14,465
2032-33	20,616	29,246	250	1,493	11,667	0	45,239	15,501
2033-34	22,053	31,381	268	1,600	12,537	0	48,468	16,615
2034-35	23,593	33,677	288	1,715	13,474	0	51,935	17,812
2035-36	25,243	36,149	309	1,839	14,483	0	55,659	19,097
2036-37	27,012	38,808	331	1,973	15,572	0	59,658	20,479
2037-38	28,767	41,463	354	2,105	16,660	0	63,638	21,855
2038-39	30,638	44,305	378	2,247	17,826	0	67,892	23,327
2039-40	32,633	47,349	404	2,399	19,077	0	72,438	24,900
2040-41	34,421	50,113	427	2,536	20,218	0	76,539	26,322
2041-42	36,309	53,045	452	2,682	21,431	0	80,882	27,829
2042-43	38,121	55,898	476	2,821	22,610	0	85,077	29,286
2043-44	40,027	58,911	500	2,968	23,857	0	89,498	30,823
2044-45	42,030	62,093	526	3,123	25,176	0	94,158	32,444
2045-46	44,137	65,455	554	3,287	26,572	0	99,070	34,153
2046-47	46,352	69,007	583	3,460	28,048	0	1,04,248	35,957
2047-48	48,491	72,463	610	3,626	29,483	0	1,09,265	37,705
2048-49	50,731	76,099	639	3,800	30,995	0	1,14,533	39,542
2049-50	53,078	79,926	669	3,984	32,587	0	1,20,065	41,473
2050-51	55,536	83,952	701	4,176	34,265	0	1,25,874	43,501
2051-52	58,112	88,191	734	4,379	36,034	0	1,31,975	45,632
2052-53	60,599	92,292	766	4,574	37,746	0	1,37,873	47,693
2053-54	63,195	96,592	800	4,779	39,543	0	1,44,044	49,850
2054-55	65,906	1,01,100	835	4,993	41,430	0	1,50,501	52,109
2055-56	68,736	1,05,827	871	5,218	43,410	0	1,57,258	54,474
2056-57	71,691	1,10,783	910	5,453	45,488	0	1,64,329	56,951
2057-58	74,777	1,15,980	950	5,699	47,670	0	1,71,730	59,544
2058-59	77,999	1,21,430	991	5,957	49,961	0	1,79,475	62,259
2059-60	81,364	1,27,145	1,035	6,226	52,367	0	1,87,582	65,103
2060-61	84,879	1,33,140	1,081	6,509	54,892	0	1,96,068	68,081
2061-62	88,549	1,39,428	1,129	6,805	57,544	0	2,04,952	71,201

Table 5-10 PCU forecast for pessimistic scenario

Entry+Exit_Point	A	B	C	D	E	F	G	Average PCU
2024-25	7,483	10,661	91	561	4,293	0	16,454	5,649

2025-26	8,083	11,494	98	603	4,622	0	17,756	6,094
2026-27	8,732	12,393	106	649	4,976	0	19,165	6,574
2027-28	9,340	13,253	113	691	5,316	0	20,497	7,030
2028-29	9,992	14,174	121	737	5,680	0	21,924	7,518
2029-30	10,691	15,161	129	786	6,070	0	23,454	8,042
2030-31	11,440	16,219	138	838	6,487	0	25,095	8,603
2031-32	12,243	17,355	148	894	6,934	0	26,854	9,204
2032-33	12,970	18,429	157	948	7,372	0	28,483	9,766
2033-34	13,742	19,573	167	1,006	7,839	0	30,215	10,363
2034-35	14,561	20,790	178	1,068	8,336	0	32,055	10,998
2035-36	15,430	22,085	189	1,134	8,866	0	34,011	11,673
2036-37	16,352	23,464	200	1,203	9,430	0	36,089	12,391
2037-38	17,262	24,833	212	1,272	9,991	0	38,148	13,103
2038-39	18,225	26,284	225	1,346	10,586	0	40,326	13,856
2039-40	19,242	27,822	238	1,423	11,218	0	42,633	14,654
2040-41	20,117	29,164	249	1,491	11,772	0	44,633	15,347
2041-42	21,034	30,574	261	1,561	12,355	0	46,730	16,074
2042-43	21,909	31,936	272	1,629	12,918	0	48,744	16,773
2043-44	22,822	33,362	284	1,699	13,507	0	50,849	17,503
2044-45	23,774	34,855	296	1,773	14,125	0	53,048	18,267
2045-46	24,767	36,417	309	1,850	14,772	0	55,345	19,066
2046-47	25,803	38,052	323	1,930	15,450	0	57,746	19,901
2047-48	26,798	39,634	335	2,008	16,105	0	60,061	20,706
2048-49	27,833	41,284	349	2,088	16,789	0	62,472	21,545
2049-50	28,909	43,006	362	2,172	17,504	0	64,983	22,420
2050-51	30,028	44,803	377	2,259	18,250	0	67,600	23,331
2051-52	31,192	46,678	392	2,350	19,030	0	70,325	24,281
2052-53	32,311	48,484	406	2,437	19,781	0	72,950	25,196
2053-54	33,473	50,364	421	2,528	20,563	0	75,676	26,146
2054-55	34,676	52,319	436	2,623	21,378	0	78,507	27,134
2055-56	35,925	54,352	452	2,721	22,226	0	81,448	28,161
2056-57	37,219	56,468	469	2,823	23,109	0	84,503	29,227
2057-58	38,562	58,669	486	2,929	24,029	0	87,677	30,336
2058-59	39,954	60,959	504	3,039	24,986	0	90,973	31,488
2059-60	41,397	63,342	523	3,153	25,983	0	94,398	32,685
2060-61	42,894	65,821	542	3,272	27,022	0	97,955	33,929
2061-62	44,447	68,400	562	3,396	28,103	0	1,01,652	35,223

Table 5-11 PCU forecast for optimistic scenario

Entry+Exit_Point	A	B	C	D	E	F	G	Average PCU
2024-25	13,332	18,957	162	995	7,622	0	29,287	10,051

2025-26	14,704	20,855	178	1,090	8,369	0	32,262	11,066
2026-27	16,223	22,952	196	1,195	9,192	0	35,552	12,187
2027-28	17,662	24,977	214	1,295	9,990	0	38,697	13,262
2028-29	19,232	27,189	233	1,403	10,860	0	42,130	14,435
2029-30	20,947	29,605	253	1,521	11,809	0	45,880	15,716
2030-31	22,819	32,245	275	1,649	12,844	0	49,977	17,116
2031-32	24,865	35,130	300	1,788	13,974	0	54,453	18,644
2032-33	26,723	37,880	323	1,926	15,091	0	58,619	20,080
2033-34	28,723	40,855	349	2,075	16,302	0	63,116	21,631
2034-35	30,877	44,073	376	2,236	17,613	0	67,970	23,306
2035-36	33,197	47,554	406	2,409	19,035	0	73,210	25,116
2036-37	35,696	51,321	438	2,597	20,576	0	78,868	27,071
2037-38	38,182	55,093	470	2,784	22,121	0	84,516	29,024
2038-39	40,845	59,153	505	2,986	23,787	0	90,581	31,122
2039-40	43,697	63,522	542	3,203	25,582	0	97,094	33,377
2040-41	46,296	67,556	576	3,402	27,248	0	1,03,069	35,449
2041-42	49,053	71,858	612	3,614	29,027	0	1,09,426	37,656
2042-43	51,707	76,058	646	3,818	30,765	0	1,15,587	39,797
2043-44	54,509	80,515	683	4,035	32,611	0	1,22,109	42,066
2044-45	57,467	85,245	721	4,264	34,573	0	1,29,013	44,469
2045-46	60,591	90,265	762	4,507	36,658	0	1,36,323	47,015
2046-47	63,890	95,593	805	4,764	38,875	0	1,44,065	49,713
2047-48	67,082	1,00,794	846	5,013	41,037	0	1,51,587	52,337
2048-49	70,439	1,06,290	889	5,275	43,324	0	1,59,517	55,105
2049-50	73,969	1,12,098	935	5,551	45,745	0	1,67,878	58,025
2050-51	77,681	1,18,238	983	5,842	48,307	0	1,76,695	61,107
2051-52	81,585	1,24,727	1,033	6,150	51,019	0	1,85,993	64,358
2052-53	85,361	1,31,024	1,082	6,448	53,653	0	1,95,002	67,510
2053-54	89,318	1,37,651	1,133	6,762	56,428	0	2,04,464	70,822
2054-55	93,464	1,44,627	1,187	7,091	59,353	0	2,14,401	74,303
2055-56	97,807	1,51,970	1,244	7,437	62,436	0	2,24,839	77,962
2056-57	1,02,358	1,59,700	1,303	7,800	65,685	0	2,35,804	81,807
2057-58	1,07,128	1,67,838	1,365	8,183	69,110	0	2,47,323	85,849
2058-59	1,12,125	1,76,407	1,430	8,584	72,721	0	2,59,424	90,099
2059-60	1,17,363	1,85,429	1,498	9,007	76,528	0	2,72,139	94,566
2060-61	1,22,853	1,94,930	1,570	9,451	80,542	0	2,85,499	99,263
2061-62	1,28,607	2,04,936	1,645	9,918	84,774	0	2,99,538	1,04,202

5.4 Modification in Concession Agreement as per Clause 29.2

5.4.1 Most Likely Scenario

In most likely scenario as per Article 29.2 and traffic at traffic dates the concession period will be extended by 2190 days. The detailed calculations shown in table below.

Table 5-12 Calculation for Modification in Concession Period as per Article 29.2 (Most Likely Scenario)

FY:	2025-26	2030-31	2035-36	2040-41	2045-46	2050-51
Weighted Average Traffic for Previous FY:	8,142	12,340	17,812	24,900	32,444	41,473
Target Traffic:	25,719	40,759	61,199	87,256	1,18,274	1,48,644
Revised Target Traffic:		32,607	48,959	69,805	94,619	1,18,915
Percent Difference from Target:	-68.34%	-49.73%	-63.62%	-64.33%	-65.71%	-65.12%
Percent Difference exceeding 5%:	-63.34%	-44.73%	-58.62%	-59.33%	-60.71%	-60.12%
Percent Difference exceeding 5% Upto 20%:	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%
Remaining Concession Period without any Modification	10056	8230	6404	4577	2751	925
Capped at 20%	12247.6	10421.6	8595.6	6768.6	4942.6	3116.6
Remaining Resultant Concession Period (yrs):	12067.2	10421.6	8595.6	6768.6	4942.6	3116.6

5.4.2 Optimistic Scenario

In optimistic scenario as per Article 29.2 and traffic at traffic dates the concession period will be extended by 2190 days. The detailed calculation shown in table below.

Table 5-13 Calculation for Modification in Concession Period as per Article 29.2 (Optimistic Scenario)

FY:	2025-26	2030-31	2035-36	2040-41	2045-46	2050-51
Weighted Average Traffic for Previous FY:	10,051	15,716	23,306	33,377	44,469	58,025
Target Traffic:	25,719	40,759	61,199	87,256	1,18,274	1,48,644
Revised Target Traffic:		32,607	48,959	69,805	94,619	1,18,915
Percent Difference from Target:	-60.92%	-41.44%	-52.40%	-52.19%	-53.00%	-51.20%

Percent Difference exceeding 5%:	-55.92%	-36.44%	-47.40%	-47.19%	-48.00%	-46.20%
Percent Difference exceeding 5% Upto 20%:	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%
Remaining Concession Period without any Modification	10056	8230	6404	4577	2751	925
Capped at 20%	12247.6	10421.6	8595.6	6768.6	4942.6	3116.6
Remaining Resultant Concession Period (yrs):	12067.2	10421.6	8595.6	6768.6	4942.6	3116.6

5.4.3 Pessimistic Scenario

In pessimistic scenario as per Article 29.2 and traffic at traffic dates the concession period will be extended by 2190 days. The detailed calculation shown in table below.

Table 5-14 Calculation for Modification in Concession Period as per Article 29.2 (Pessimistic Scenario)

FY:	2025-26	2030-31	2035-36	2040-41	2045-46	2050-51
Weighted Average Traffic for Previous FY:	5,649	8,042	10,998	14,654	18,267	22,420
Target Traffic:	25,719	40,759	61,199	87,256	1,18,274	1,48,644
Revised Target Traffic:		32,607	48,959	69,805	94,619	1,18,915
Percent Difference from Target:	-78.04%	-60.27%	-77.54%	-79.01%	-80.69%	-81.15%
Percent Difference exceeding 5%:	-73.04%	-55.27%	-72.54%	-74.01%	-75.69%	-76.15%
Percent Difference exceeding 5% Upto 20%:	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%
Remaining Concession Period without any Modification	10056	8230	6404	4577	2751	925
Capped at 20%	12247.6	10421.6	8595.6	6768.6	4942.6	3116.6
Remaining Resultant Concession Period (days):	12067.2	10421.6	8595.6	6768.6	4942.6	3116.6

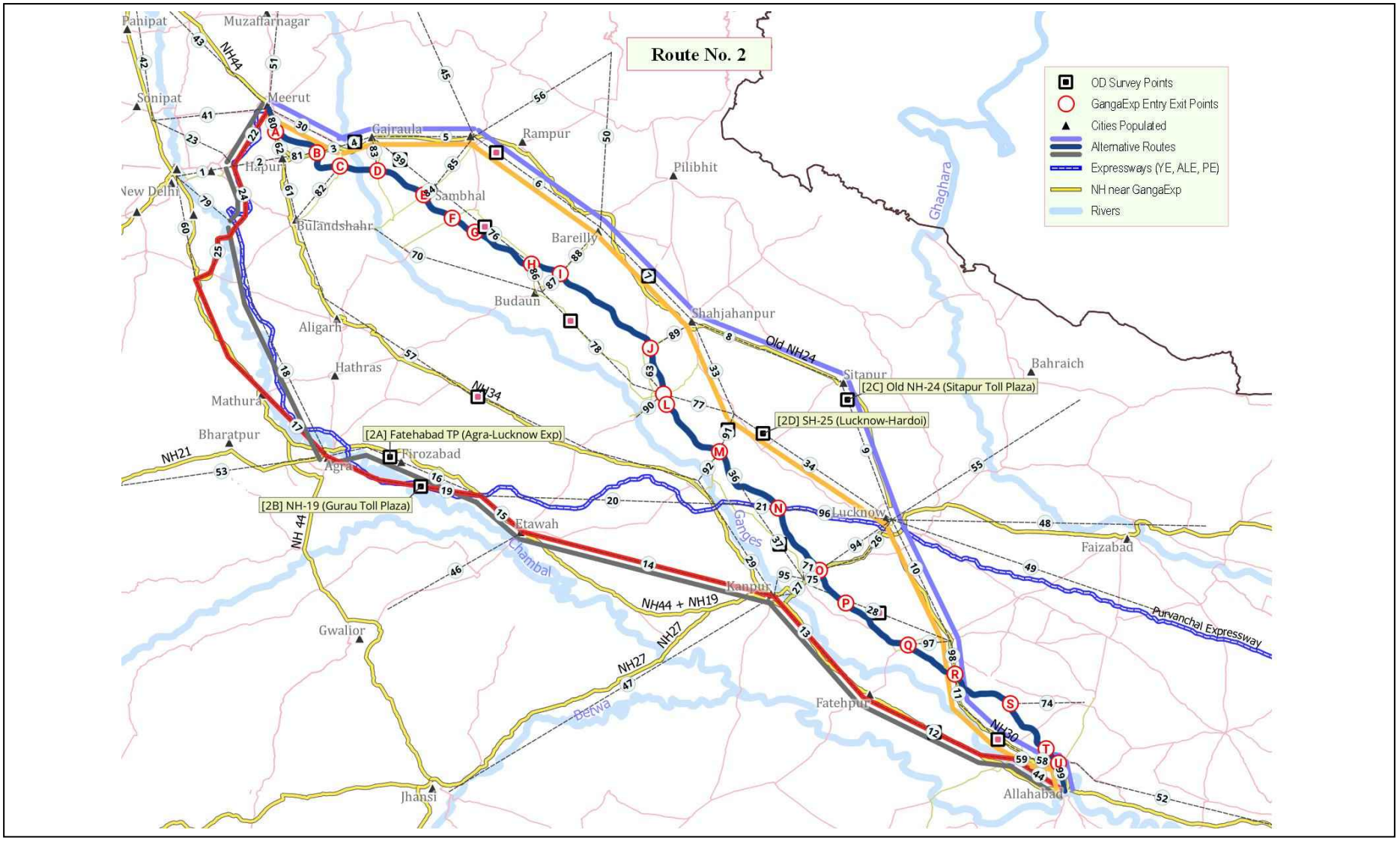
6 ANNEXURES ROUTE MAP

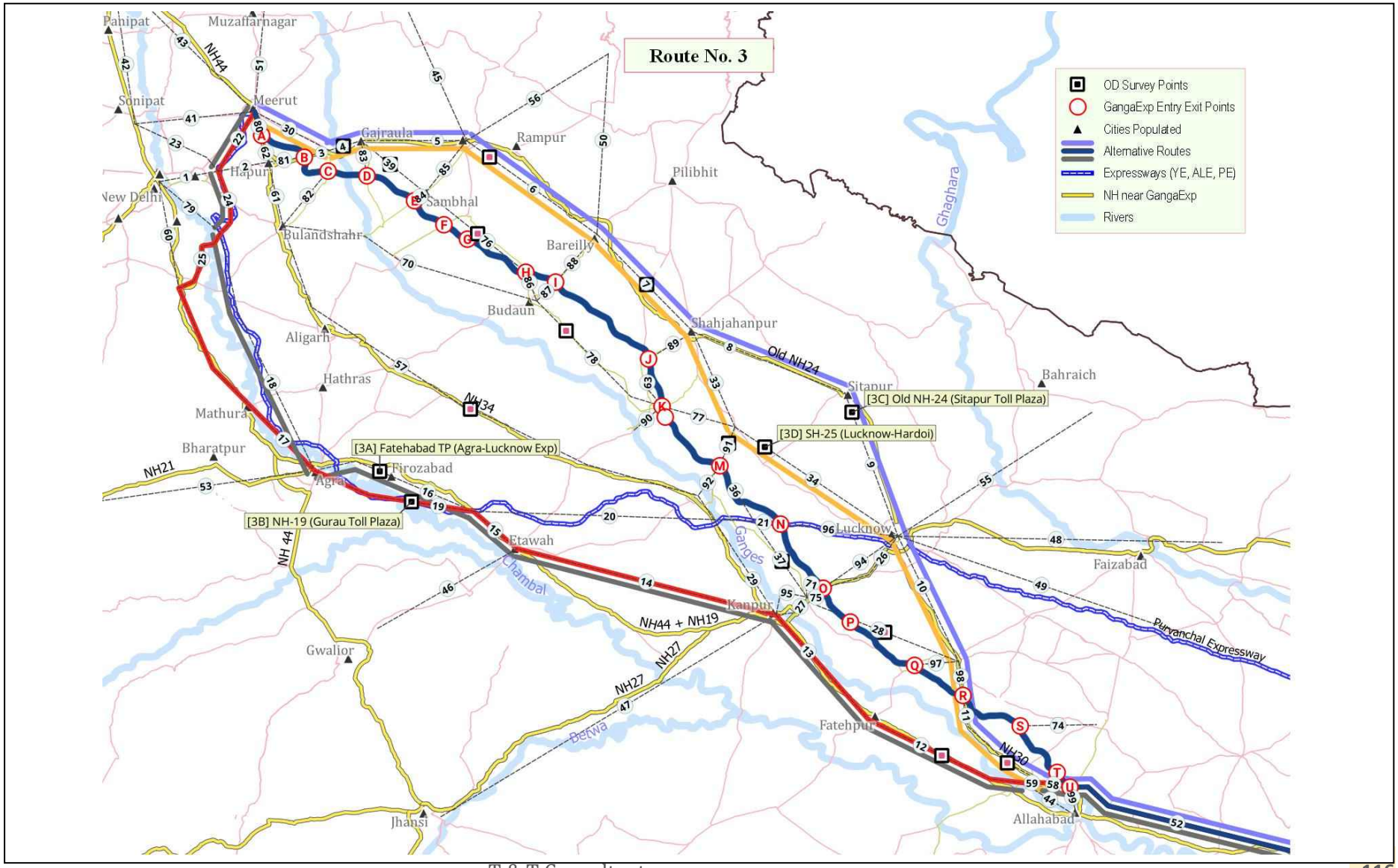
Route Code with Entry Exit

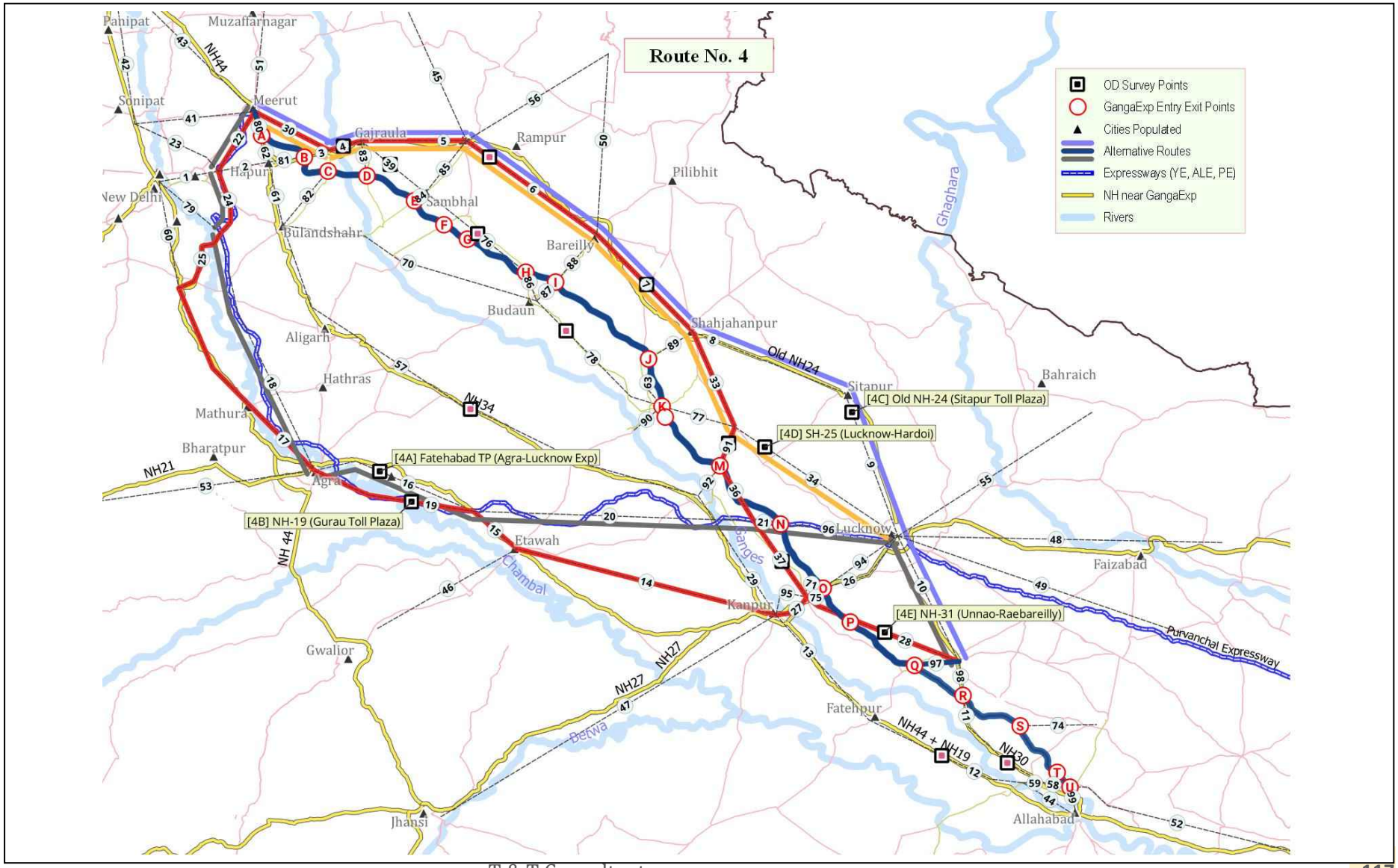
Route no.	From	To	Corridor Section (Entry-Exit)
2	Meerut	Prayagraj	A to U
3	Meerut	Varanasi	A to U
4	Meerut	Raebareli	A to Q
5	Meerut	Kanpur	A to O
6	Meerut	Lucknow	A to N
7	Meerut	Unnao	A to O
8	Meerut	Hardoi	A to K
9	Meerut	Shahjahanpur	A to J
10	Meerut	Bareilly	A to I
11	Meerut	Badaun	A to H
12	Meerut	Sambhal	A to E
13	NorthernStates	Prayagraj	A to U
14	NorthernStates	Varanasi	A to U
15	NorthernStates	Raebareli	A to Q
16	NorthernStates	Kanpur	A to O
17	NorthernStates	Unnao	A to O
18	NorthernStates	Lucknow	A to N
19	Meerut	Muradabad	A to E
20	Delhi	Prayagraj	B to U
21	Delhi	Varanasi	B to U
22	Delhi	Raebareli	B to Q
23	Delhi	Lucknow	B to N
24	Delhi	Kanpur	B to O
25	Delhi	Unnao	B to O
26	Delhi	Hardoi	B to K
27	Delhi	Shahjahanpur	B to J
28	Delhi	Bareilly	B to I
29	Delhi	Muradabad	B to E
30	Delhi	Sambhal	B to E
31	Delhi	Badaun	B to H
32	Amroha	Prayagraj	D to U
33	Amroha	Varanasi	D to U
34	Amroha	Raebareli	D to Q
35	Amroha	Lucknow	D to N
36	Amroha	Kanpur	D to O
37	Amroha	Unnao	D to O
38	Amroha	Hardoi	D to K
39	Amroha	Shahjahanpur	D to J

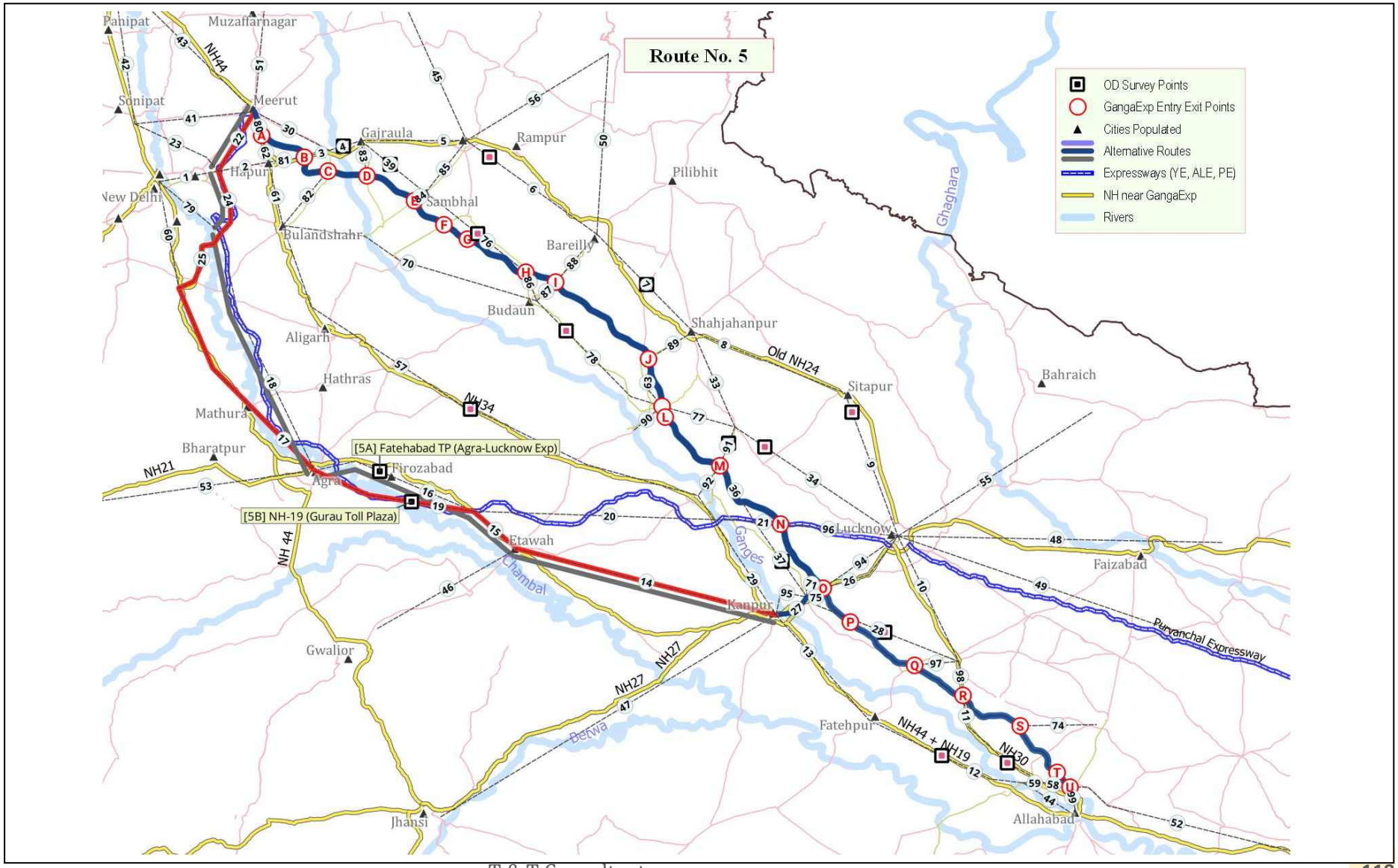
40	Amroha	Badaun	D to H
41	Amroha	Bareilly	D to J
42	Sambhal	Prayagraj	E to U
43	Sambhal	Varanasi	E to U
44	Sambhal	Raebareli	E to Q
45	Sambhal	Lucknow	E to N
46	Sambhal	Kanpur	E to O
47	Sambhal	Unnao	E to O
48	Sambhal	Hardoi	E to K
49	Sambhal	Shahjahanpur	E to J
50	Sambhal	Bareilly	E to I
51	Sambhal	Badaun	E to H
52	Moradabad	Prayagraj	E to U
53	Moradabad	Varanasi	E to U
54	Moradabad	Lucknow	E to N
55	Moradabad	Kanpur	E to O
56	Moradabad	Hardoi	E to K
57	Moradabad	Badaun	E to H
58	Bareilly	Prayagraj	I to U
59	Bareilly	Varanasi	I to U
60	Bareilly	Raebareli	I to Q
61	Bareilly	Kanpur	I to O
62	Bareilly	Unnao	I to O
63	Bareilly	Lucknow	I to N
64	Bareilly	Hardoi	I to K
65	Badaun	Prayagraj	I to U
66	Badaun	Varanasi	I to U
67	Badaun	Raebareli	I to Q
68	Badaun	Kanpur	I to O
69	Badaun	Lucknow	I to N
70	Badaun	Hardoi	I to K
71	Badaun	Unnao	I to O
72	Shahjahanpur	Prayagraj	J to U
73	Shahjahanpur	Varanasi	J to U
74	Shahjahanpur	Raebareli	J to Q
75	Shahjahanpur	Kanpur	J to O
76	Shahjahanpur	Unnao	J to O
77	Shahjahanpur	Lucknow	J to N
78	Hardoi	Prayagraj	M to U
79	Hardoi	Varanasi	M to U
80	Hardoi	Raebareli	M to Q
81	Hardoi	Kanpur	M to O
82	Hardoi	Unnao	M to O
83	Agra	Prayagraj	N to U
84	Agra	Varanasi	N to U
85	Lucknow	Prayagraj	O to U

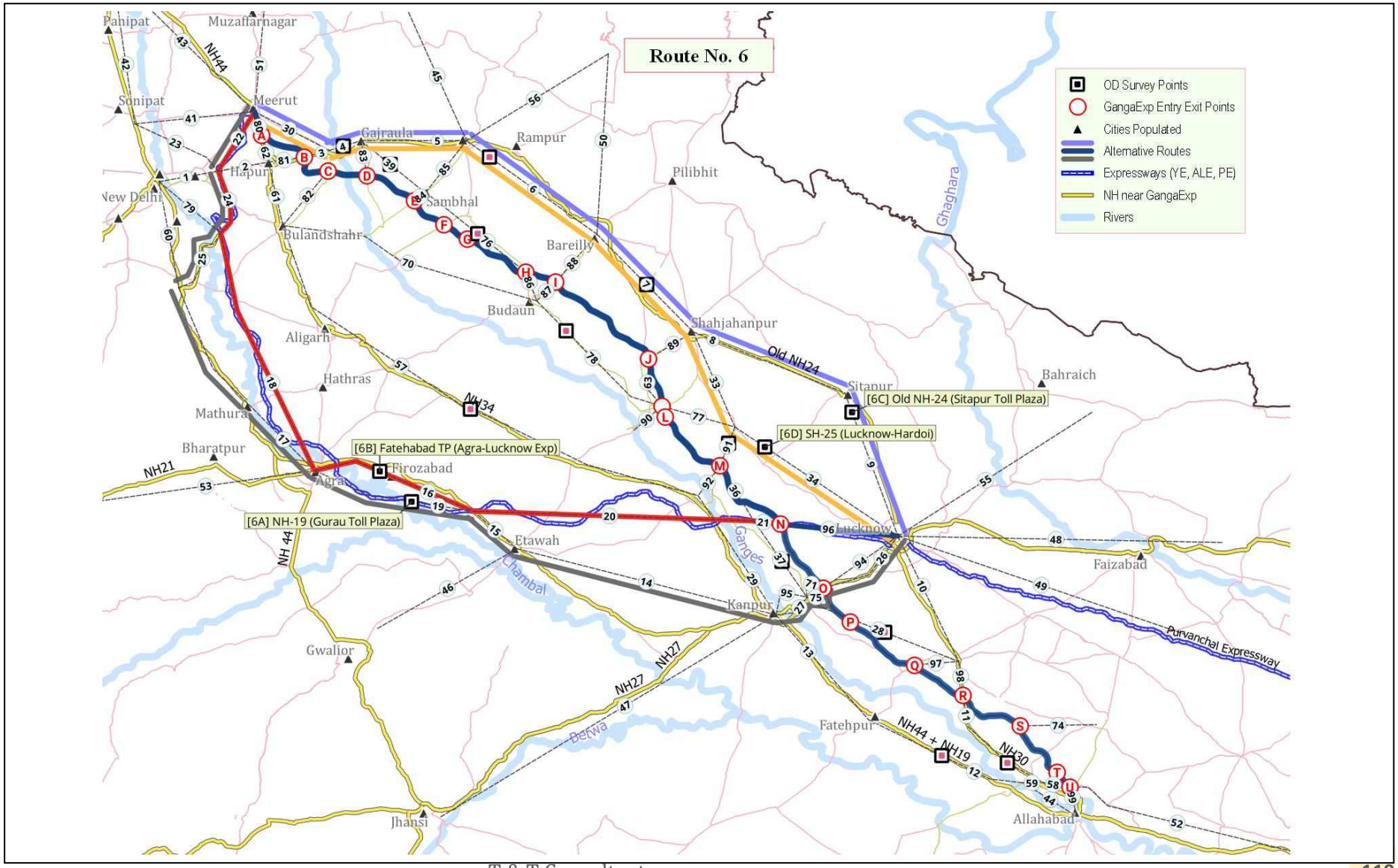
86	Lucknow	Varanasi	O to U
87	Kanpur	Prayagraj	O to U
88	Kanpur	Varanasi	O to U
89	Kanpur	Raebareli	O to Q
90	Raebareli	Prayagraj	R to U
91	Raebareli	Varanasi	R to U
92	Hapur	Prayagraj	B to U
93	Hapur	Varanasi	B to U
94	Hapur	Lucknow	B to N
95	Hapur	Kanpur	B to O
96	Hapur	Bareilly	B to I
97	Hapur	Badaun	B to H
98	Hapur	Sambhal	B to E
99	Hapur	Shahjahanpur	B to J
100	Hapur	Hardoi	B to K
101	Bulandshahr	Bareilly	C to I
102	Bulandshahr	Lucknow	C to N
103	Bulandshahr	Muradabad	C to E
104	Bulandshahr	Sambhal	C to E
105	Bulandshahr	Hardoi	C to K
106	Bulandshahr	Shahjahanpur	C to J

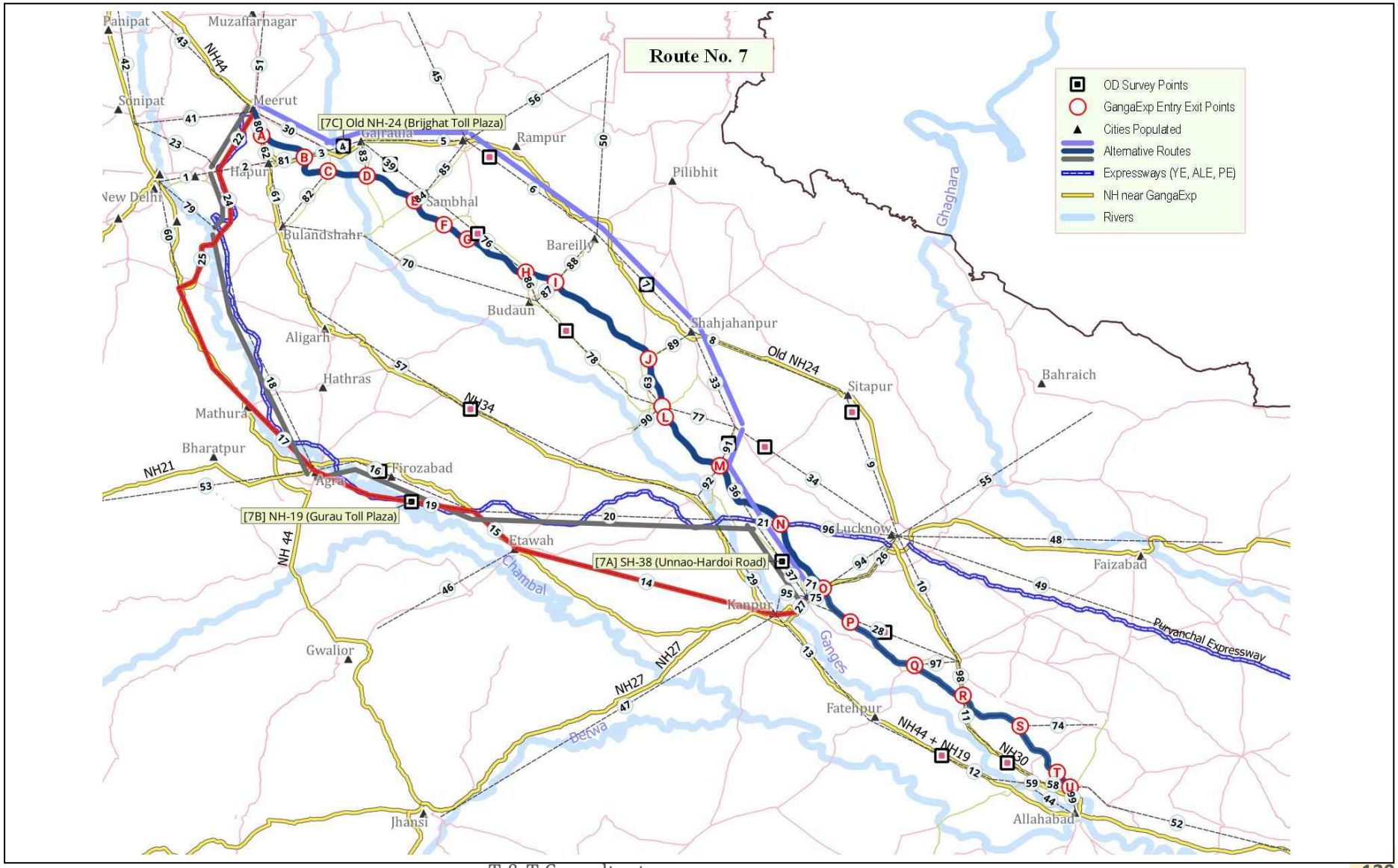

Route No. 2
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Ghaghara
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Budaun
Shahjahanpur
Aligarh
Hathras
Old NH24
Sitapur
Bahraich
[2C] Old NH-24 (Sitapur Toll Plaza)
[2D] SH-25 (Lucknow-Hardoi)
Mathura
NH34
Bharatpur
NH21
[2A] Fatehabad TP (Agra-Lucknow Exp)
Firozabad
Agra
[2B] NH-19 (Gurau Toll Plaza)
NH 44
Etawah
Chambal
Ganges
Lucknow
Faizabad
Purvanchal Expressway
Kanpur
NH44 + NH19
Gwalior
NH27
Betwa
Fatehpur
NH30
Jhansi
Allahabad

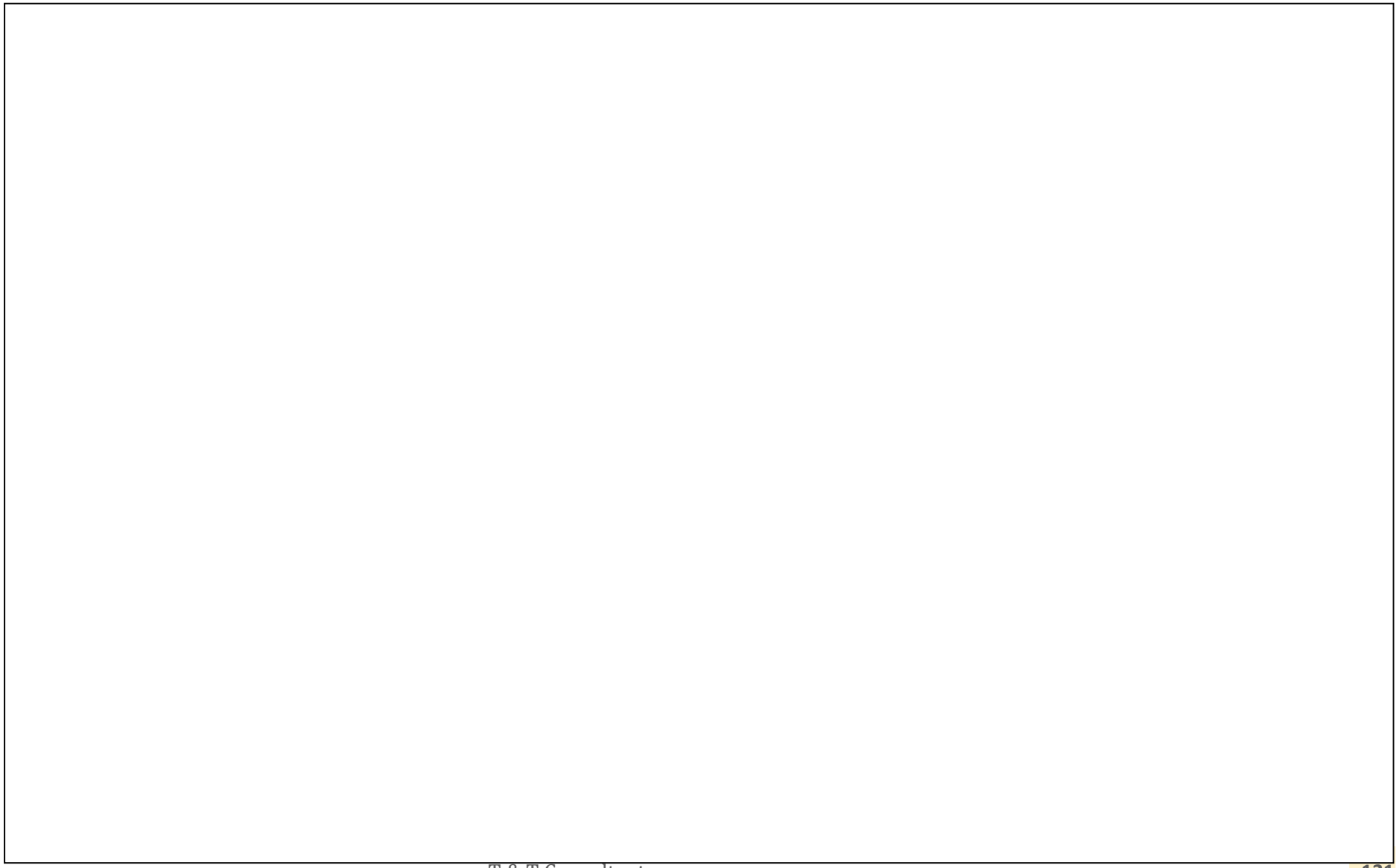

Route No. 3
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[3A] Fatehabad TP (Agra-Lucknow Exp)
[3B] NH-19 (Gurau Toll Plaza)
[3C] Old NH-24 (Sitapur Toll Plaza)
[3D] SH-25 (Lucknow-Hardoi)
Old NH24
NH44 + NH19
Purvanchal Expressway
Ganges
Ghaghara
Chambal
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Budaun
Shahjahanpur
Aligarh
Hathras
Sitapur
Bahraich
Mathura
Bharatpur
Firozabad
Agra
Etawah
Lucknow
Faizabad
Kanpur
Gwalior
Fatehpur
Jhansi
Allahabad

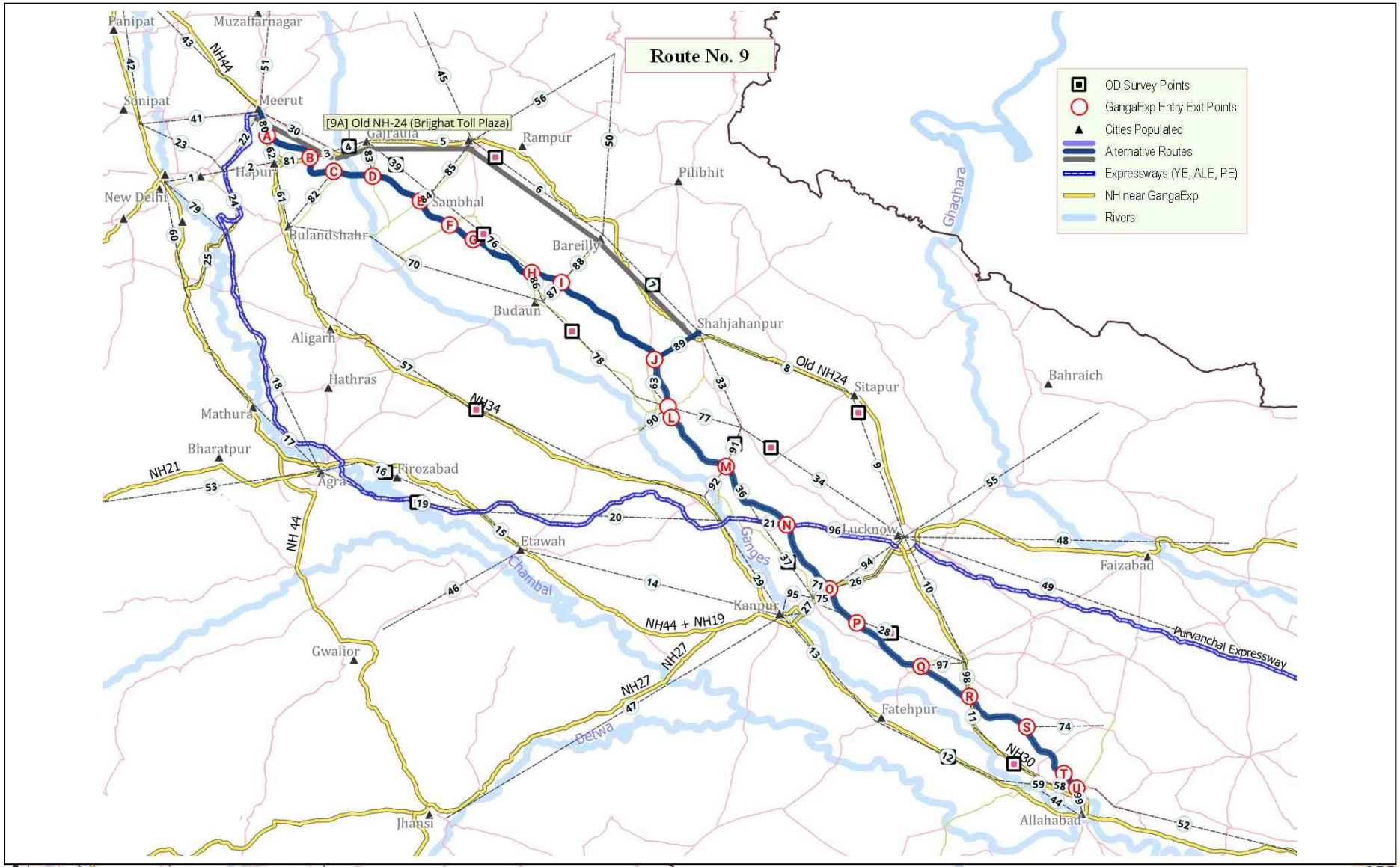

Route No. 4
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Ghaghara
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Budaun
Shahjahanpur
Aligarh
Hathras
Old NH24
Sitapur
Bahraich
[4C] Old NH-24 (Sitapur Toll Plaza)
[4D] SH-25 (Lucknow-Hardoi)
Mathura
NH34
Bharatpur
NH21
[4A] Fatehabad TP (Agra-Lucknow Exp)
Agra
[4B] NH-19 (Gurau Toll Plaza)
NH 44
Etawah
Chambal
Ganges
Lucknow
Faizabad
Kanpur
[4E] NH-31 (Unnao-Raebareilly)
Purvanchal Expressway
Gwalior
NH27
Fatehpur
NH44 + NH19
NH30
Allahabad
Jhansi
Betwa

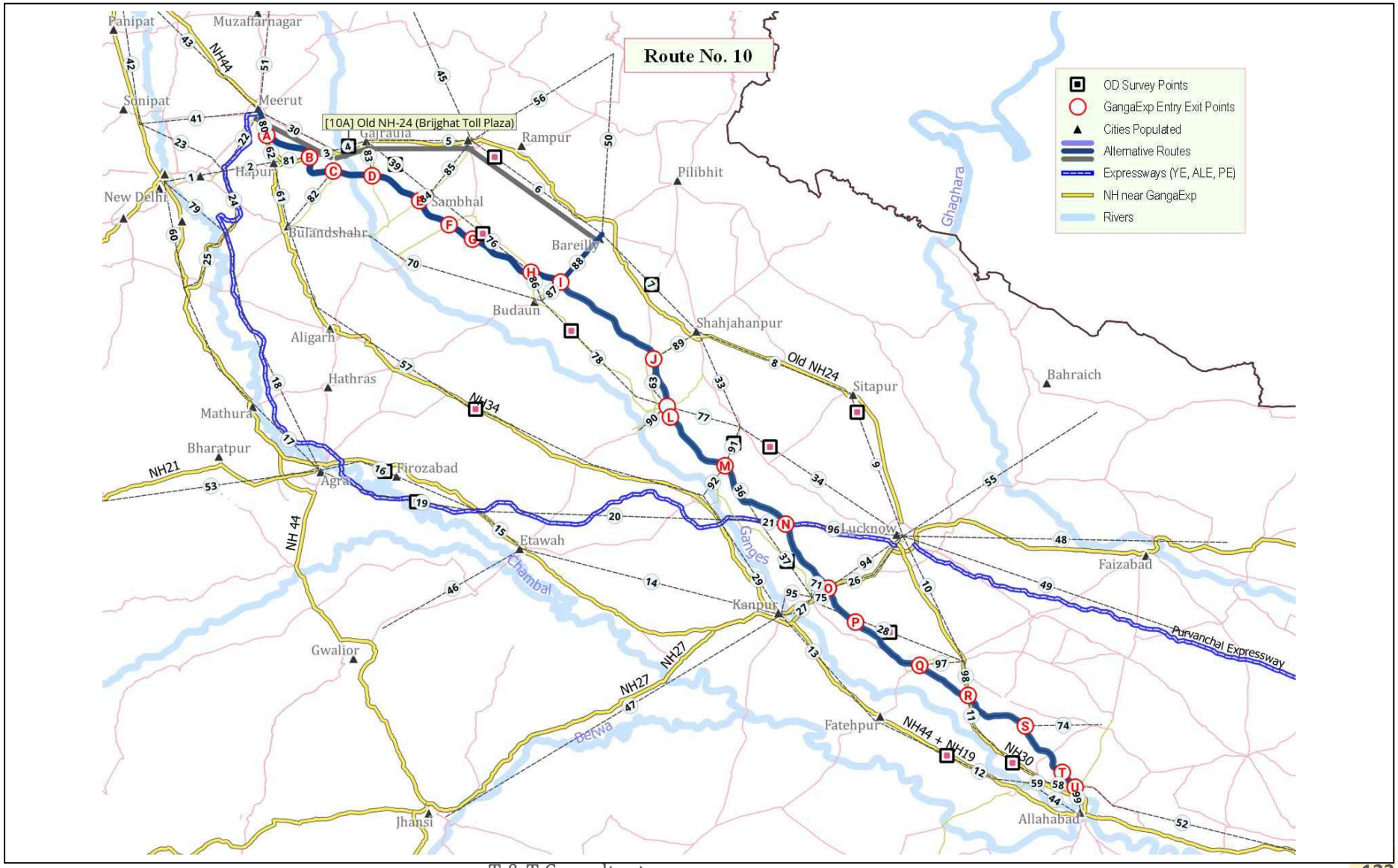

Route No. 5
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Old NH24
Hathras
Sitapur
Bahraich
NH34
Mathura
Bharatpur
[5A] Fatehabad TP (Agra-Lucknow Exp)
Firozabad
NH21
Agra
[5B] NH-19 (Gurau Toll Plaza)
Etawah
Lucknow
Ganges
Faizabad
NH 44
Chambal
Kanpur
Purvanchal Expressway
Gwalior
NH27
Betwa
Fatehpur
NH44 + NH19
NH30
Jhansi
Allahabad

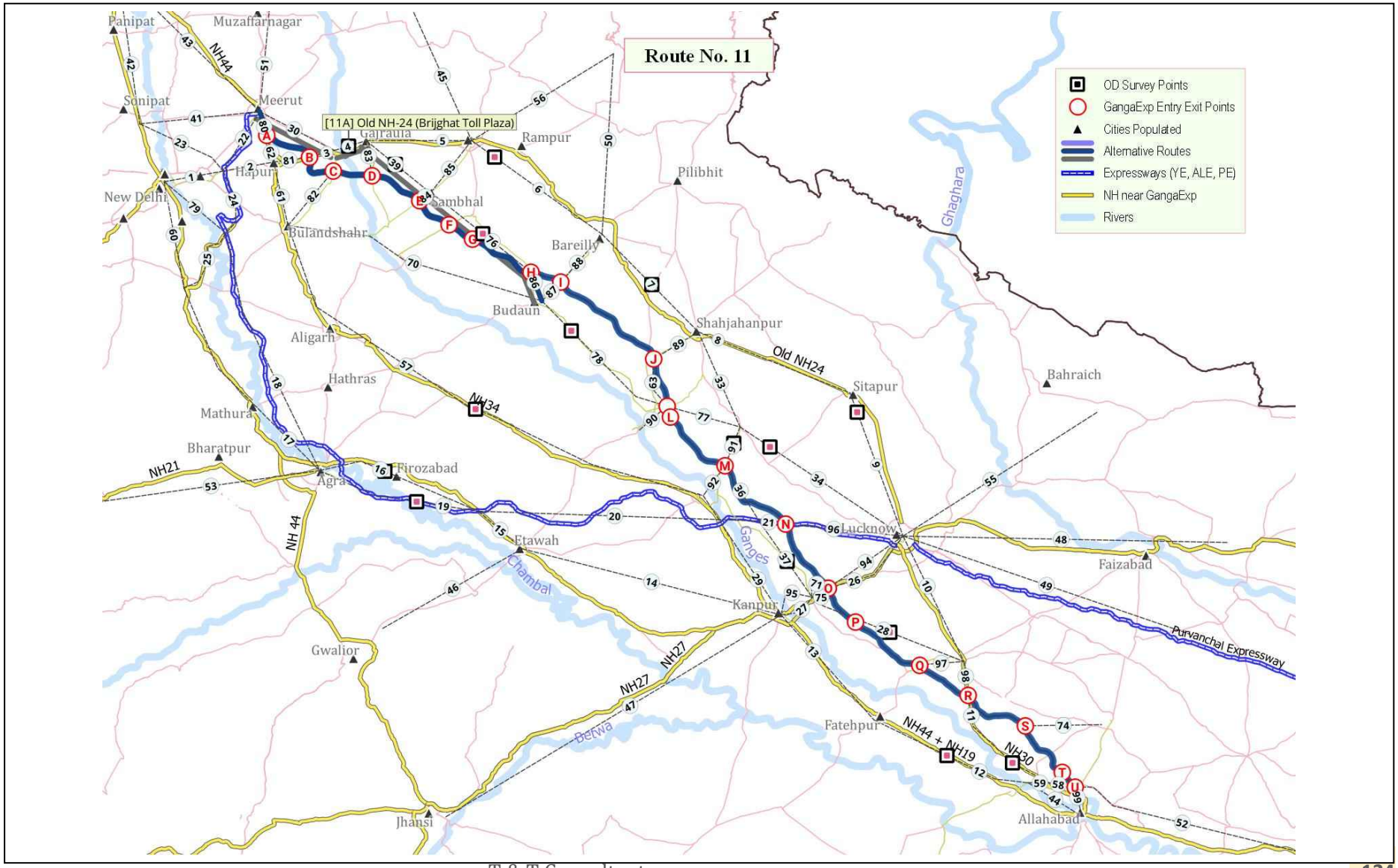

Route No. 6
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[6A] NH-19 (Gurau Toll Plaza)
[6B] Fatehabad TP (Agra-Lucknow Exp)
[6C] Old NH-24 (Sitapur Toll Plaza)
[6D] SH-25 (Lucknow-Hardoi)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Hapur
Pilibhit
New Delhi
Sambhal
Bulandshahr
Bareilly
Budaun
Shahjahanpur
Aligarh
Hathras
Sitapur
Bahraich
Mathura
Bharatpur
Firozabad
Agra
Etawah
Lucknow
Faizabad
Kanpur
Gwalior
Jhansi
Fatehpur
Allahabad
Ghaghara
Ganges
Chambal
Betwa
Purvanchal Expressway
Old NH24
NH44
NH34
NH21
NH 44
NH27
NH44 + NH19
NH30

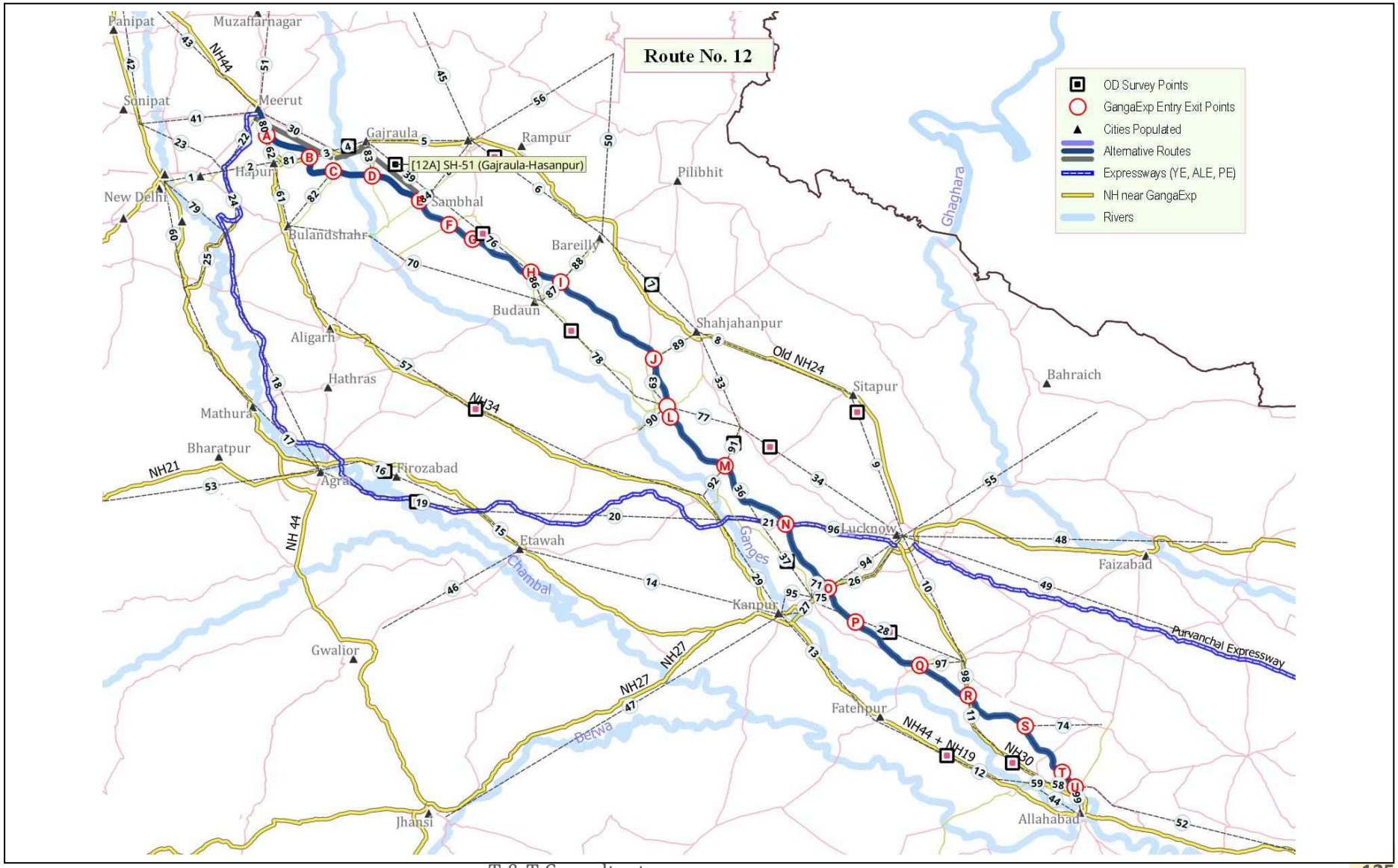

Route No. 7
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[7C] Old NH-24 (Brijghat Toll Plaza)
[7B] NH-19 (Gurau Toll Plaza)
[7A] SH-38 (Unnao-Hardoi Road)
Old NH24
Purvanchal Expressway
Panipat
Muzaffarnagar
Sonipat
Meerut
Hapur
New Delhi
Gajraula
Rampur
Pilibhit
Sambhal
Bulandshahr
Bareilly
Budaun
Shahjahanpur
Aligarh
Hathras
Mathura
Bharatpur
Agra
Firozabad
Etawah
Sitapur
Bahraich
Lucknow
Faizabad
Kanpur
Gwalior
Jhansi
Fatehpur
Allahabad
Ghaghara
Chambal
Ganges
Betwa
NH44
NH34
NH21
NH 44
NH27
NH44 + NH19
NH30

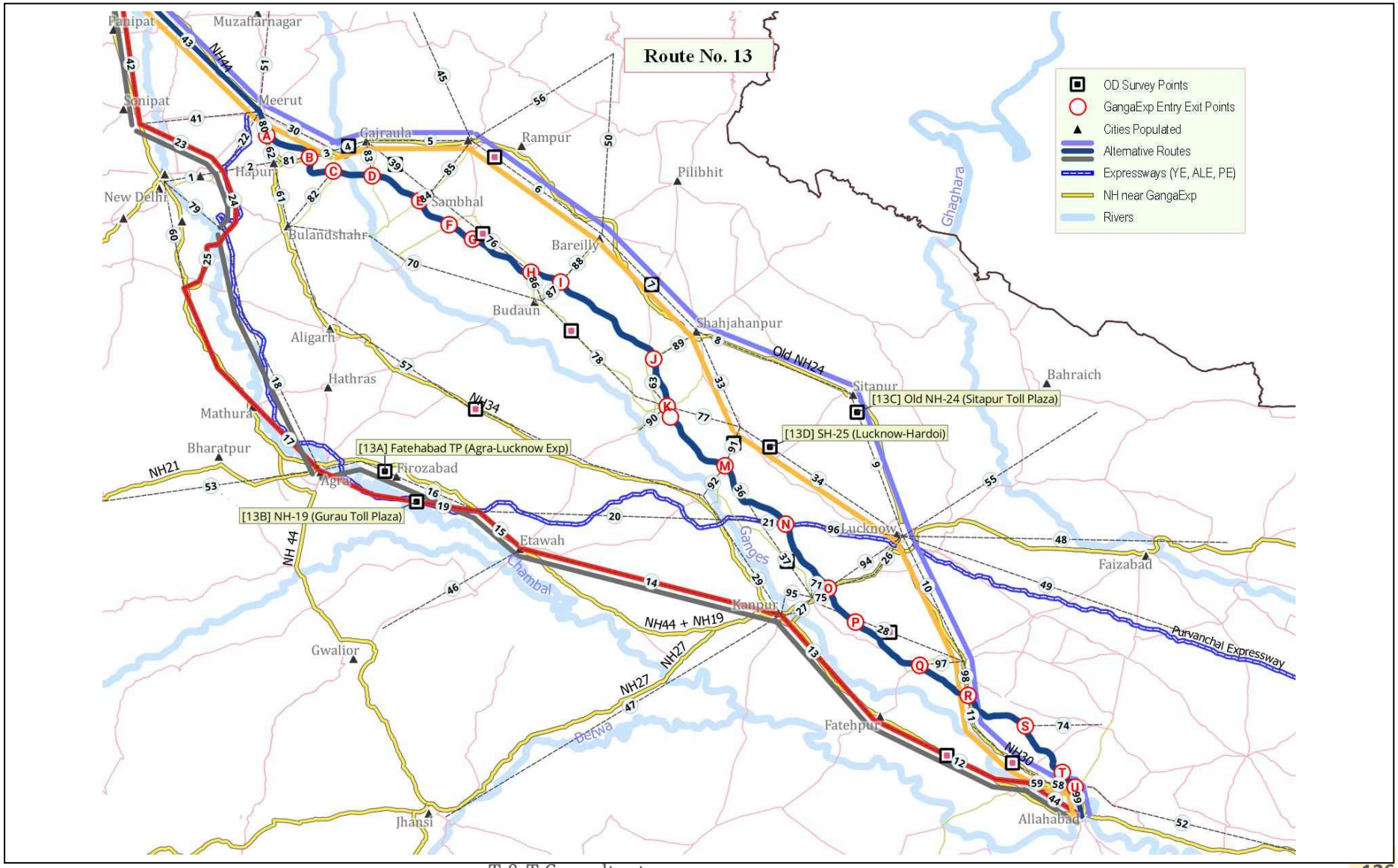


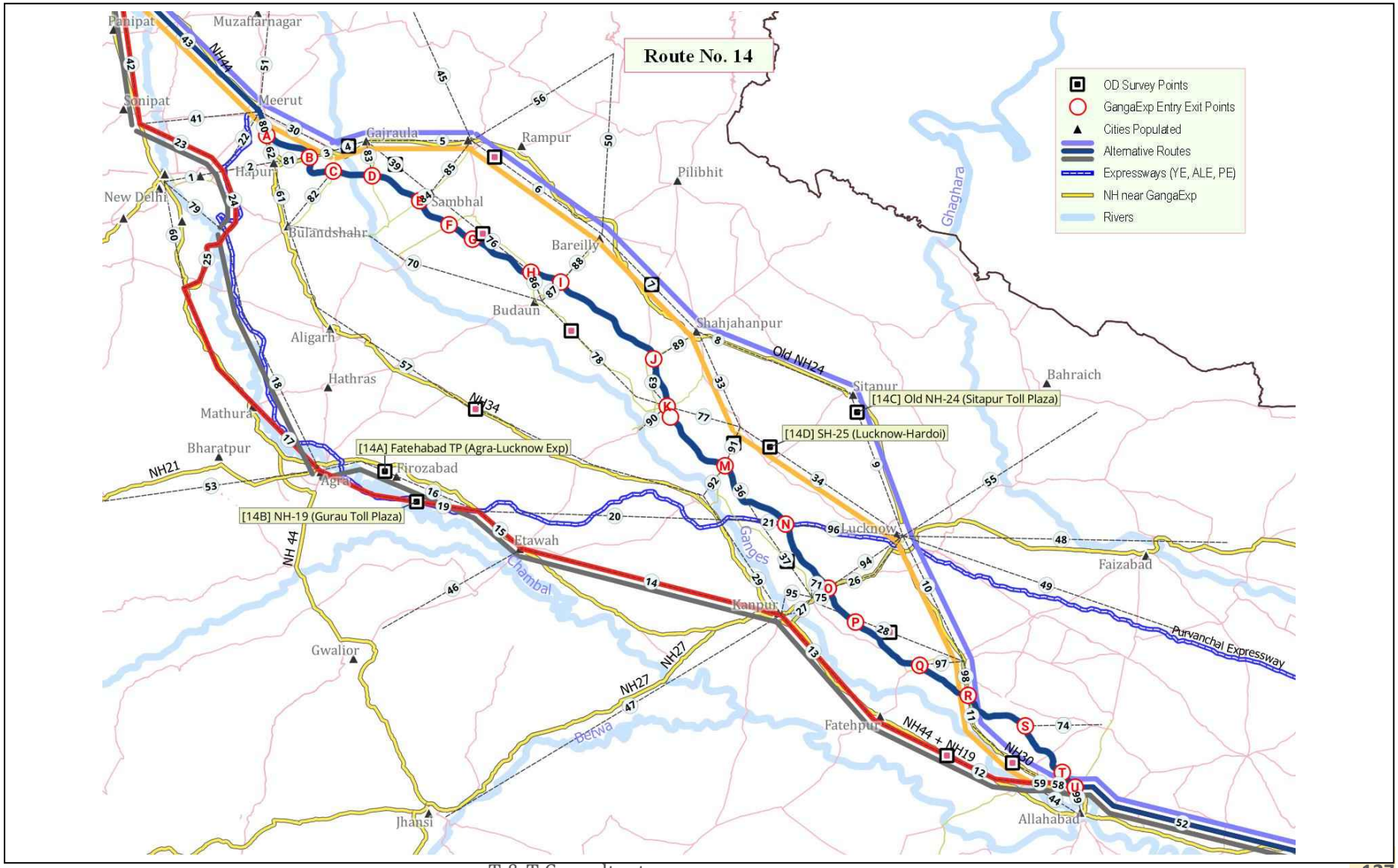

Route No. 9
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[9A] Old NH-24 (Brijghat Toll Plaza)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Hapur
Pilibhit
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Old NH24
Sitapur
Bahraich
Hathras
NH34
Mathura
Bharatpur
NH21
Agra
Firozabad
NH 44
Etawah
Chambal
Ganges
Lucknow
Faizabad
Kanpur
Purvanchal Expressway
NH44 + NH19
Gwalior
NH27
Fatehpur
Betwa
NH30
Jhansi
Allahabad
Route No. 8
A - 1016

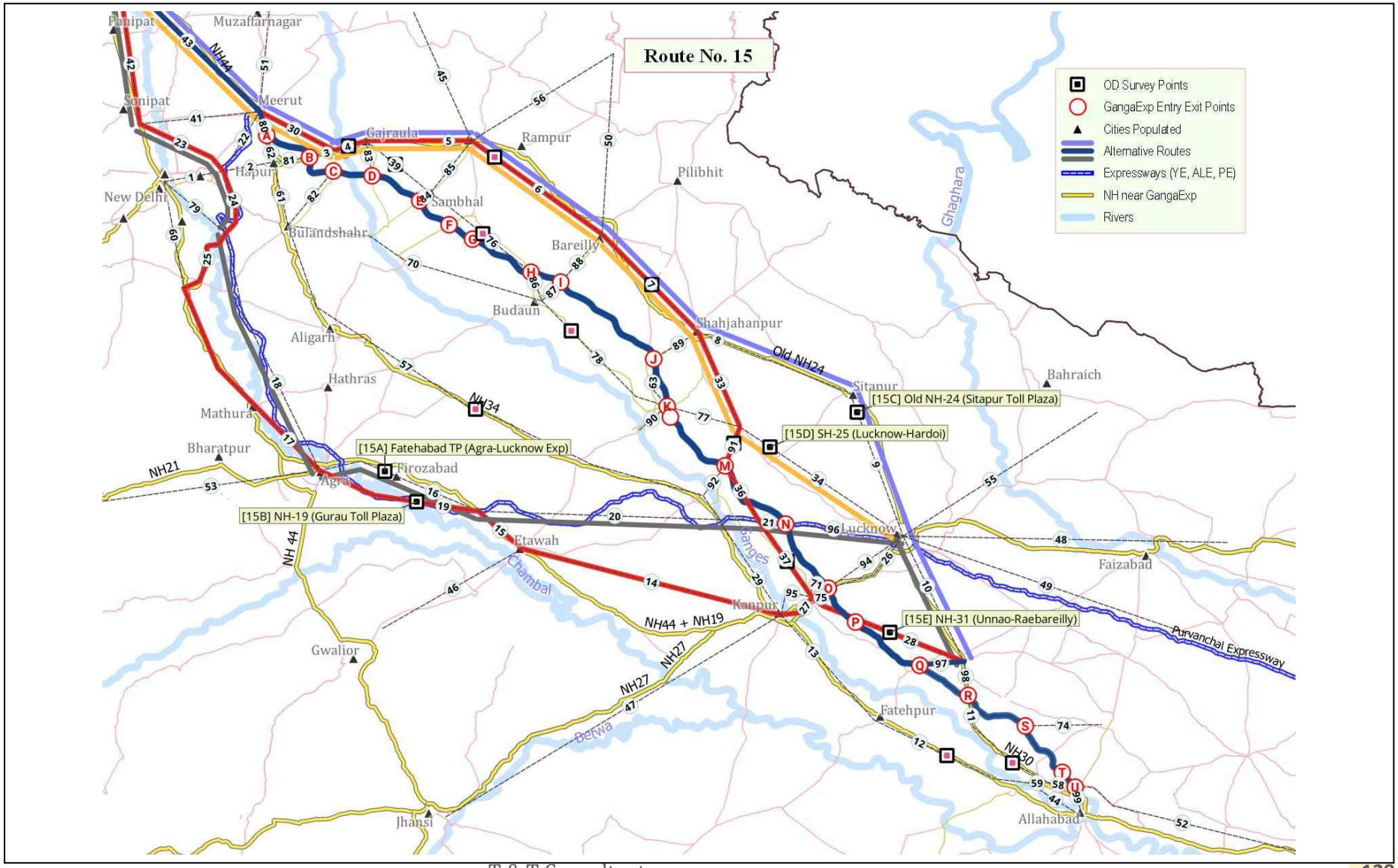

Route No. 10
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[10A] Old NH-24 (Brijghat Toll Plaza)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Hapur
New Delhi
Bulandshahr
Sambhal
Bareilly
Pilibhit
Ghaghara
Budaun
Shahjahanpur
Aligarh
Hathras
Old NH24
Sitapur
Bahraich
Mathura
NH34
Bharatpur
NH21
Firozabad
Agra
NH 44
Etawah
Chambal
Ganges
Lucknow
Faizabad
Kanpur
Purvanchal Expressway
Gwalior
NH27
Fatehpur
NH44 + NH19
NH30
Jhansi
Allahabad
Betwa

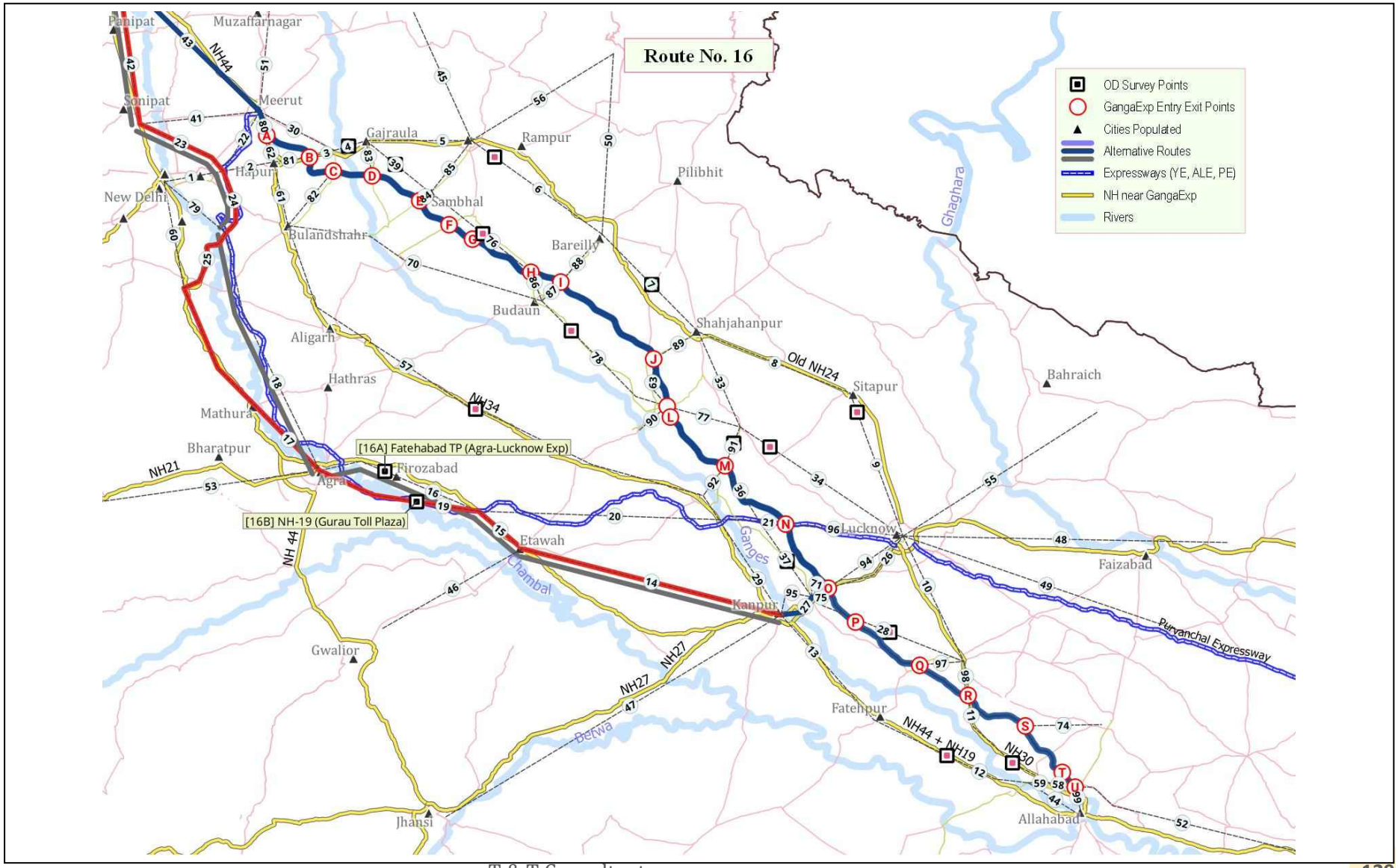

Route No. 11
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[11A] Old NH-24 (Brijghat Toll Plaza)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Hapur
New Delhi
Sambhal
Pilibhit
Ghaghara
Bulandshahr
Bareilly
Budaun
Shahjahanpur
Old NH24
Aligarh
Hathras
Sitapur
Bahraich
Mathura
NH34
Bharatpur
NH21
Firozabad
Agra
Etawah
NH 44
Chambal
Ganges
Lucknow
Faizabad
Kanpur
Purvanchal Expressway
Gwalior
NH27
Betwa
Fatehpur
NH44 + NH19
NH30
Jhansi
Allahabad

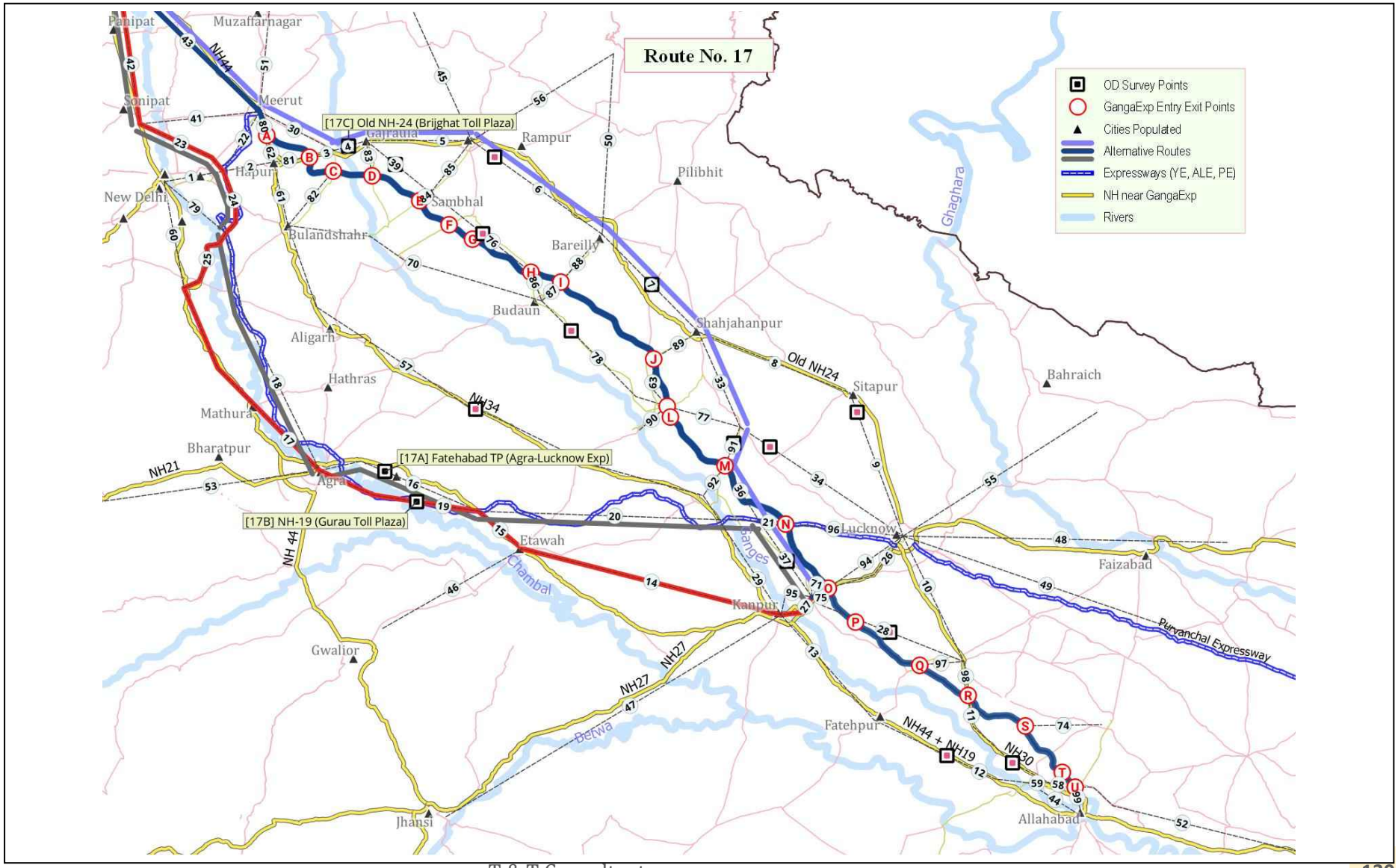

Route No. 12
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[12A] SH-51 (Gajraula-Hasanpur)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Pilibhit
Ghaghara
Budaun
Shahjahanpur
Old NH24
Aligarh
Hathras
Sitapur
Bahraich
Mathura
NH34
Bharatpur
NH21
Agra
Firozabad
Etawah
NH 44
Chambal
Ganges
Lucknow
Faizabad
Kanpur
Purvanchal Expressway
Gwalior
NH27
Fatehpur
Betwa
NH44 + NH19
NH30
Allahabad
Jhansi

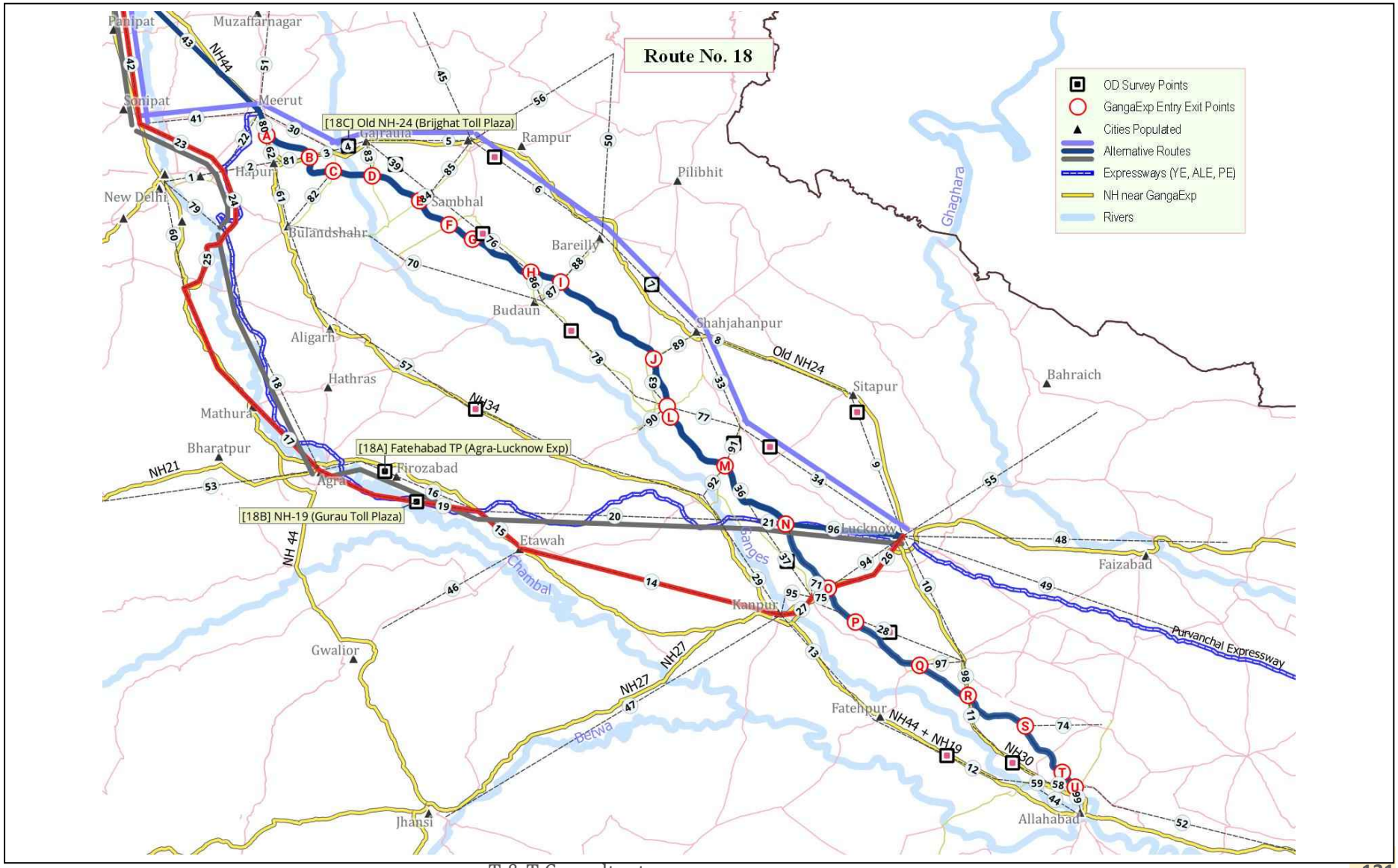

Route No. 13
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Hathras
Old NH24
Sitapur
Bahraich
[13C] Old NH-24 (Sitapur Toll Plaza)
Mathura
NH34
[13D] SH-25 (Lucknow-Hardoi)
Bharatpur
[13A] Fatehabad TP (Agra-Lucknow Exp)
Firozabad
Agra
NH21
[13B] NH-19 (Gurau Toll Plaza)
NH 44
Etawah
Ganges
Chambal
Lucknow
Faizabad
Kanpur
NH44 + NH19
Purvanchal Expressway
Gwalior
NH27
Fatehpur
Betwa
NH30
Jhansi
Allahabad

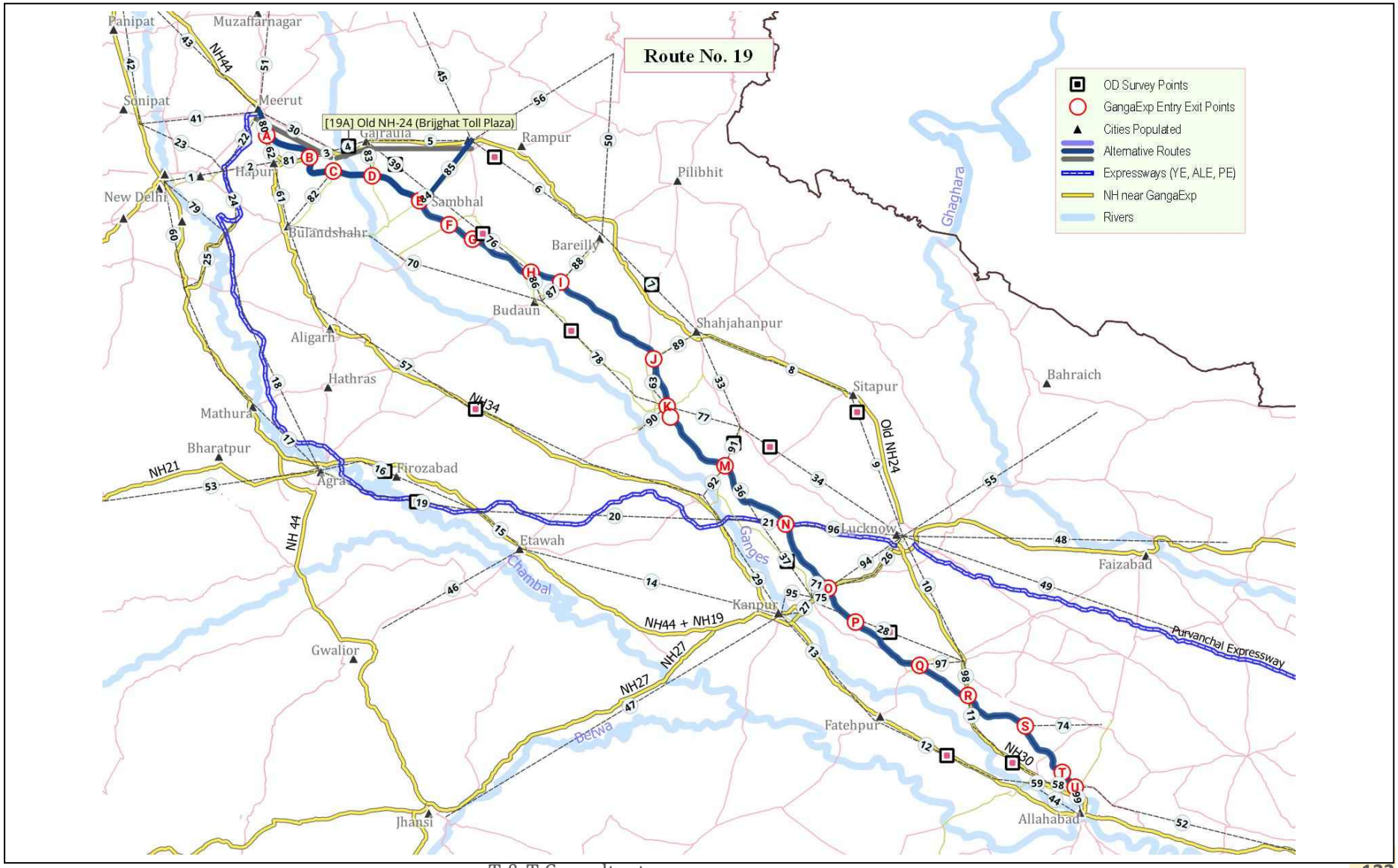

Route No. 14
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Hathras
Old NH24
Sitapur
Bahraich
[14C] Old NH-24 (Sitapur Toll Plaza)
Mathura
[14D] SH-25 (Lucknow-Hardoi)
Bharatpur
[14A] Fatehabad TP (Agra-Lucknow Exp)
Firozabad
Agra
NH21
[14B] NH-19 (Gurau Toll Plaza)
NH 44
Etawah
Chambal
Ganges
Lucknow
Faizabad
Kanpur
Purvanchal Expressway
Gwalior
NH27
Fatehpur
NH44 + NH19
NH30
Allahabad
Jhansi
Betwa

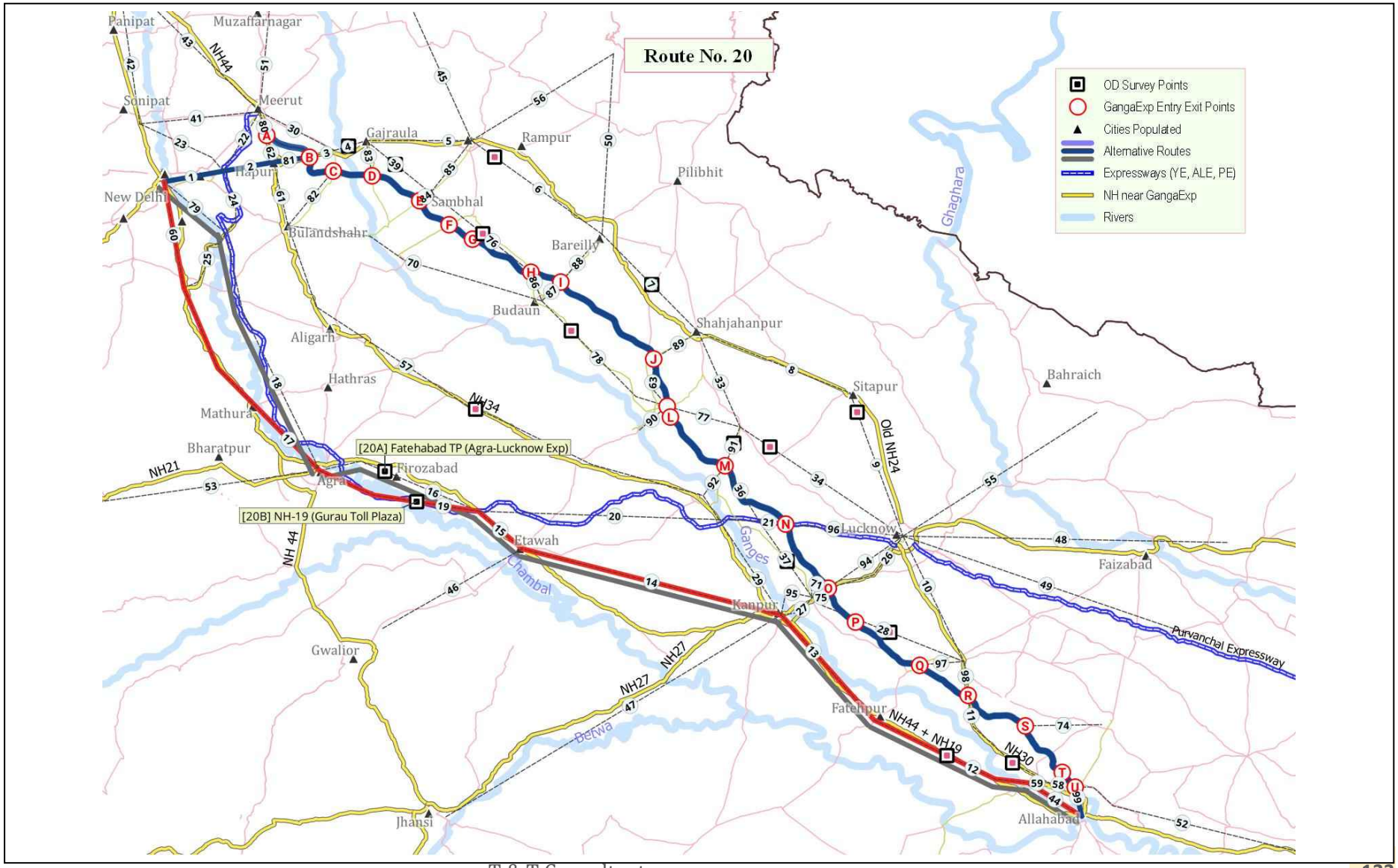

Route No. 15
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Hathras
Old NH24
Sitapur
Bahraich
[15C] Old NH-24 (Sitapur Toll Plaza)
[15D] SH-25 (Lucknow-Hardoi)
Mathura
NH34
Bharatpur
[15A] Fatehabad TP (Agra-Lucknow Exp)
Firozabad
Agra
NH21
[15B] NH-19 (Gurau Toll Plaza)
NH 44
Etawah
Lucknow
Faizabad
Ganges
Chambal
Kanpur
[15E] NH-31 (Unnao-Raebareilly)
Purvanchal Expressway
NH44 + NH19
Gwalior
NH27
Fatehpur
Betwa
NH30
Jhansi
Allahabad

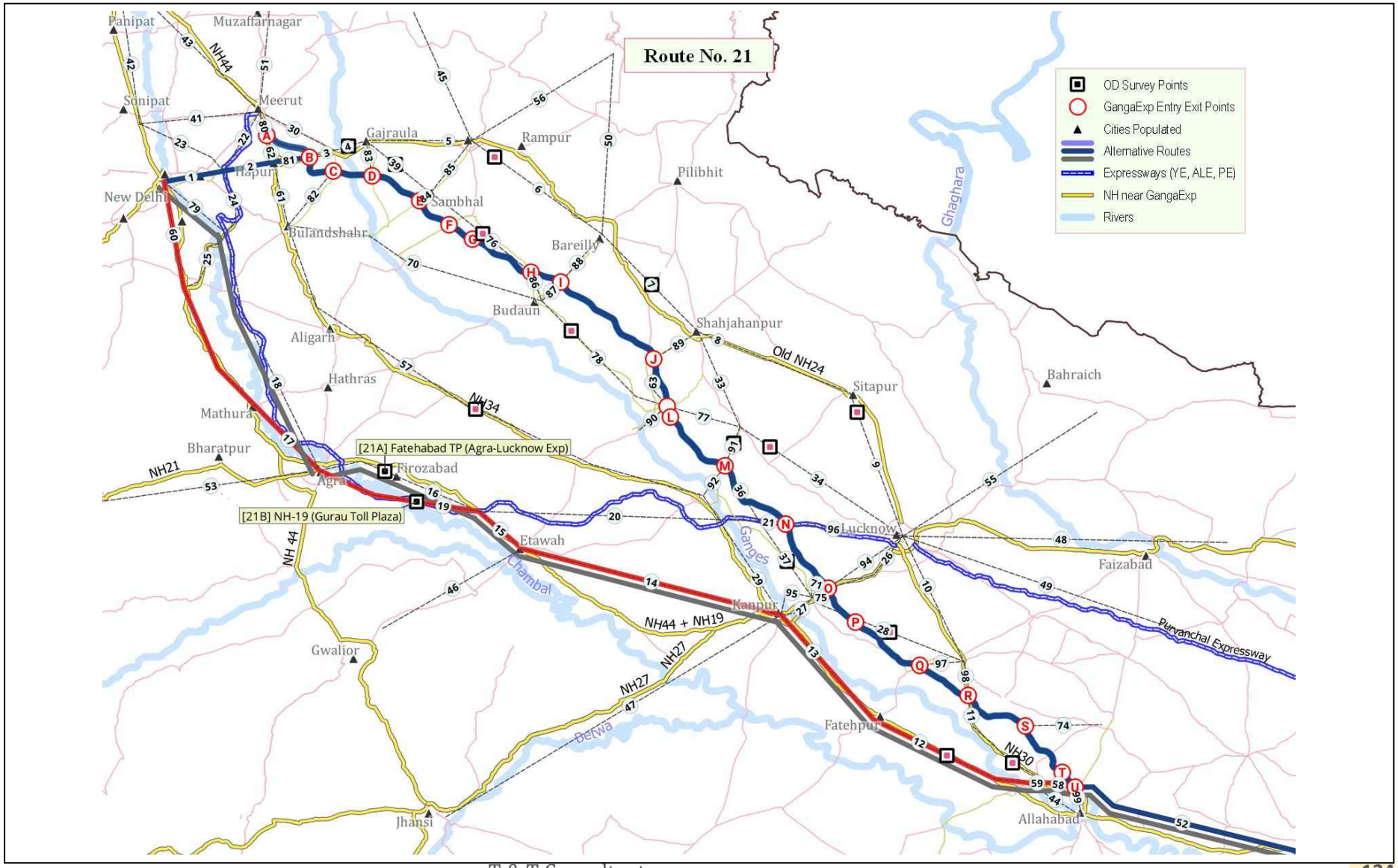

Route No. 16
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Hathras
Old NH24
Sitapur
Bahraich
Mathura
NH34
Bharatpur
[16A] Fatehabad TP (Agra-Lucknow Exp)
Firozabad
Agra
NH21
[16B] NH-19 (Gurau Toll Plaza)
NH 44
Etawah
Chambal
Ganges
Lucknow
Faizabad
Purvanchal Expressway
Kanpur
Gwalior
NH27
Fatehpur
Berwa
NH44 + NH19
NH30
Jhansi
Allahabad

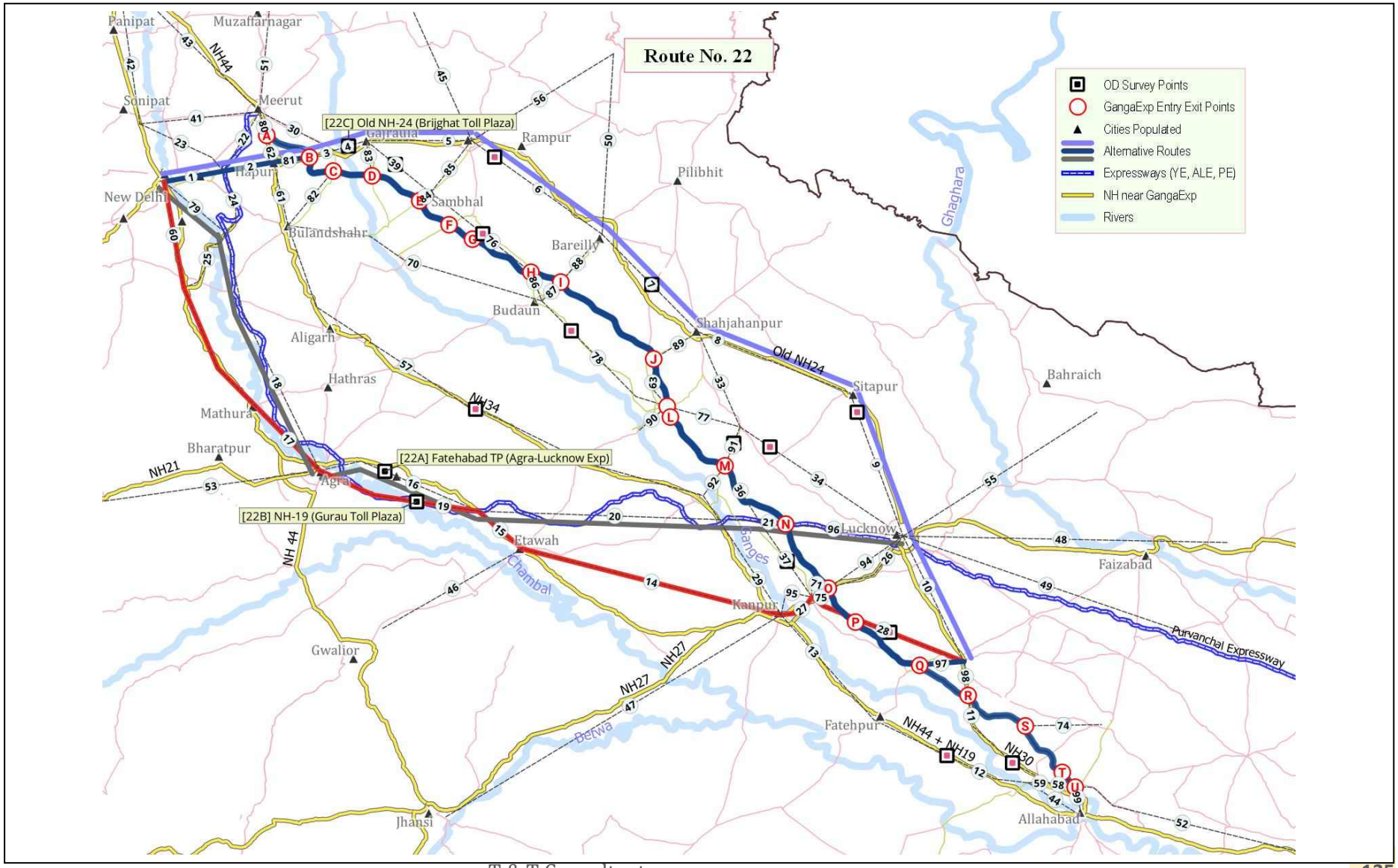

Route No. 17
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[17C] Old NH-24 (Brijghat Toll Plaza)
[17A] Fatehabad TP (Agra-Lucknow Exp)
[17B] NH-19 (Gurau Toll Plaza)
Panipat
Muzaffarnagar
Sonipat
Meerut
Hapur
New Delhi
Bulandshahr
Sambhal
Rampur
Pilibhit
Bareilly
Budaun
Shahjahanpur
Aligarh
Hathras
Mathura
Bharatpur
Agra
Etawah
Kanpur
Lucknow
Sitapur
Old NH24
Bahraich
Faizabad
Gwalior
Jhansi
Fatehpur
Allahabad
Ghaghara
Ganges
Chambal
Betwa
Purvanchal Expressway
NH44
NH34
NH21
NH 44
NH27
NH44 + NH19
NH30

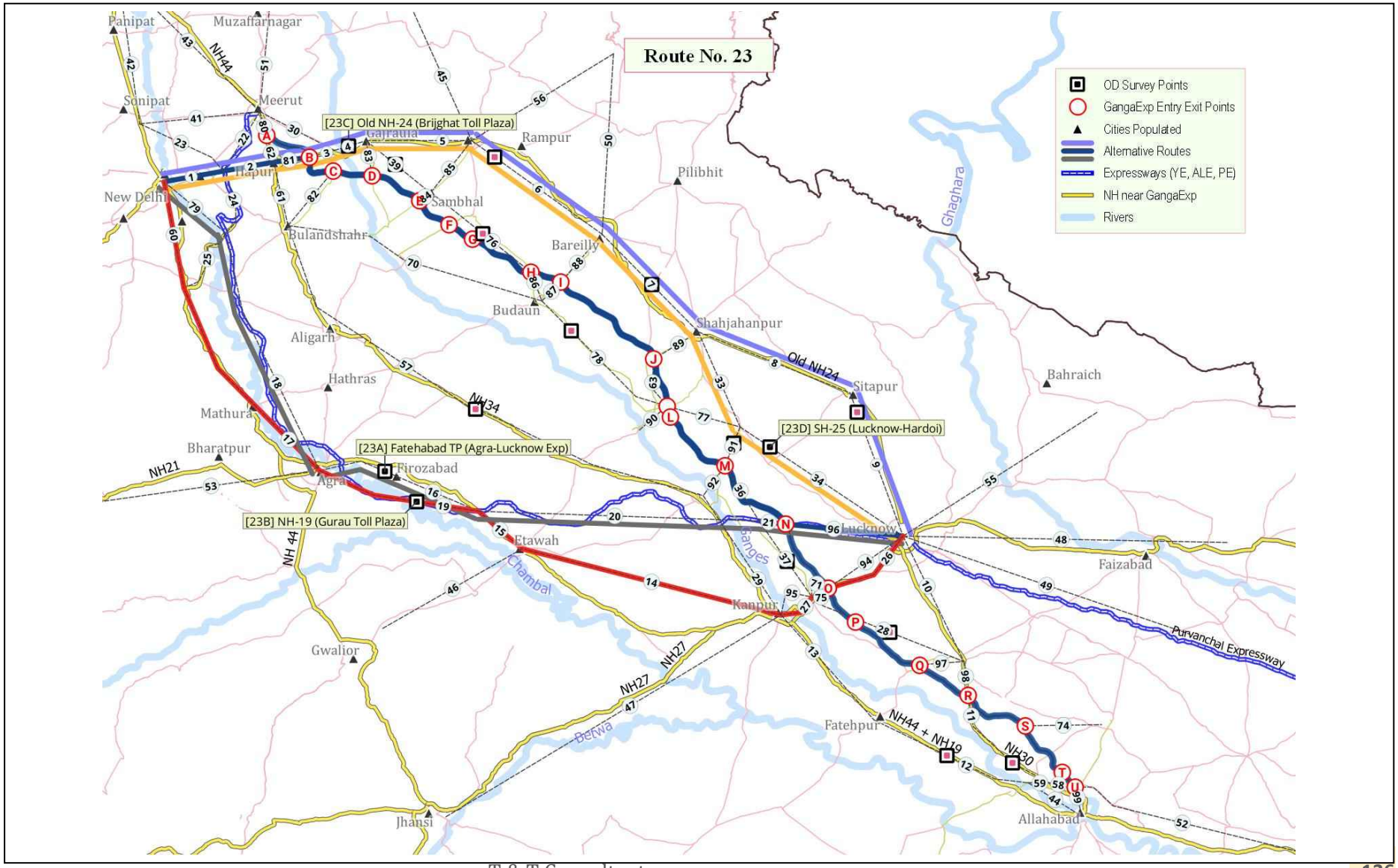

Route No. 18
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[18C] Old NH-24 (Brijghat Toll Plaza)
[18A] Fatehabad TP (Agra-Lucknow Exp)
[18B] NH-19 (Gurau Toll Plaza)
Old NH24
Purvanchal Expressway
NH44 + NH19
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Hathras
Sitapur
Bahraich
Mathura
Bharatpur
Firozabad
Agra
Etawah
Lucknow
Faizabad
Kanpur
Gwalior
Fatehpur
Jhansi
Allahabad
Chambal
Ganges
Betwa

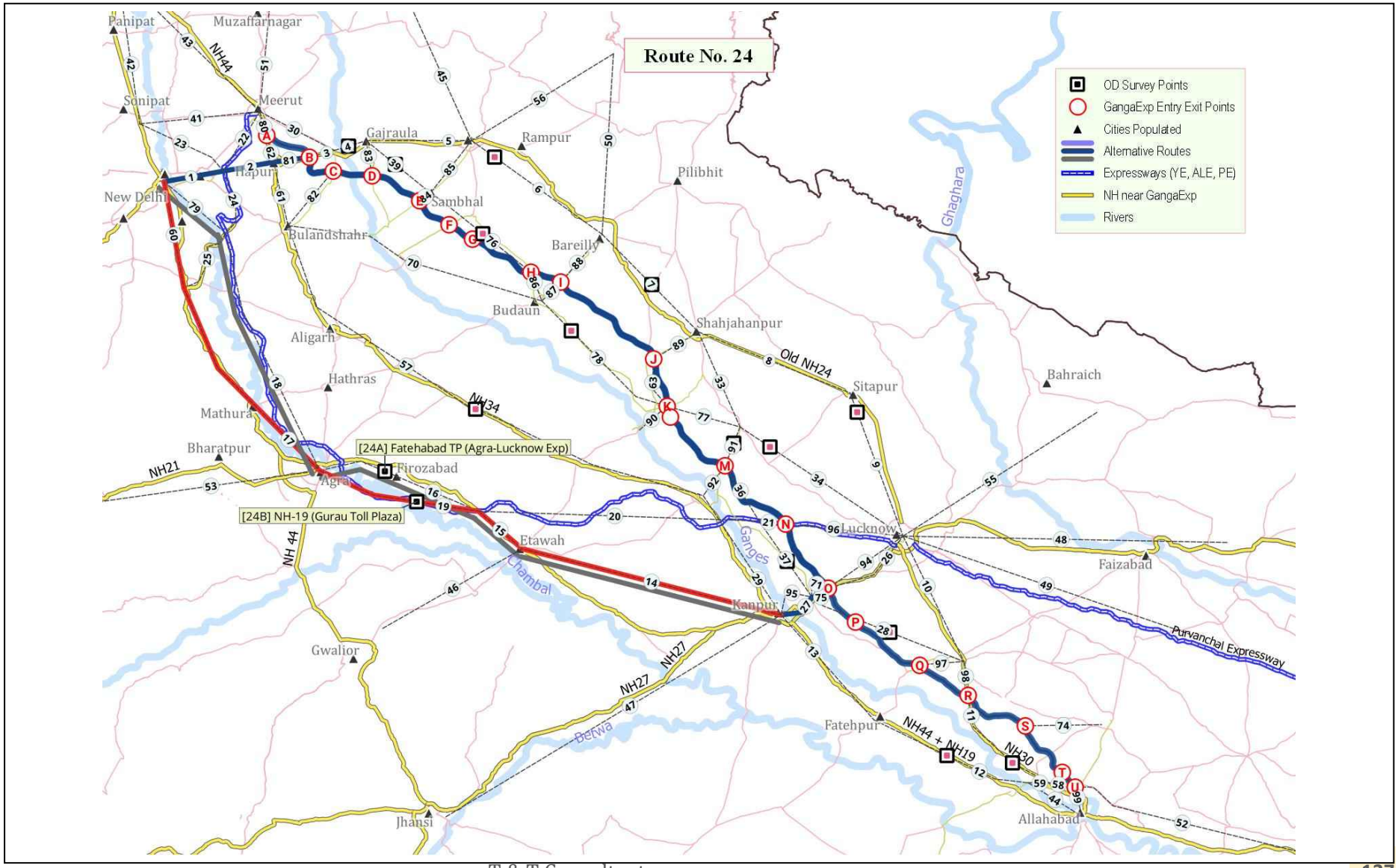

Route No. 19
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[19A] Old NH-24 (Brijghat Toll Plaza)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Hapur
New Delhi
Sambhal
Pilibhit
Ghaghara
Bulandshahr
Bareilly
Budaun
Shahjahanpur
Aligarh
Hathras
Sitapur
Bahraich
Mathura
Bharatpur
Firozabad
Agra
Old NH24
Etawah
Lucknow
Faizabad
Ganges
Chambal
Kanpur
Purvanchal Expressway
Gwalior
Fatehpur
Berwa
Jhansi
Allahabad
NH44
NH34
NH21
NH 44
NH44 + NH19
NH27
NH30

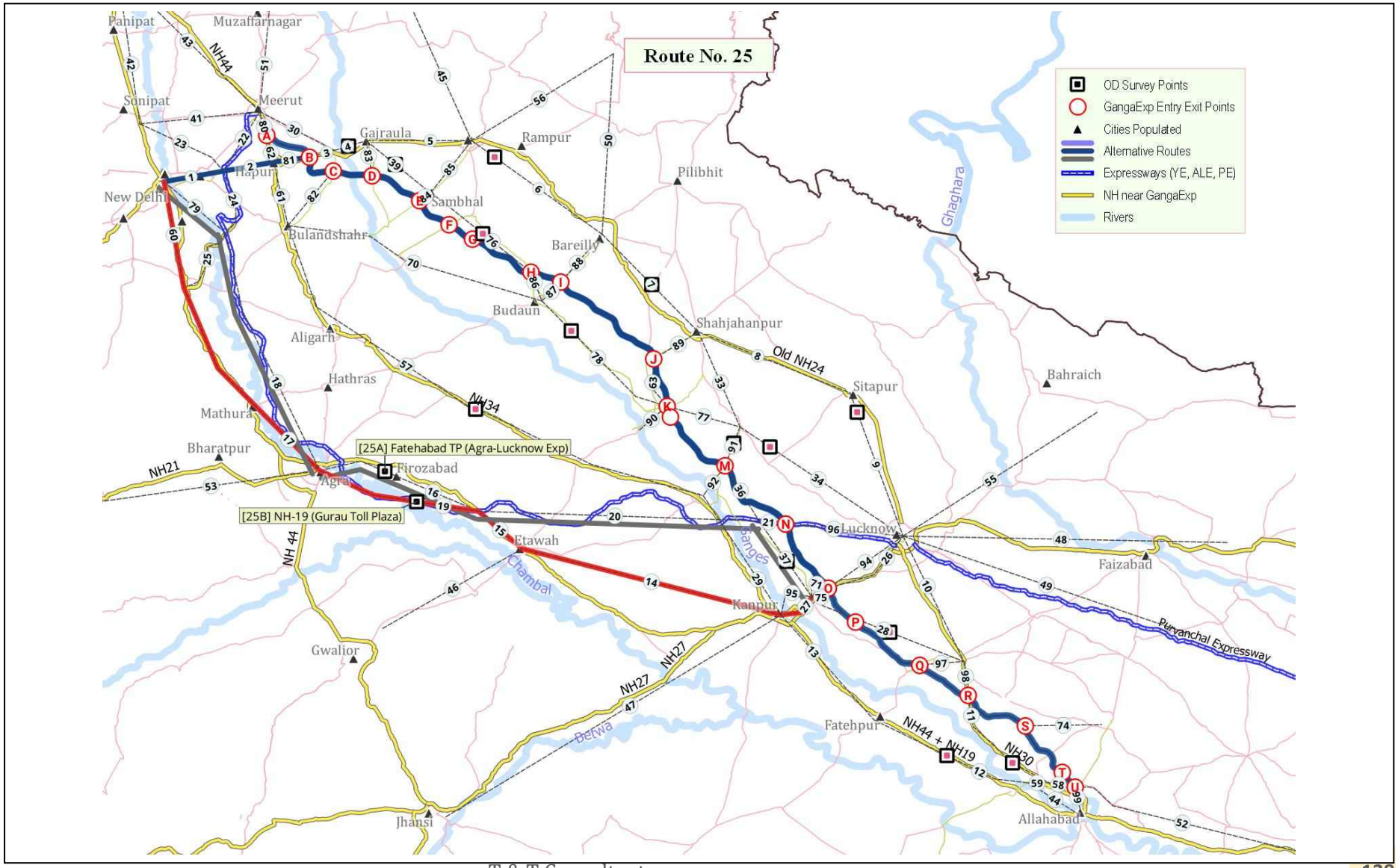

Route No. 20
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Hathras
Sitapur
Bahraich
Mathura
Bharatpur
[20A] Fatehabad TP (Agra-Lucknow Exp)
Firozabad
Agra
[20B] NH-19 (Gurau Toll Plaza)
Etawah
Lucknow
Faizabad
Ganges
Chambal
Kanpur
Purvanchal Expressway
Gwalior
Fatehpur
Berwa
Jhansi
Allahabad
NH44
NH21
NH 44
NH34
NH27
NH44 + NH19
NH30
Old NH24

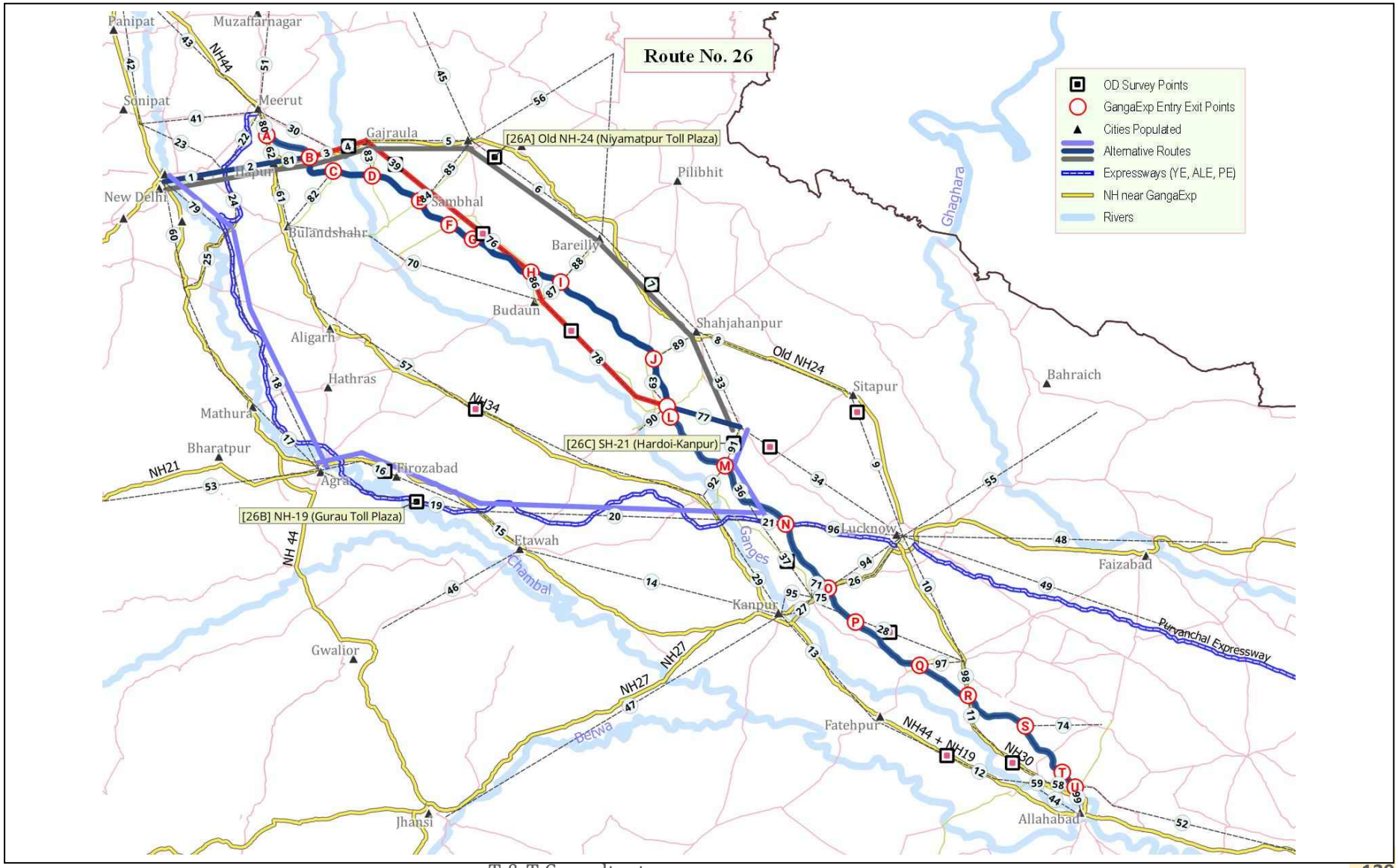

Route No. 21
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Hathras
Old NH24
Sitapur
Bahraich
Mathura
NH34
Bharatpur
[21A] Fatehabad TP (Agra-Lucknow Exp)
Firozabad
Agra
NH21
[21B] NH-19 (Gurau Toll Plaza)
NH 44
Etawah
Chambal
Ganges
Lucknow
Faizabad
Kanpur
NH44 + NH19
Purvanchal Expressway
Gwalior
NH27
Fatehpur
Betwa
NH30
Jhansi
Allahabad

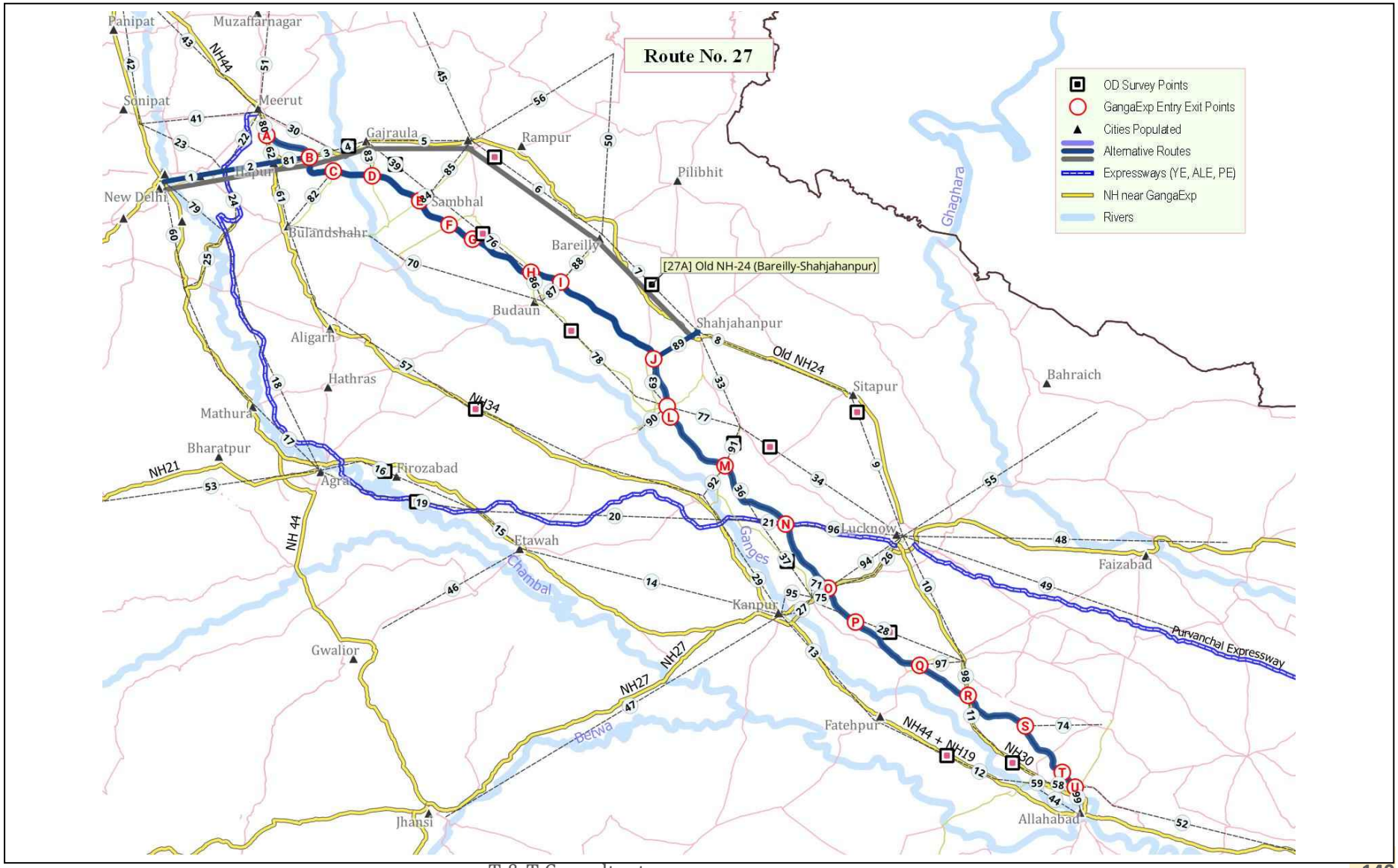

Route No. 22
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[22C] Old NH-24 (Brijghat Toll Plaza)
[22A] Fatehabad TP (Agra-Lucknow Exp)
[22B] NH-19 (Gurau Toll Plaza)
Old NH24
Purvanchal Expressway
Panipat
Muzaffarnagar
Sonipat
Meerut
Rampur
Pilibhit
Ghaghara
New Delhi
Hapur
Sambhal
Bulandshahr
Bareilly
Budaun
Shahjahanpur
Aligarh
Hathras
Sitapur
Bahraich
Mathura
Bharatpur
Agra
Etawah
Lucknow
Faizabad
Kanpur
Gwalior
Fatehpur
Jhansi
Allahabad
Chambal
Ganges
Betwa
NH44
NH21
NH 44
NH34
NH27
NH30
NH44 + NH19

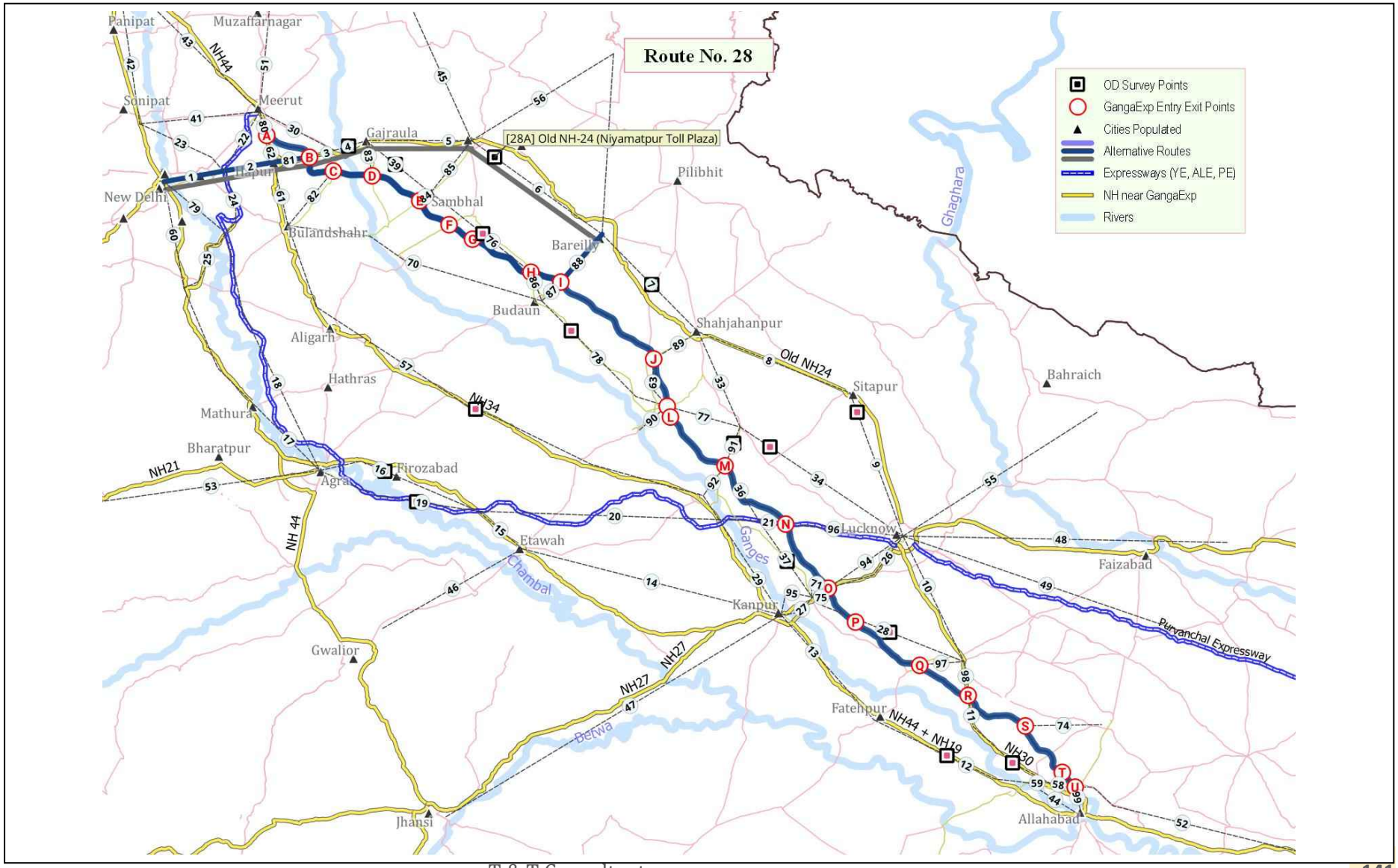

Route No. 23
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[23C] Old NH-24 (Brijghat Toll Plaza)
[23D] SH-25 (Lucknow-Hardoi)
[23A] Fatehabad TP (Agra-Lucknow Exp)
[23B] NH-19 (Gurau Toll Plaza)
Old NH24
Purvanchal Expressway
NH44 + NH19
Panipat
Muzaffarnagar
Sonipat
Meerut
Rampur
Pilibhit
Ghaghara
New Delhi
Sambhal
Bulandshahr
Bareilly
Budaun
Shahjahanpur
Aligarh
Hathras
Sitapur
Bahraich
Mathura
Bharatpur
Firozabad
Agra
Etawah
Kanpur
Lucknow
Faizabad
Gwalior
Fatehpur
Jhansi
Allahabad
Chambal
Ganges
Betwa
NH44
NH34
NH21
NH27
NH30

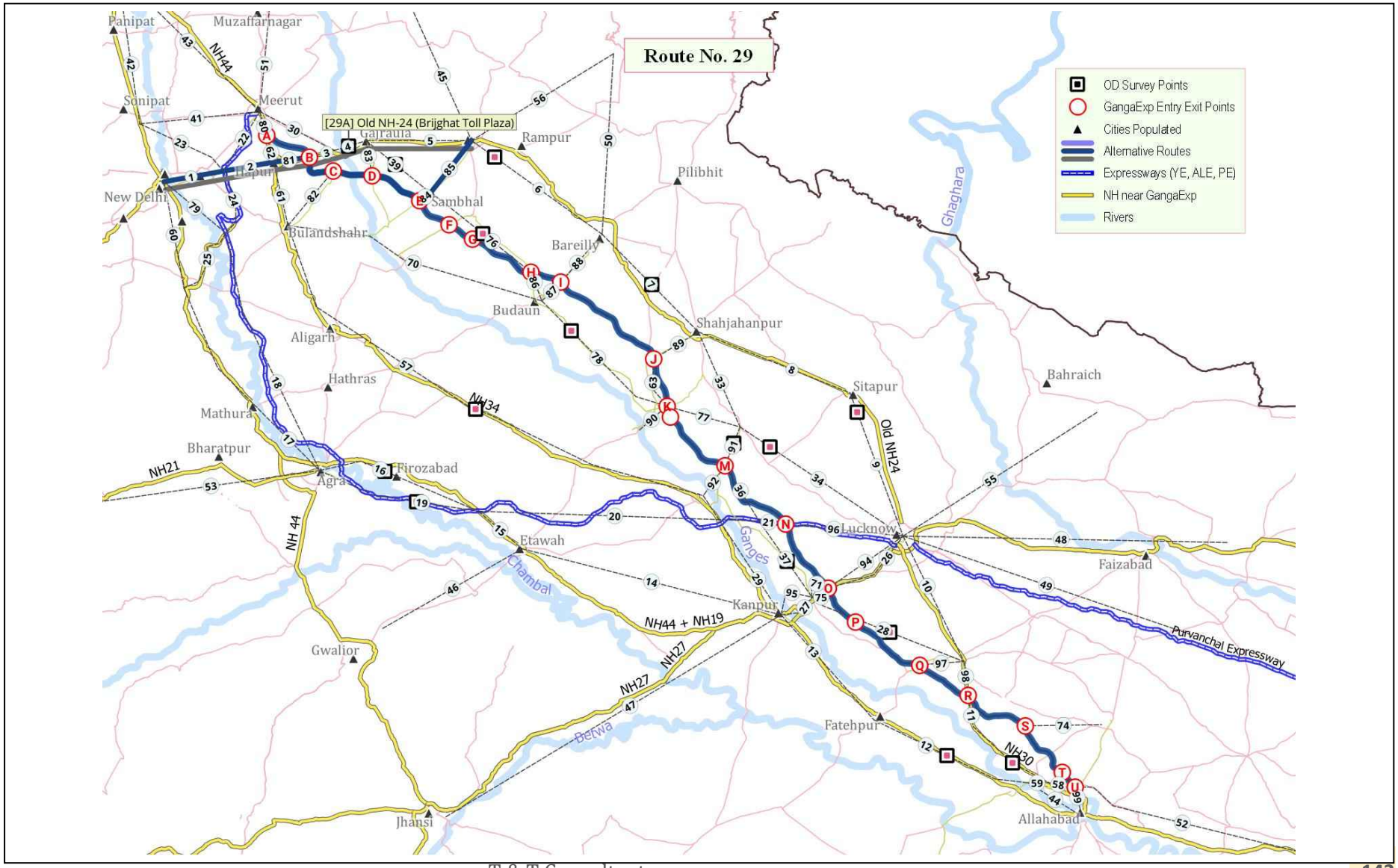

Route No. 24
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Old NH24
Sitapur
Bahraich
Hathras
NH34
Mathura
Bharatpur
[24A] Fatehabad TP (Agra-Lucknow Exp)
Firozabad
Agra
NH21
[24B] NH-19 (Gurau Toll Plaza)
NH 44
Etawah
Chambal
Ganges
Lucknow
Faizabad
Kanpur
Purvanchal Expressway
Gwalior
NH27
Betwa
Fatehpur
NH44 + NH19
NH30
Jhansi
Allahabad

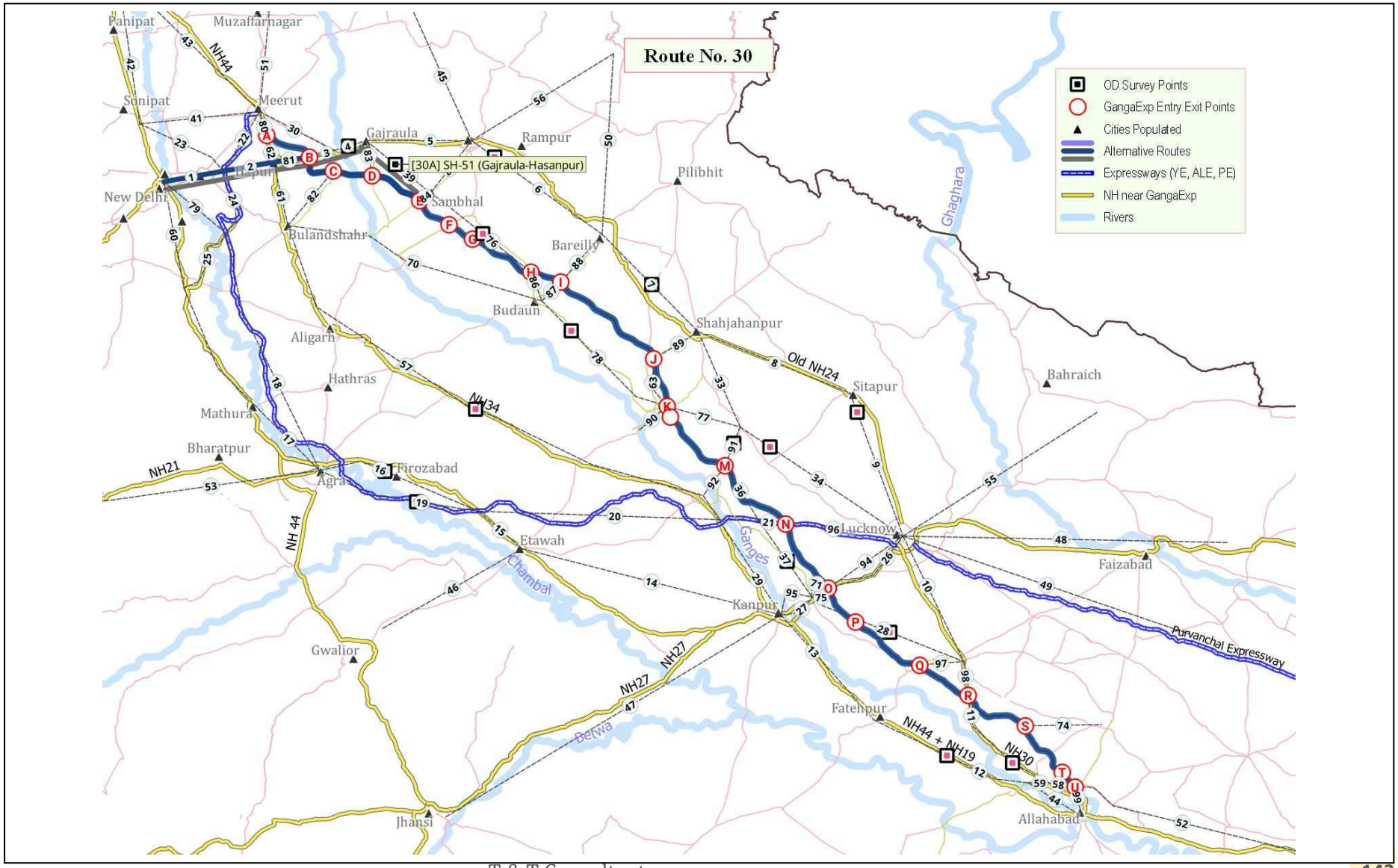

Route No. 25
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Old NH24
Sitapur
Bahraich
Hathras
NH34
Mathura
Bharatpur
[25A] Fatehabad TP (Agra-Lucknow Exp)
Firozabad
Agra
NH21
[25B] NH-19 (Gurau Toll Plaza)
NH 44
Etawah
Chambal
Ganges
Lucknow
Faizabad
Kanpur
Purvanchal Expressway
Gwalior
NH27
Betwa
Fatehpur
NH44 + NH19
NH30
Jhansi
Allahabad

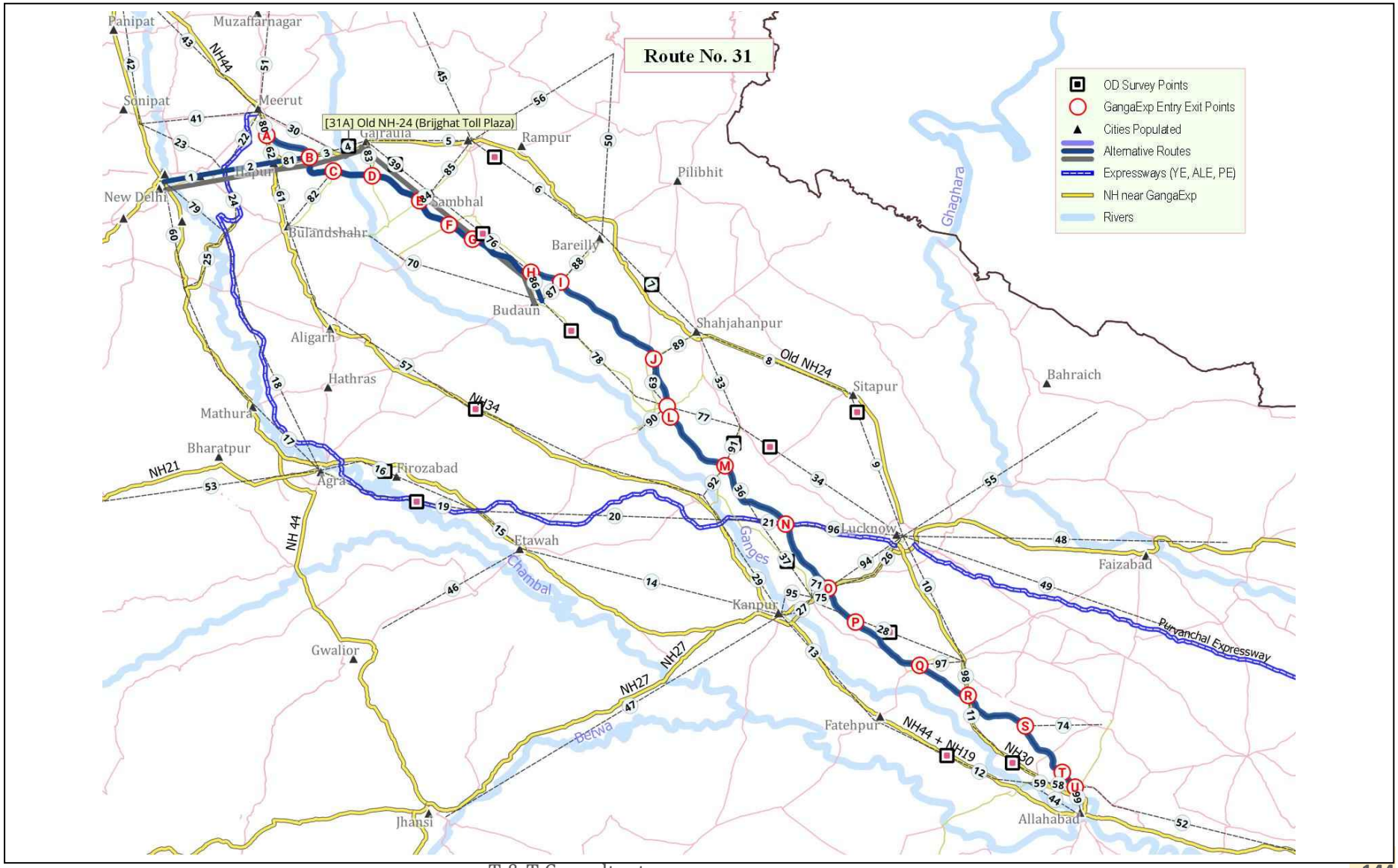

Route No. 26
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[26A] Old NH-24 (Niyamatpur Toll Plaza)
[26B] NH-19 (Gurau Toll Plaza)
[26C] SH-21 (Hardoi-Kanpur)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Pilibhit
New Delhi
Hapur
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Old NH24
Sitapur
Bahraich
Hathras
Mathura
NH34
Bharatpur
NH21
Agra
Firozabad
Etawah
Chambal
Ganges
Lucknow
Faizabad
Kanpur
Purvanchal Expressway
Gwalior
NH27
Fatehpur
NH44 + NH19
NH30
Jhansi
Allahabad
Betwa

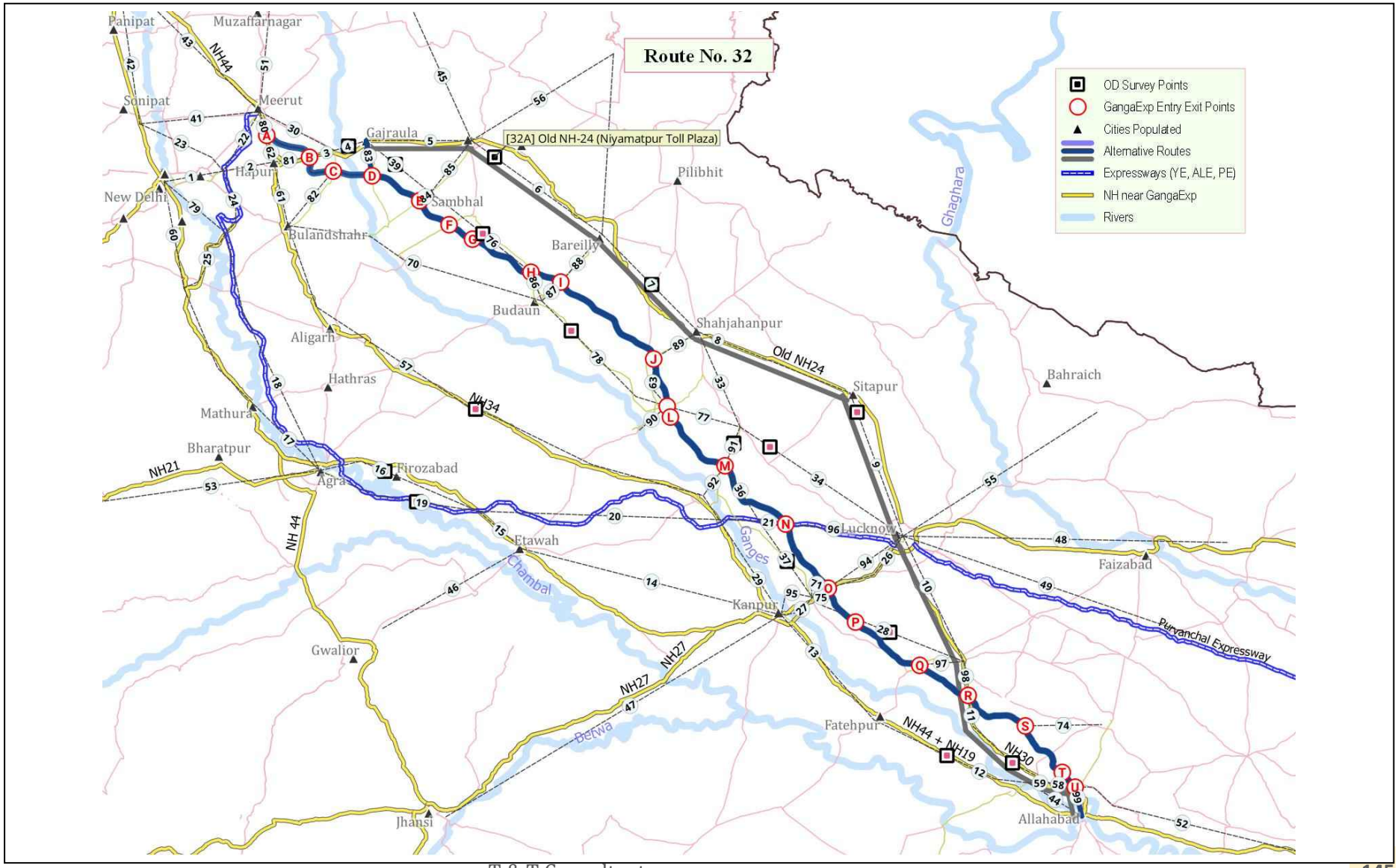

Route No. 27
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[27A] Old NH-24 (Bareilly-Shahjahanpur)
Old NH24
Purvanchal Expressway
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Ghaghara
New Delhi
Hapur
Sambhal
Bulandshahr
Bareilly
Budaun
Shahjahanpur
Aligarh
Hathras
Sitapur
Bahraich
Mathura
Bharatpur
Firozabad
Agra
Etawah
Chambal
Ganges
Lucknow
Faizabad
Kanpur
Gwalior
Jhansi
Fatehpur
Allahabad
NH44
NH21
NH 44
NH34
NH27
NH44 + NH19
NH30
Betwa

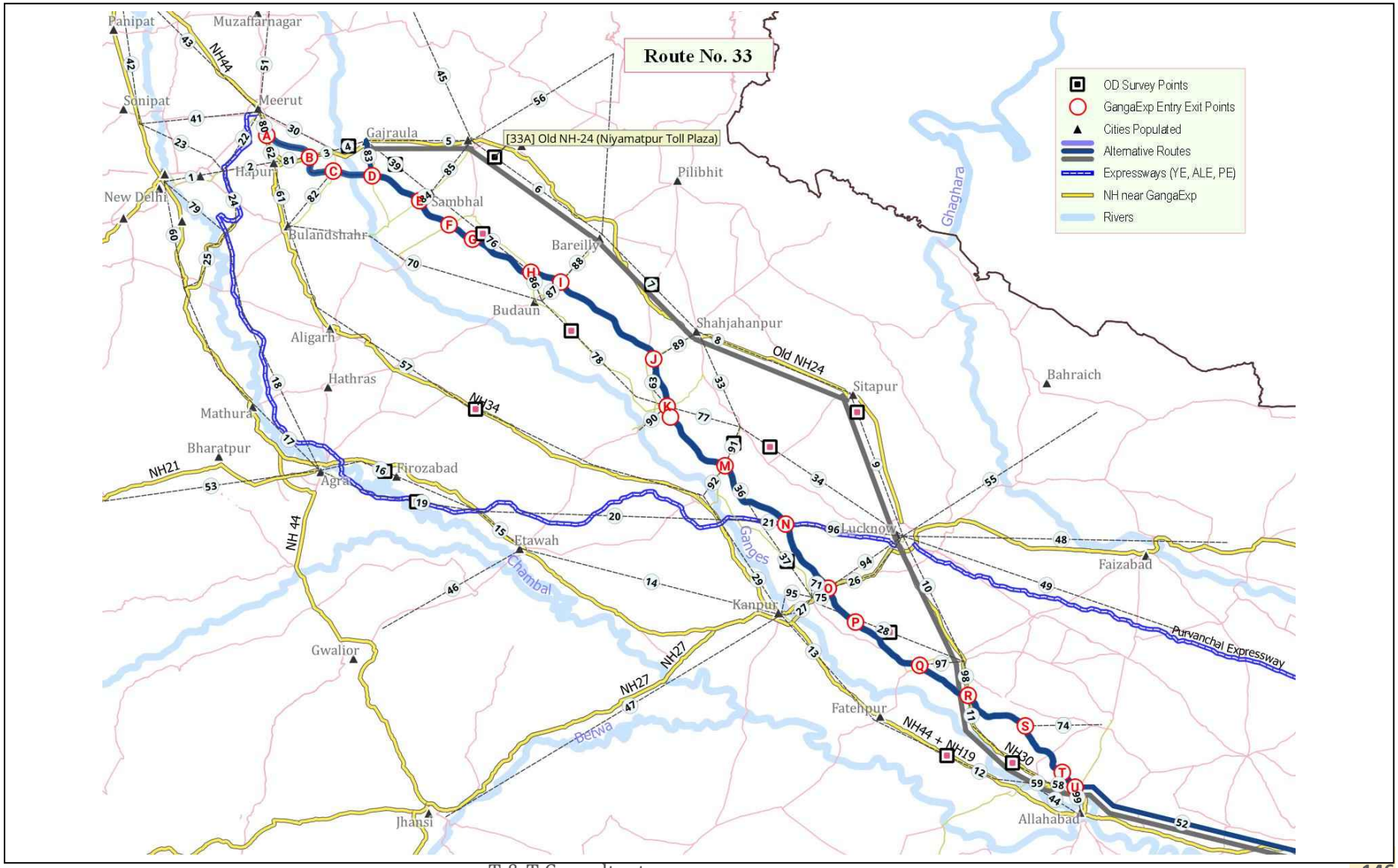

Route No. 28
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[28A] Old NH-24 (Niyamatpur Toll Plaza)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Pilibhit
New Delhi
Hapur
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Hathras
Old NH24
Sitapur
Bahraich
Mathura
NH34
Bharatpur
NH21
Firozabad
Agra
Etawah
Lucknow
Faizabad
NH 44
Chambal
Ganges
Kanpur
Purvanchal Expressway
Gwalior
NH27
Fatehpur
NH44 + NH19
NH30
Allahabad
Jhansi
Betwa

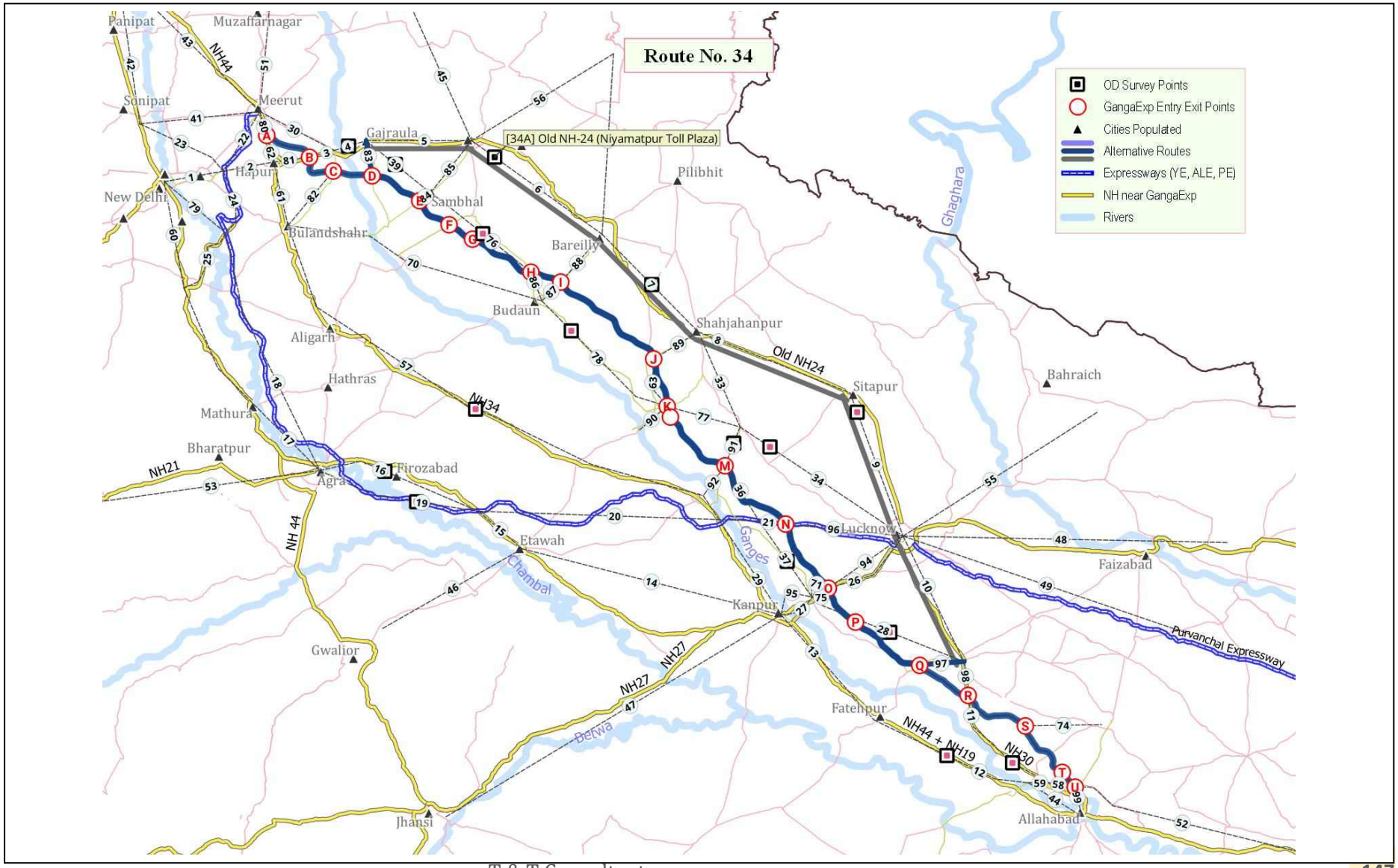

Route No. 29
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[29A] Old NH-24 (Brijghat Toll Plaza)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
New Delhi
Hapur
Bulandshahr
Sambhal
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Hathras
Sitapur
Bahraich
Mathura
Bharatpur
Firozabad
Agra
Etawah
Lucknow
Faizabad
Kanpur
Ganges
Chambal
Gwalior
Jhansi
Fatehpur
Allahabad
Purvanchal Expressway
Old NH24
NH34
NH21
NH 44
NH44 + NH19
NH27
NH30
Betwa

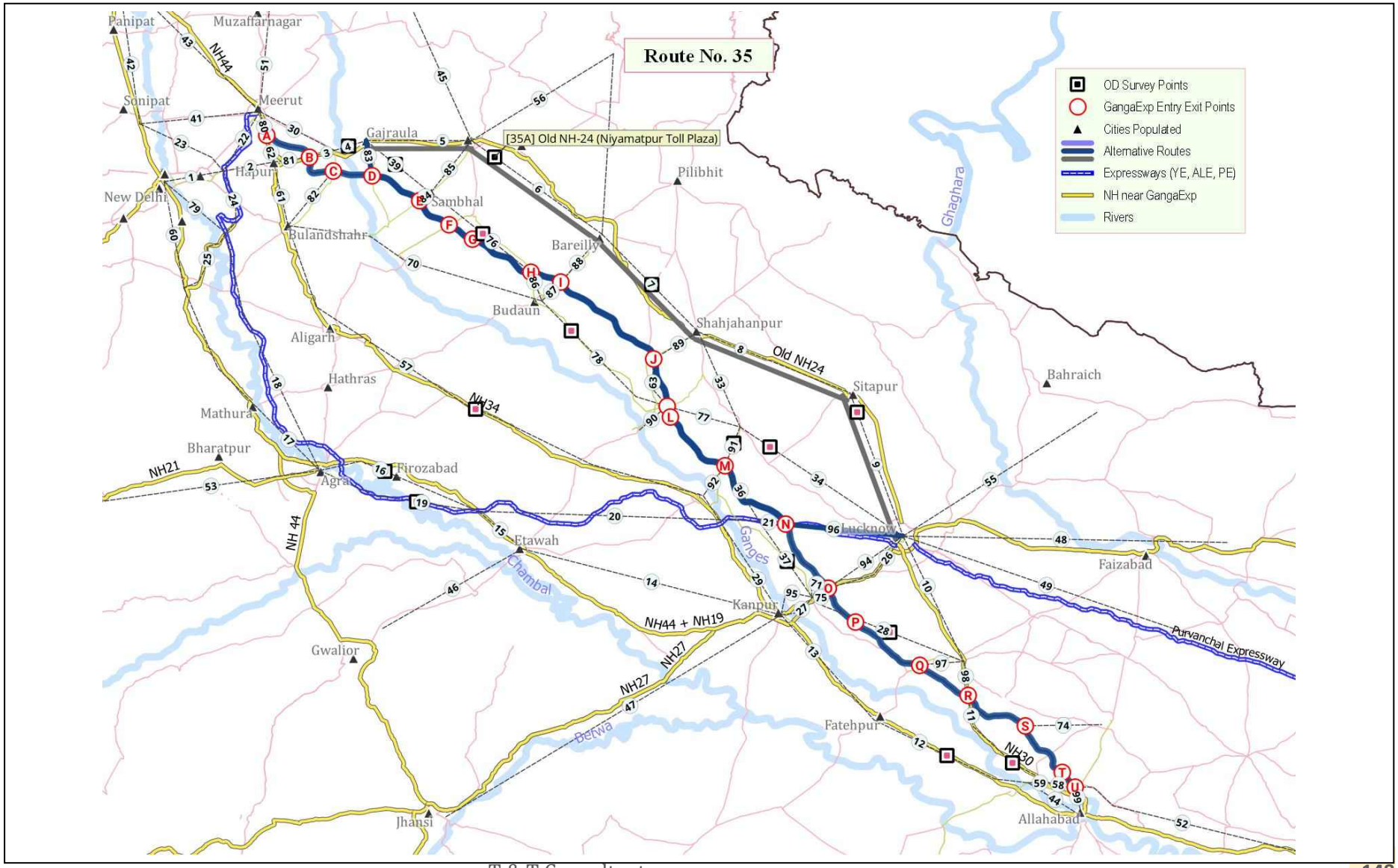

Route No. 30
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[30A] SH-51 (Gajraula-Hasanpur)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
New Delhi
Bulandshahr
Sambhal
Bareilly
Budaun
Shahjahanpur
Aligarh
Hathras
Mathura
Bharatpur
Firozabad
Agra
Etawah
Kanpur
Lucknow
Sitapur
Bahraich
Faizabad
Gwalior
Jhansi
Fatehpur
Allahabad
Ghaghara
Ganges
Chambal
Betwa
Purvanchal Expressway
Old NH24
NH44
NH34
NH21
NH 44
NH27
NH44 + NH19
NH30

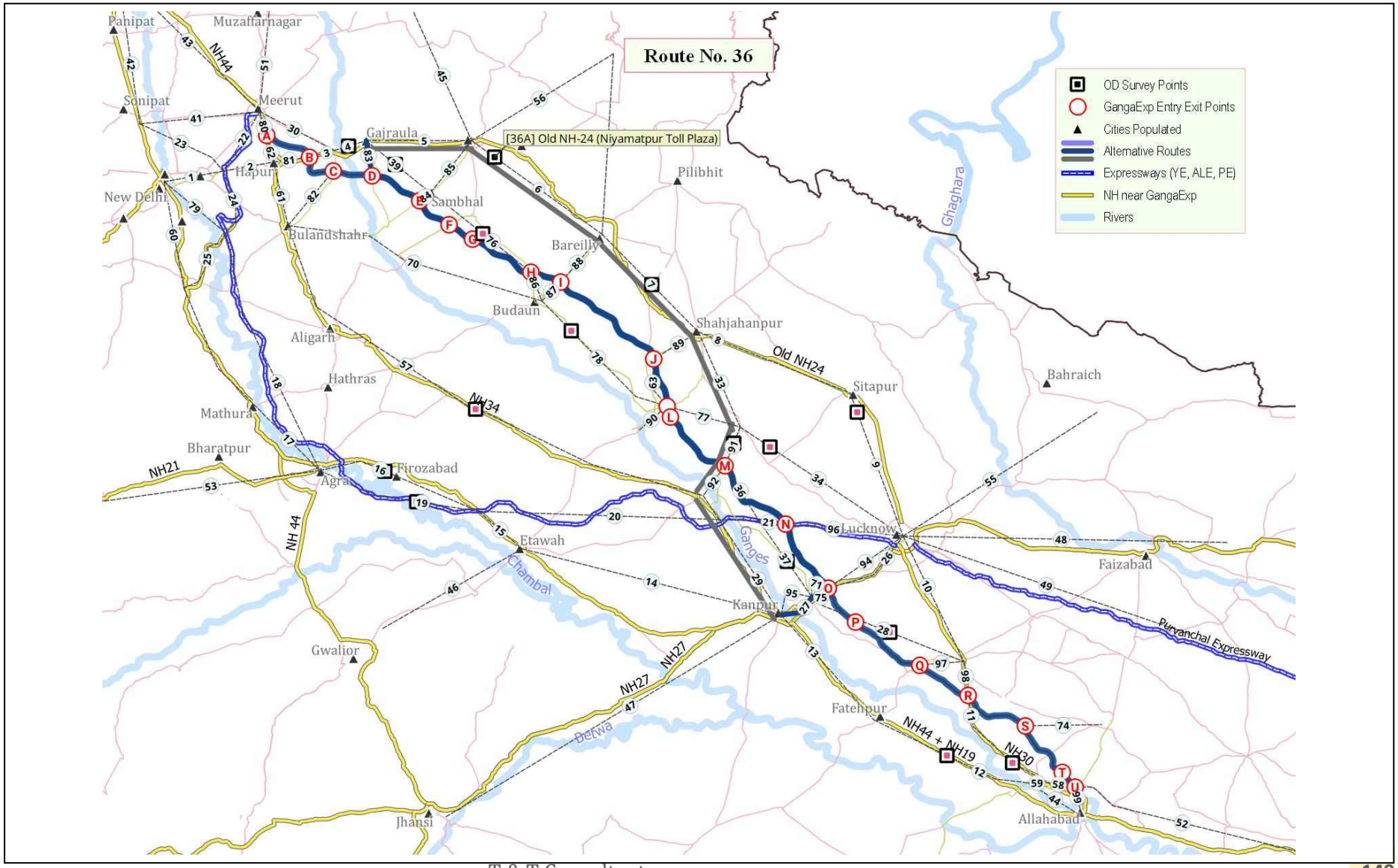

Route No. 31
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[31A] Old NH-24 (Brijghat Toll Plaza)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
New Delhi
Hapur
Bulandshahr
Sambhal
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Hathras
Old NH24
Sitapur
Bahraich
Mathura
NH34
Bharatpur
NH21
Agra
Firozabad
Etawah
NH 44
Chambal
Ganges
Lucknow
Faizabad
Kanpur
Purvanchal Expressway
Gwalior
NH27
Fatehpur
NH44 + NH19
NH30
Jhansi
Allahabad
Betwa

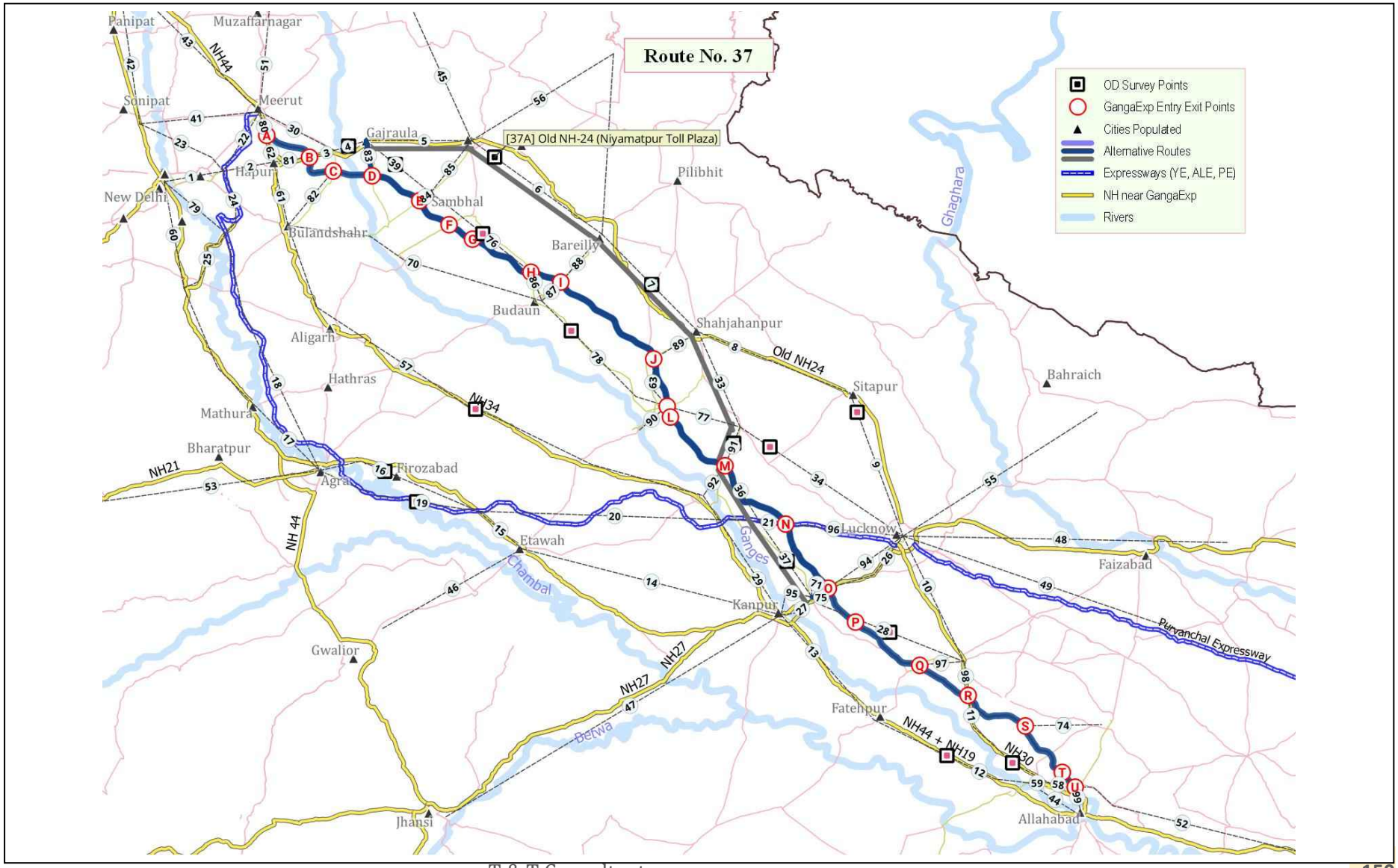

Route No. 32
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[32A] Old NH-24 (Niyamatpur Toll Plaza)
Old NH24
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Hapur
New Delhi
Bulandshahr
Sambhal
Pilibhit
Bareilly
Budaun
Shahjahanpur
Sitapur
Bahraich
Ghaghara
Aligarh
Hathras
Mathura
Bharatpur
Agra
Firozabad
Etawah
Chambal
Ganges
Kanpur
Lucknow
Faizabad
Purvanchal Expressway
Gwalior
Jhansi
Fatehpur
Allahabad
NH44
NH21
NH 44
NH34
NH27
NH44 + NH19
NH30
Betwa

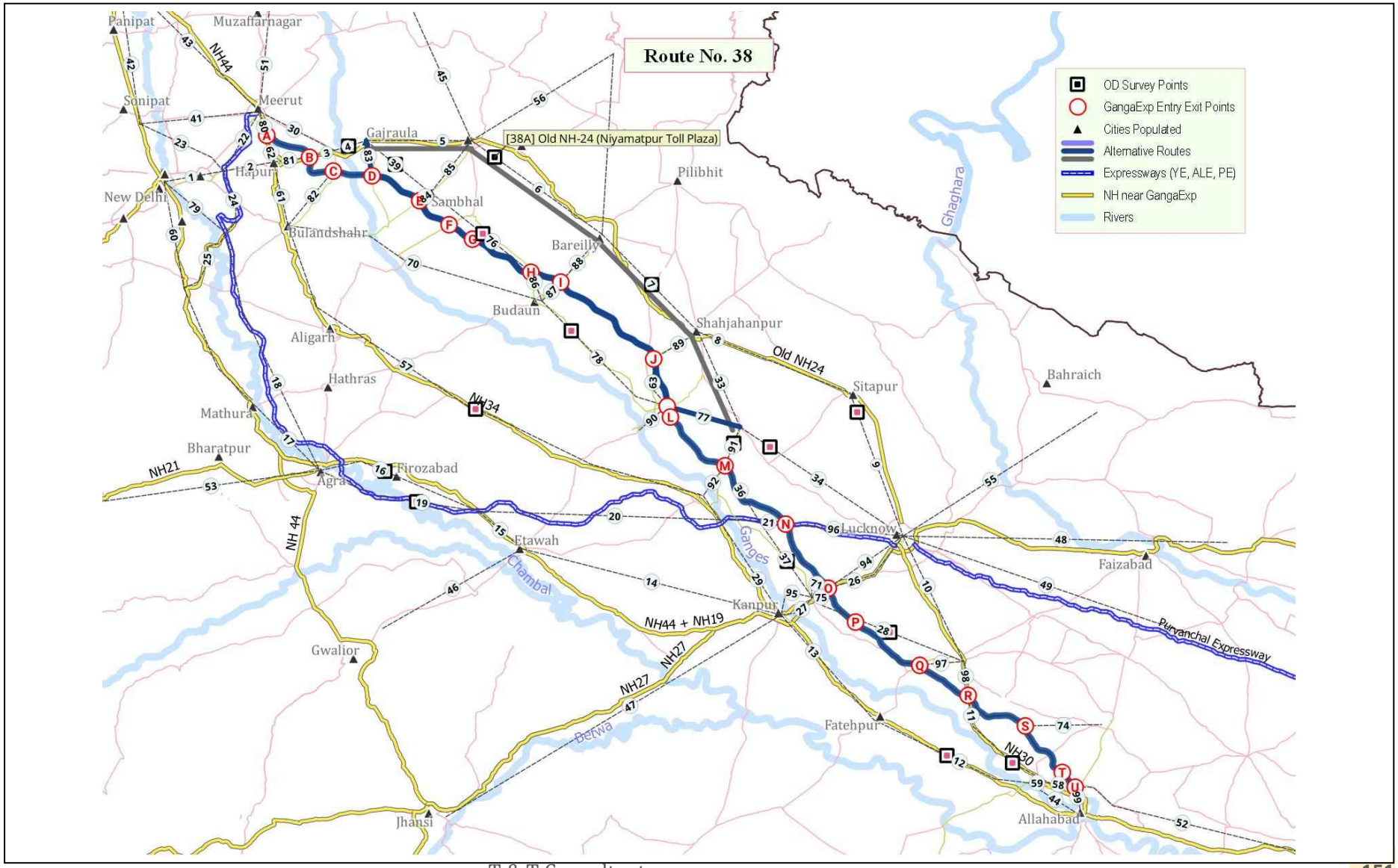

Route No. 33
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[33A] Old NH-24 (Niyamatpur Toll Plaza)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Hapur
New Delhi
Bulandshahr
Sambhal
Pilibhit
Ghaghara
Bareilly
Budaun
Shahjahanpur
Old NH24
Aligarh
Hathras
Sitapur
Bahraich
Mathura
NH34
Bharatpur
NH21
Agra
Firozabad
Etawah
NH 44
Chambal
Ganges
Lucknow
Faizabad
Purvanchal Expressway
Kanpur
Gwalior
NH27
Berwa
Fatehpur
NH44 + NH19
NH30
Jhansi
Allahabad

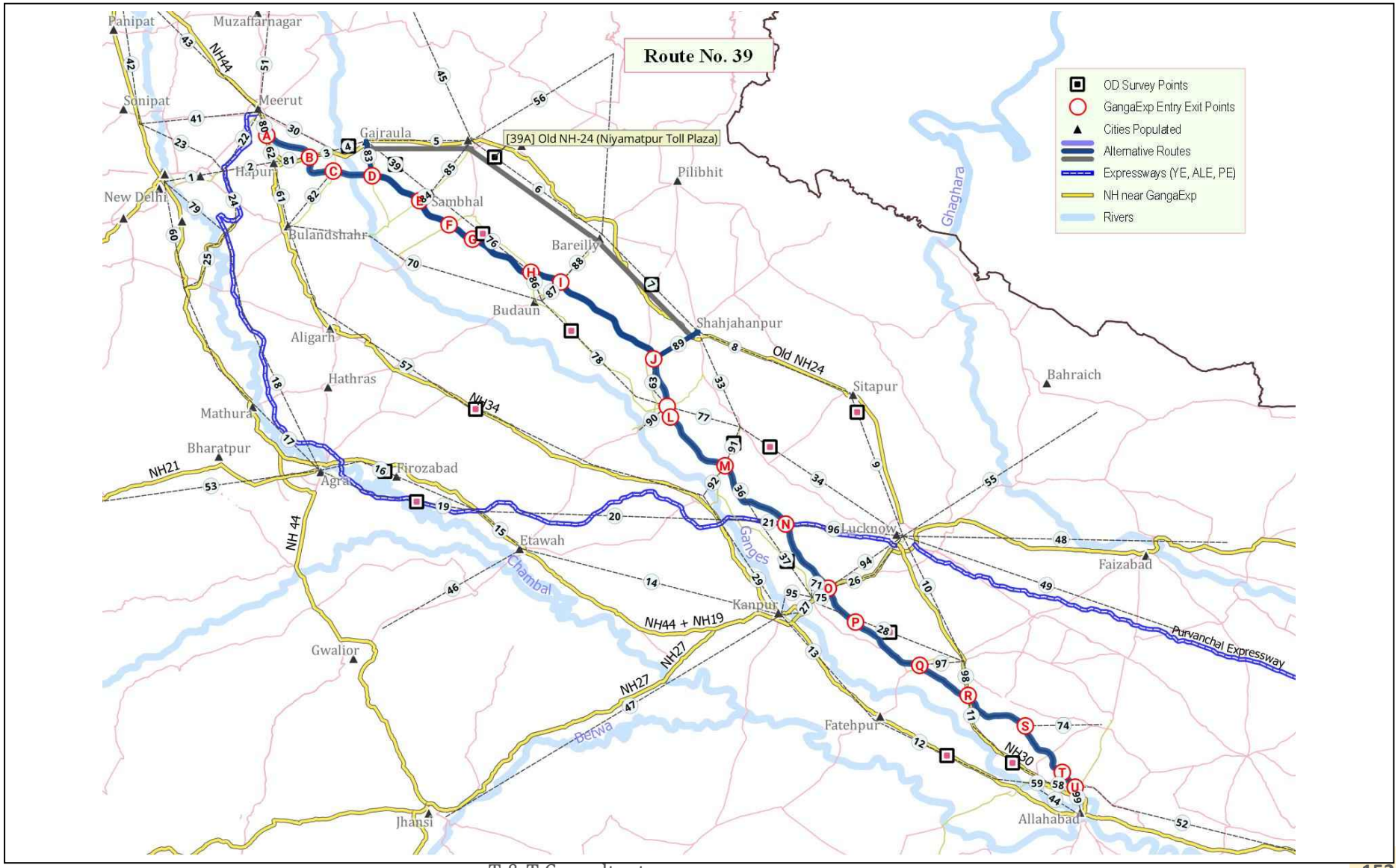

Route No. 34
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[34A] Old NH-24 (Niyamatpur Toll Plaza)
Old NH24
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Hapur
New Delhi
Bulandshahr
Sambhal
Pilibhit
Ghaghara
Bareilly
Budaun
Shahjahanpur
Aligarh
Hathras
Sitapur
Bahraich
Mathura
NH34
Bharatpur
NH21
Agra
Firozabad
Etawah
Chambal
Ganges
Lucknow
Faizabad
Purvanchal Expressway
Kanpur
NH 44
Gwalior
NH27
Berwa
Fatehpur
NH44 + NH19
NH30
Jhansi
Allahabad

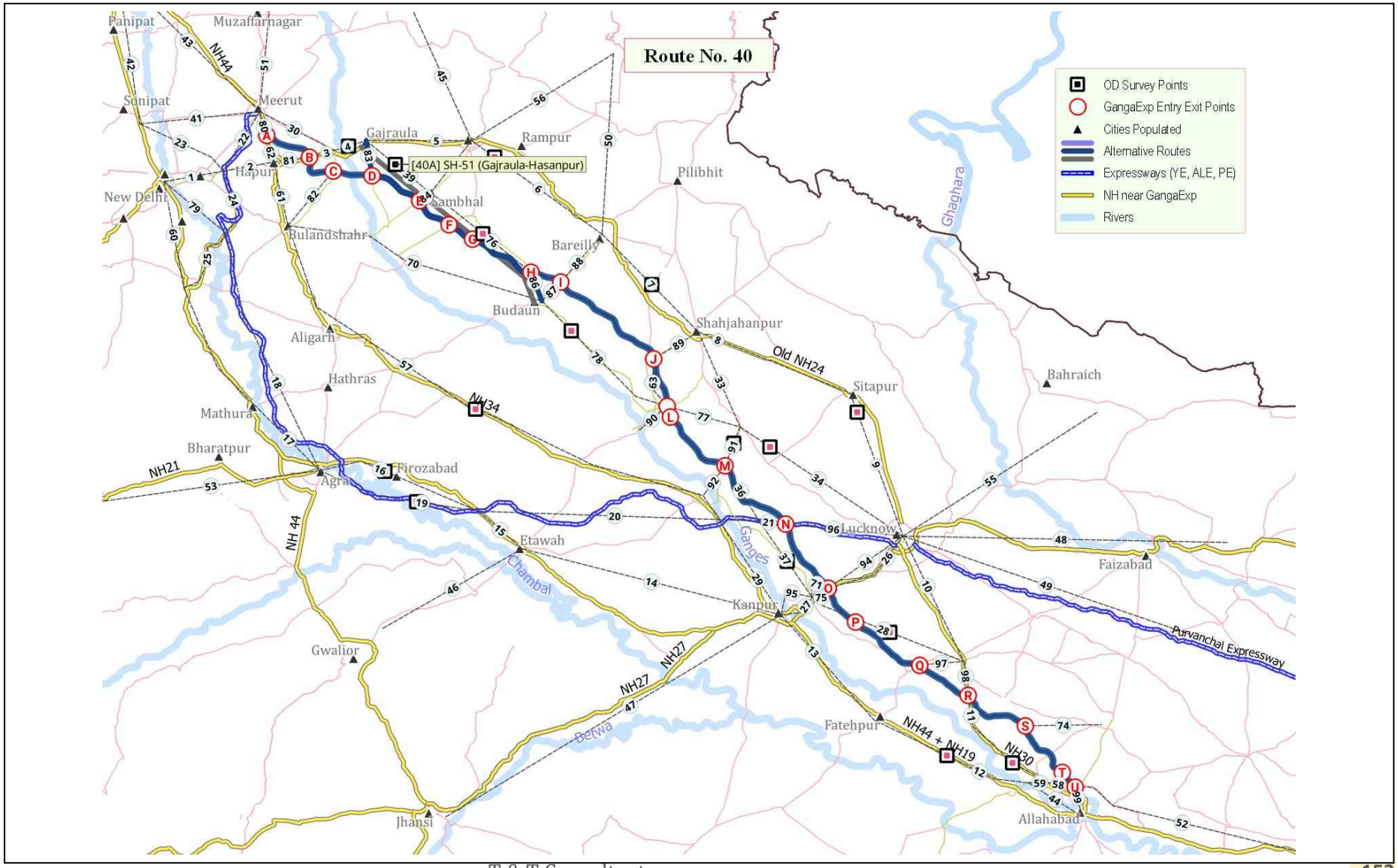

Route No. 35
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[35A] Old NH-24 (Niyamatpur Toll Plaza)
Old NH24
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Hapur
New Delhi
Bulandshahr
Sambhal
Pilibhit
Bareilly
Budaun
Shahjahanpur
Sitapur
Bahraich
Ghaghara
Aligarh
Hathras
Mathura
Bharatpur
Agra
Firozabad
Etawah
Chambal
Ganges
Kanpur
Lucknow
Faizabad
Purvanchal Expressway
Gwalior
Jhansi
Fatehpur
Allahabad
Berwa
NH44
NH34
NH21
NH 44
NH44 + NH19
NH27
NH30

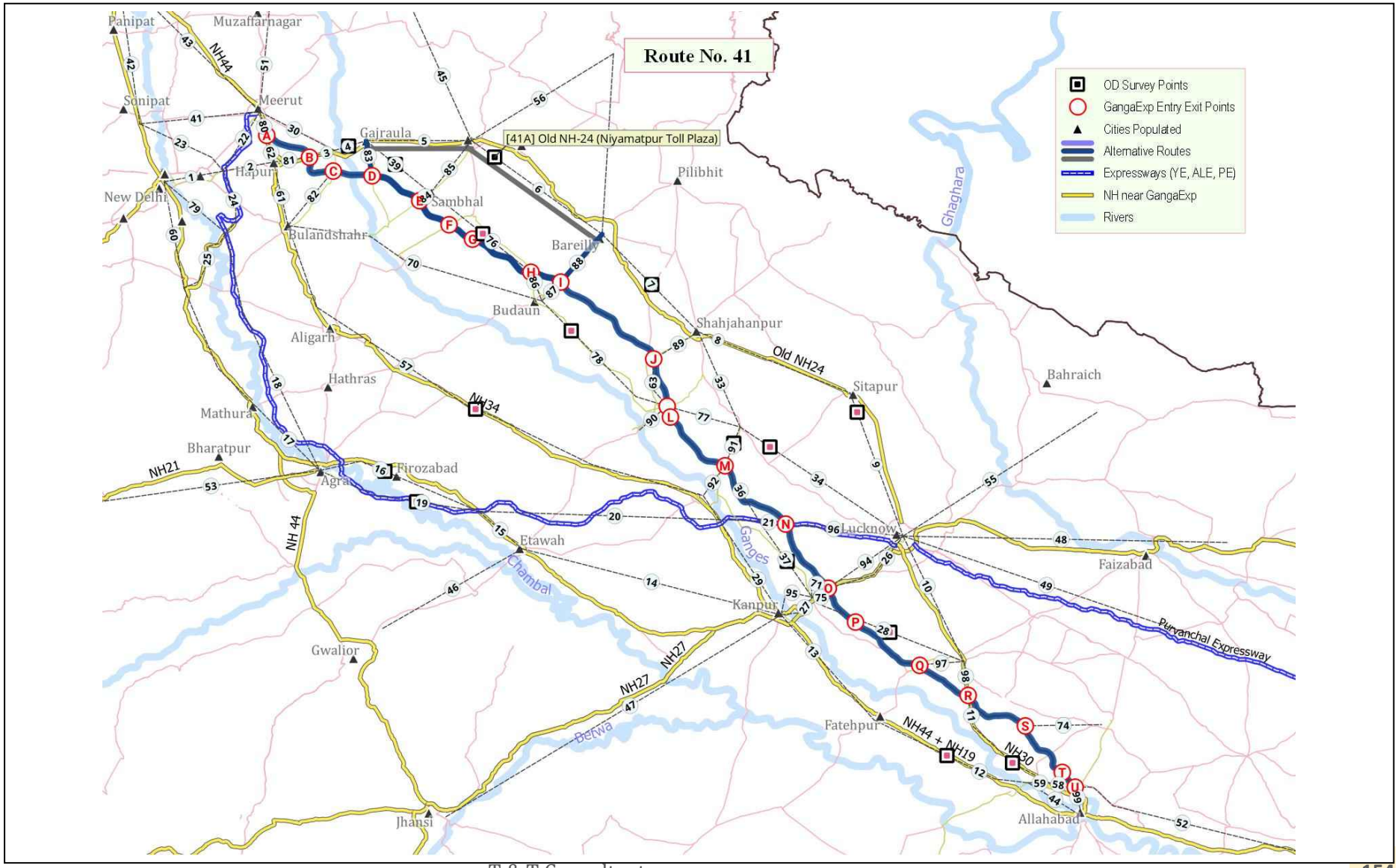

Route No. 36
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[36A] Old NH-24 (Niyamatpur Toll Plaza)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Hapur
New Delhi
Bulandshahr
Sambhal
Pilibhit
Ghaghara
Bareilly
Budaun
Shahjahanpur
Old NH24
Sitapur
Bahraich
Aligarh
Hathras
Mathura
Bharatpur
NH21
Agra
Firozabad
NH34
NH 44
Etawah
Chambal
Ganges
Kanpur
Lucknow
Faizabad
Purvanchal Expressway
Gwalior
NH27
Betwa
Fatehpur
NH44 + NH19
NH30
Allahabad
Jhansi

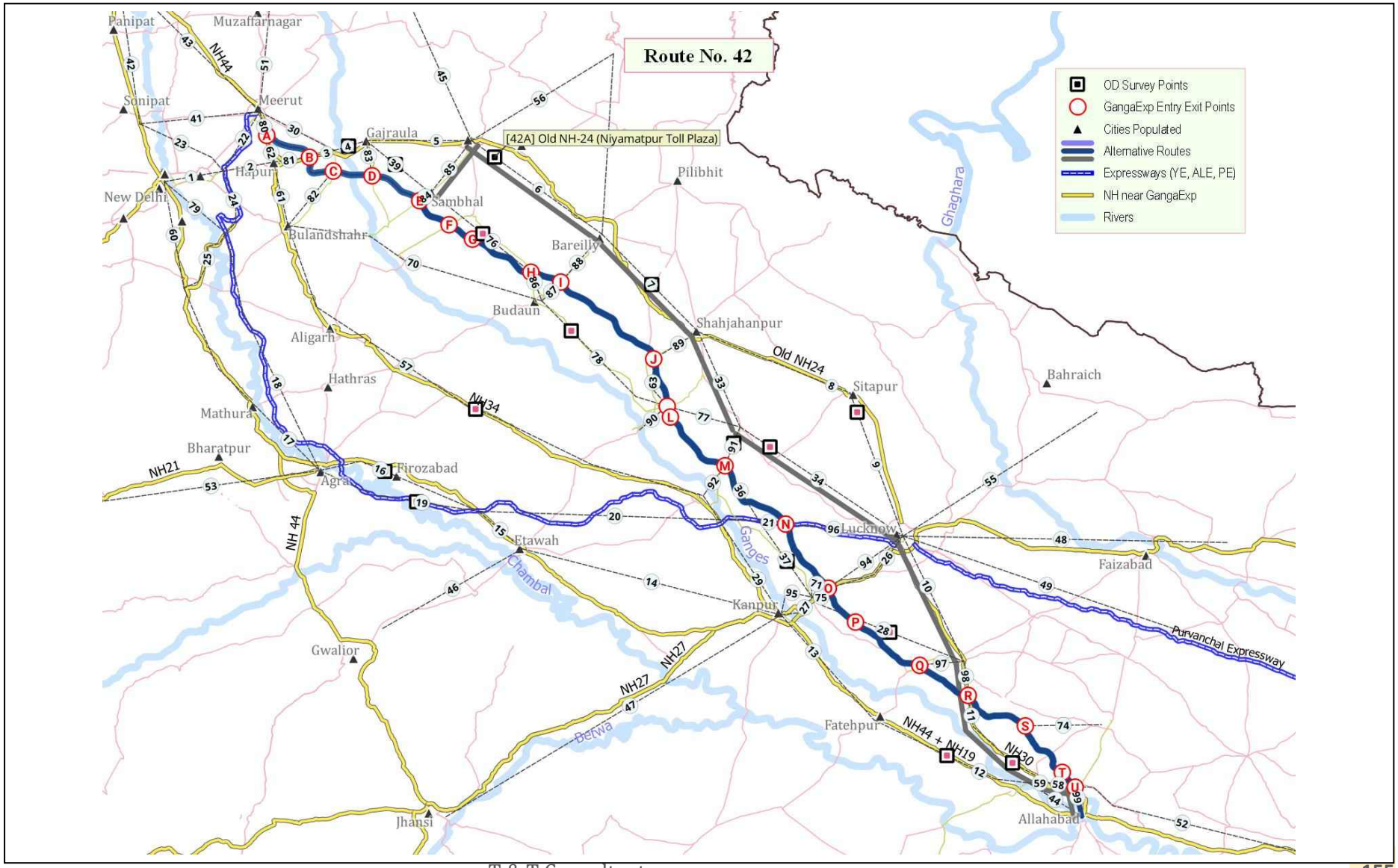

Route No. 37
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[37A] Old NH-24 (Niyamatpur Toll Plaza)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Hapur
New Delhi
Bulandshahr
Sambhal
Pilibhit
Ghaghara
Bareilly
Budaun
Shahjahanpur
Old NH24
Sitapur
Bahraich
Aligarh
Hathras
Mathura
Bharatpur
Agra
Firozabad
Etawah
Chambal
Ganges
Kanpur
Lucknow
Faizabad
Purvanchal Expressway
Gwalior
Jhansi
Fatehpur
Allahabad
Berwa
NH44
NH21
NH 44
NH34
NH27
NH44 + NH19
NH30

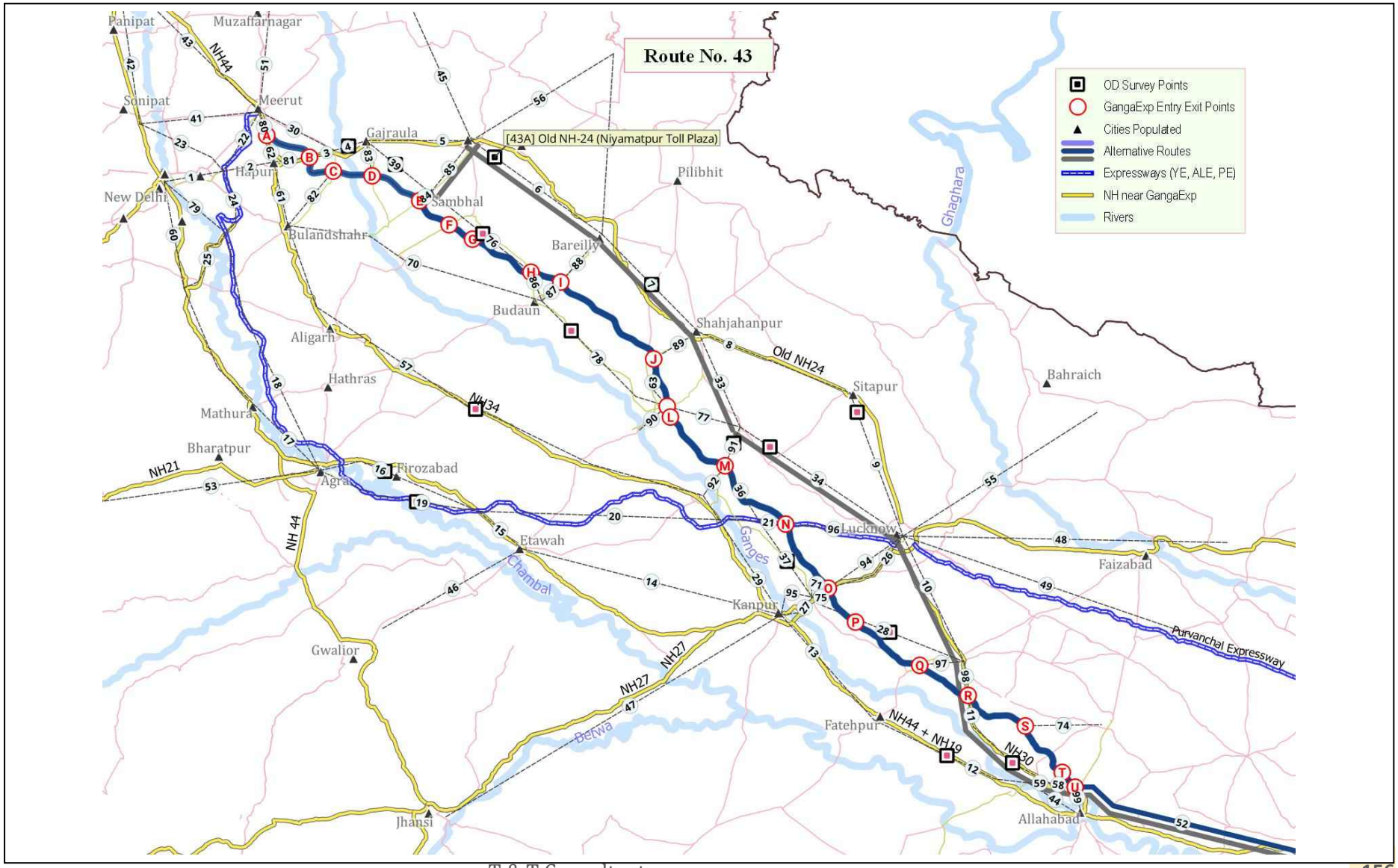

Route No. 38
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[38A] Old NH-24 (Niyamatpur Toll Plaza)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Hapur
New Delhi
Bulandshahr
Sambhal
Pilibhit
Ghaghara
Bareilly
Budaun
Shahjahanpur
Old NH24
Aligarh
Hathras
Mathura
NH34
Sitapur
Bahraich
Bharatpur
NH21
Agra
Firozabad
NH 44
Etawah
Chambal
Ganges
Lucknow
Faizabad
Kanpur
NH44 + NH19
Purvanchal Expressway
Gwalior
NH27
Berwa
Fatehpur
NH30
Jhansi
Allahabad


Route No. 39
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[39A] Old NH-24 (Niyamatpur Toll Plaza)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Hapur
New Delhi
Bulandshahr
Sambhal
Pilibhit
Ghaghara
Bareilly
Budaun
Shahjahanpur
Old NH24
Aligarh
Hathras
Mathura
Bharatpur
NH21
Agra
Firozabad
NH34
Sitapur
Bahraich
Lucknow
Faizabad
Purvanchal Expressway
Etawah
Chambal
Ganges
Kanpur
NH44 + NH19
NH 44
Gwalior
NH27
Berwa
Fatehpur
NH30
Allahabad
Jhansi

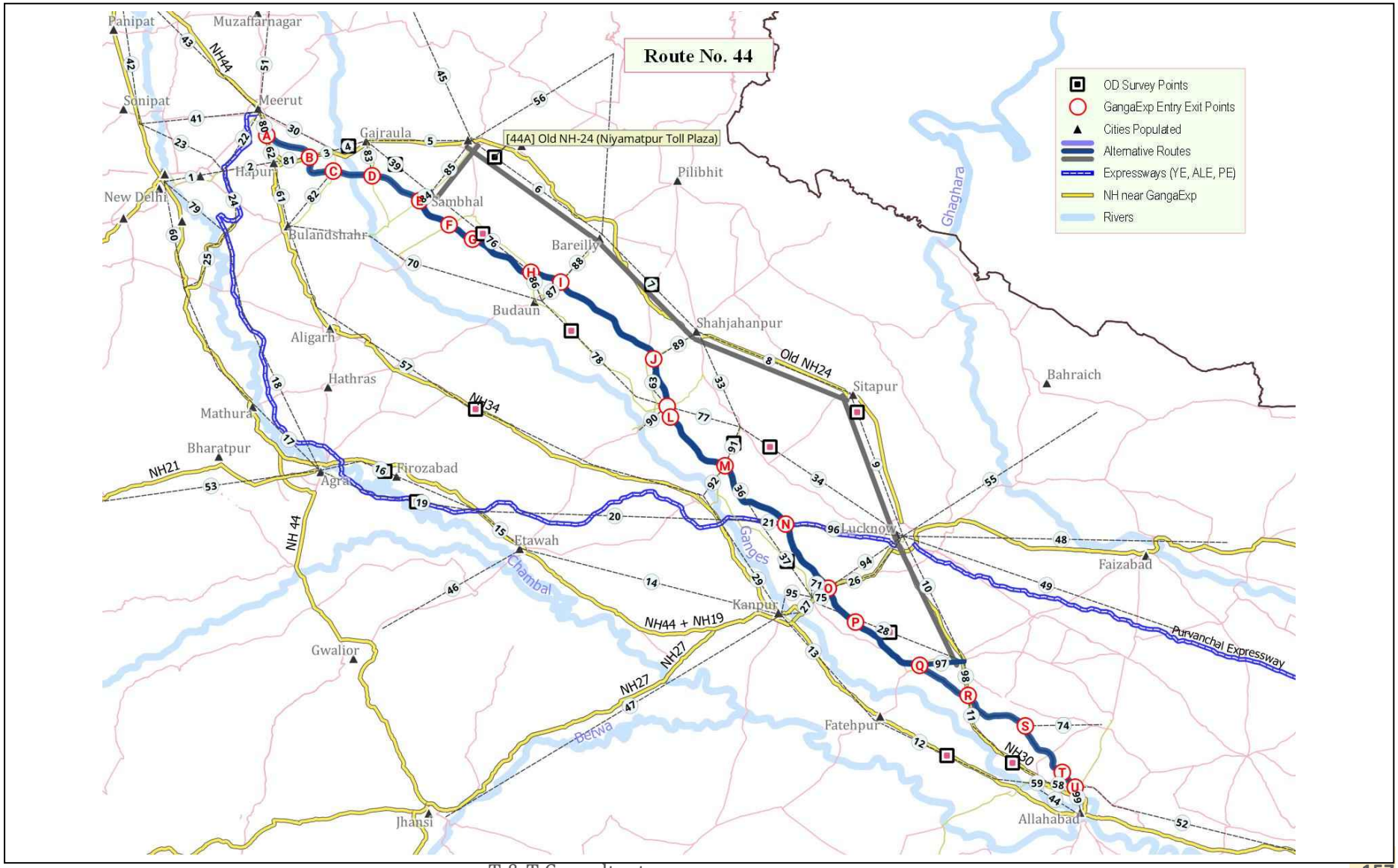

Route No. 40
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[40A] SH-51 (Gajraula-Hasanpur)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Pilibhit
Ghaghara
Budaun
Shahjahanpur
Old NH24
Aligarh
Hathras
Sitapur
Bahraich
Mathura
NH34
Bharatpur
NH21
Firozabad
Agra
NH 44
Etawah
Chambal
Ganges
Lucknow
Faizabad
Purvanchal Expressway
Kanpur
Gwalior
NH27
Fatehpur
NH44 + NH19
NH30
Allahabad
Jhansi
Betwa

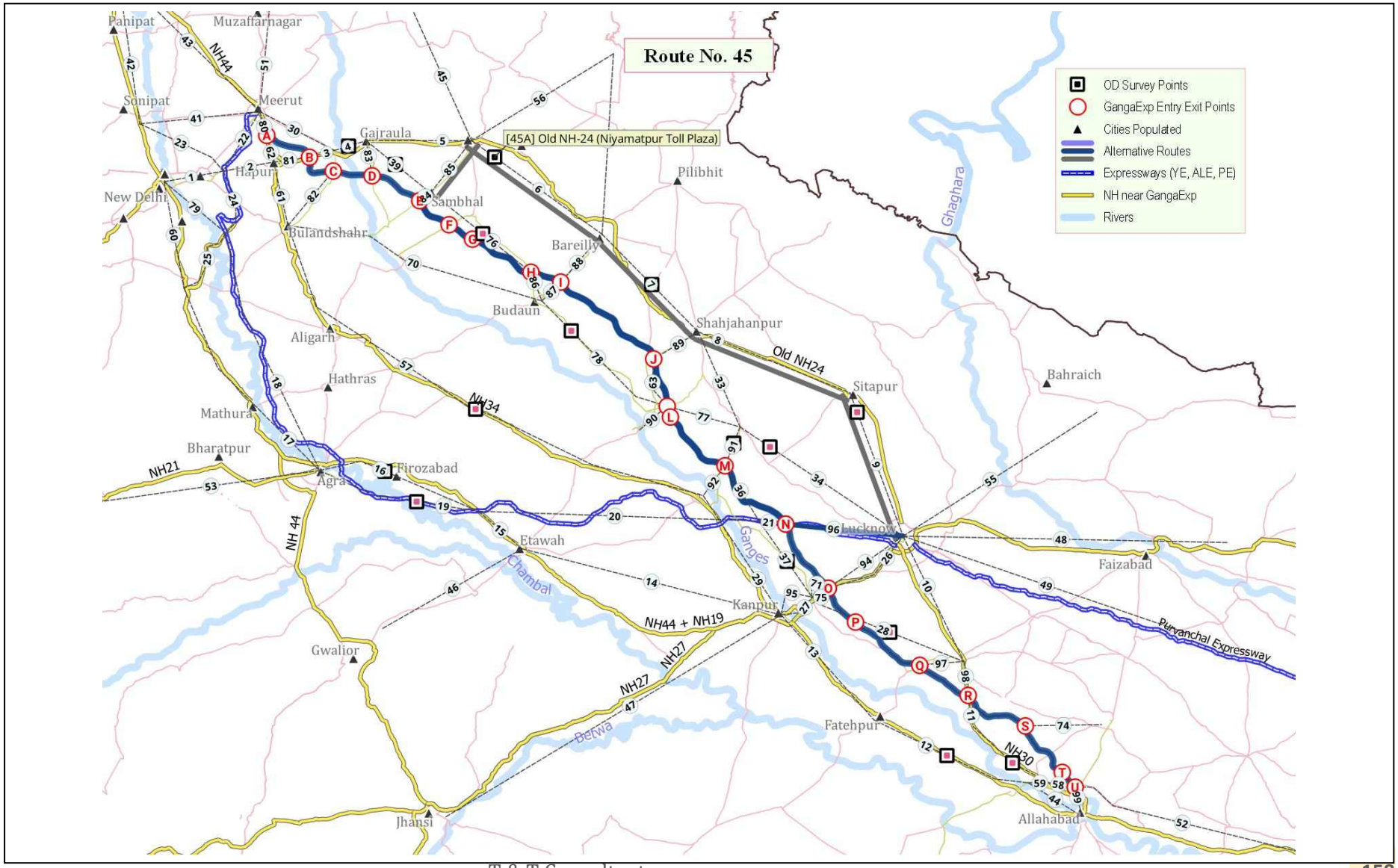

Route No. 41
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[41A] Old NH-24 (Niyamatpur Toll Plaza)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Hapur
New Delhi
Bulandshahr
Sambhal
Pilibhit
Ghaghara
Bareilly
Budaun
Shahjahanpur
Old NH24
Sitapur
Bahraich
Aligarh
Hathras
Mathura
Bharatpur
Agra
Firozabad
Etawah
Chambal
Ganges
Kanpur
Lucknow
Faizabad
Purvanchal Expressway
Gwalior
Jhansi
Fatehpur
Allahabad
NH44
NH21
NH 44
NH34
NH27
NH44 + NH19
NH30
Betwa

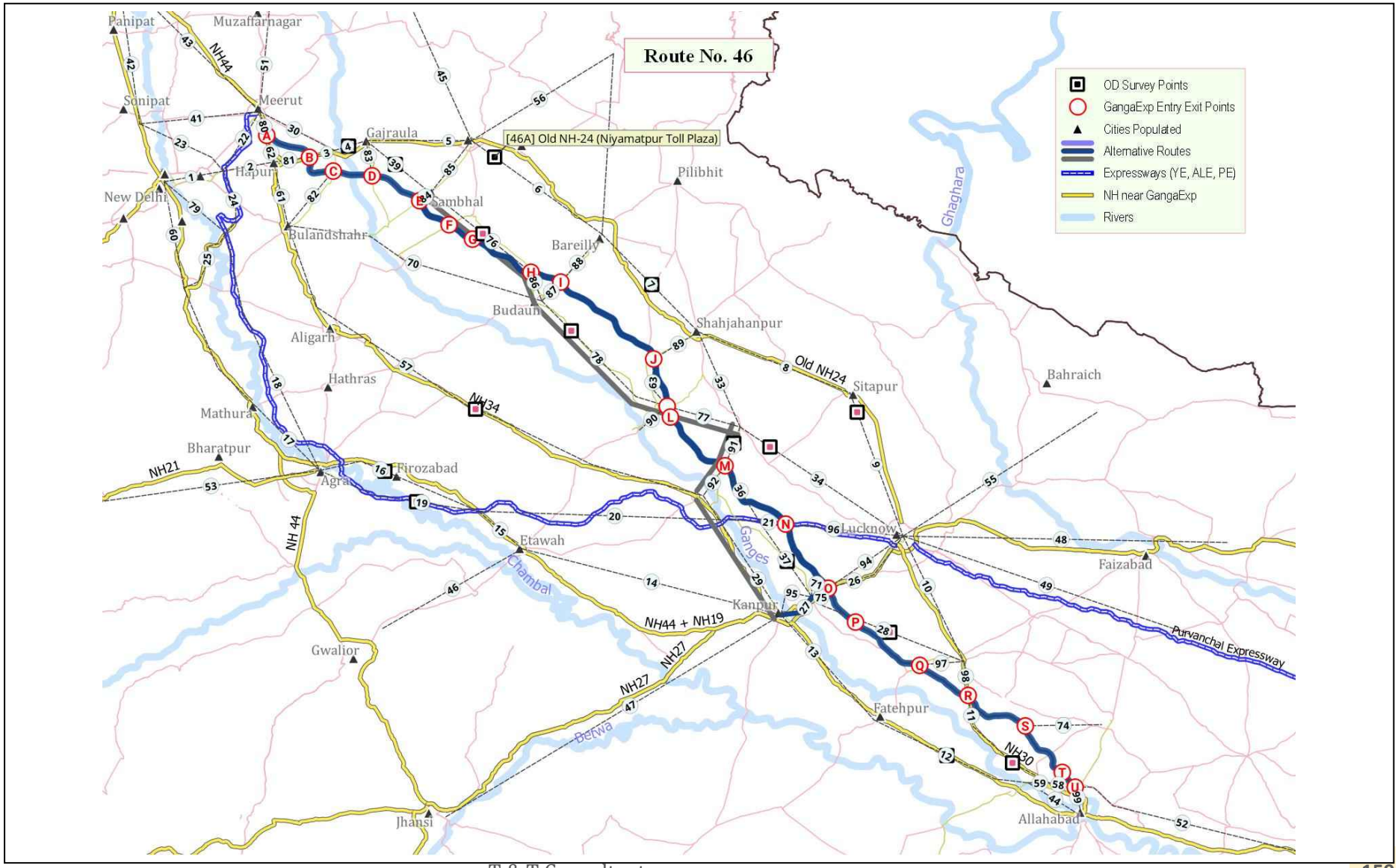

Route No. 42
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[42A] Old NH-24 (Niyamatpur Toll Plaza)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Pilibhit
Ghaghara
Budaun
Shahjahanpur
Old NH24
Sitapur
Bahraich
Aligarh
Hathras
Mathura
NH34
Bharatpur
NH21
Agra
Firozabad
Etawah
NH 44
Chambal
Ganges
Kanpur
Lucknow
Faizabad
Purvanchal Expressway
Gwalior
NH27
Fatehpur
NH44 + NH19
NH30
Allahabad
Jhansi
Betwa

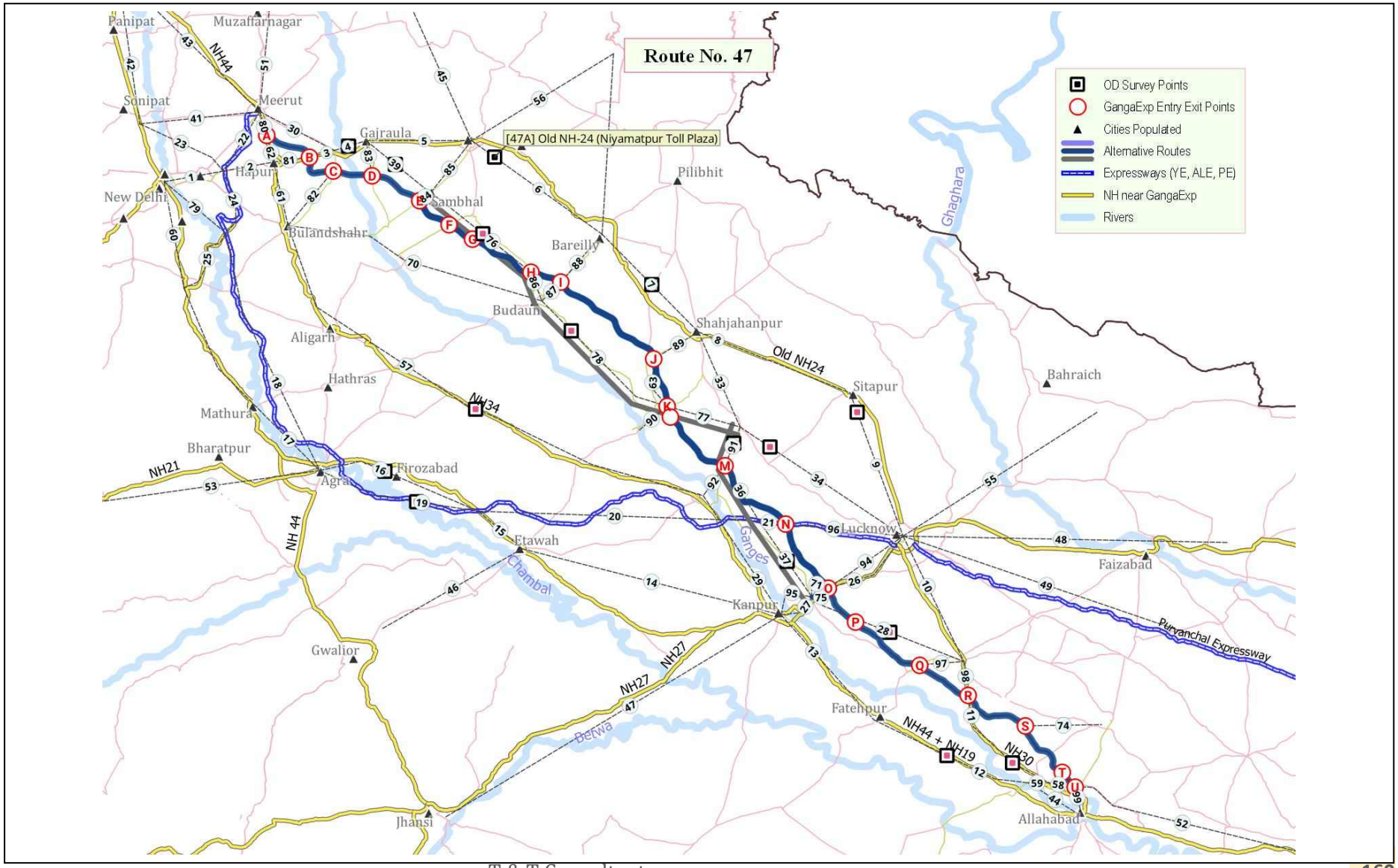

Route No. 43
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[43A] Old NH-24 (Niyamatpur Toll Plaza)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Pilibhit
Ghaghara
Budaun
Shahjahanpur
Old NH24
Aligarh
Hathras
Sitapur
Bahraich
Mathura
NH34
Bharatpur
NH21
Agra
Firozabad
Etawah
NH 44
Chambal
Ganges
Lucknow
Faizabad
Purvanchal Expressway
Kanpur
Gwalior
NH27
Fatehpur
NH44 + NH19
NH30
Allahabad
Jhansi
Betwa

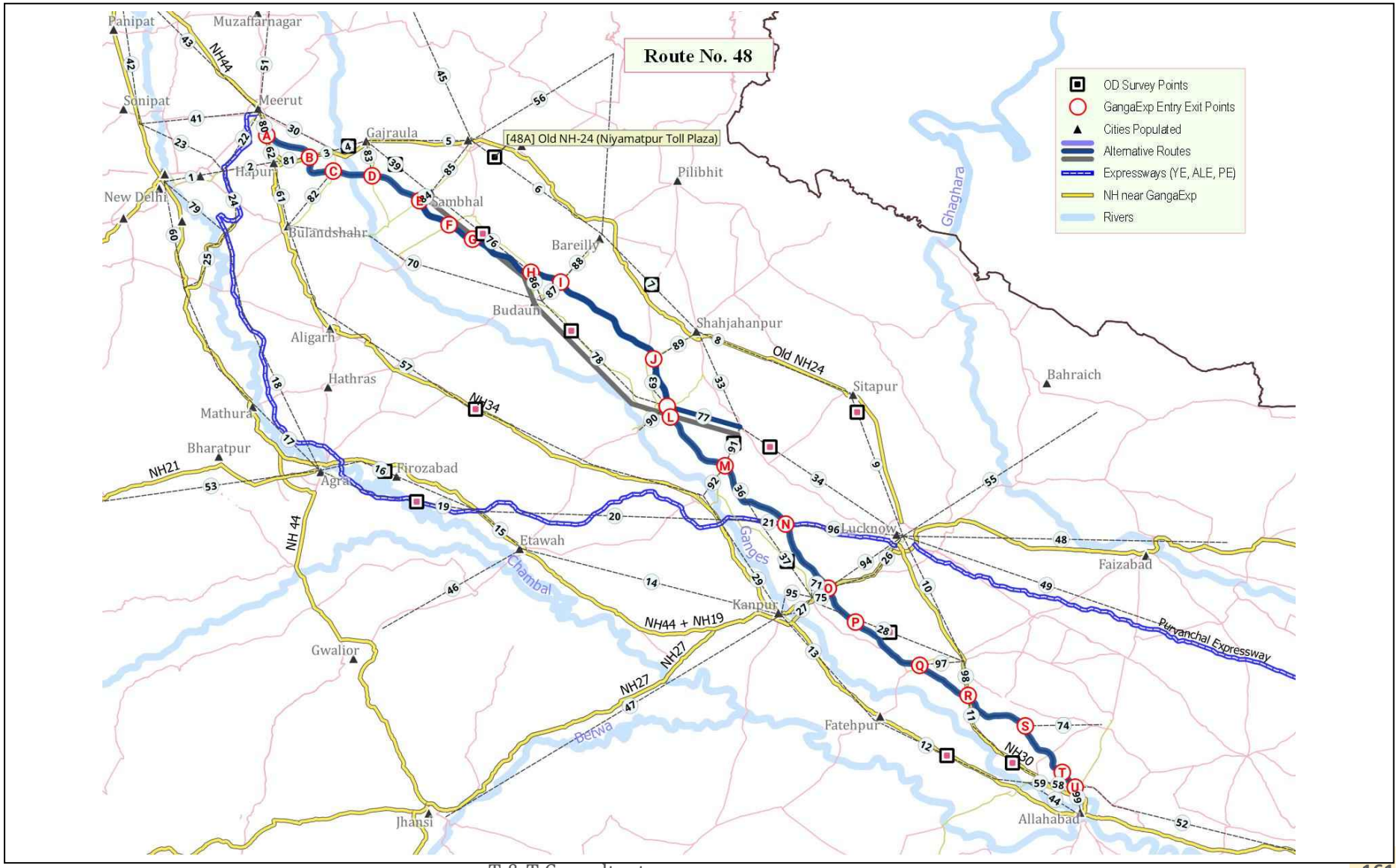
A - 1050

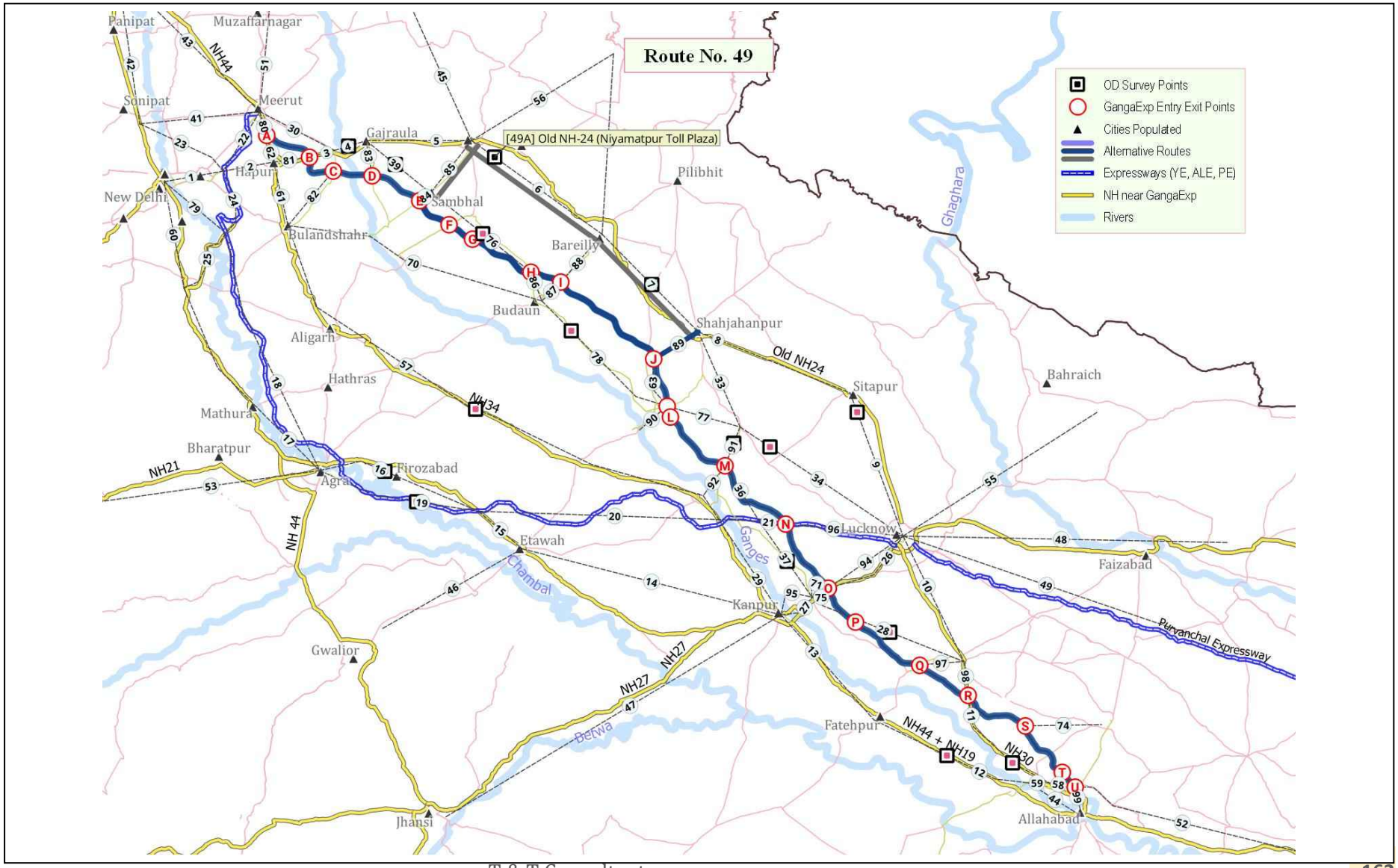

Route No. 44
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[44A] Old NH-24 (Niyamatpur Toll Plaza)
Old NH24
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Hapur
New Delhi
Bulandshahr
Sambhal
Pilibhit
Ghaghara
Bareilly
Budaun
Shahjahanpur
Aligarh
Hathras
Sitapur
Bahraich
Mathura
NH34
Bharatpur
NH21
Agra
Firozabad
Etawah
NH 44
Chambal
Ganges
Lucknow
Faizabad
Kanpur
Purvanchal Expressway
NH44 + NH19
Gwalior
NH27
Fatehpur
Berwa
NH30
Jhansi
Allahabad

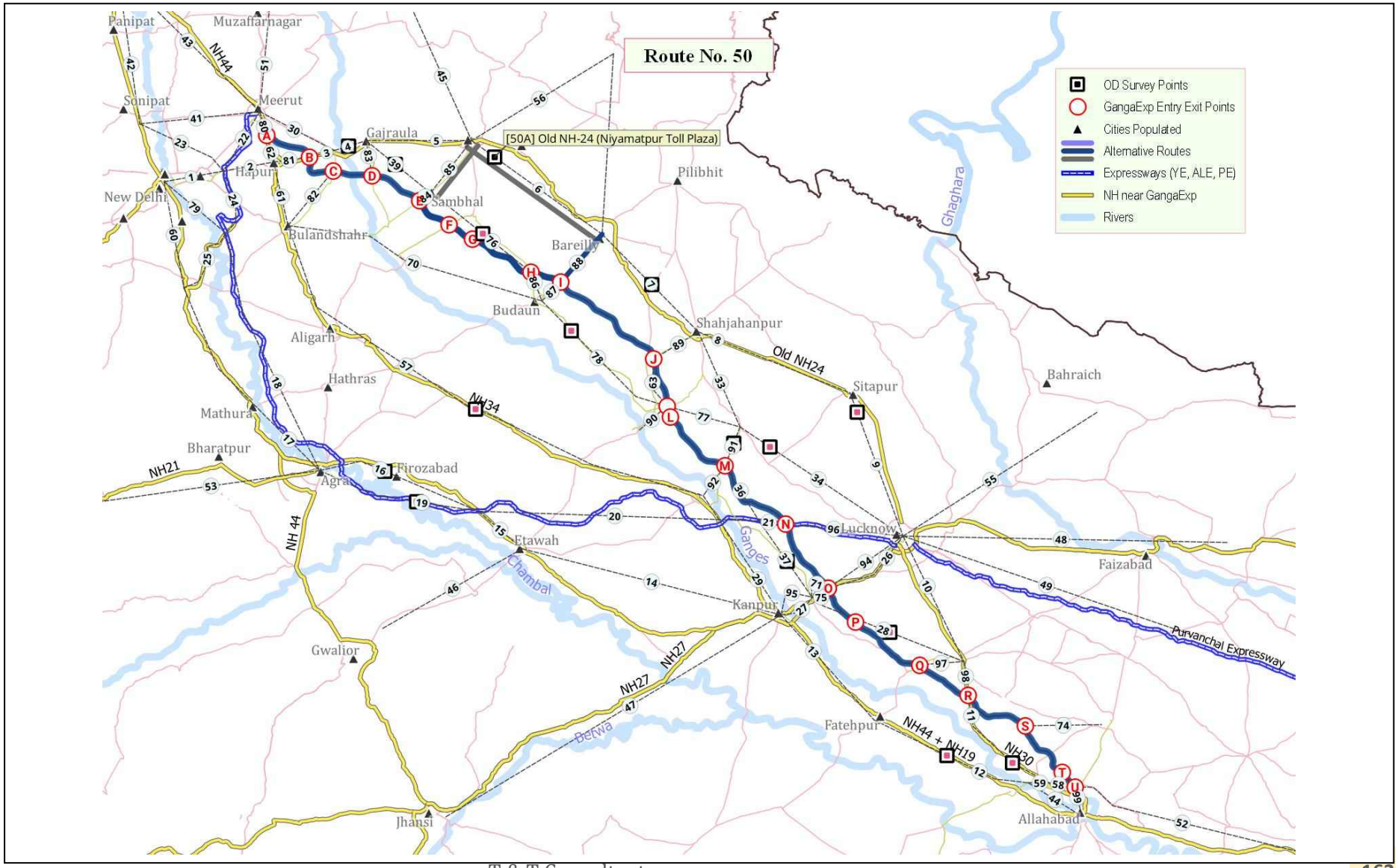

Route No. 45
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[45A] Old NH-24 (Niyamatpur Toll Plaza)
Old NH24
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Hapur
New Delhi
Bulandshahr
Sambhal
Pilibhit
Ghaghara
Bareilly
Budaun
Shahjahanpur
Aligarh
Hathras
Sitapur
Bahraich
Mathura
Bharatpur
Agra
Firozabad
Etawah
Lucknow
Faizabad
Kanpur
Ganges
Chambal
Gwalior
Jhansi
Fatehpur
Allahabad
Purvanchal Expressway
NH44
NH34
NH21
NH 44
NH44 + NH19
NH27
NH30
Betwa

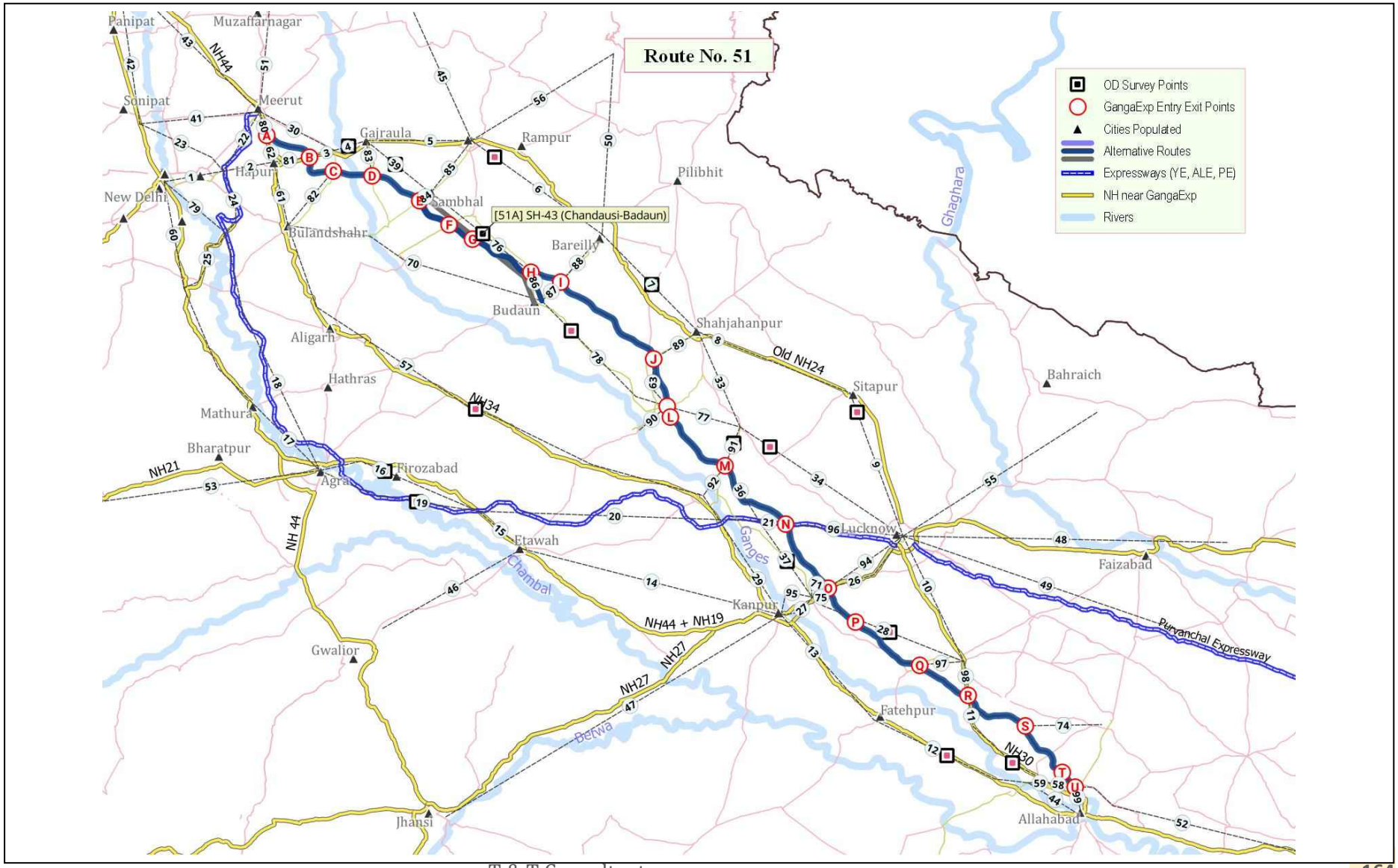

Route No. 46
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[46A] Old NH-24 (Niyamatpur Toll Plaza)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Hapur
New Delhi
Bulandshahr
Sambhal
Pilibhit
Ghaghara
Bareilly
Budaun
Shahjahanpur
Aligarh
Hathras
Old NH24
Sitapur
Bahraich
Mathura
NH34
Bharatpur
NH21
Agra
Firozabad
Etawah
NH 44
Chambal
Ganges
Lucknow
Faizabad
Kanpur
NH44 + NH19
Purvanchal Expressway
Gwalior
NH27
Fatehpur
Betwa
NH30
Jhansi
Allahabad

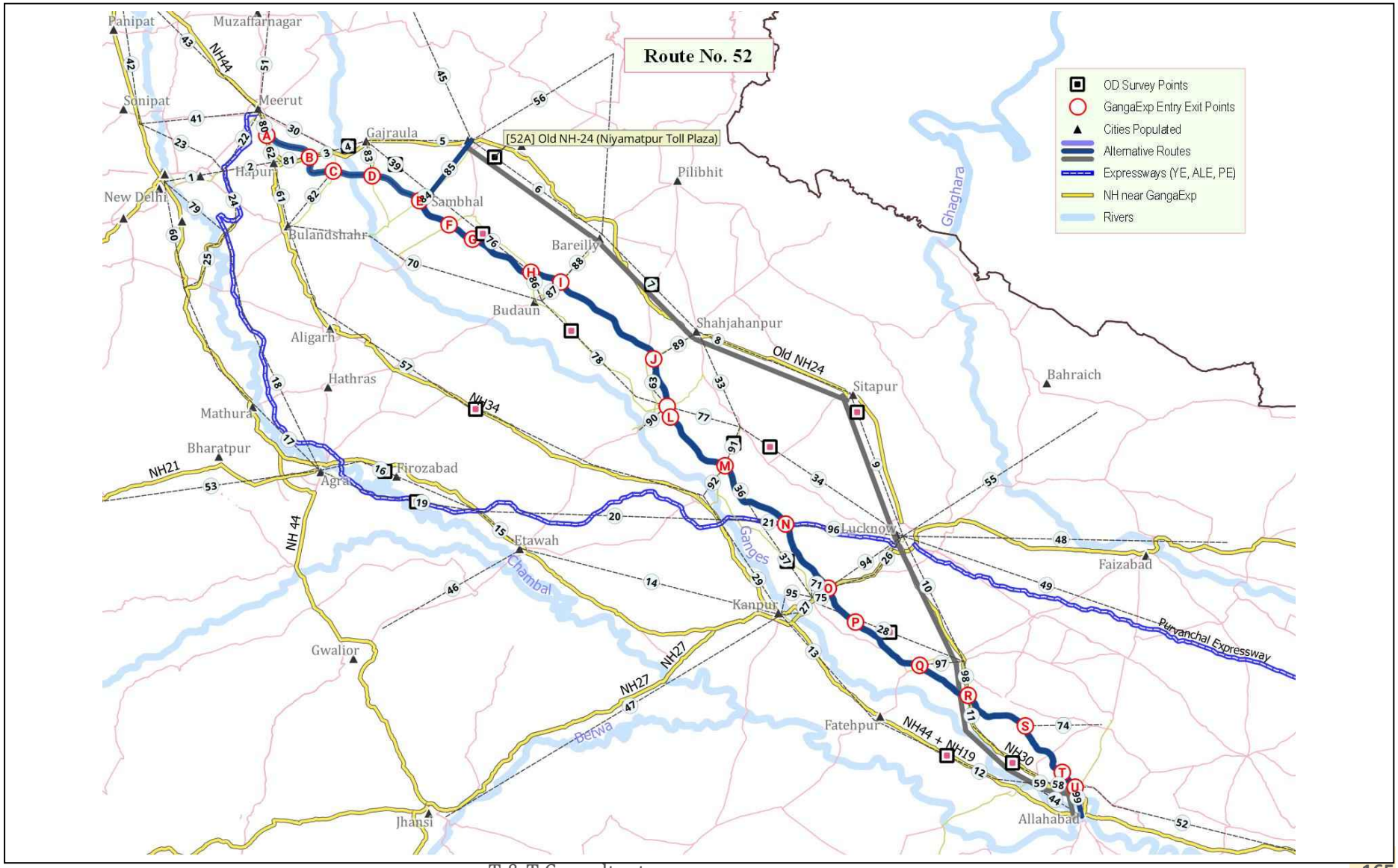

Route No. 47
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[47A] Old NH-24 (Niyamatpur Toll Plaza)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Hapur
New Delhi
Bulandshahr
Sambhal
Pilibhit
Ghaghara
Bareilly
Budaun
Shahjahanpur
Old NH24
Sitapur
Bahraich
Aligarh
Hathras
Mathura
NH34
Bharatpur
NH21
Agra
Firozabad
NH 44
Etawah
Chambal
Ganges
Lucknow
Faizabad
Purvanchal Expressway
Kanpur
Gwalior
NH27
Berwa
Fatehpur
NH44 + NH19
NH30
Jhansi
Allahabad

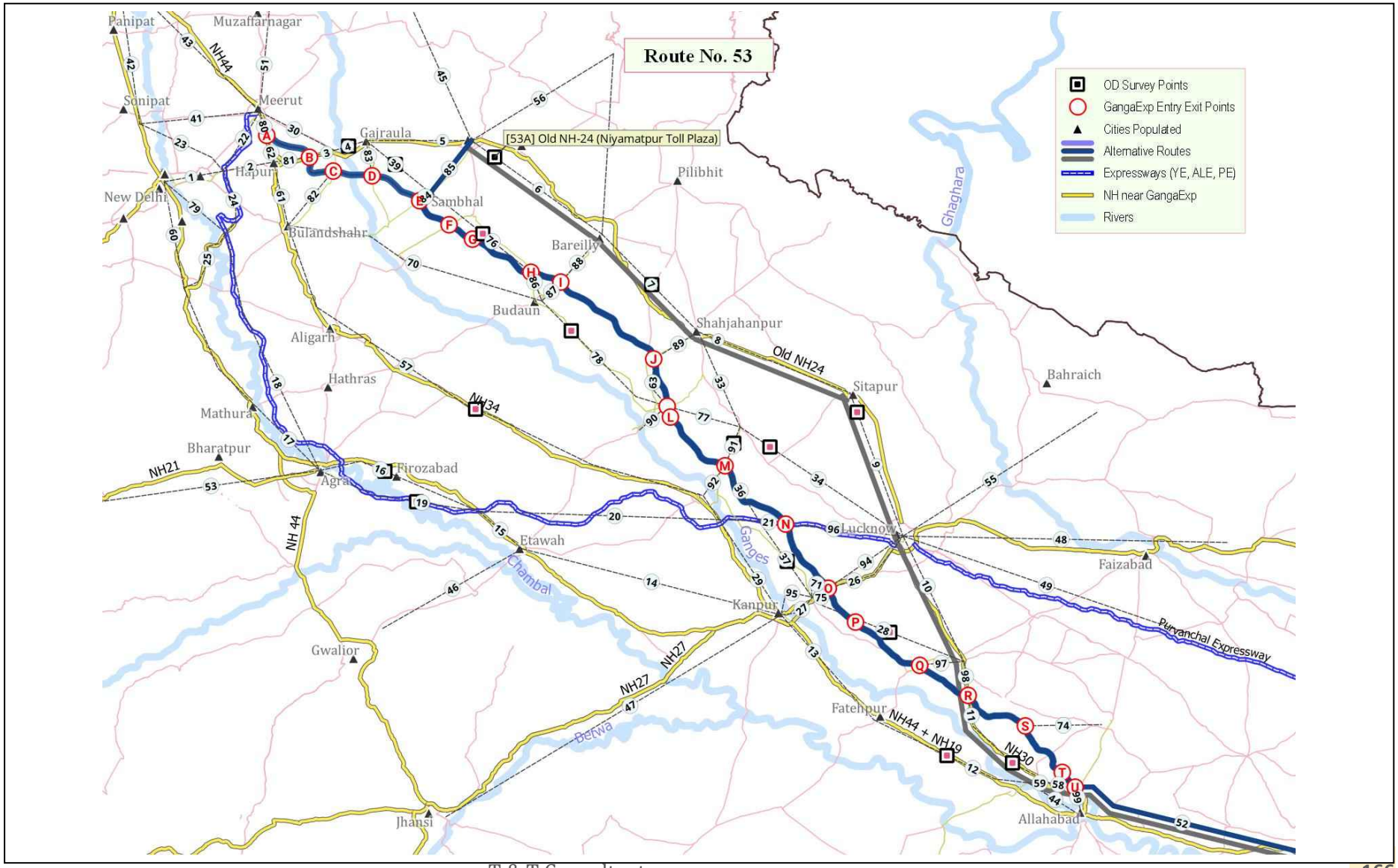

Route No. 48
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[48A] Old NH-24 (Niyamatpur Toll Plaza)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Hapur
New Delhi
Bulandshahr
Sambhal
Pilibhit
Ghaghara
Bareilly
Budaun
Shahjahanpur
Old NH24
Sitapur
Bahraich
Aligarh
Hathras
NH34
Mathura
Bharatpur
NH21
Agra
Firozabad
Etawah
Chambal
Ganges
Kanpur
Lucknow
Faizabad
Purvanchal Expressway
NH 44
NH44 + NH19
NH27
Gwalior
Jhansi
Betwa
Fatehpur
NH30
Allahabad

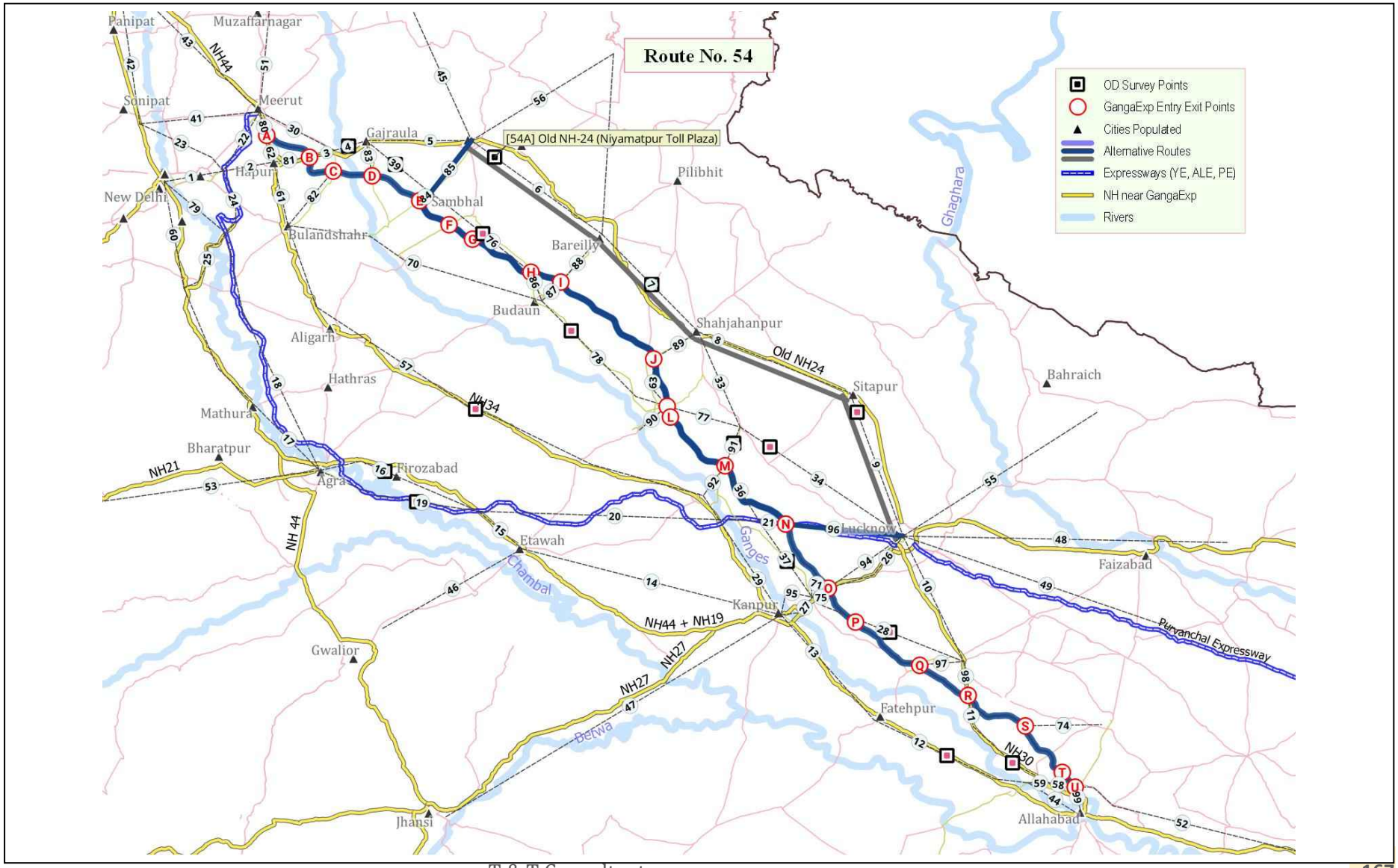

Route No. 49
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[49A] Old NH-24 (Niyamatpur Toll Plaza)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Hapur
New Delhi
Bulandshahr
Sambhal
Pilibhit
Ghaghara
Bareilly
Budaun
Shahjahanpur
Old NH24
Aligarh
Hathras
Mathura
NH34
Sitapur
Bahraich
Bharatpur
NH21
Agra
Firozabad
Etawah
NH 44
Chambal
Ganges
Kanpur
Lucknow
Faizabad
Purvanchal Expressway
Gwalior
NH27
Betwa
Fatehpur
NH44 + NH19
NH30
Allahabad
Jhansi

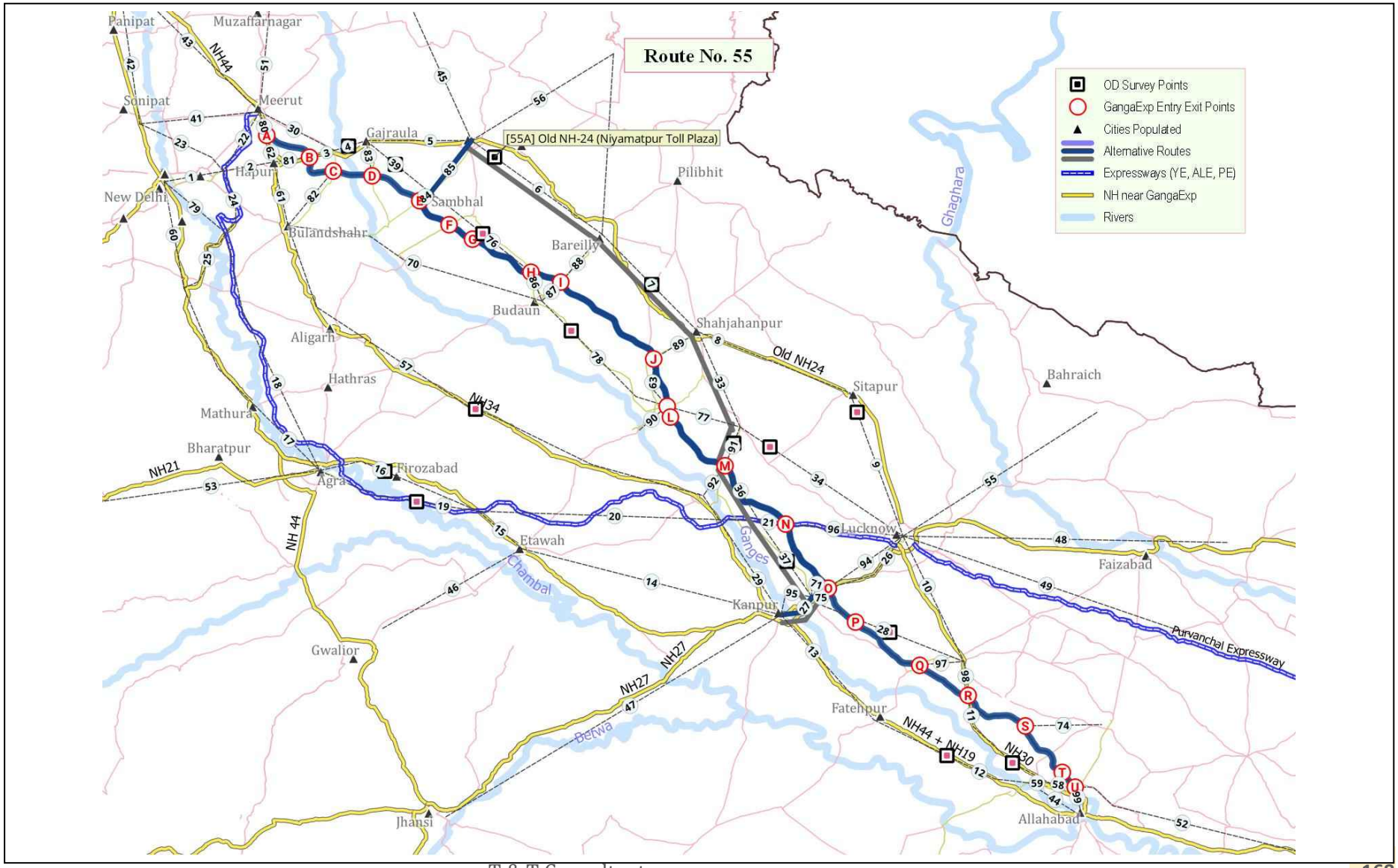

Route No. 50
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[50A] Old NH-24 (Niyamatpur Toll Plaza)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Pilibhit
Ghaghara
Budaun
Shahjahanpur
Old NH24
Aligarh
Hathras
Sitapur
Bahraich
Mathura
NH34
Bharatpur
NH21
Firozabad
Agra
NH 44
Etawah
Chambal
Ganges
Lucknow
Faizabad
Kanpur
Purvanchal Expressway
Gwalior
NH27
Fatehpur
NH44 + NH19
NH30
Jhansi
Allahabad
Betwa

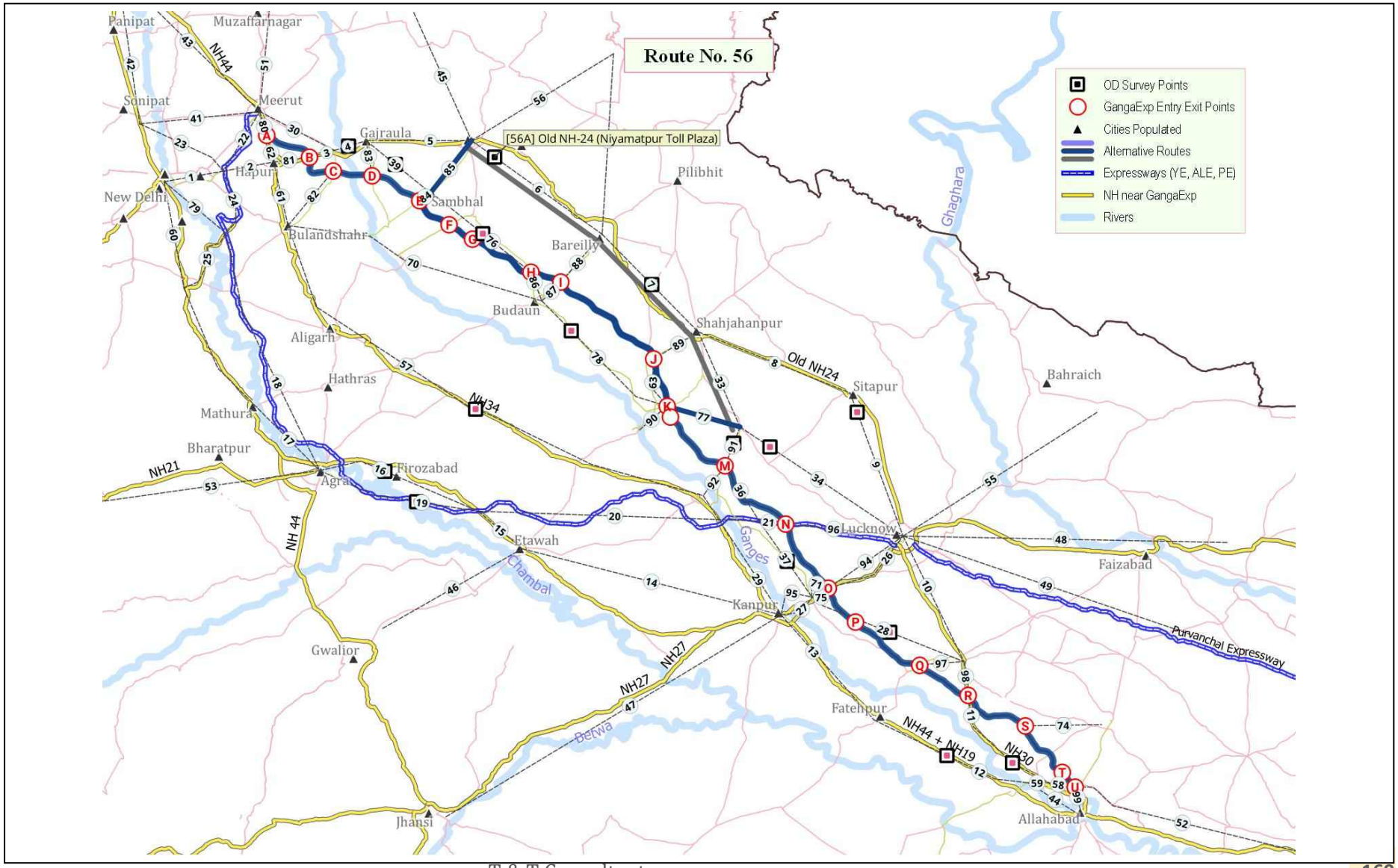

Route No. 51
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[51A] SH-43 (Chandausi-Badaun)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Hathras
Old NH24
Sitapur
Bahraich
Mathura
NH34
Bharatpur
NH21
Agra
Firozabad
Etawah
NH 44
Chambal
Ganges
Lucknow
Faizabad
Kanpur
NH44 + NH19
Purvanchal Expressway
Gwalior
NH27
Berwa
Fatehpur
NH30
Jhansi
Allahabad

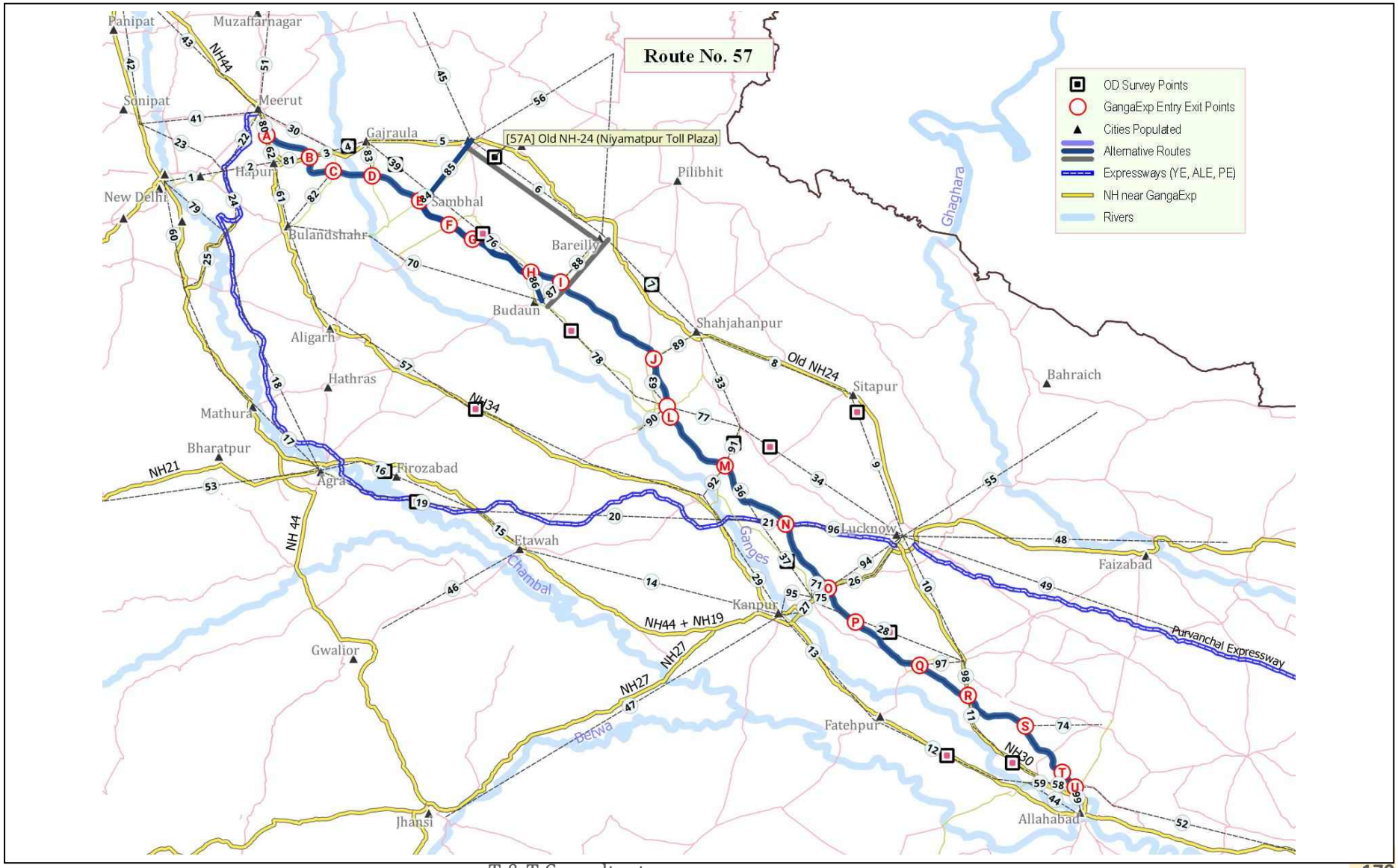

Route No. 52
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[52A] Old NH-24 (Niyamatpur Toll Plaza)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Hapur
New Delhi
Bulandshahr
Sambhal
Pilibhit
Ghaghara
Bareilly
Budaun
Shahjahanpur
Old NH24
Aligarh
Hathras
Mathura
NH34
Sitapur
Bahraich
Bharatpur
NH21
Firozabad
Agra
NH 44
Etawah
Chambal
Ganges
Kanpur
Lucknow
Faizabad
Purvanchal Expressway
Gwalior
NH27
Betwa
Fatehpur
NH44 + NH19
NH30
Allahabad
Jhansi

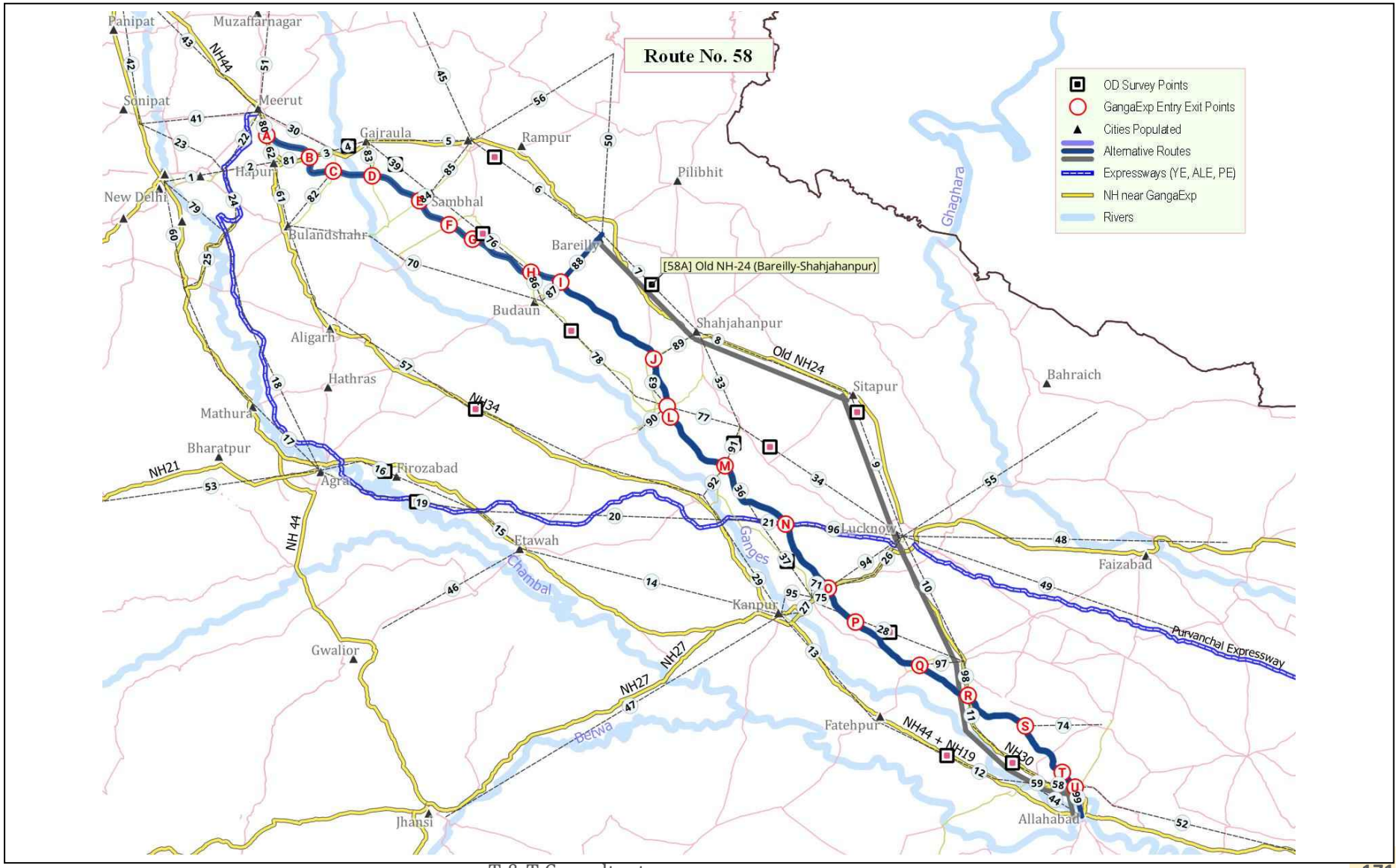

Route No. 53
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[53A] Old NH-24 (Niyamatpur Toll Plaza)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Hapur
New Delhi
Bulandshahr
Sambhal
Pilibhit
Ghaghara
Bareilly
Budaun
Shahjahanpur
Old NH24
Aligarh
Hathras
Sitapur
Bahraich
Mathura
NH34
Bharatpur
NH21
Agra
Firozabad
Etawah
NH 44
Chambal
Ganges
Lucknow
Faizabad
Kanpur
Purvanchal Expressway
Gwalior
NH27
Berwa
Fatehpur
NH44 + NH19
NH30
Jhansi
Allahabad

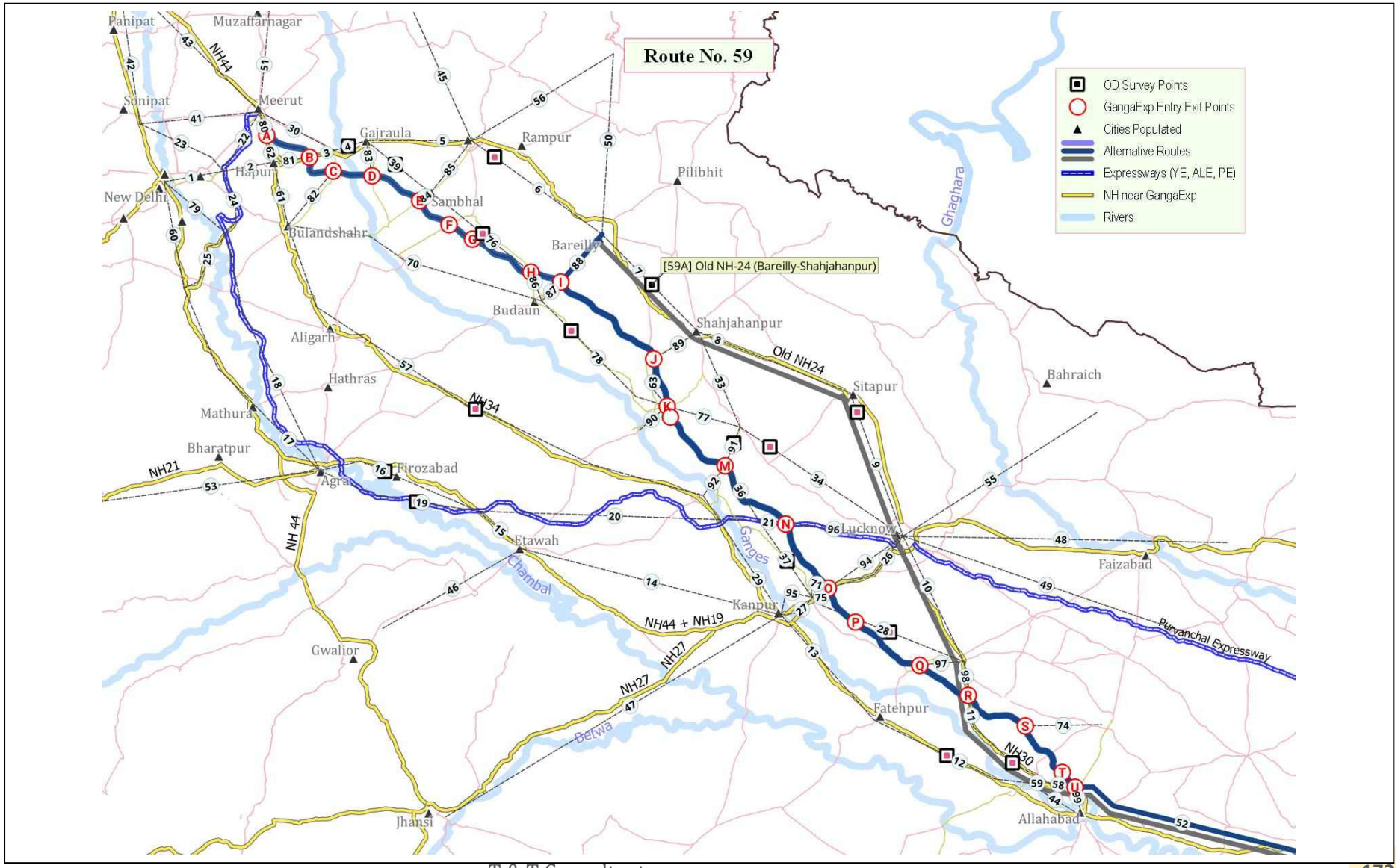

Route No. 54
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[54A] Old NH-24 (Niyamatpur Toll Plaza)
Old NH24
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Hapur
New Delhi
Bulandshahr
Sambhal
Pilibhit
Bareilly
Budaun
Shahjahanpur
Sitapur
Bahraich
Ghaghara
Aligarh
Hathras
Mathura
Bharatpur
Agra
Firozabad
Etawah
Chambal
Ganges
Kanpur
Lucknow
Faizabad
Purvanchal Expressway
Gwalior
Jhansi
Fatehpur
Allahabad
Berwa
NH44
NH21
NH 44
NH34
NH44 + NH19
NH27
NH30

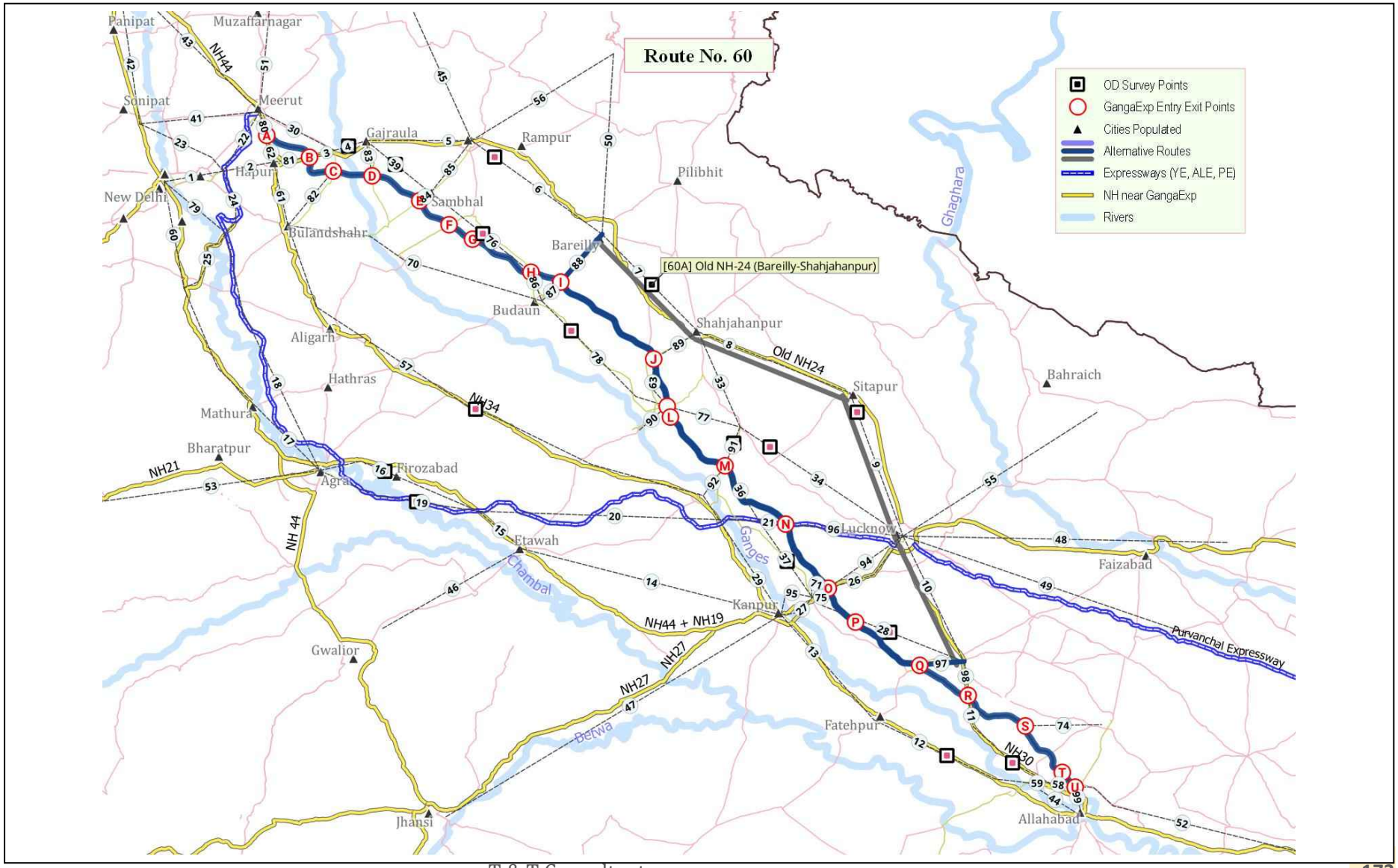

Route No. 55
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[55A] Old NH-24 (Niyamatpur Toll Plaza)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Hapur
New Delhi
Bulandshahr
Sambhal
Pilibhit
Ghaghara
Bareilly
Budaun
Shahjahanpur
Old NH24
Aligarh
Hathras
Sitapur
Bahraich
Mathura
NH34
Bharatpur
NH21
Agra
Firozabad
Etawah
NH 44
Chambal
Ganges
Lucknow
Faizabad
Kanpur
Purvanchal Expressway
Gwalior
NH27
Fatehpur
Betwa
NH44 + NH19
NH30
Jhansi
Allahabad

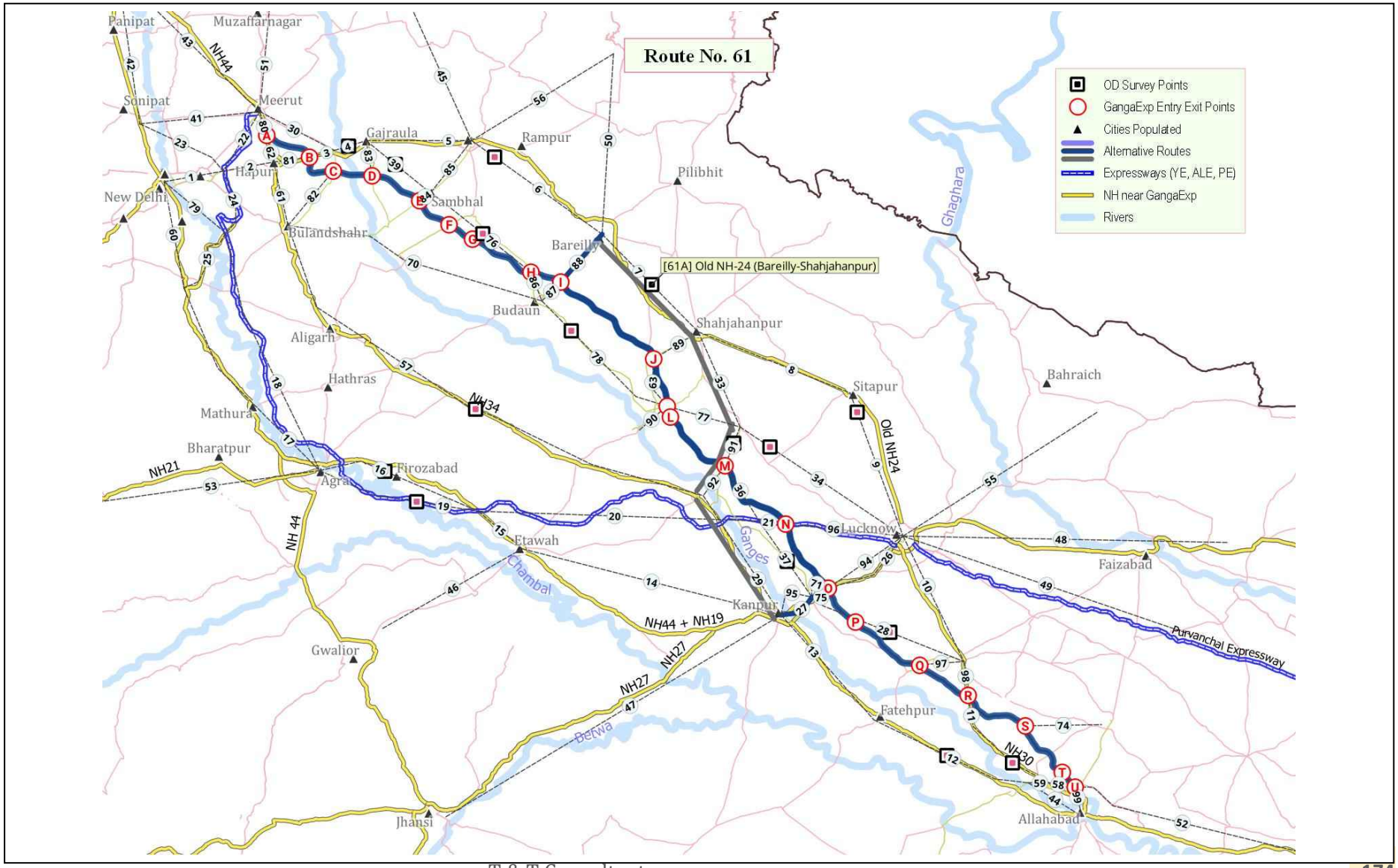

Route No. 56
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[56A] Old NH-24 (Niyamatpur Toll Plaza)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Pilibhit
Ghaghara
Budaun
Shahjahanpur
Aligarh
Hathras
Old NH24
Sitapur
Bahraich
Mathura
NH34
Bharatpur
NH21
Firozabad
Agra
NH 44
Etawah
Chambal
Ganges
Lucknow
Faizabad
Purvanchal Expressway
Kanpur
Gwalior
NH27
Berwa
Fatehpur
NH44 + NH19
NH30
Jhansi
Allahabad

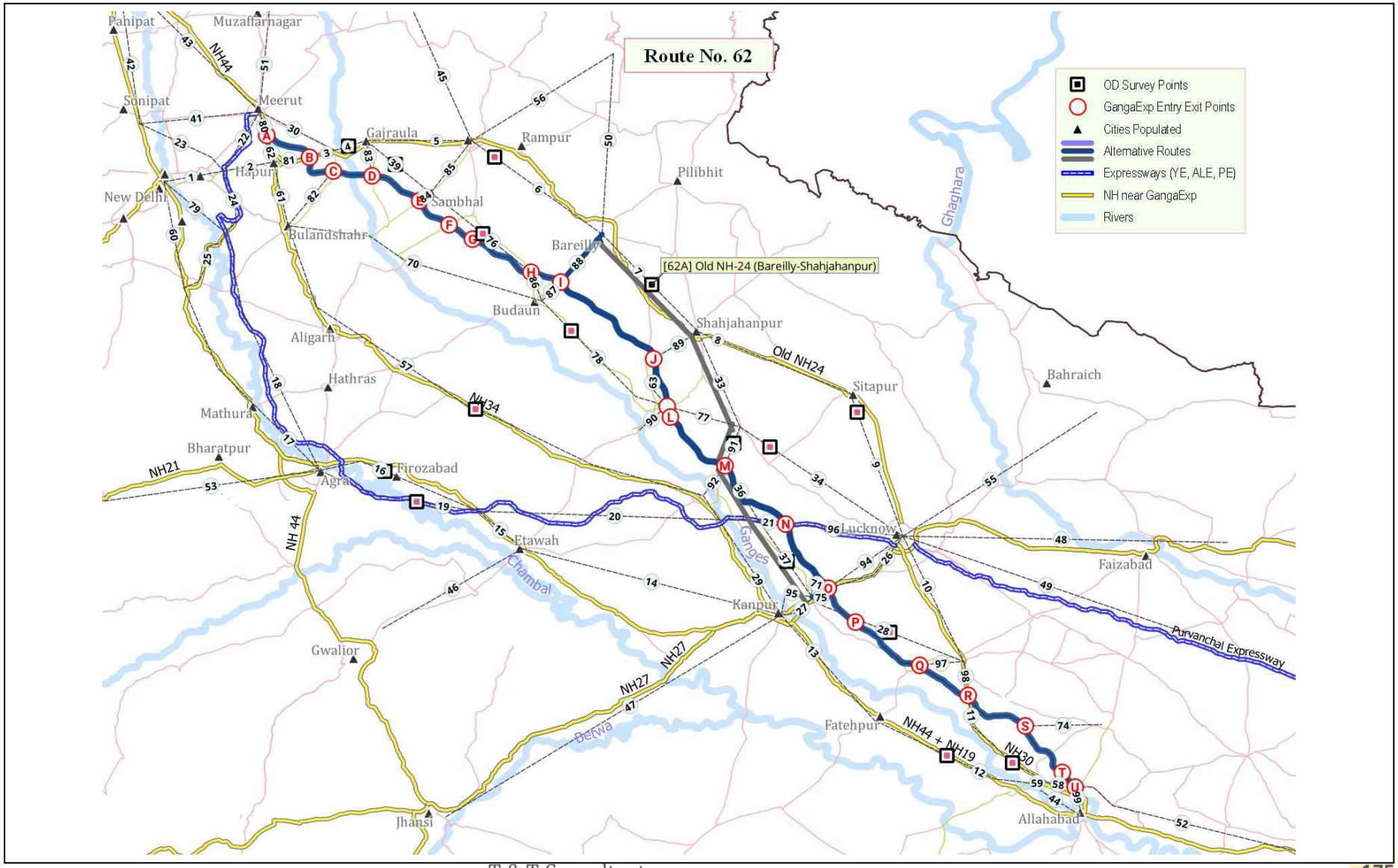

Route No. 57
[57A] Old NH-24 (Niyamatpur Toll Plaza)
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Pilibhit
Ghaghara
Budaun
Shahjahanpur
Aligarh
Hathras
Old NH24
Sitapur
Bahraich
Mathura
NH34
Bharatpur
NH21
Agra
Firozabad
NH 44
Etawah
Chambal
Ganges
Lucknow
Faizabad
Kanpur
NH44 + NH19
Purvanchal Expressway
Gwalior
NH27
Fatehpur
Berwa
NH30
Jhansi
Allahabad

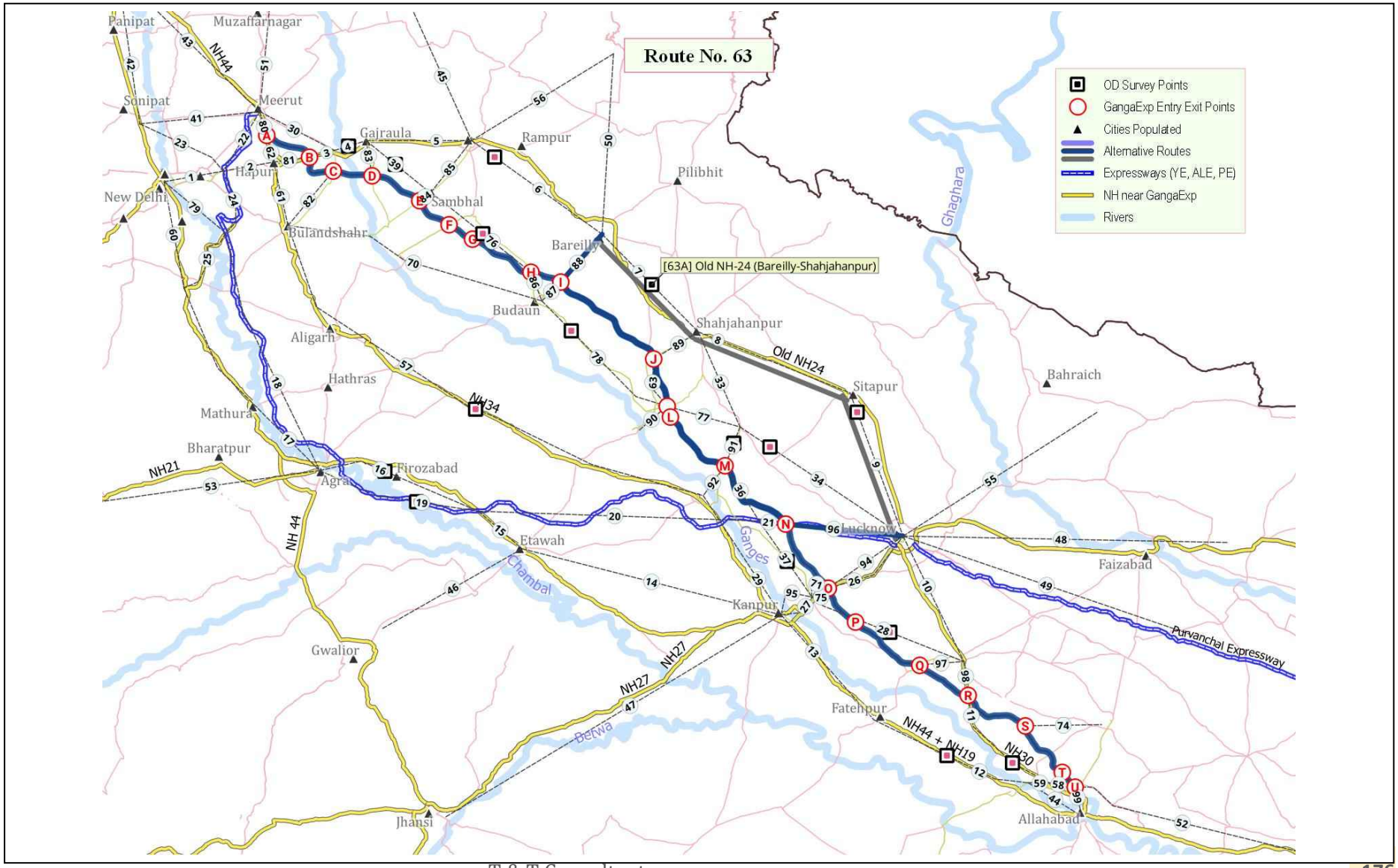

Route No. 58
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[58A] Old NH-24 (Bareilly-Shahjahanpur)
Old NH24
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Budaun
Shahjahanpur
Aligarh
Hathras
Sitapur
Bahraich
Mathura
Bharatpur
Firozabad
Agra
Etawah
Lucknow
Faizabad
Kanpur
Gwalior
Jhansi
Fatehpur
Allahabad
Ghaghara
Ganges
Chambal
Betwa
Purvanchal Expressway
NH44
NH34
NH21
NH 44
NH27
NH44 + NH19
NH30

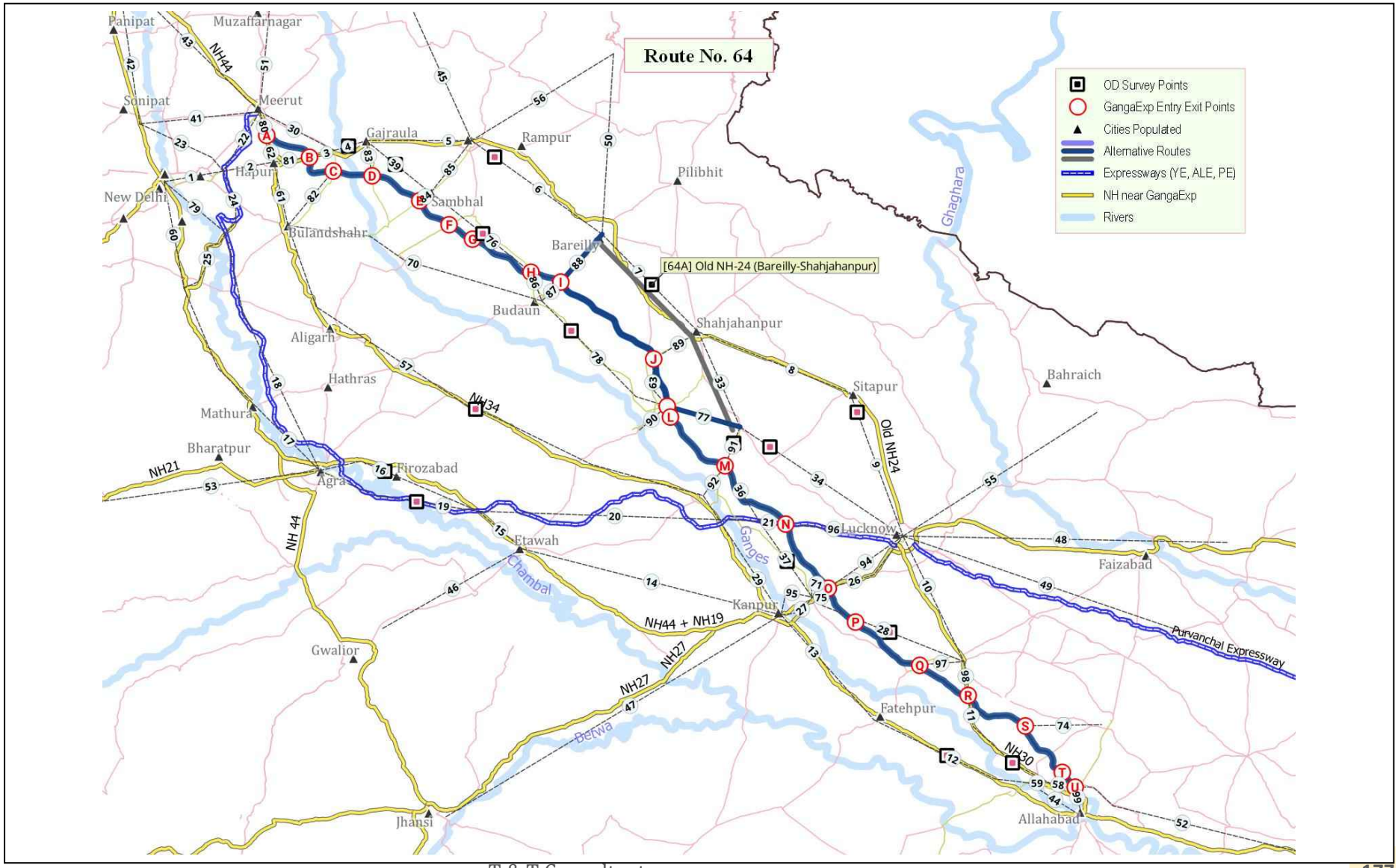

Route No. 59
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[59A] Old NH-24 (Bareilly-Shahjahanpur)
Old NH24
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Budaun
Shahjahanpur
Aligarh
Hathras
Sitapur
Bahraich
Mathura
Bharatpur
Firozabad
Agra
Etawah
Lucknow
Faizabad
Kanpur
Gwalior
Fatehpur
Allahabad
Jhansi
Ghaghara
Ganges
Chambal
Betwa
Purvanchal Expressway
NH44
NH34
NH21
NH 44
NH44 + NH19
NH27
NH30

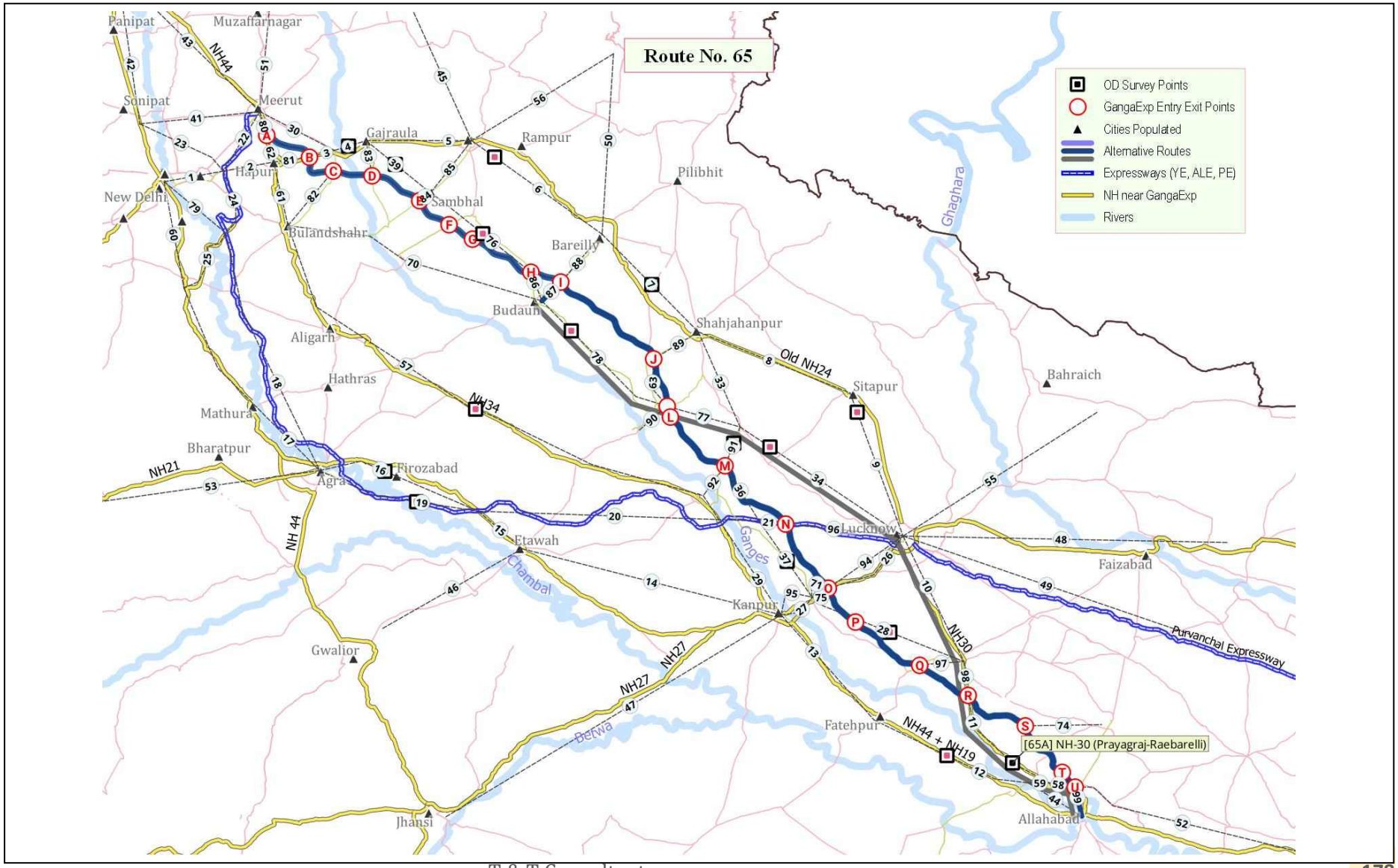

Route No. 60
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[60A] Old NH-24 (Bareilly-Shahjahanpur)
Old NH24
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Budaun
Shahjahanpur
Aligarh
Hathras
Sitapur
Bahraich
Mathura
Bharatpur
Firozabad
Agra
Etawah
Lucknow
Faizabad
Kanpur
Gwalior
Jhansi
Fatehpur
Allahabad
Ghaghara
Ganges
Chambal
Betwa
Purvanchal Expressway
NH44
NH34
NH21
NH 44
NH44 + NH19
NH27
NH30

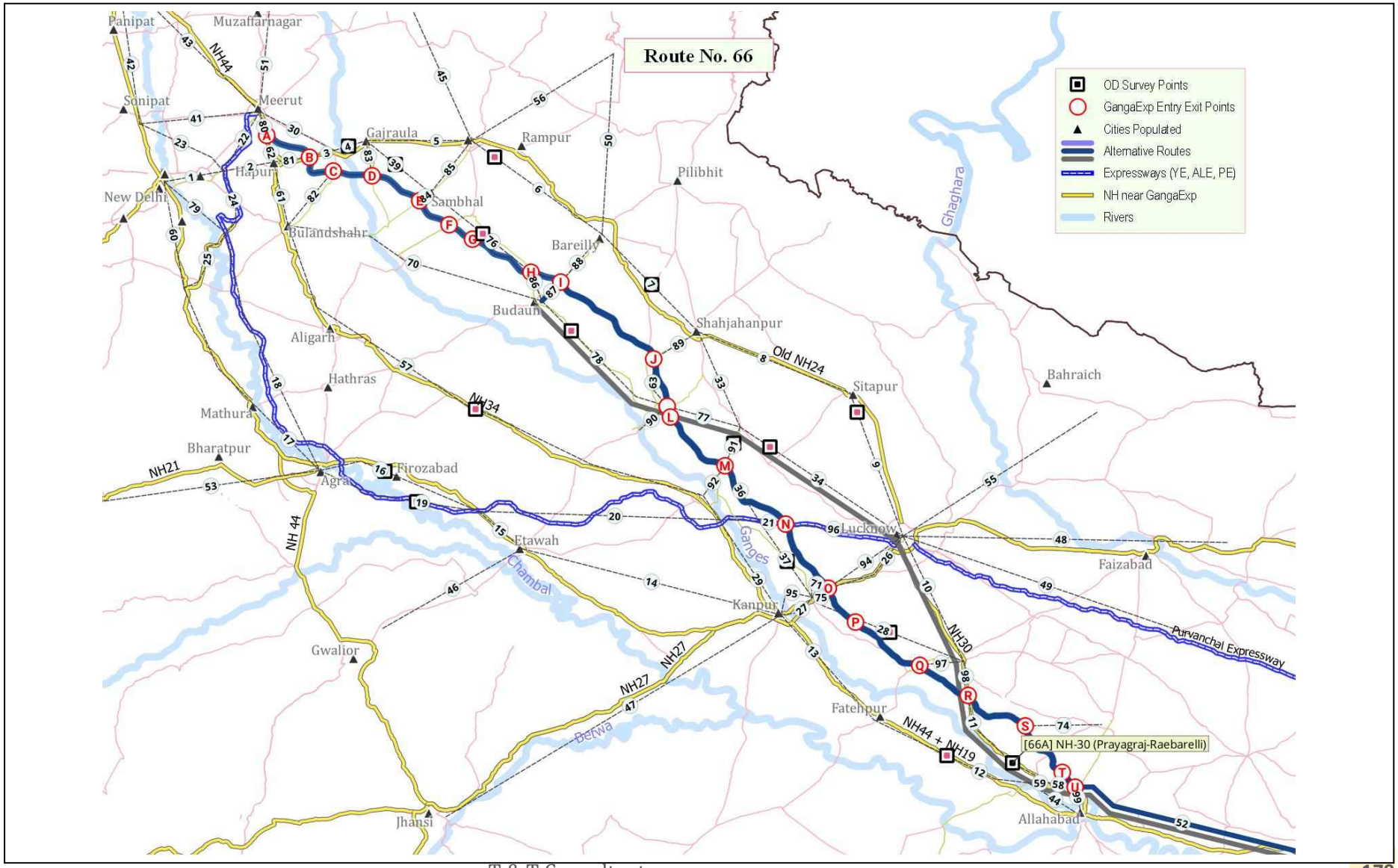

Route No. 61
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[61A] Old NH-24 (Bareilly-Shahjahanpur)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Budaun
Shahjahanpur
Aligarh
Hathras
Sitapur
Bahraich
Mathura
Bharatpur
Firozabad
Agra
Etawah
Lucknow
Faizabad
Kanpur
Gwalior
Jhansi
Fatehpur
Allahabad
Ghaghara
Ganges
Chambal
Betwa
Purvanchal Expressway
Old NH24
NH44
NH34
NH21
NH 44
NH44 + NH19
NH27
NH30

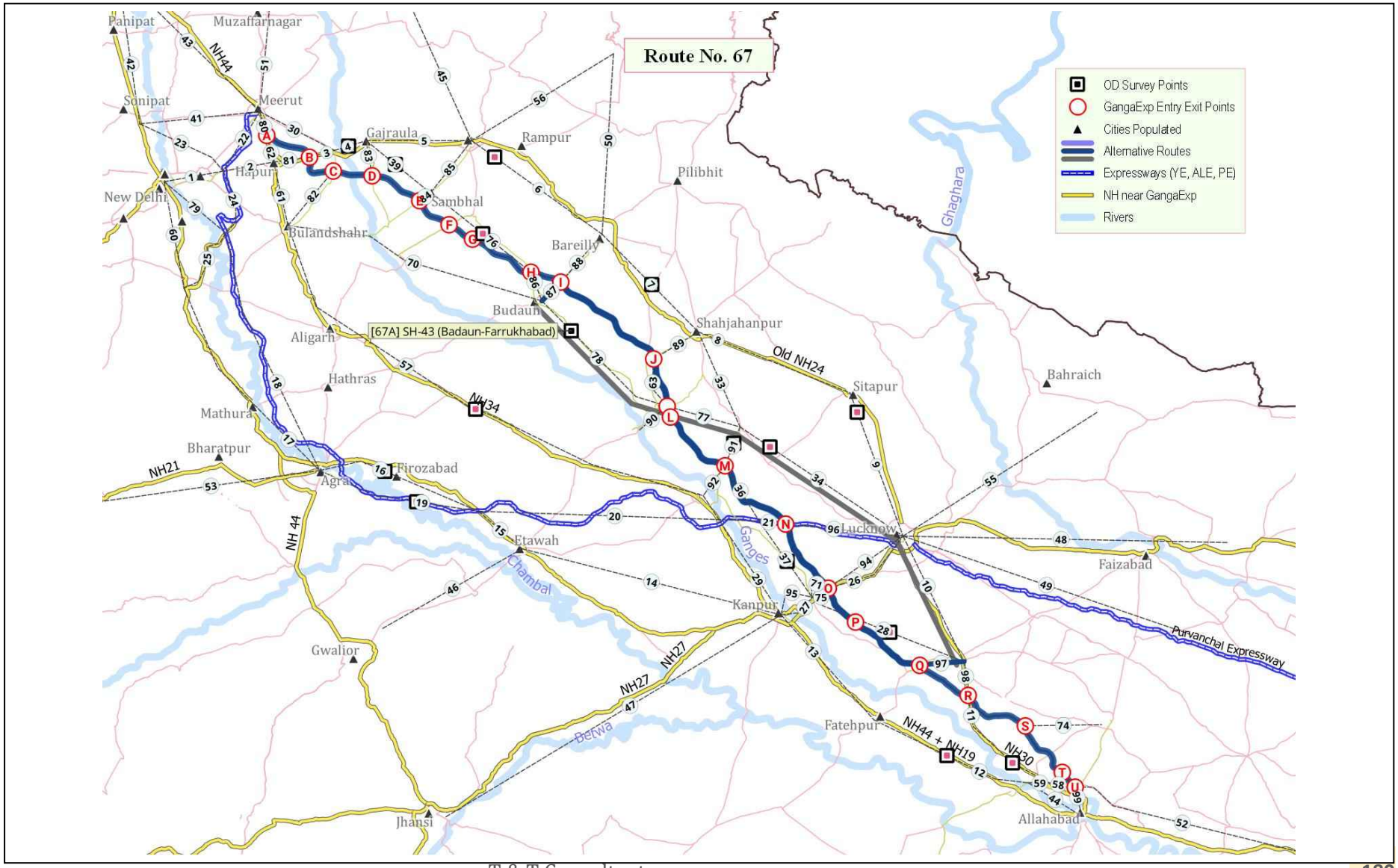

Route No. 62
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[62A] Old NH-24 (Bareilly-Shahjahanpur)
Old NH24
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Budaun
Shahjahanpur
Aligarh
Hathras
Sitapur
Bahraich
Mathura
Bharatpur
Firozabad
Agra
Etawah
Lucknow
Faizabad
Kanpur
Gwalior
Jhansi
Fatehpur
Allahabad
Purvanchal Expressway
Ganges
Chambal
Betwa
Ghaghara
NH44
NH34
NH21
NH 44
NH27
NH30
NH44 + NH19

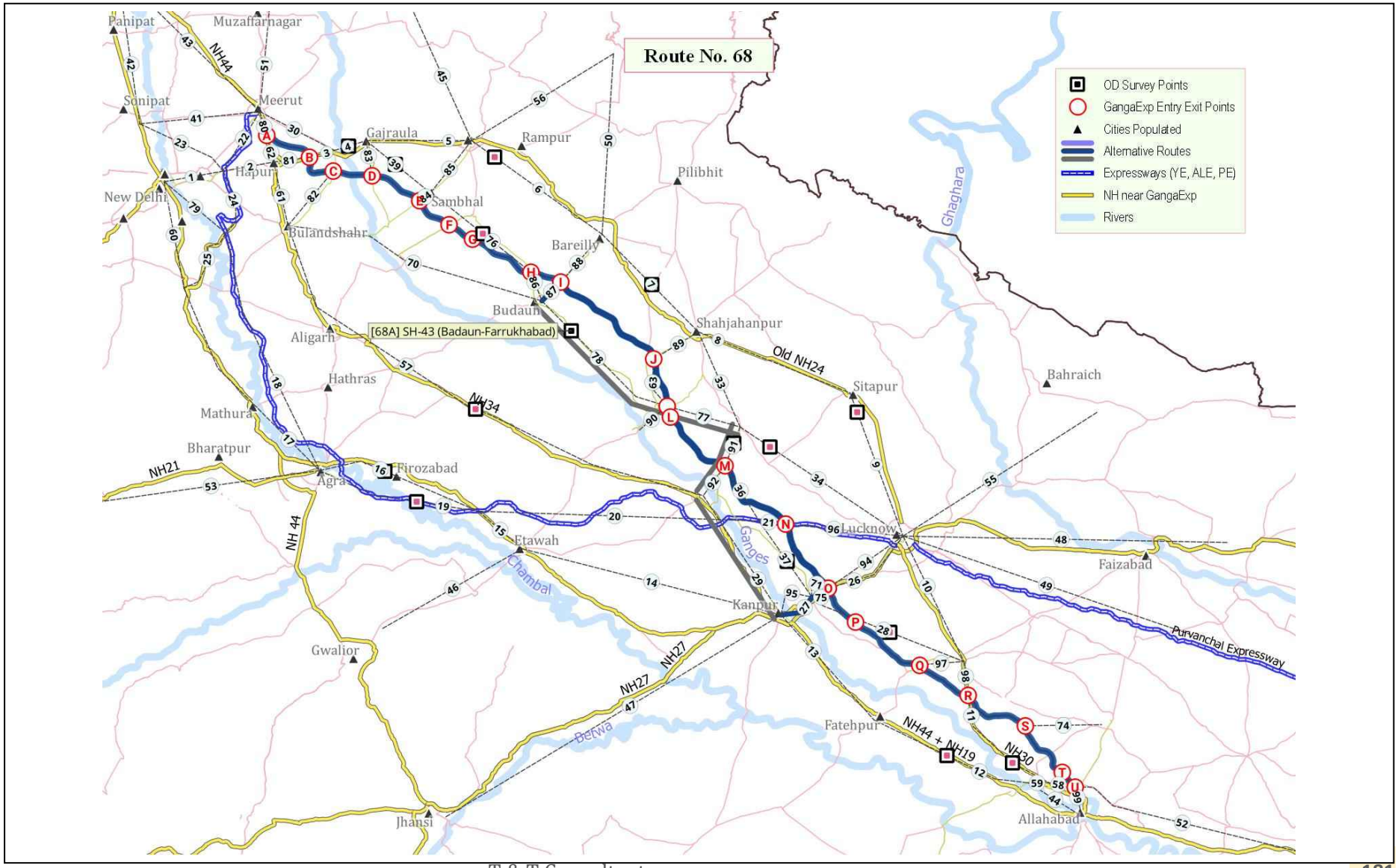

Route No. 63
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[63A] Old NH-24 (Bareilly-Shahjahanpur)
Old NH24
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Budaun
Shahjahanpur
Aligarh
Hathras
Sitapur
Bahraich
Mathura
Bharatpur
Firozabad
Agra
Etawah
Lucknow
Faizabad
Kanpur
Gwalior
Jhansi
Fatehpur
Allahabad
Ghaghara
Ganges
Chambal
Betwa
Purvanchal Expressway
NH44
NH34
NH21
NH 44
NH27
NH44 + NH19
NH30

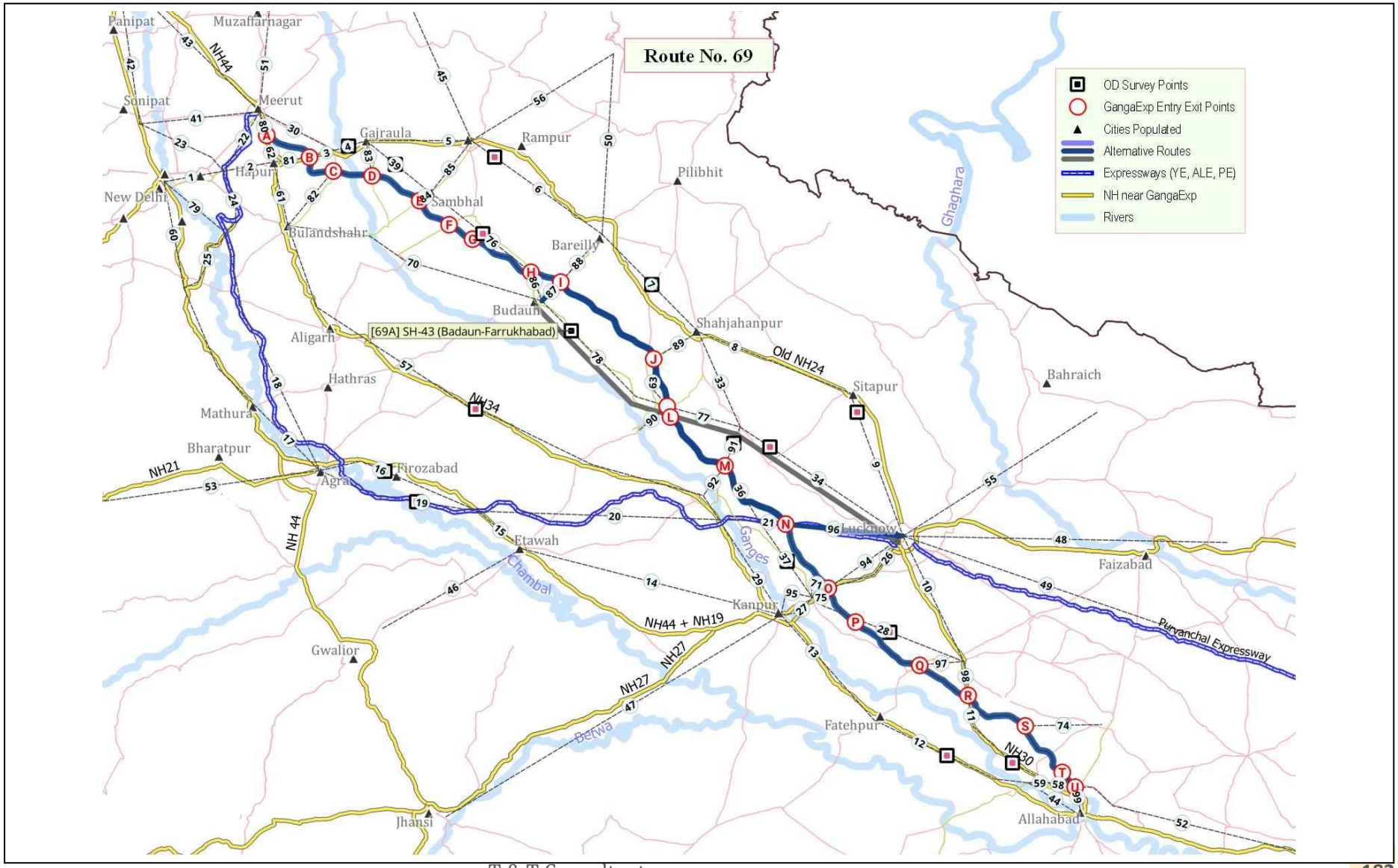

Route No. 64
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[64A] Old NH-24 (Bareilly-Shahjahanpur)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Budaun
Shahjahanpur
Aligarh
Hathras
Sitapur
Bahraich
Mathura
Bharatpur
Firozabad
Agra
Etawah
Lucknow
Faizabad
Kanpur
Gwalior
Jhansi
Fatehpur
Allahabad
Ghaghara
Ganges
Chambal
Betwa
Purvanchal Expressway
Old NH24
NH44
NH34
NH21
NH 44
NH44 + NH19
NH27
NH30

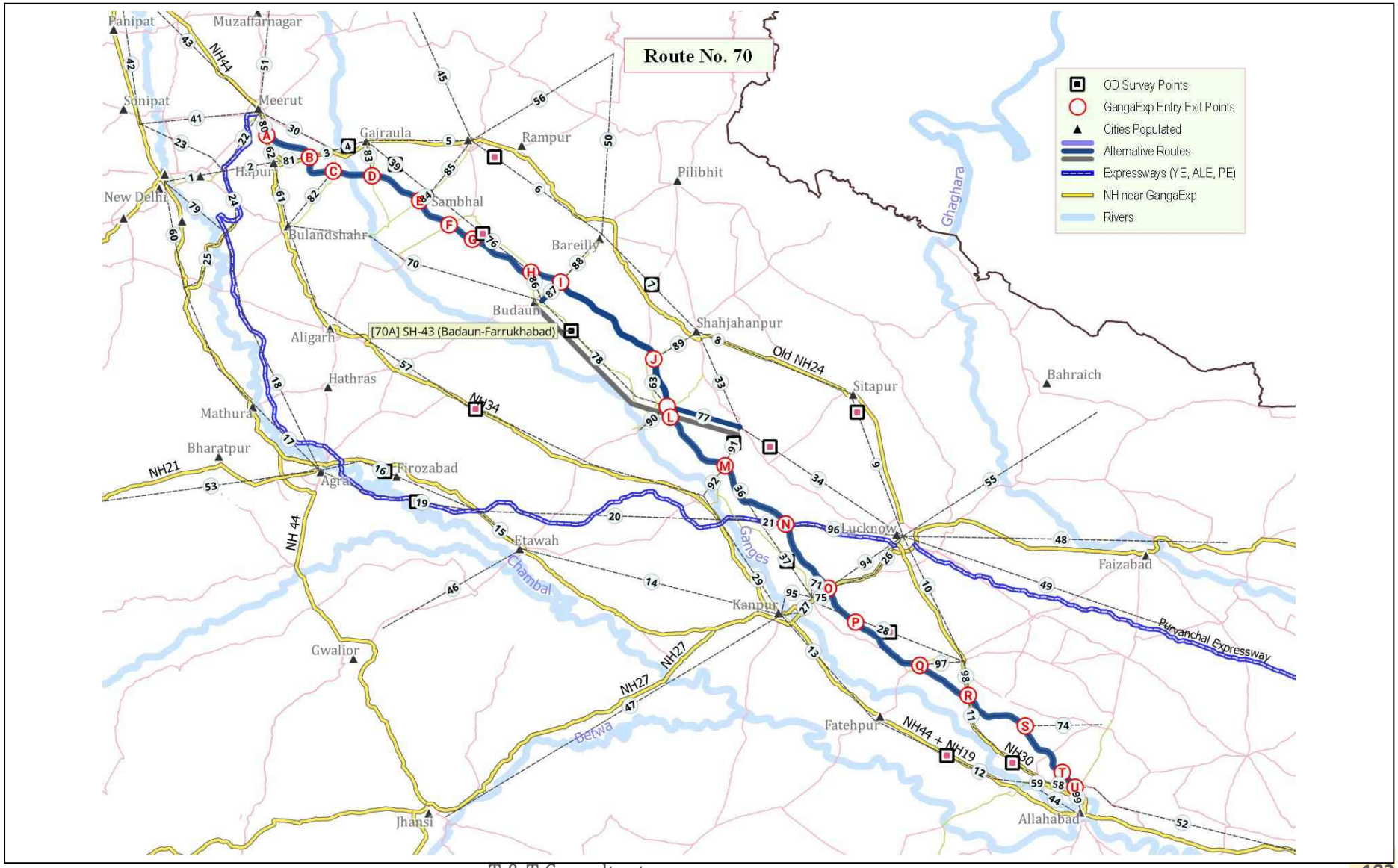

Route No. 65
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Ghaghara
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Budaun
Shahjahanpur
Old NH24
Sitapur
Bahraich
Aligarh
Hathras
NH34
Mathura
Bharatpur
NH21
Agra
Firozabad
NH 44
Etawah
Chambal
Ganges
Kanpur
Lucknow
Faizabad
Purvanchal Expressway
NH30
Gwalior
NH27
Fatehpur
NH44 + NH19
[65A] NH-30 (Prayagraj-Raebarelli)
Allahabad
Jhansi
Betwa

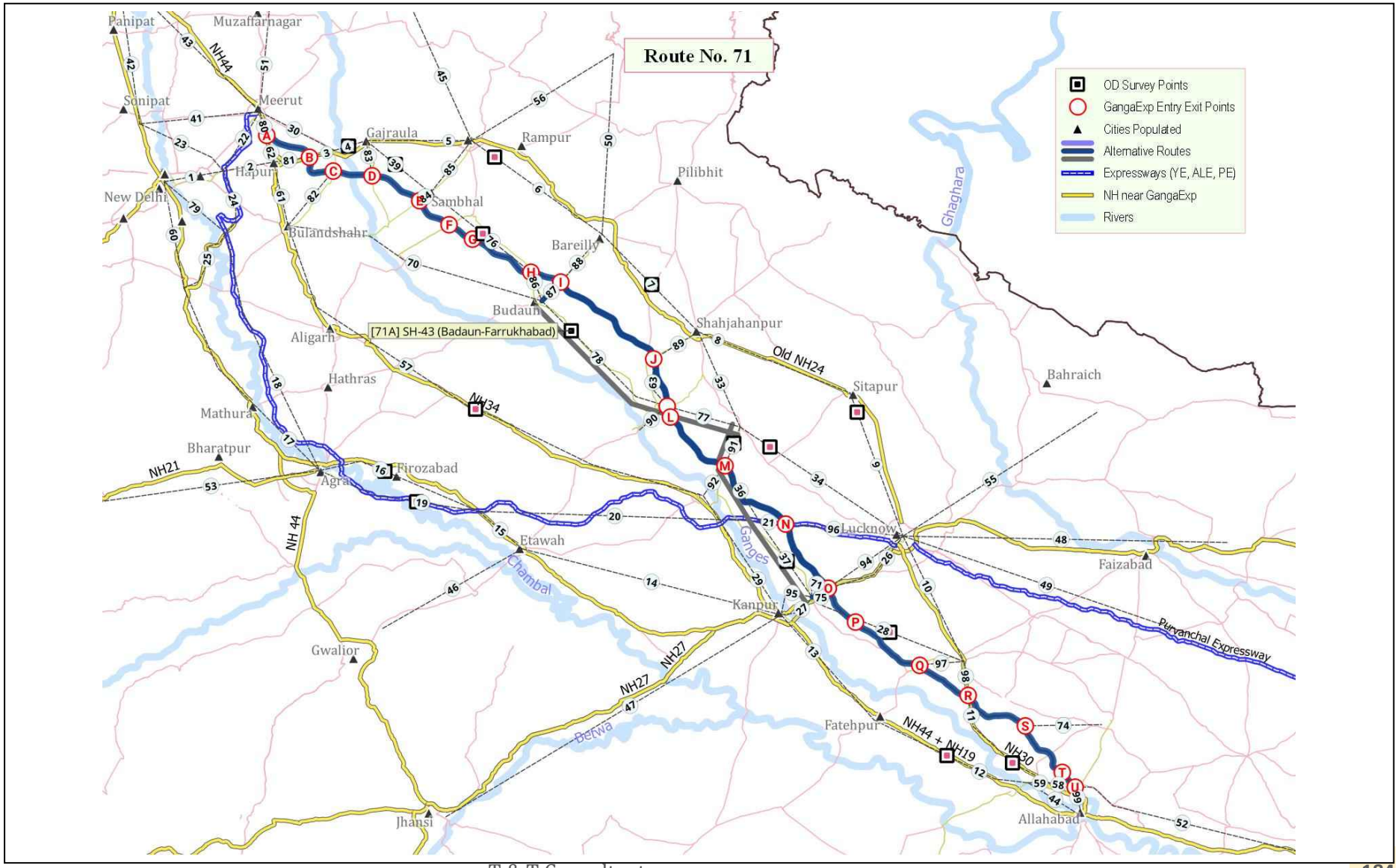

Route No. 66
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Ghaghara
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Budaun
Shahjahanpur
Old NH24
Aligarh
Hathras
Sitapur
Bahraich
Mathura
NH34
Bharatpur
NH21
Firozabad
Agra
NH 44
Etawah
Chambal
Ganges
Lucknow
Faizabad
Kanpur
Purvanchal Expressway
NH30
Gwalior
NH27
Berwa
Fatehpur
NH44 + NH19
[66A] NH-30 (Prayagraj-Raebarelli)
Allahabad
Jhansi

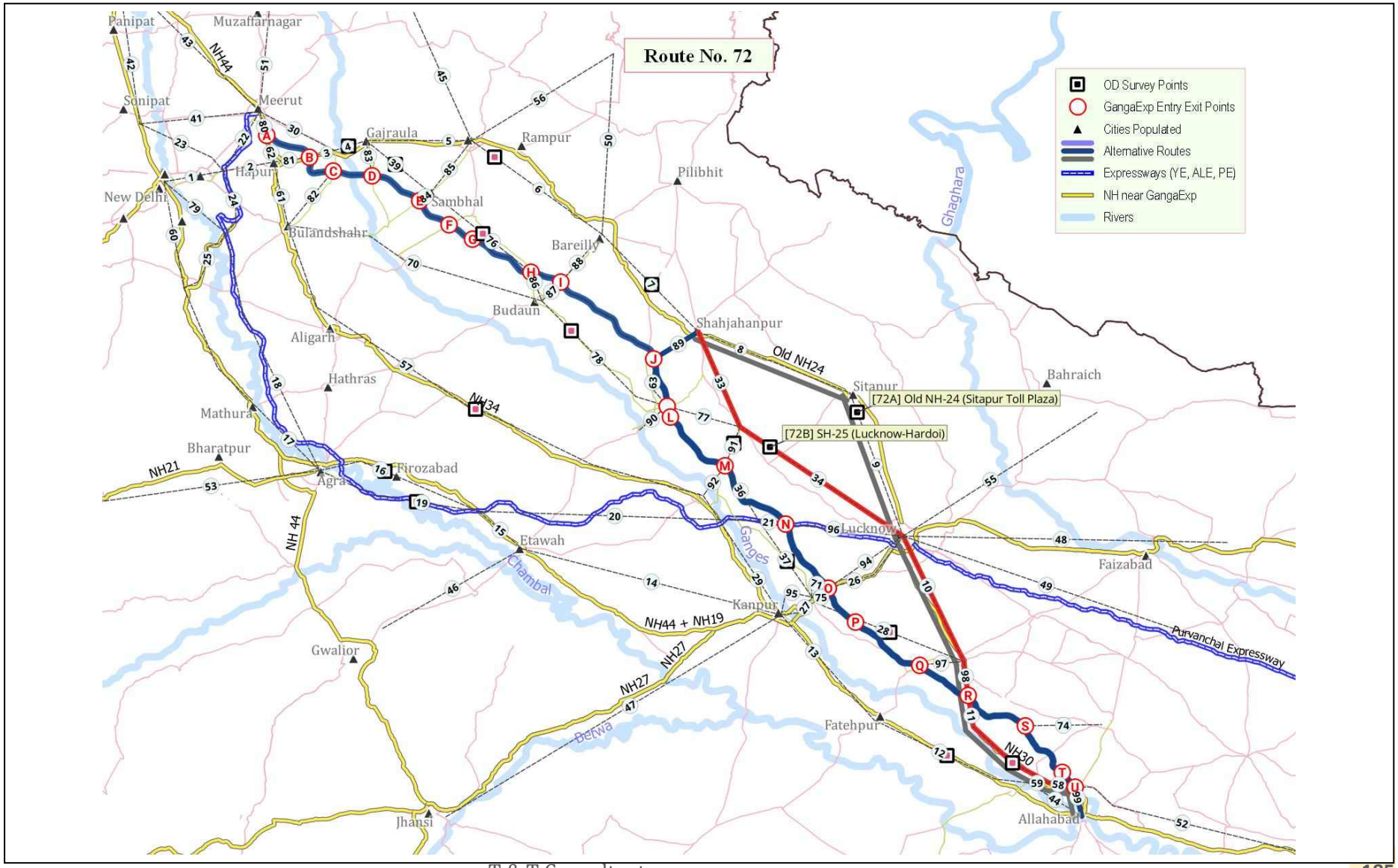

Route No. 67
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
[67A] SH-43 (Badaun-Farrukhabad)
Shahjahanpur
Aligarh
Old NH24
Sitapur
Bahraich
Hathras
Mathura
NH34
Bharatpur
NH21
Firozabad
Agra
NH 44
Etawah
Chambal
Ganges
Lucknow
Faizabad
Kanpur
Purvanchal Expressway
Gwalior
NH27
Fatehpur
NH44 + NH19
NH30
Allahabad
Jhansi
Betwa

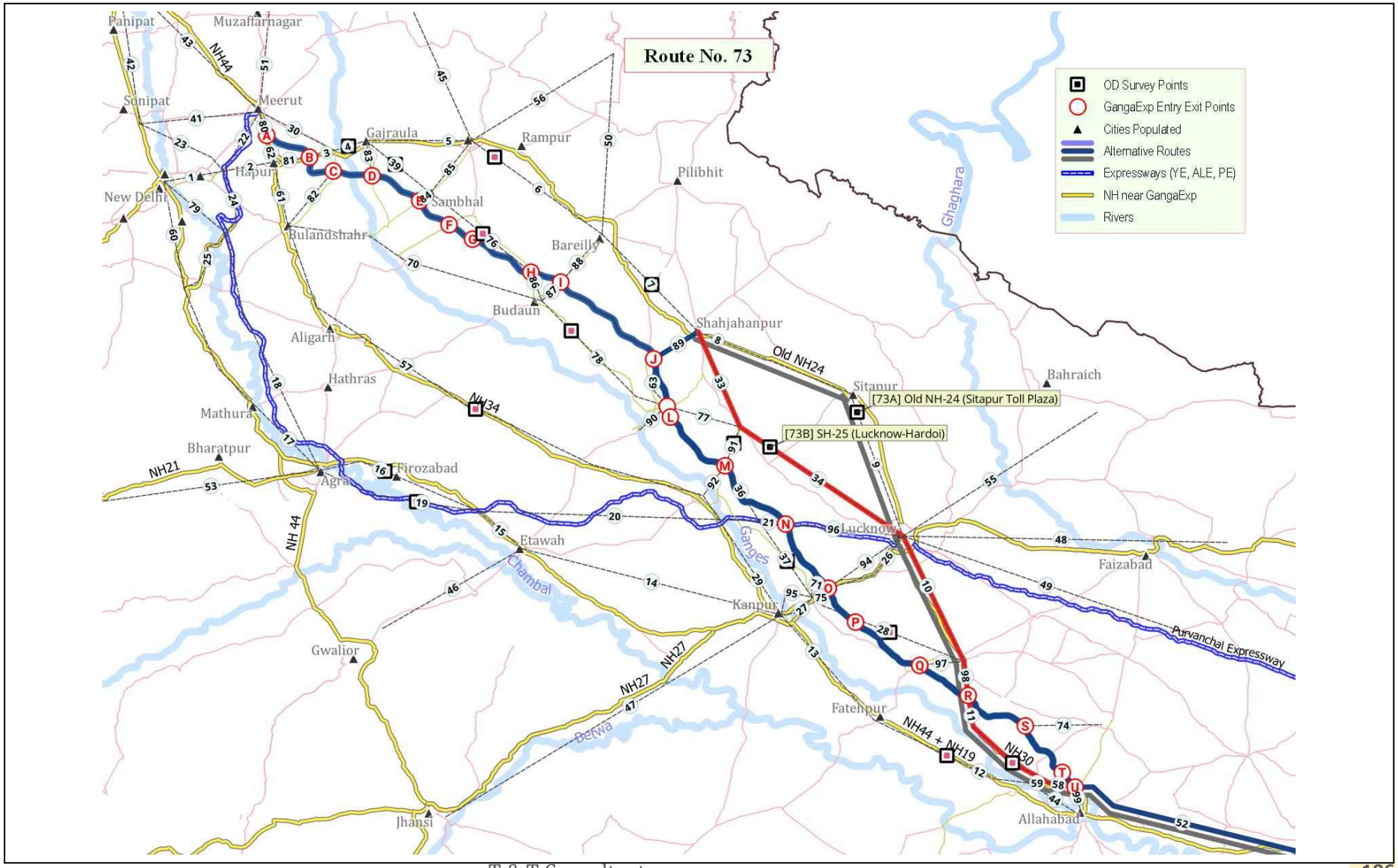

Route No. 68
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
[68A] SH-43 (Badaun-Farrukhabad)
Shahjahanpur
Aligarh
Old NH24
Sitapur
Bahraich
Hathras
Mathura
NH34
Bharatpur
NH21
Agra
Firozabad
Etawah
NH 44
Chambal
Ganges
Lucknow
Faizabad
Kanpur
Purvanchal Expressway
Gwalior
NH27
Betwa
Fatehpur
NH44 + NH19
NH30
Allahabad
Jhansi

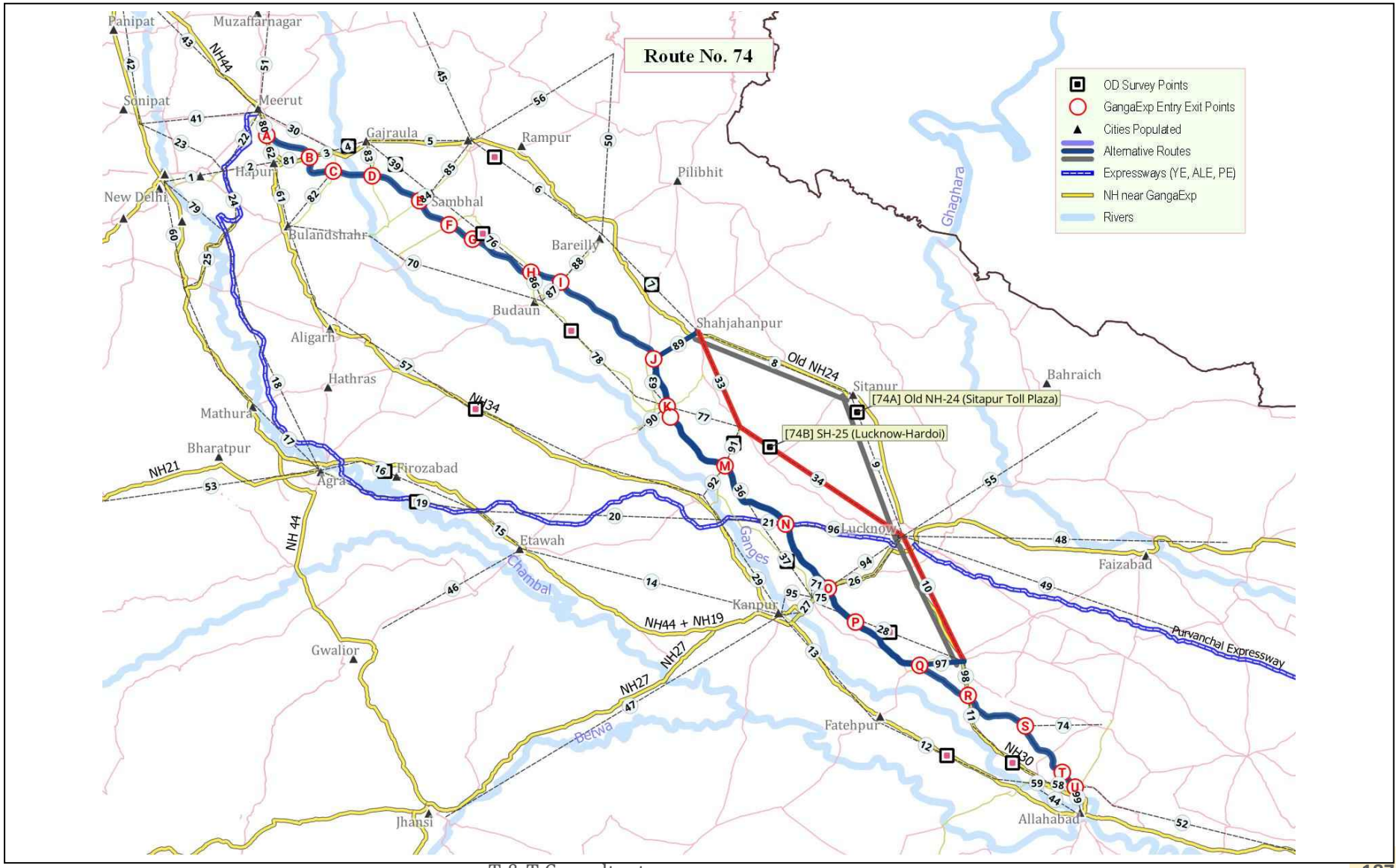

Route No. 69
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
[69A] SH-43 (Badaun-Farrukhabad)
Shahjahanpur
Old NH24
Aligarh
Hathras
Sitapur
Bahraich
Mathura
NH34
Bharatpur
NH21
Firozabad
Agra
NH 44
Etawah
Chambal
Ganges
Lucknow
Faizabad
Kanpur
Purvanchal Expressway
NH44 + NH19
Gwalior
NH27
Fatehpur
Betwa
NH30
Jhansi
Allahabad

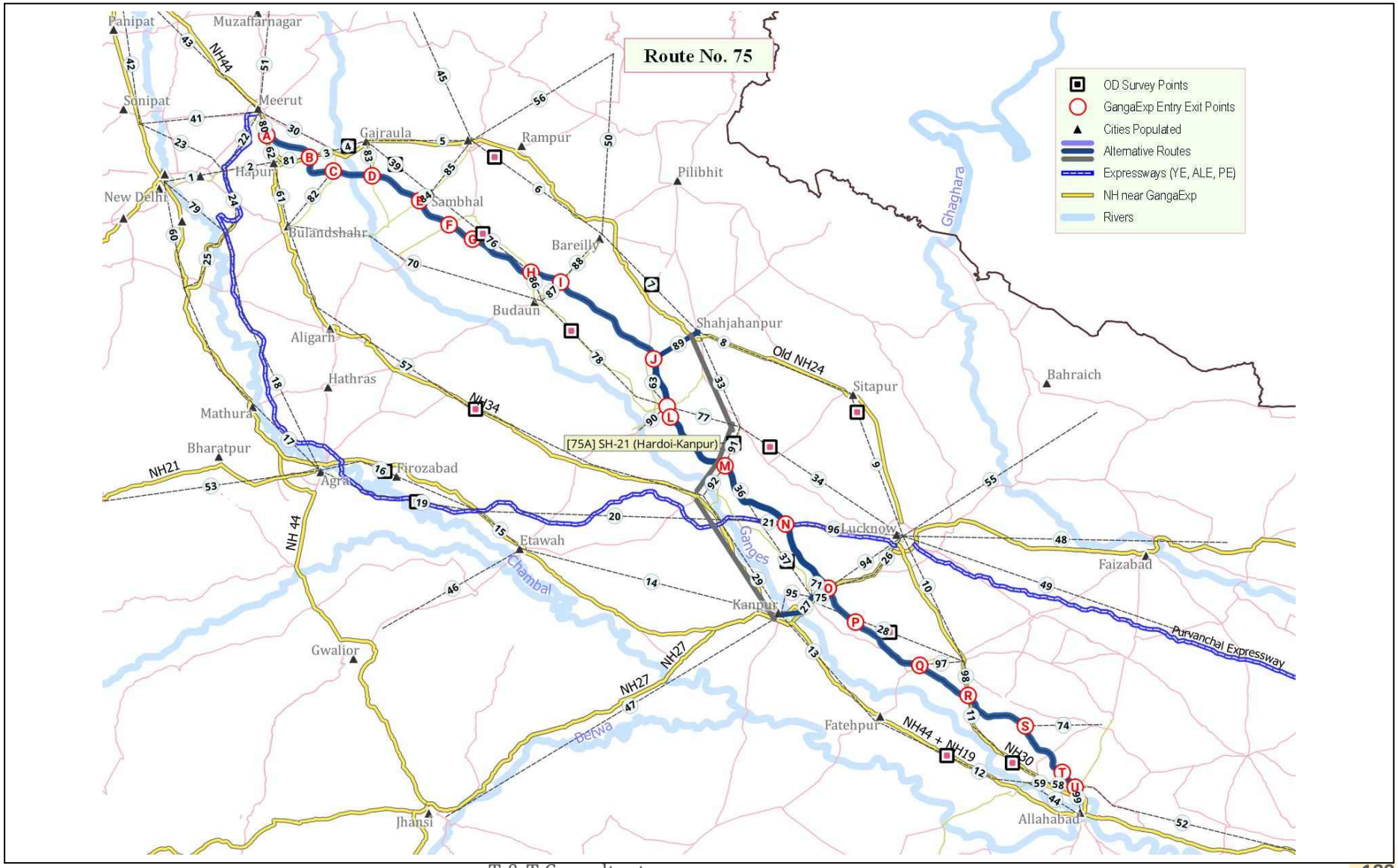

Route No. 70
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
[70A] SH-43 (Badaun-Farrukhabad)
Shahjahanpur
Aligarh
Old NH24
Sitapur
Bahraich
Hathras
Mathura
Bharatpur
Firozabad
Agra
Lucknow
Faizabad
Etawah
Ganges
Chambal
Kanpur
Purvanchal Expressway
Gwalior
Fatehpur
Jhansi
Allahabad
Berwa
NH44
NH34
NH21
NH 44
NH27
NH44 + NH19
NH30

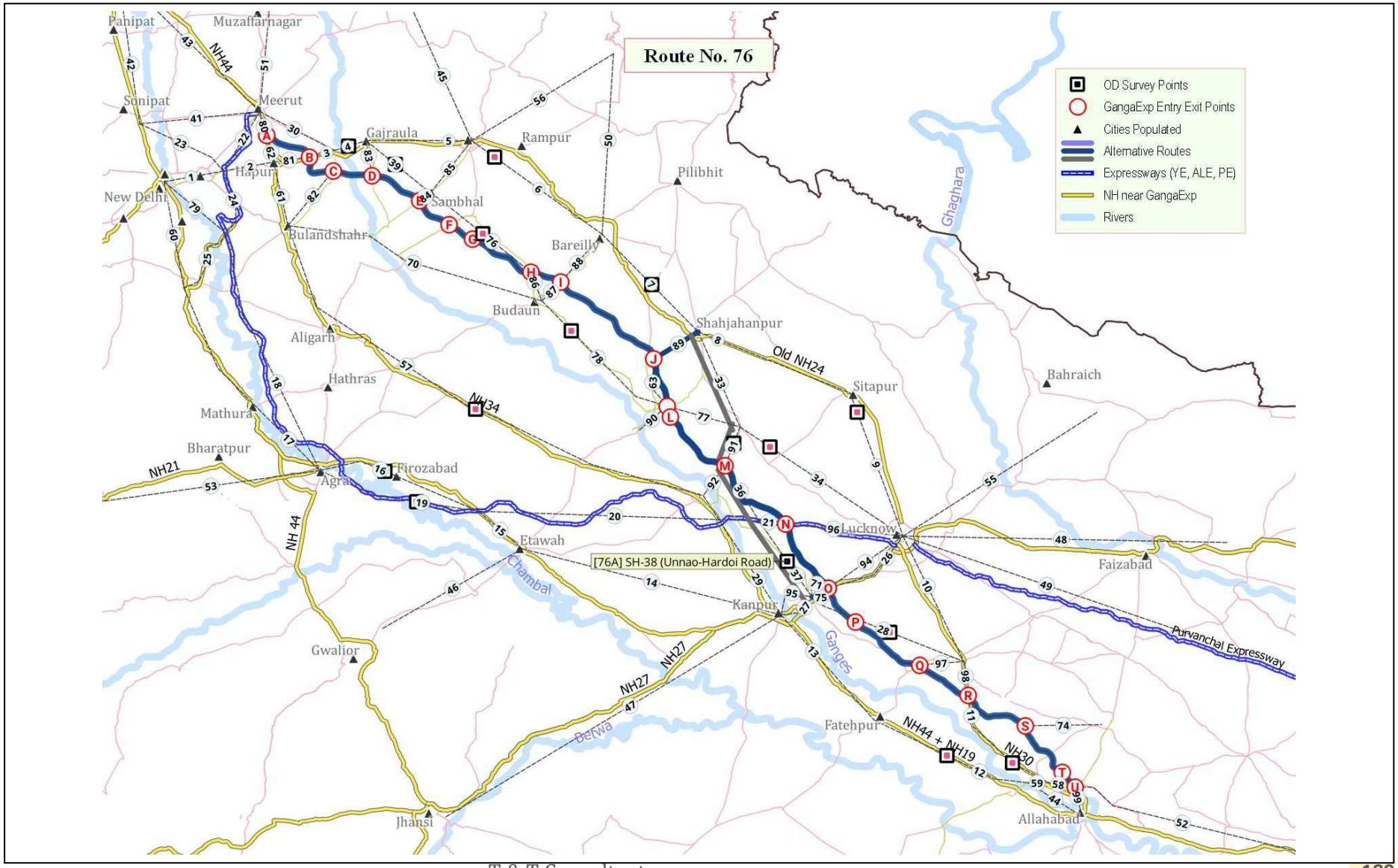

Route No. 71
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
[71A] SH-43 (Badaun-Farrukhabad)
Shahjahanpur
Aligarh
Old NH24
Sitapur
Bahraich
Hathras
Mathura
NH34
Bharatpur
NH21
Firozabad
Agra
Lucknow
Faizabad
NH 44
Etawah
Chambal
Ganges
Kanpur
Purvanchal Expressway
Gwalior
NH27
Fatehpur
NH44 + NH19
NH30
Allahabad
Jhansi
Betwa

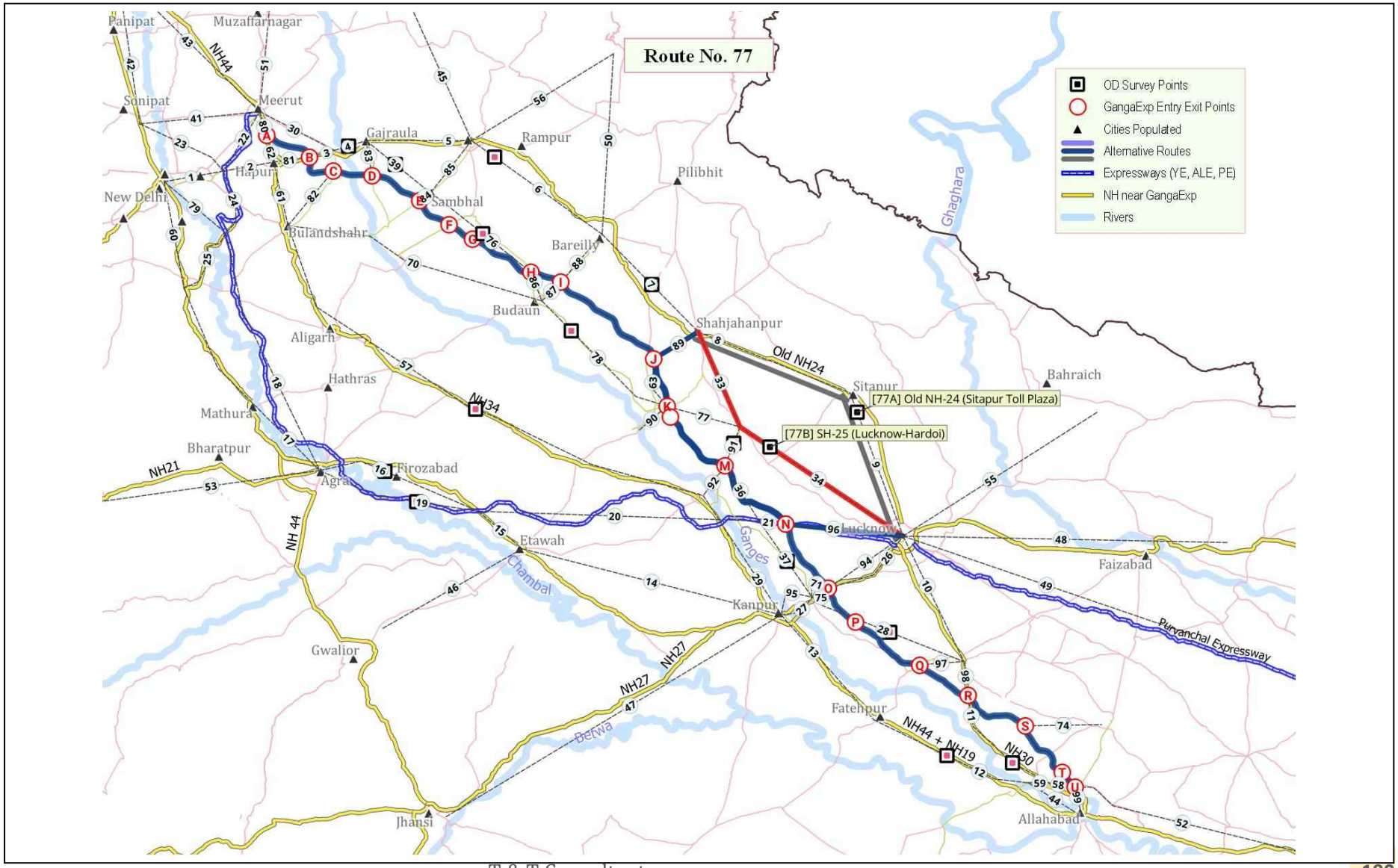

Route No. 72
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Hathras
Old NH24
Sitapur
Bahraich
[72A] Old NH-24 (Sitapur Toll Plaza)
[72B] SH-25 (Lucknow-Hardoi)
Mathura
NH34
Bharatpur
NH21
Agra
Firozabad
Etawah
NH 44
Chambal
Ganges
Lucknow
Faizabad
Purvanchal Expressway
Kanpur
NH44 + NH19
Gwalior
NH27
Fatehpur
Betwa
NH30
Jhansi
Allahabad

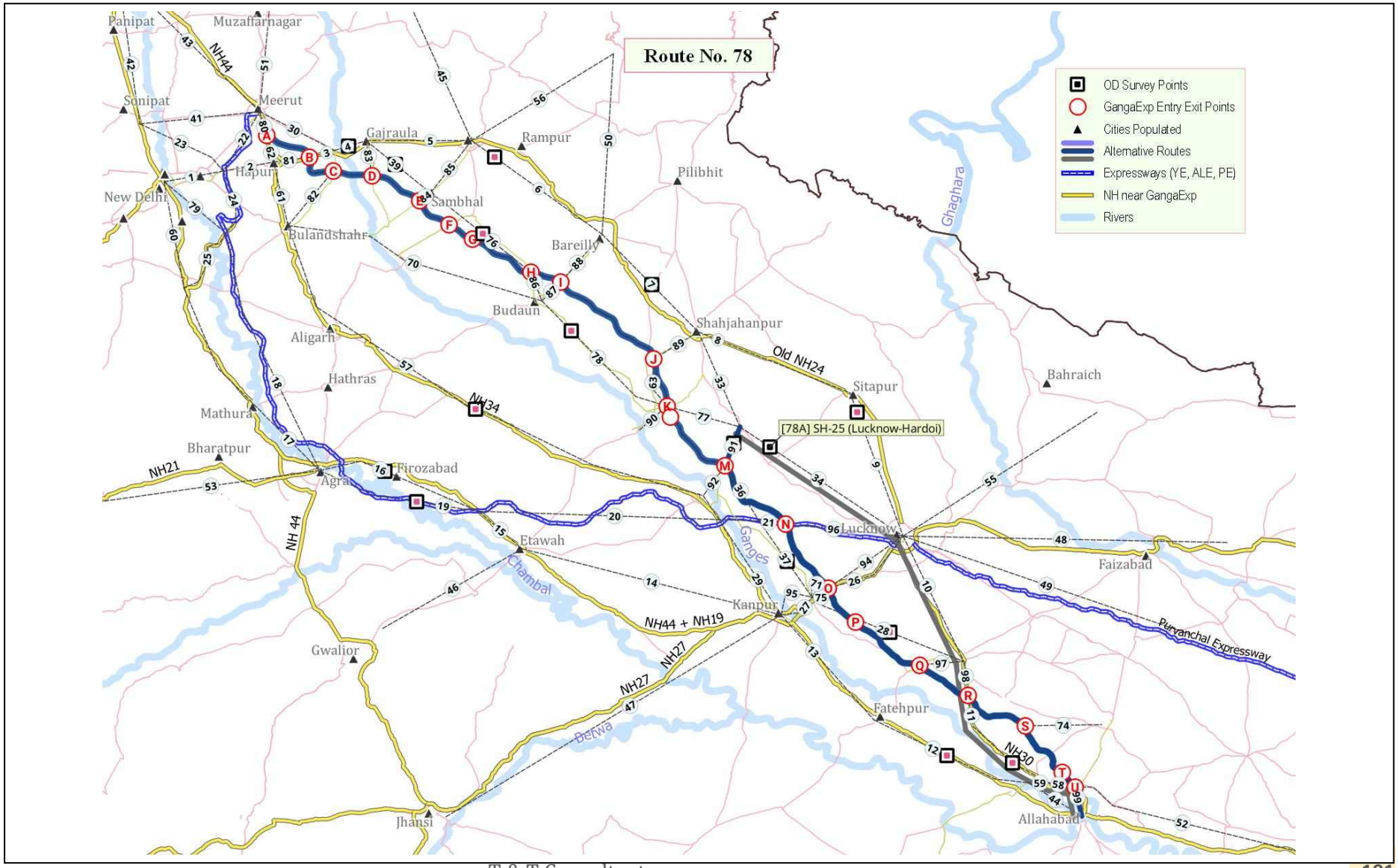

Route No. 73
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Hathras
Old NH24
Sitapur
Bahraich
[73A] Old NH-24 (Sitapur Toll Plaza)
[73B] SH-25 (Lucknow-Hardoi)
Mathura
NH34
Bharatpur
NH21
Agra
Firozabad
Etawah
NH 44
Chambal
Ganges
Lucknow
Faizabad
Purvanchal Expressway
Kanpur
Gwalior
NH27
Berwa
Fatehpur
NH44 + NH19
NH30
Jhansi
Allahabad

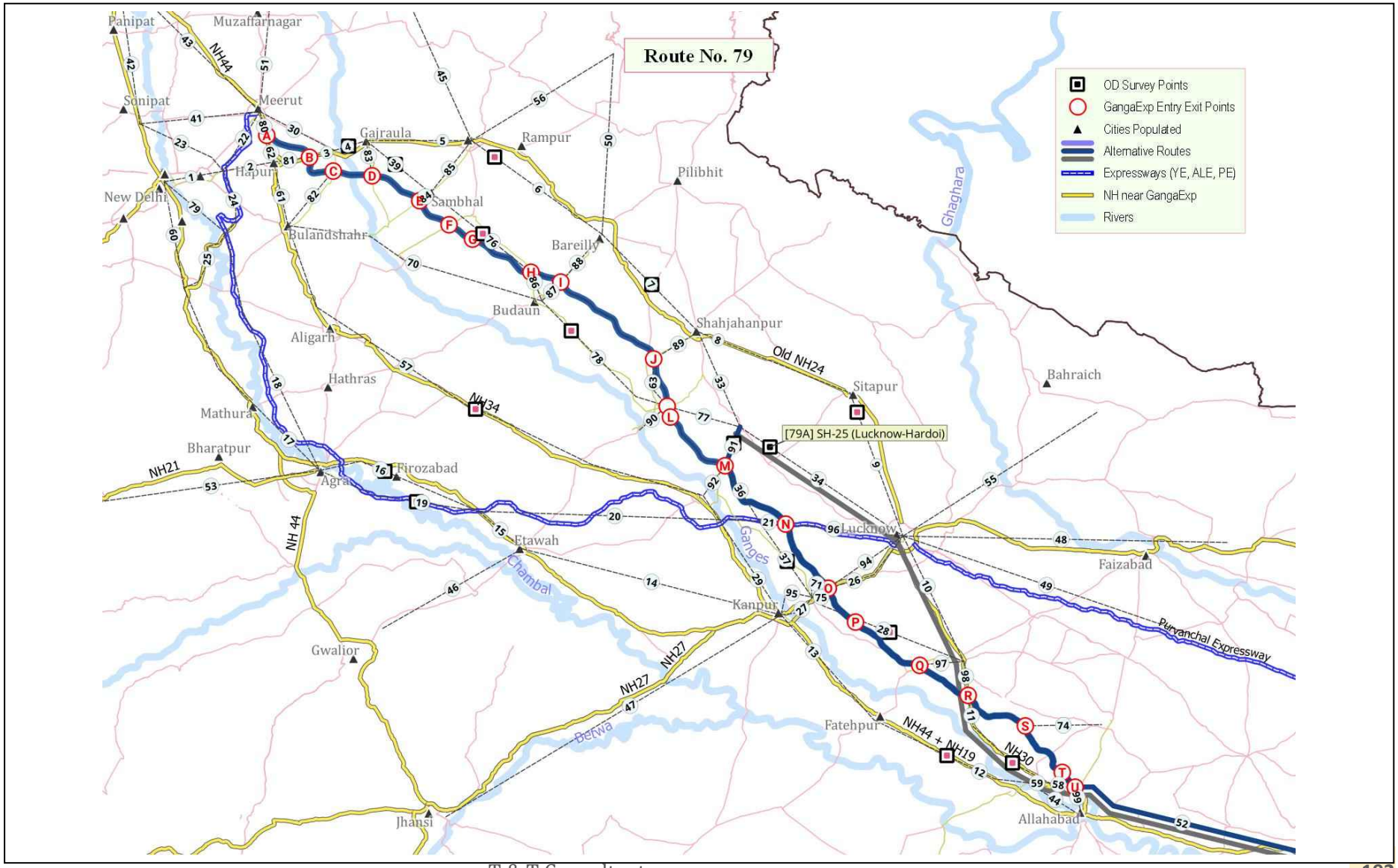

Route No. 74
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Hathras
Old NH24
Sitapur
Bahraich
[74A] Old NH-24 (Sitapur Toll Plaza)
[74B] SH-25 (Lucknow-Hardoi)
Mathura
NH34
Bharatpur
NH21
Agra
Firozabad
Etawah
NH 44
Chambal
Ganges
Lucknow
Faizabad
Purvanchal Expressway
Kanpur
NH44 + NH19
Gwalior
NH27
Fatehpur
Berwa
NH30
Jhansi
Allahabad

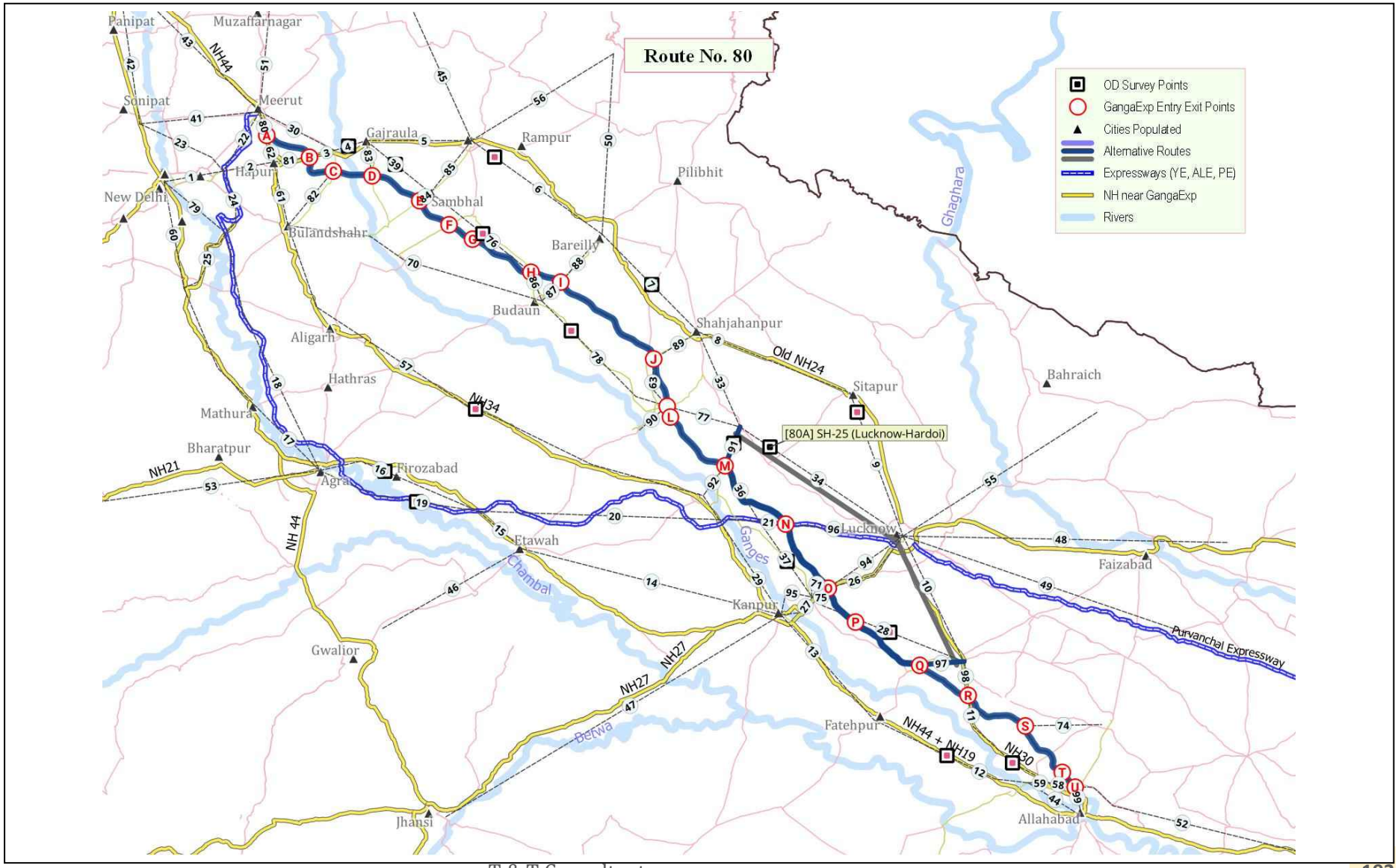

Route No. 75
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Old NH24
Sitapur
Bahraich
Hathras
Mathura
NH34
[75A] SH-21 (Hardoi-Kanpur)
Bharatpur
NH21
Agra
Firozabad
Lucknow
Etawah
Ganges
Chambal
Kanpur
Faizabad
NH 44
Purvanchal Expressway
Gwalior
NH27
Fatehpur
NH44 + NH19
NH30
Allahabad
Jhansi
Betwa

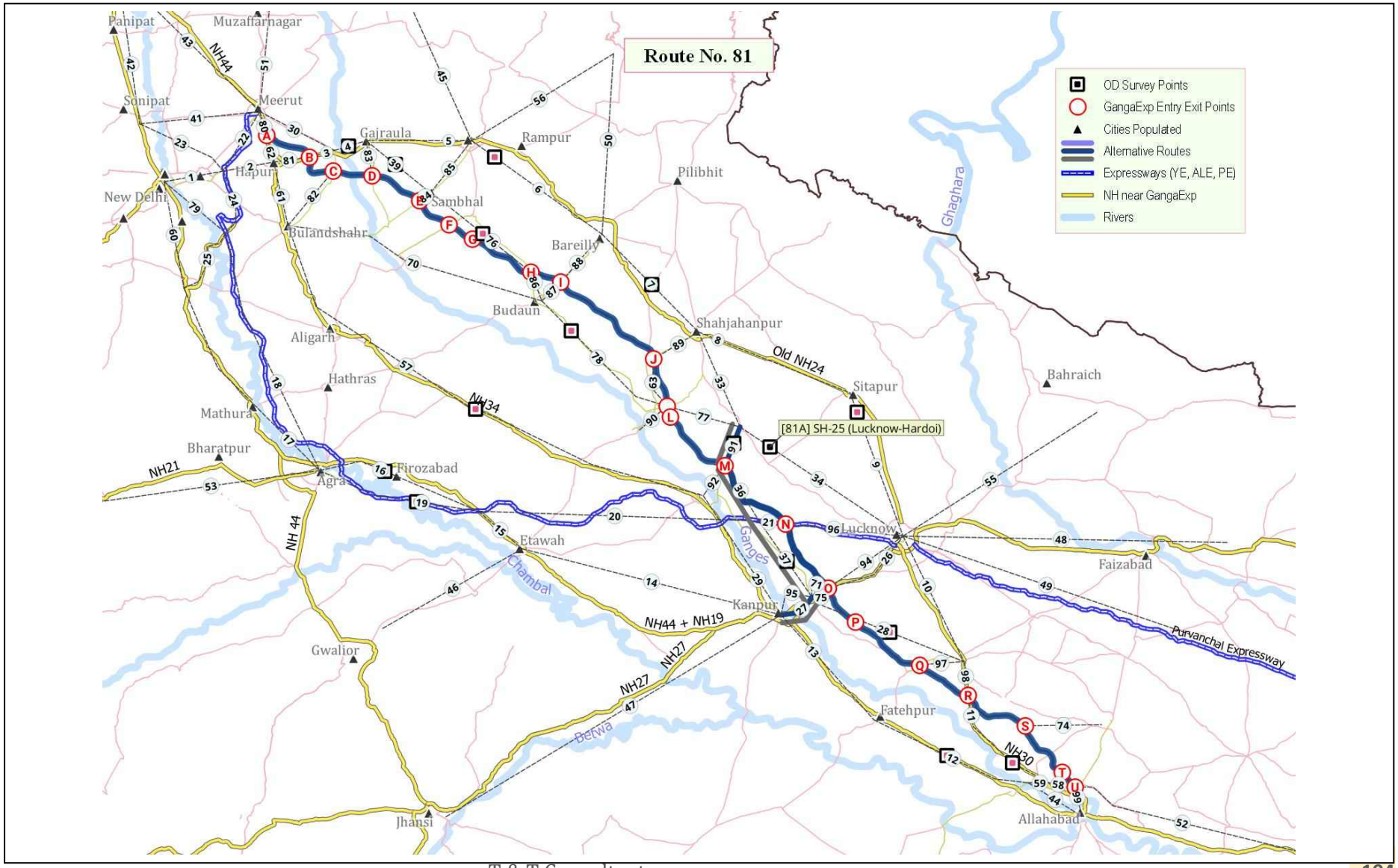

Route No. 76
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Old NH24
Sitapur
Bahraich
Hathras
NH34
Mathura
Bharatpur
NH21
Firozabad
Agra
NH 44
Etawah
[76A] SH-38 (Unnao-Hardoi Road)
Lucknow
Faizabad
Chambal
Kanpur
Purvanchal Expressway
Ganges
Gwalior
NH27
Berwa
Fatehpur
NH44 + NH19
NH30
Jhansi
Allahabad

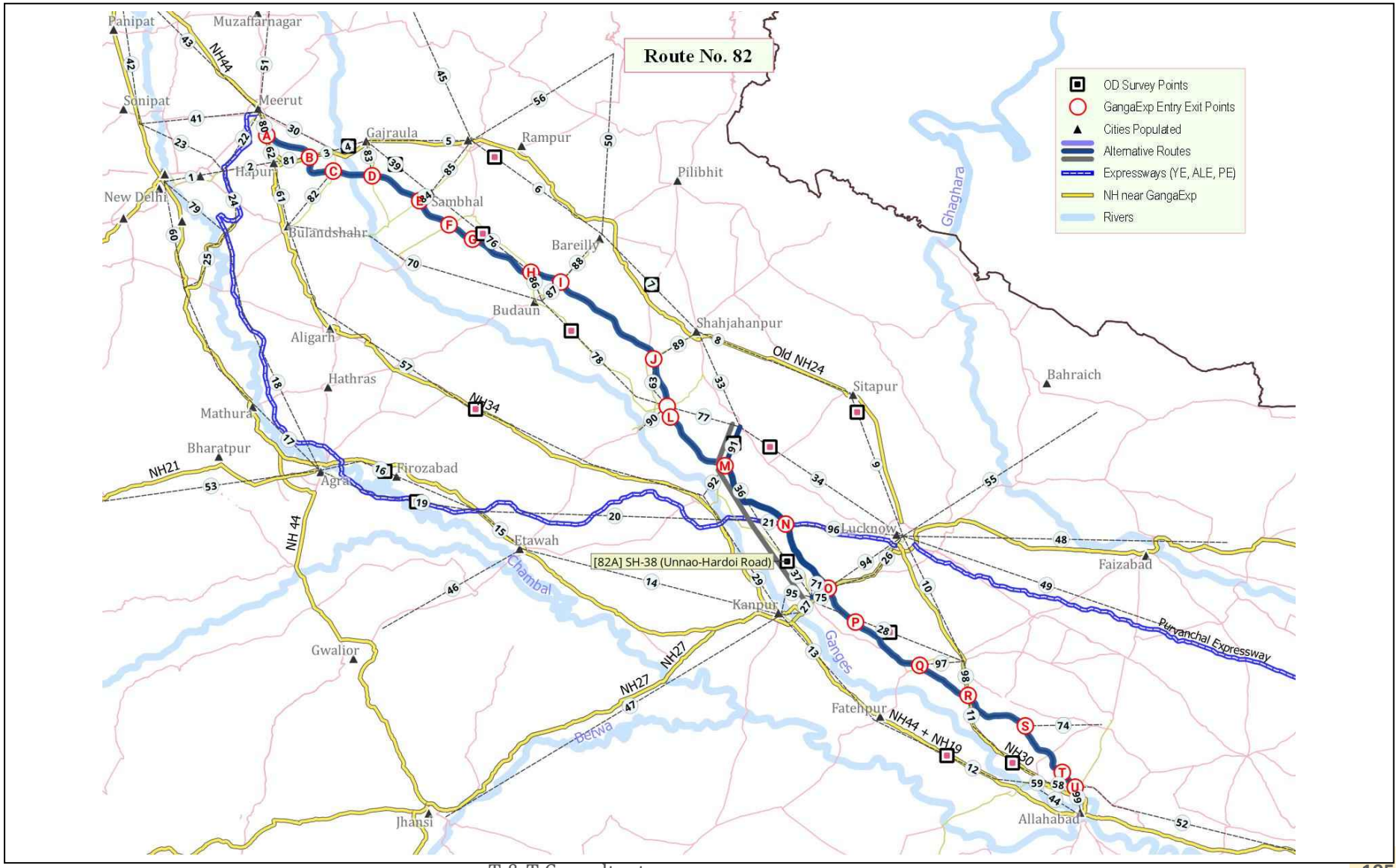

Route No. 77
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Hathras
Old NH24
Sitapur
Bahraich
[77A] Old NH-24 (Sitapur Toll Plaza)
[77B] SH-25 (Lucknow-Hardoi)
Mathura
Bharatpur
Agra
Firozabad
Etawah
Lucknow
Faizabad
Ganges
Chambal
Kanpur
Purvanchal Expressway
Gwalior
Fatehpur
Jhansi
Allahabad
NH44
NH21
NH 44
NH34
NH27
NH44 + NH19
NH30
Betwa

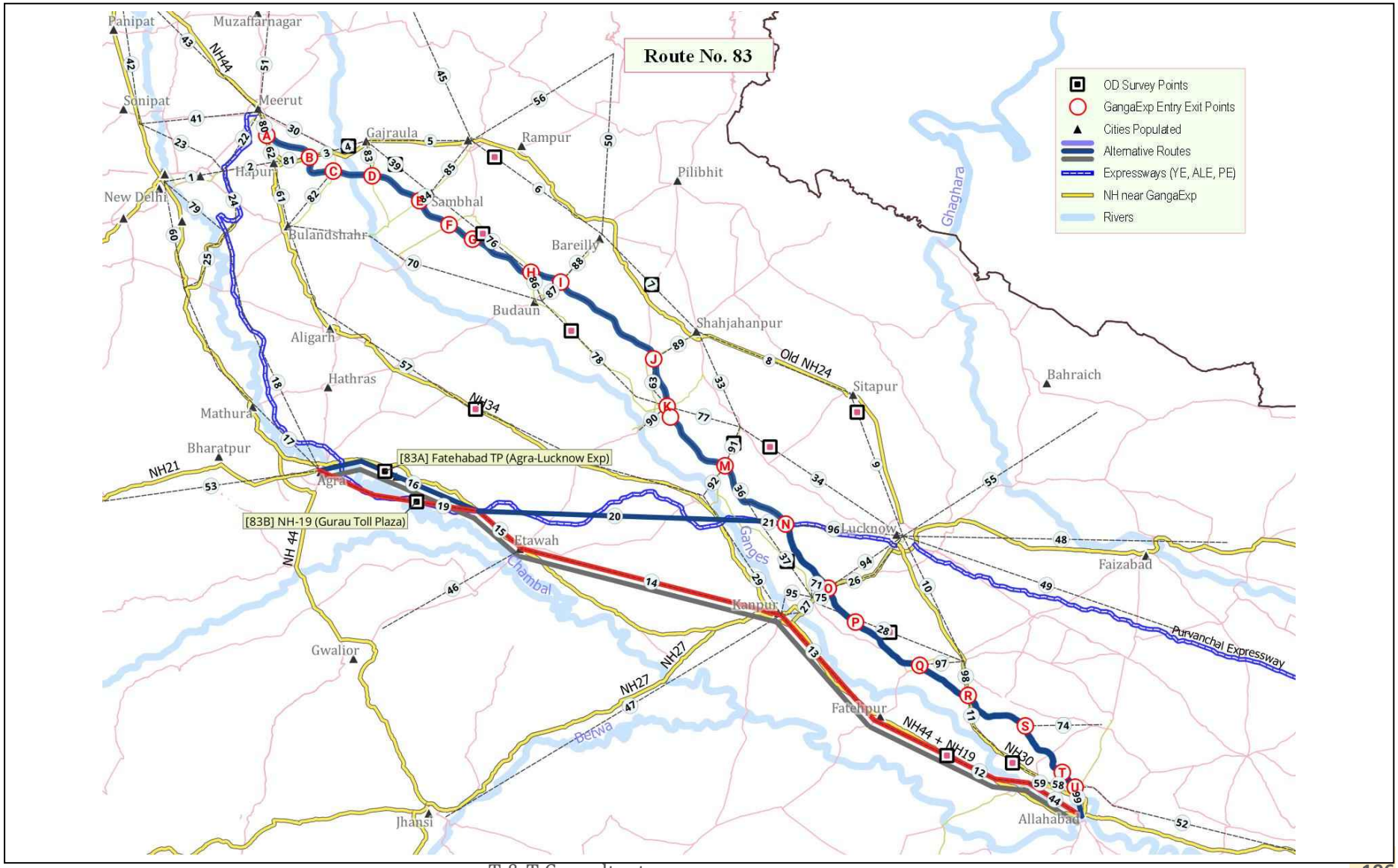

Route No. 78
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Ghaghara
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Budaun
Shahjahanpur
Old NH24
Sitapur
Bahraich
Aligarh
Hathras
NH34
Mathura
[78A] SH-25 (Lucknow-Hardoi)
Bharatpur
NH21
Agra
Firozabad
NH 44
Etawah
Chambal
Ganges
Kanpur
Lucknow
Faizabad
Purvanchal Expressway
NH44 + NH19
Gwalior
NH27
Betwa
Fatehpur
NH30
Jhansi
Allahabad

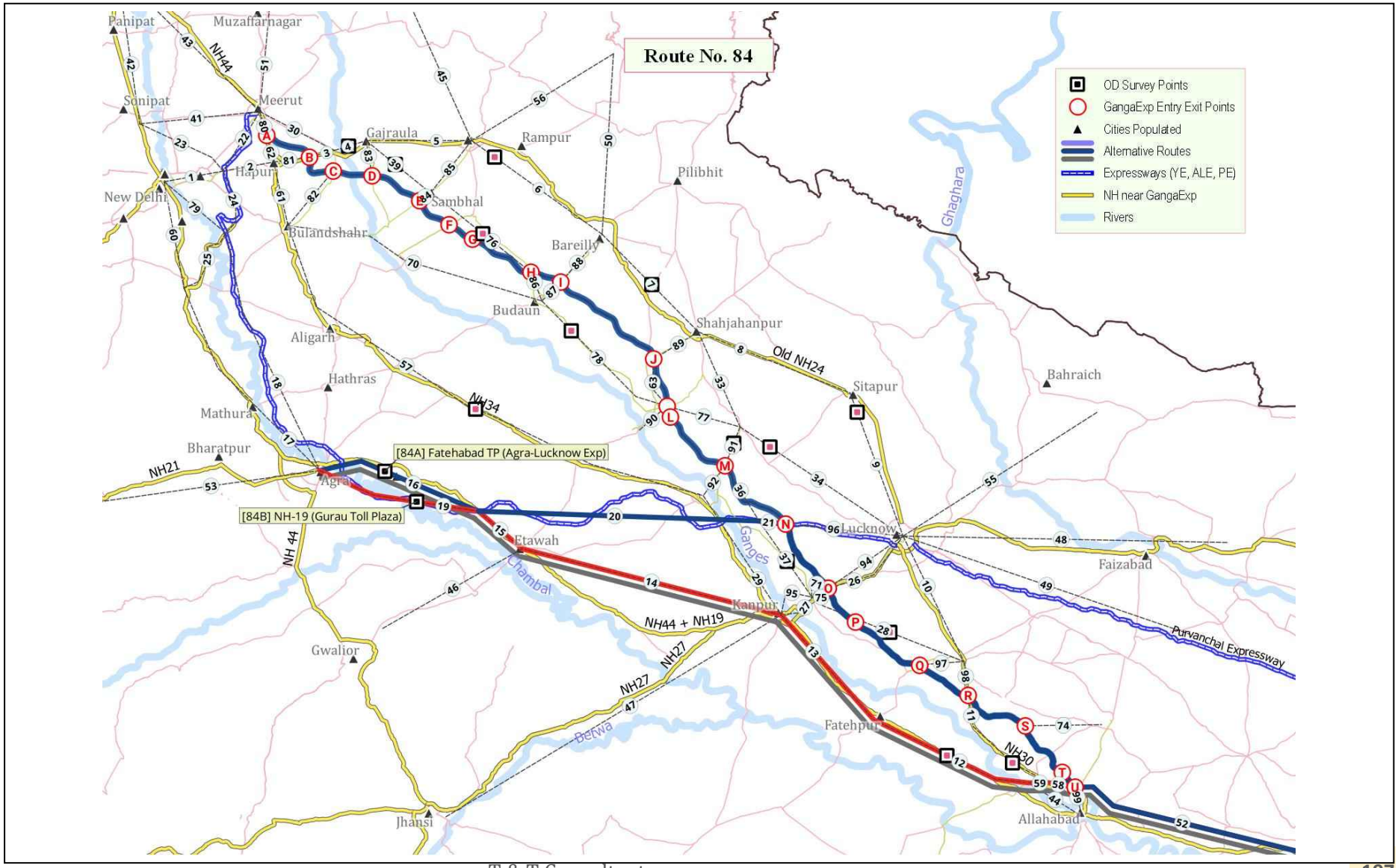

Route No. 79
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Hathras
Old NH24
Sitapur
Bahraich
Mathura
NH34
[79A] SH-25 (Lucknow-Hardoi)
Bharatpur
NH21
Agra
Firozabad
NH 44
Etawah
Chambal
Ganges
Lucknow
Faizabad
Kanpur
Purvanchal Expressway
Gwalior
NH27
Berwa
Fatehpur
NH44 + NH19
NH30
Jhansi
Allahabad

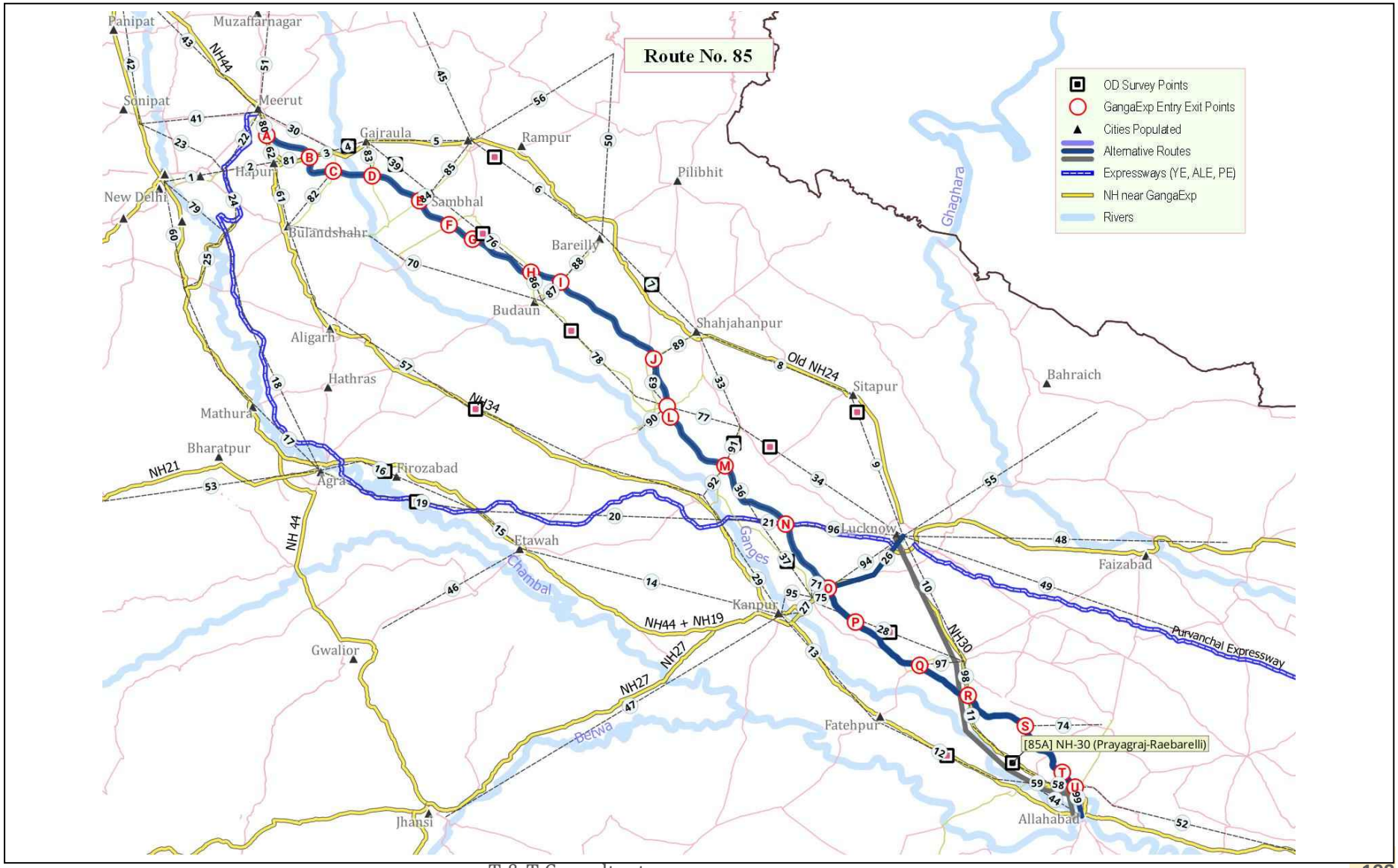

Route No. 80
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Old NH24
Sitapur
Bahraich
Hathras
NH34
Mathura
[80A] SH-25 (Lucknow-Hardoi)
Bharatpur
NH21
Firozabad
Agra
Lucknow
Faizabad
NH 44
Etawah
Ganges
Chambal
Kanpur
Purvanchal Expressway
Gwalior
NH27
Berwa
Fatehpur
NH44 + NH19
NH30
Jhansi
Allahabad

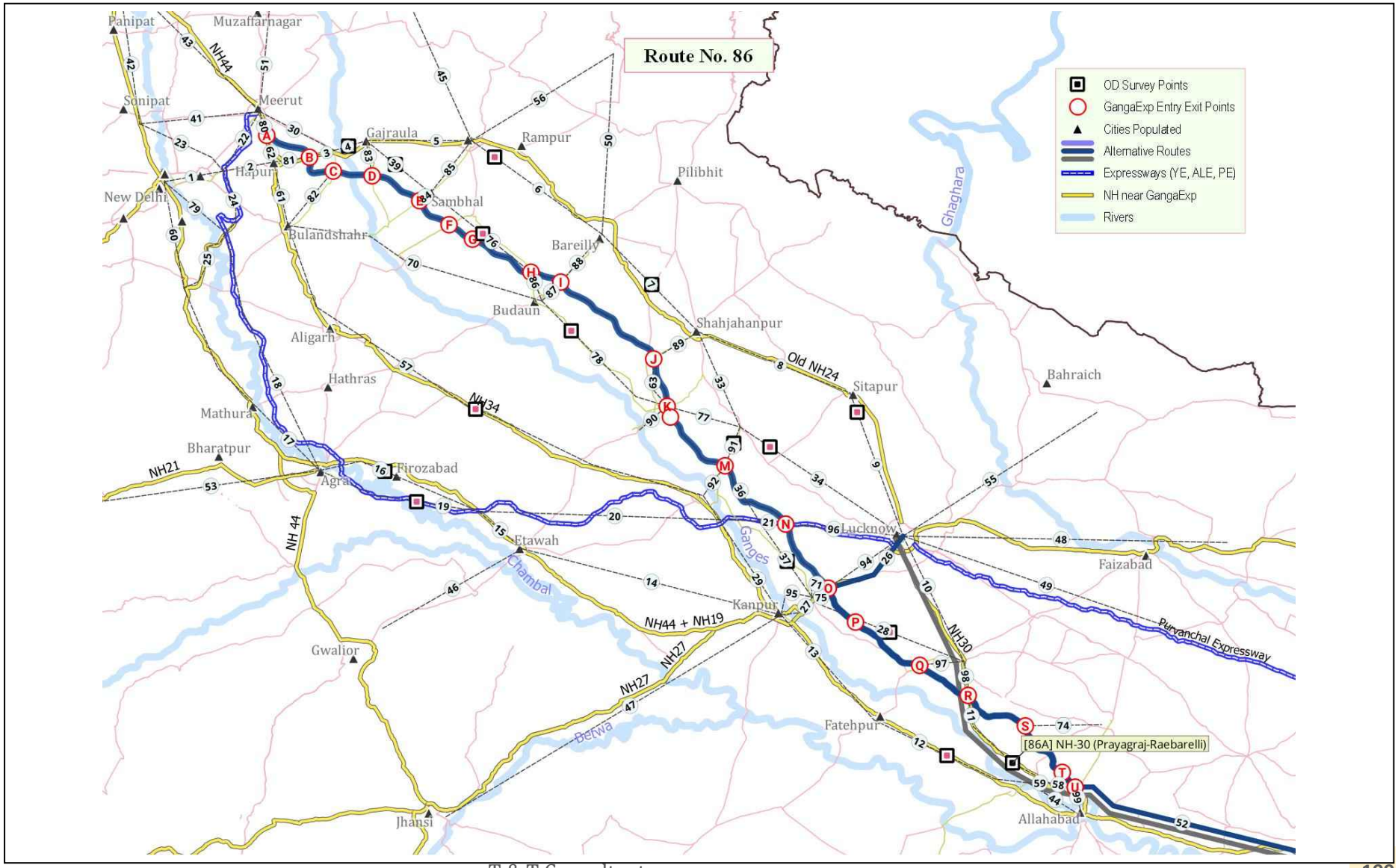

Route No. 81
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Hathras
Old NH24
Sitapur
Bahraich
Mathura
NH34
[81A] SH-25 (Lucknow-Hardoi)
Bharatpur
NH21
Agra
Firozabad
Lucknow
Etawah
Ganges
Chambal
NH 44
Faizabad
Kanpur
NH44 + NH19
Purvanchal Expressway
Gwalior
NH27
Fatehpur
Betwa
NH30
Jhansi
Allahabad

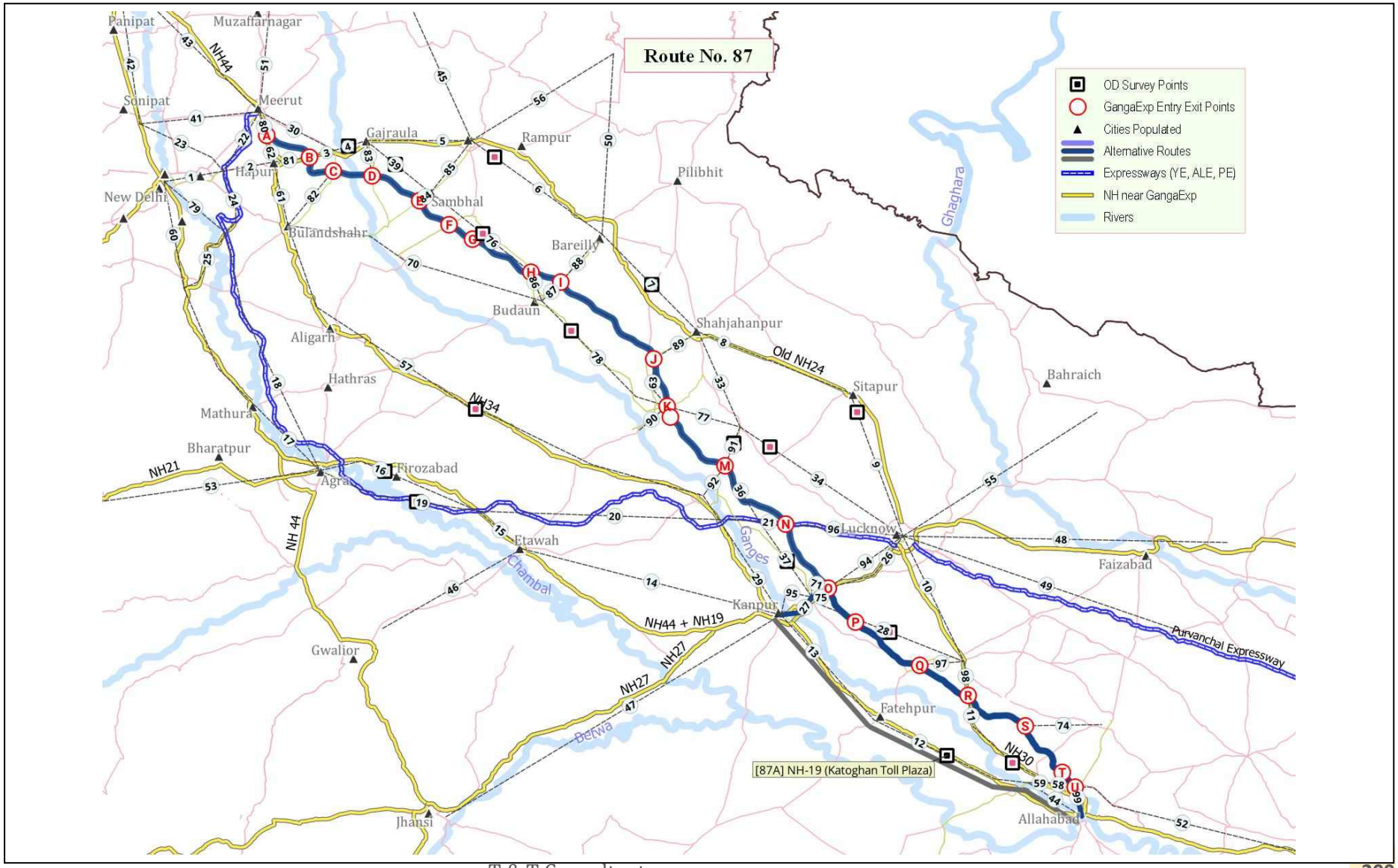

Route No. 82
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Old NH24
Sitapur
Bahraich
Hathras
Mathura
NH34
Bharatpur
NH21
Firozabad
Agra
NH 44
Etawah
Chambal
[82A] SH-38 (Unnao-Hardoi Road)
Lucknow
Faizabad
Kanpur
Purvanchal Expressway
Ganges
Gwalior
NH27
Fatehpur
NH44 + NH19
NH30
Allahabad
Jhansi
Betwa

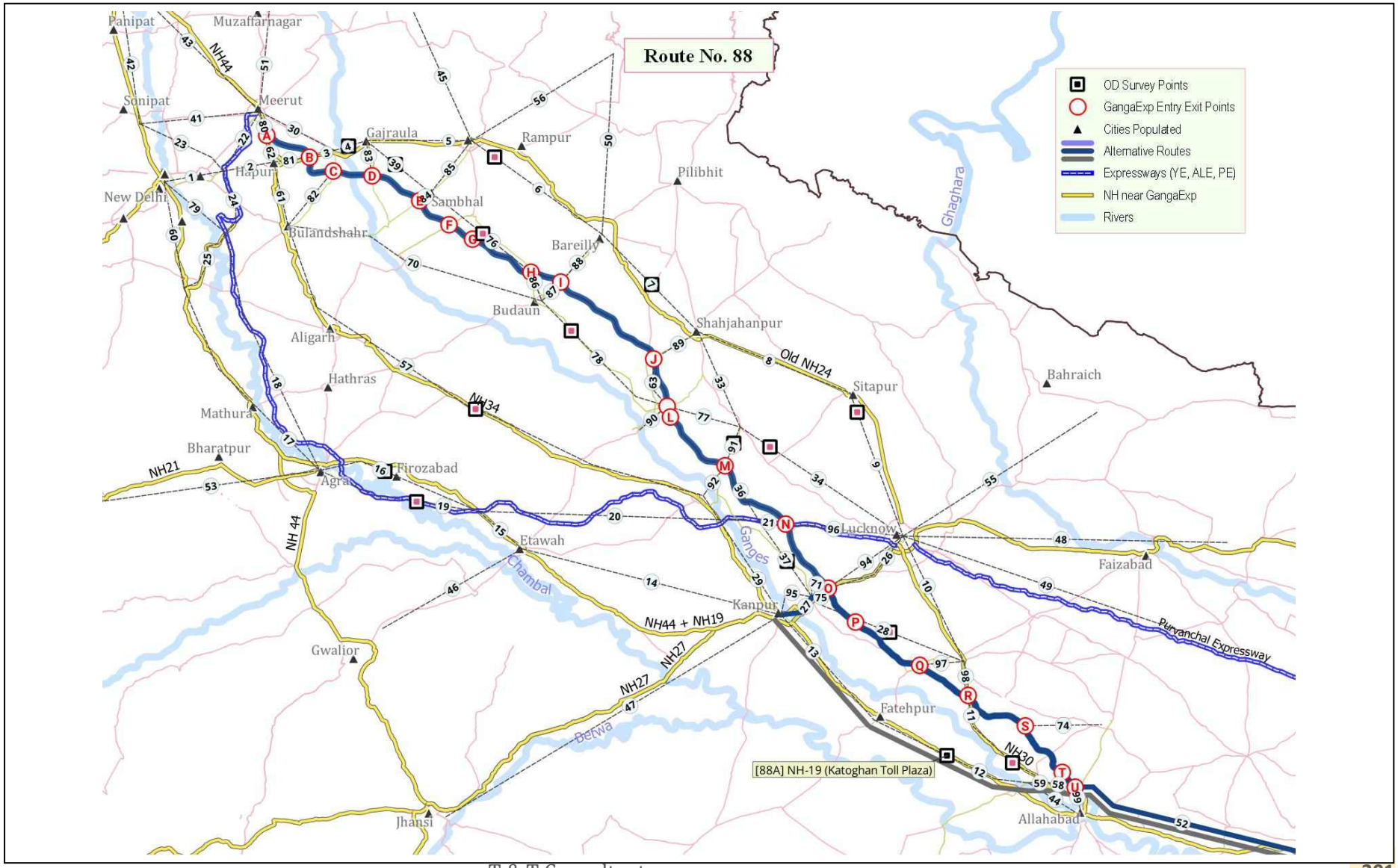

Route No. 83
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Hathras
Old NH24
Sitapur
Bahraich
Mathura
NH34
Bharatpur
NH21
[83A] Fatehabad TP (Agra-Lucknow Exp)
Agra
[83B] NH-19 (Gurau Toll Plaza)
NH 44
Etawah
Chambal
Ganges
Lucknow
Faizabad
Kanpur
Purvanchal Expressway
Gwalior
NH27
Fatehpur
Betwa
NH44 + NH19
NH30
Jhansi
Allahabad

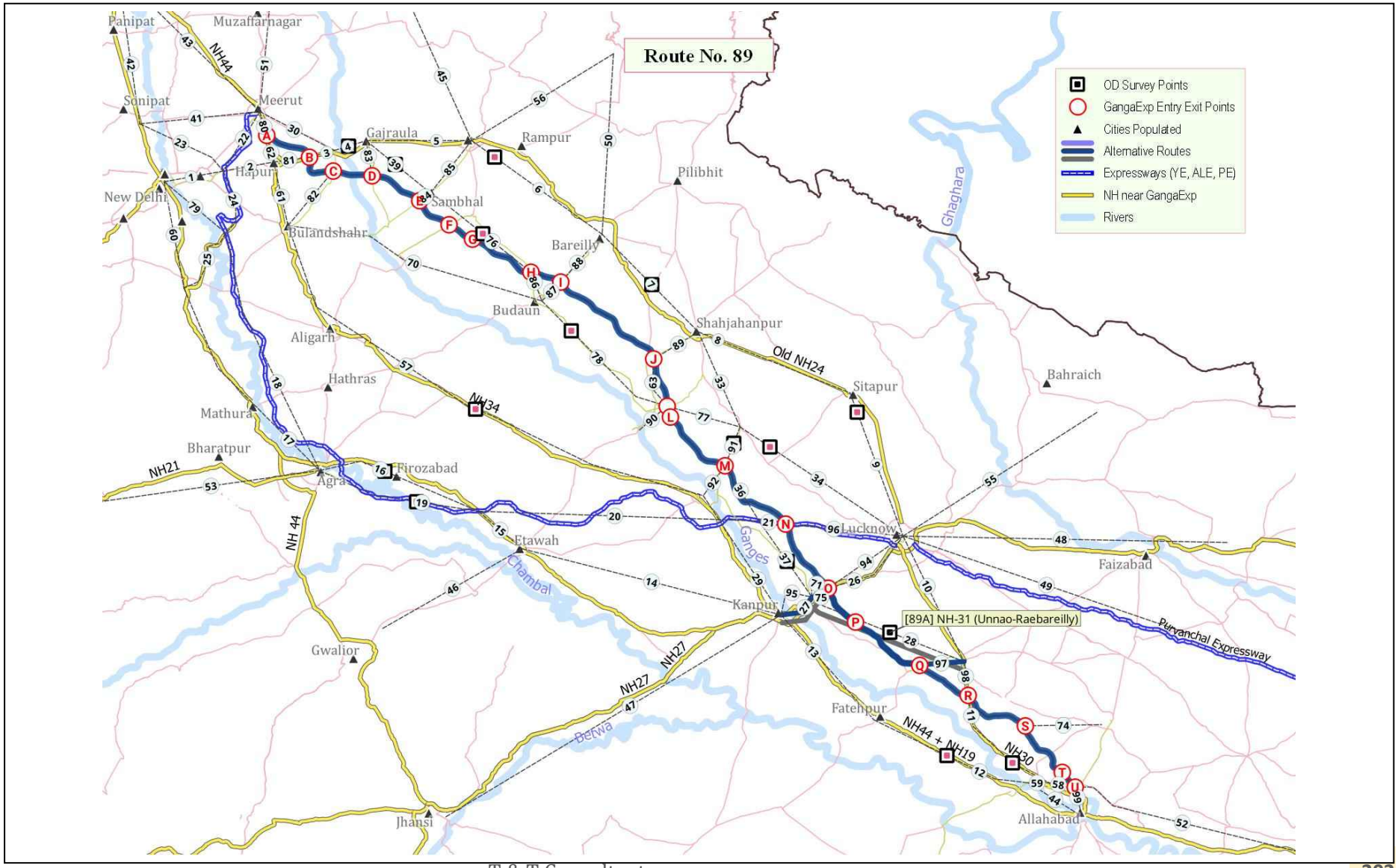

Route No. 84
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Old NH24
Sitapur
Bahraich
Hathras
NH34
Mathura
Bharatpur
NH21
[84A] Fatehabad TP (Agra-Lucknow Exp)
Agra
[84B] NH-19 (Gurau Toll Plaza)
NH 44
Etawah
Chambal
Ganges
Lucknow
Faizabad
Kanpur
NH44 + NH19
Purvanchal Expressway
Gwalior
NH27
Fatehpur
Betwa
NH30
Jhansi
Allahabad

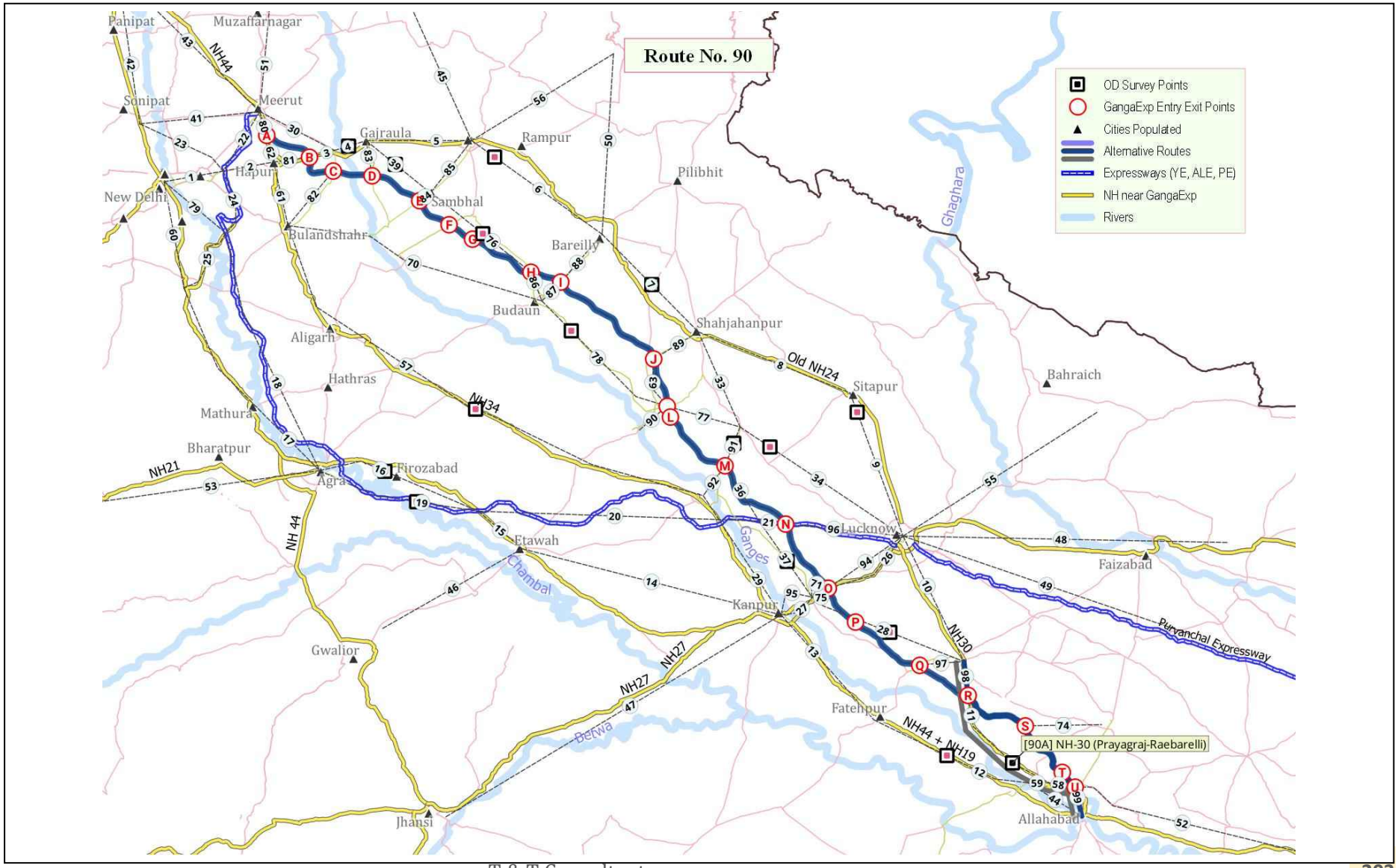

Route No. 85
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Hathras
Old NH24
Sitapur
Bahraich
Mathura
NH34
Bharatpur
NH21
Firozabad
Agra
Etawah
NH 44
Chambal
Ganges
Lucknow
Faizabad
Kanpur
NH44 + NH19
Purvanchal Expressway
NH30
Gwalior
NH27
Fatehpur
Betwa
[85A] NH-30 (Prayagraj-Raebarelli)
Allahabad
Jhansi

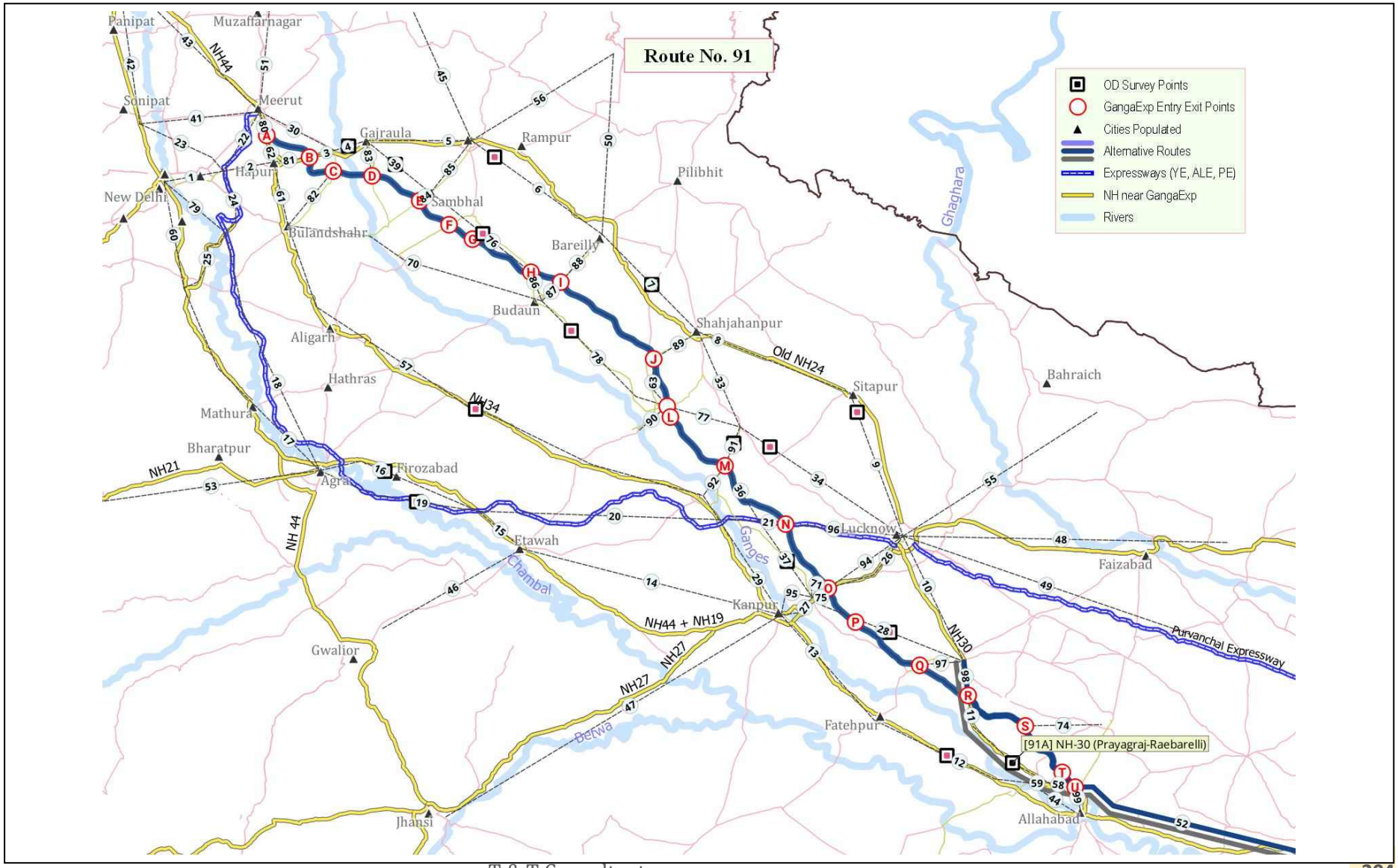

Route No. 86
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Hathras
Old NH24
Sitapur
Bahraich
Mathura
NH34
Bharatpur
NH21
Firozabad
Agra
Lucknow
Faizabad
NH 44
Etawah
Ganges
Chambal
Kanpur
Purvanchal Expressway
NH44 + NH19
NH30
Gwalior
NH27
Fatehpur
Berwa
[86A] NH-30 (Prayagraj-Raebarelli)
Jhansi
Allahabad

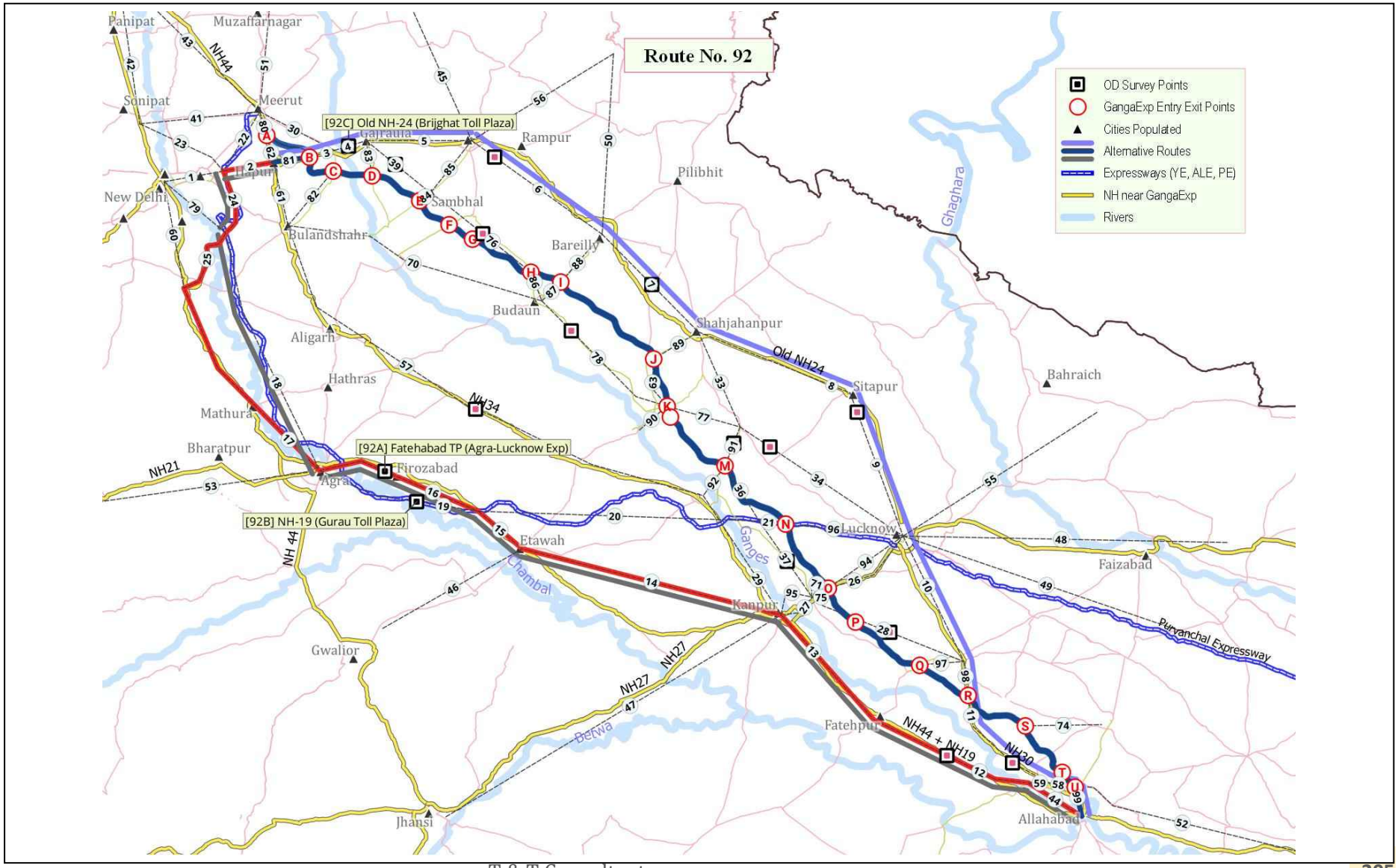

Route No. 87
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Old NH24
Sitapur
Bahraich
Hathras
NH34
Mathura
Bharatpur
NH21
Agra
Firozabad
NH 44
Etawah
Chambal
Ganges
Kanpur
Lucknow
Faizabad
Purvanchal Expressway
NH44 + NH19
Gwalior
NH27
Fatehpur
Betwa
[87A] NH-19 (Katoghan Toll Plaza)
NH30
Jhansi
Allahabad

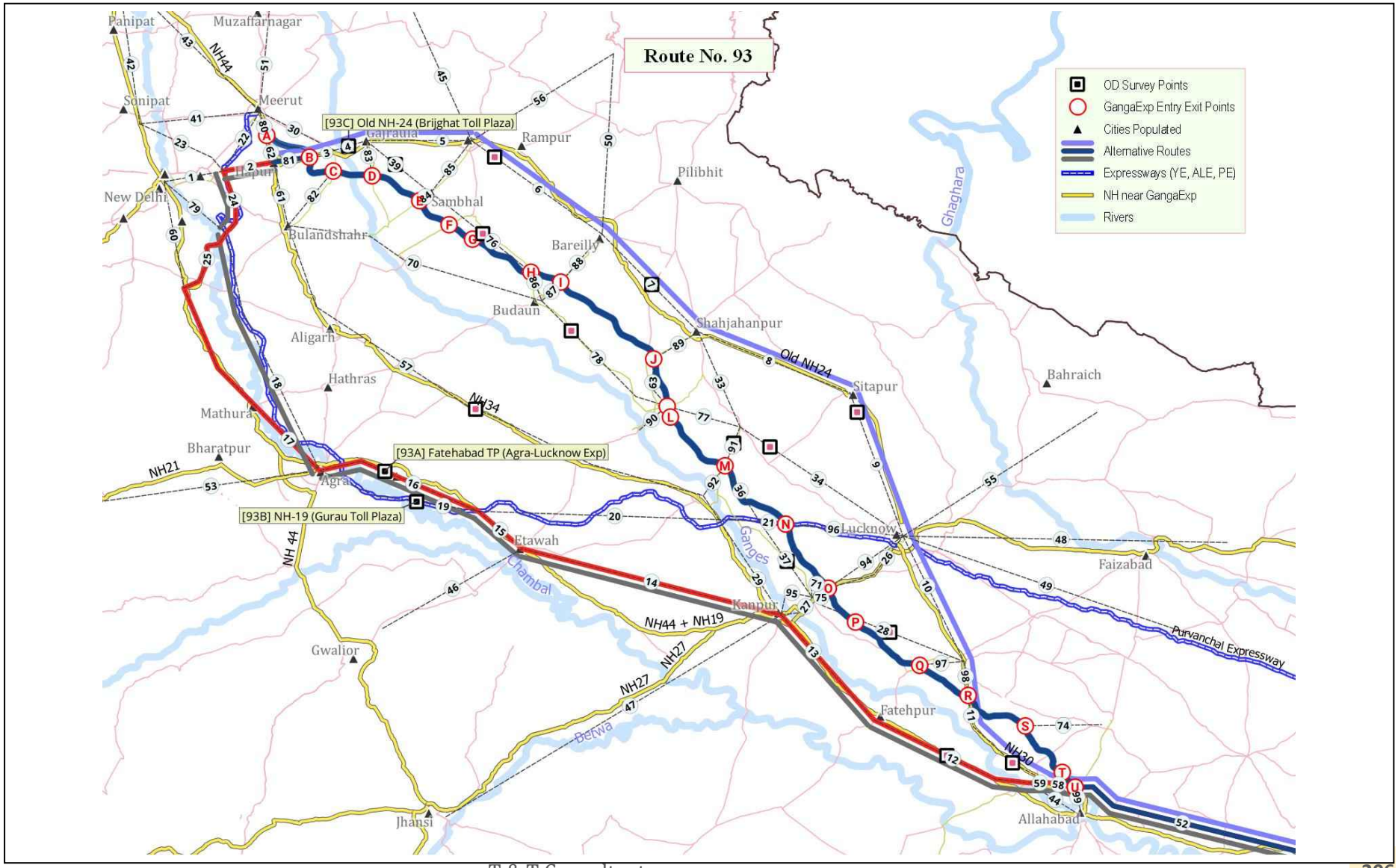

Route No. 88
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Old NH24
Sitapur
Bahraich
Hathras
NH34
Mathura
Bharatpur
NH21
Firozabad
Agra
NH 44
Etawah
Chambal
Ganges
Lucknow
Faizabad
Kanpur
Purvanchal Expressway
NH44 + NH19
Gwalior
NH27
Fatehpur
Betwa
[88A] NH-19 (Katoghan Toll Plaza)
NH30
Jhansi
Allahabad

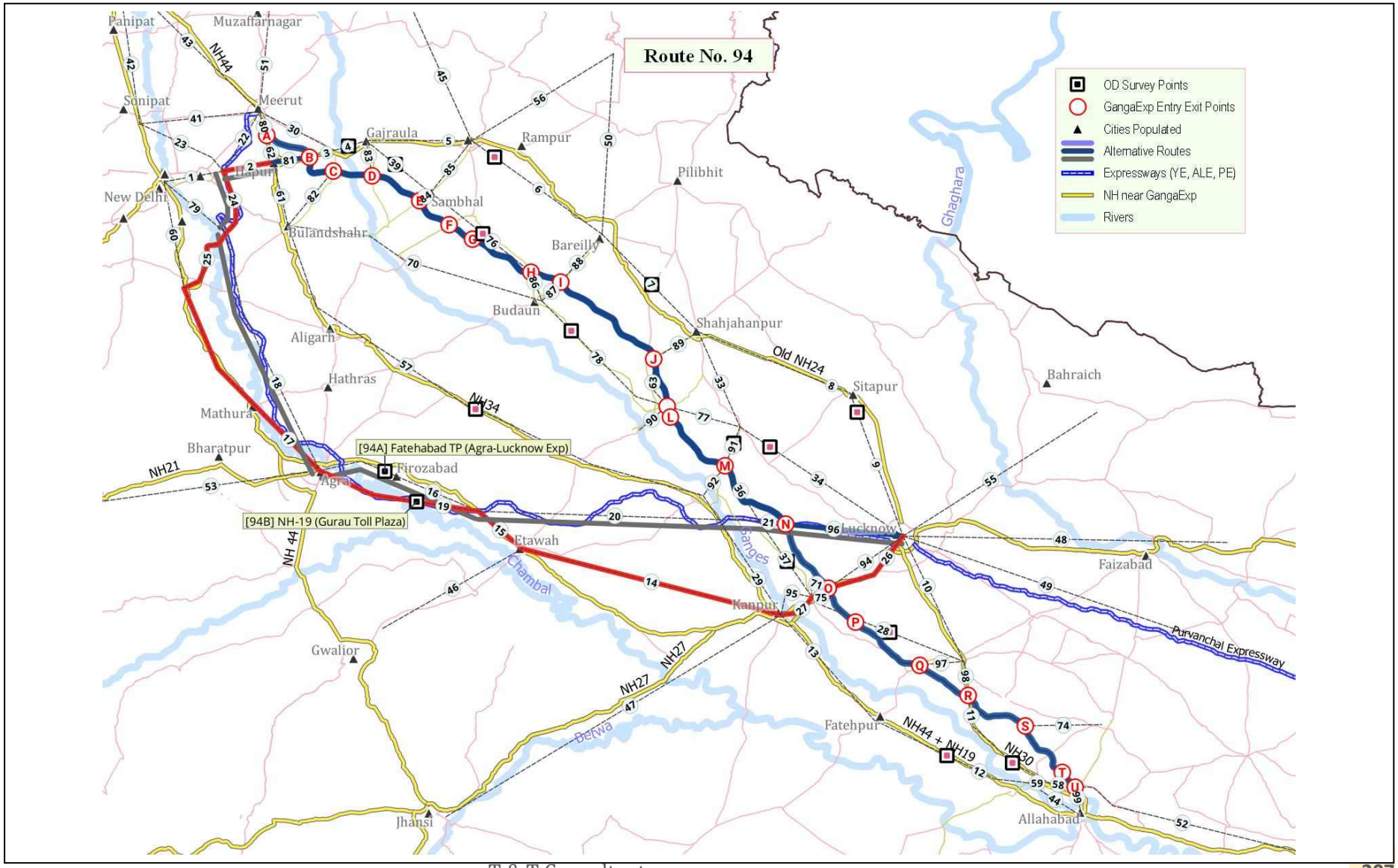

Route No. 89
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Old NH24
Sitapur
Bahraich
Hathras
NH34
Mathura
Bharatpur
NH21
Firozabad
Agra
NH 44
Etawah
Chambal
Ganges
Lucknow
Faizabad
Kanpur
[89A] NH-31 (Unnao-Raebareilly)
Purvanchal Expressway
Gwalior
NH27
Fatehpur
Betwa
NH44 + NH19
NH30
Jhansi
Allahabad

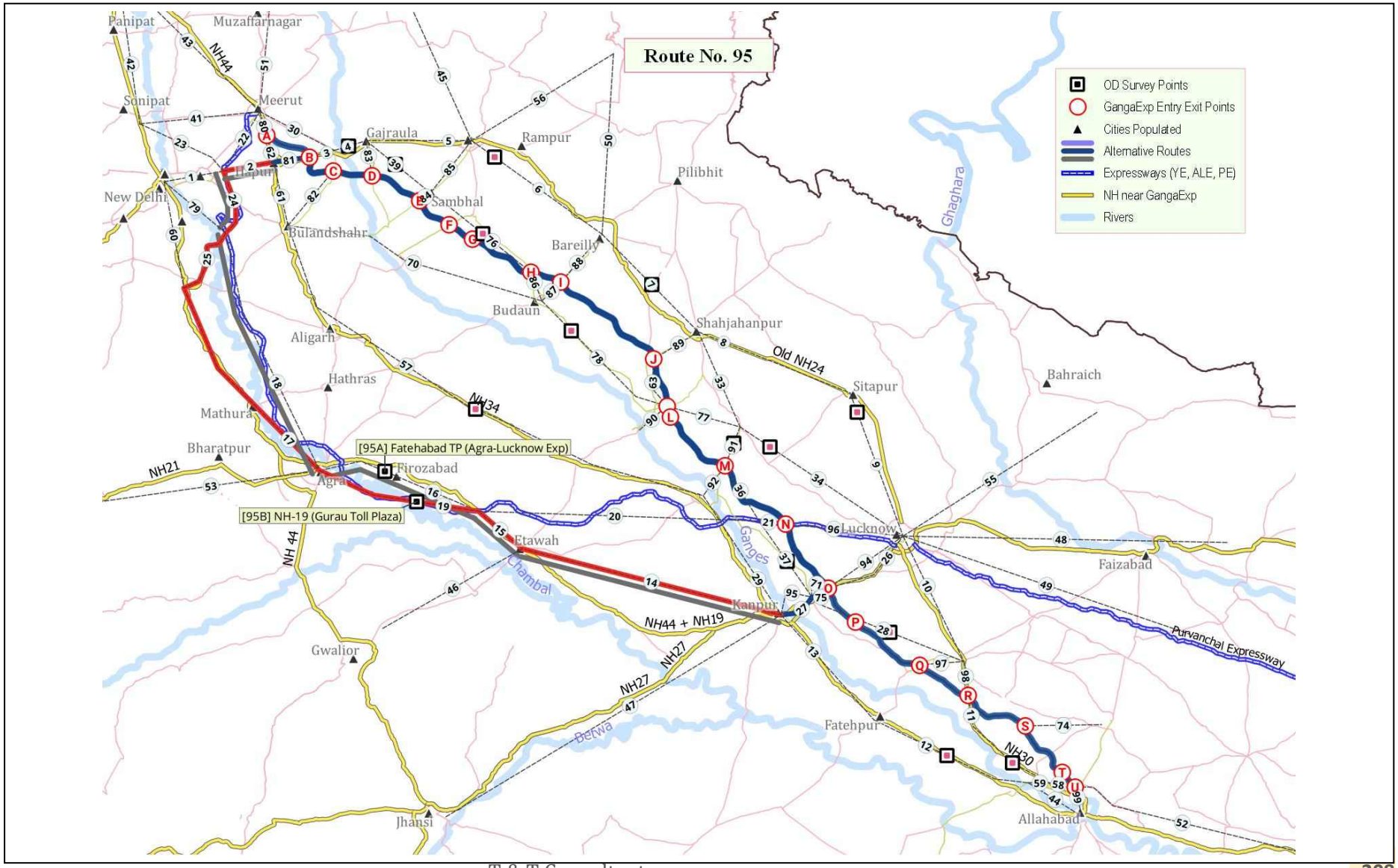

Route No. 90
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Hathras
Old NH24
Sitapur
Bahraich
Mathura
NH34
Bharatpur
NH21
Firozabad
Agra
NH 44
Etawah
Chambal
Ganges
Lucknow
Faizabad
Kanpur
Purvanchal Expressway
NH30
Gwalior
NH27
Fatehpur
Betwa
NH44 + NH19
[90A] NH-30 (Prayagraj-Raebarelli)
Allahabad
Jhansi

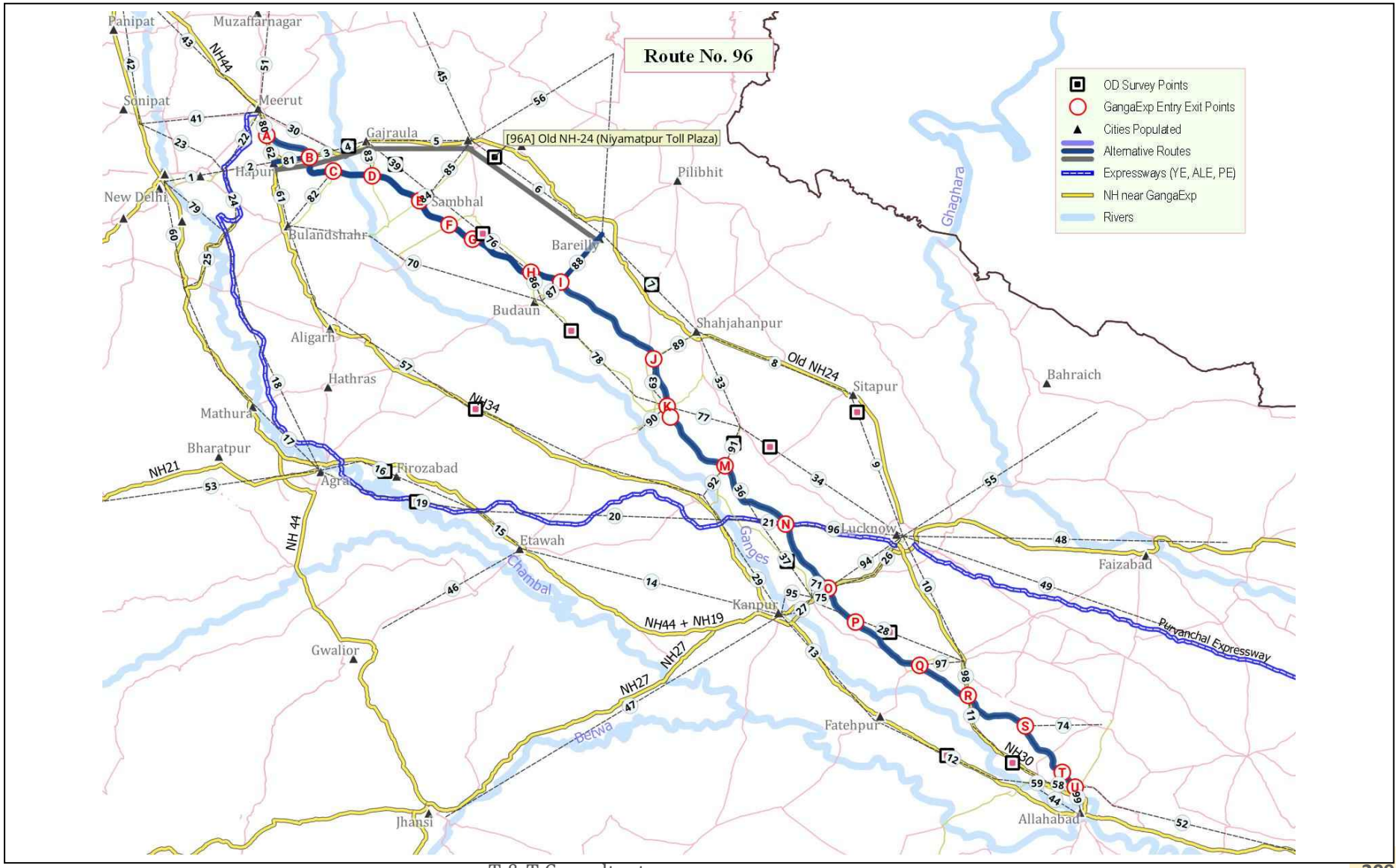

Route No. 91
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Old NH24
Sitapur
Bahraich
Hathras
NH34
Mathura
Bharatpur
NH21
Firozabad
Agra
NH 44
Etawah
Chambal
Ganges
Lucknow
Faizabad
Kanpur
NH44 + NH19
Purvanchal Expressway
NH30
Gwalior
NH27
Fatehpur
Betwa
[91A] NH-30 (Prayagraj-Raebarelli)
Jhansi
Allahabad

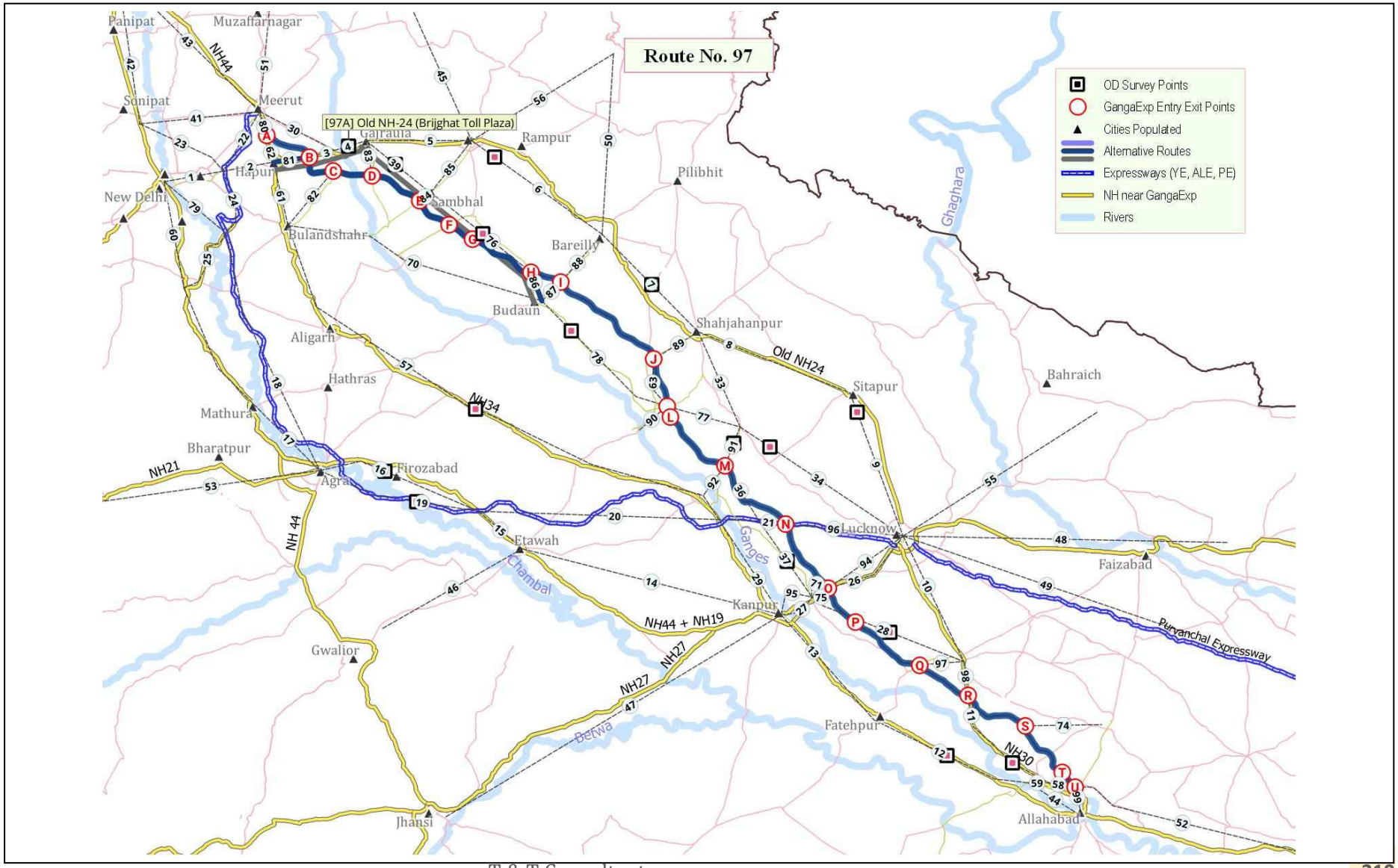

Route No. 92
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[92C] Old NH-24 (Brijghat Toll Plaza)
[92A] Fatehabad TP (Agra-Lucknow Exp)
[92B] NH-19 (Gurau Toll Plaza)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Old NH24
Aligarh
Hathras
Sitapur
Bahraich
Mathura
NH34
Bharatpur
Firozabad
Agra
NH21
NH 44
Etawah
Chambal
Ganges
Lucknow
Faizabad
Kanpur
Purvanchal Expressway
Gwalior
NH27
Fatehpur
NH44 + NH19
NH30
Berwa
Jhansi
Allahabad


Route No. 93
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[93C] Old NH-24 (Brijghat Toll Plaza)
[93A] Fatehabad TP (Agra-Lucknow Exp)
[93B] NH-19 (Gurau Toll Plaza)
Old NH24
Purvanchal Expressway
NH44 + NH19
Panipat
Muzaffarnagar
Sonipat
Meerut
Rampur
Pilibhit
New Delhi
Sambhal
Bulandshahr
Bareilly
Budaun
Shahjahanpur
Aligarh
Hathras
Sitapur
Bahraich
Mathura
Bharatpur
Agra
Etawah
Lucknow
Faizabad
Kanpur
Gwalior
Fatehpur
Jhansi
Allahabad
Ghaghara
Ganges
Chambal
Betwa

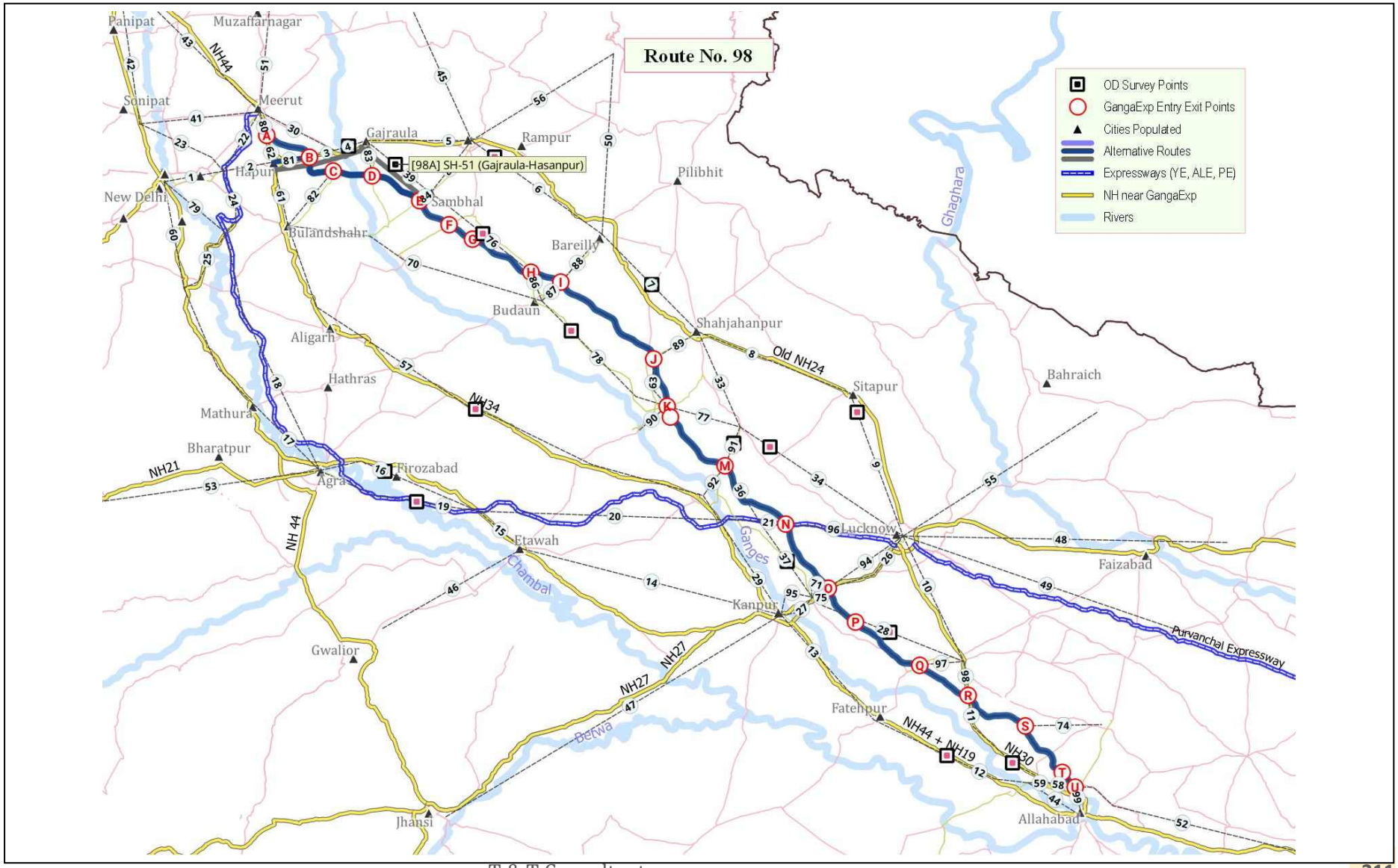

Route No. 94
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
New Delhi
Bulandshahr
Sambhal
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Hathras
Old NH24
Sitapur
Bahraich
Mathura
NH34
Bharatpur
[94A] Fatehabad TP (Agra-Lucknow Exp)
Firozabad
Agra
NH21
[94B] NH-19 (Gurau Toll Plaza)
Etawah
NH 44
Chambal
Ganges
Lucknow
Faizabad
Kanpur
Purvanchal Expressway
Gwalior
NH27
Fatehpur
Betwa
NH44 + NH19
NH30
Jhansi
Allahabad

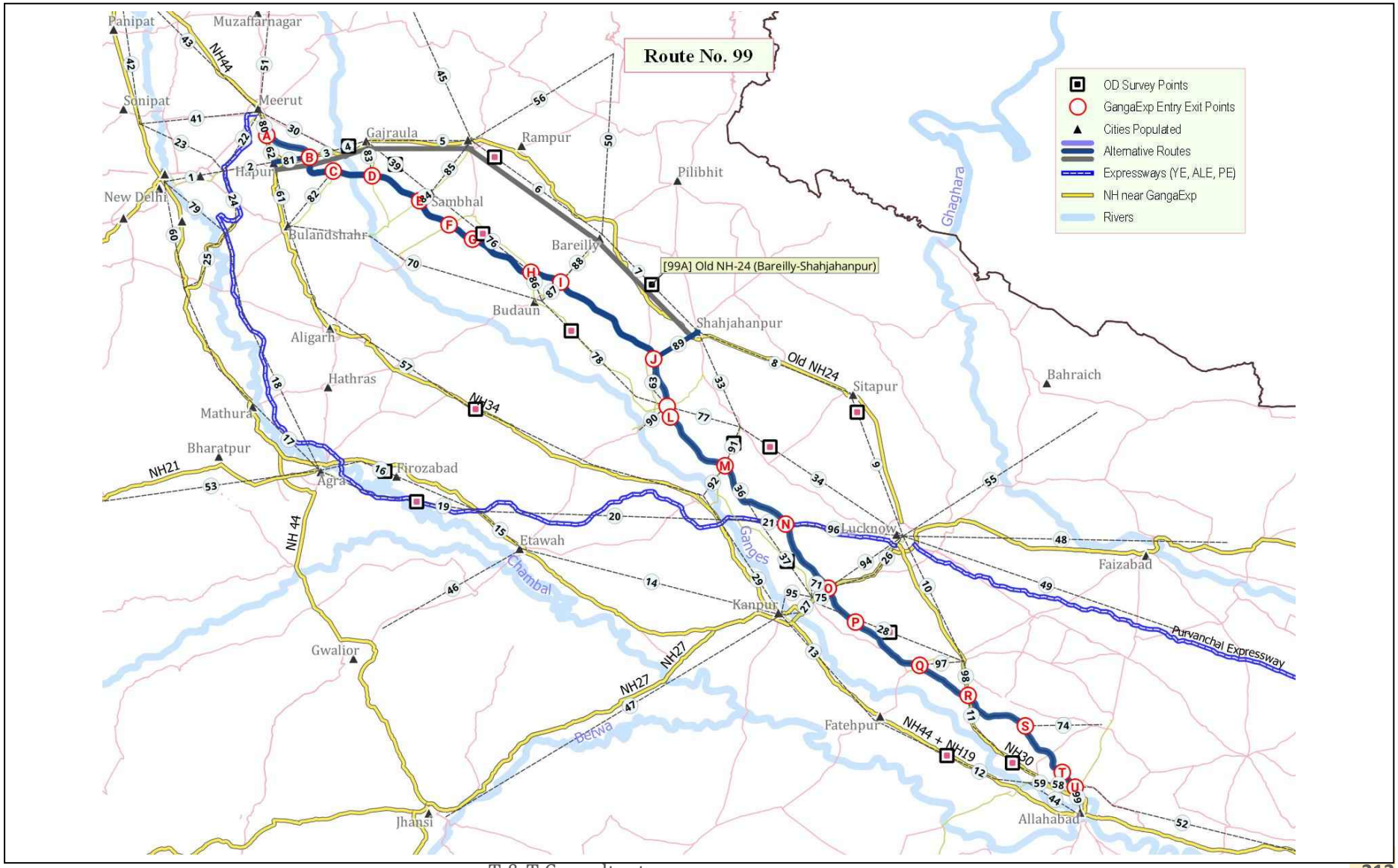

Route No. 95
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
New Delhi
Bulandshahr
Sambhal
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Hathras
Old NH24
Sitapur
Bahraich
Mathura
NH34
Bharatpur
[95A] Fatehabad TP (Agra-Lucknow Exp)
Firozabad
Agra
NH21
[95B] NH-19 (Gurau Toll Plaza)
NH 44
Etawah
Chambal
Ganges
Lucknow
Faizabad
Kanpur
NH44 + NH19
Purvanchal Expressway
Gwalior
NH27
Fatehpur
Betwa
NH30
Jhansi
Allahabad

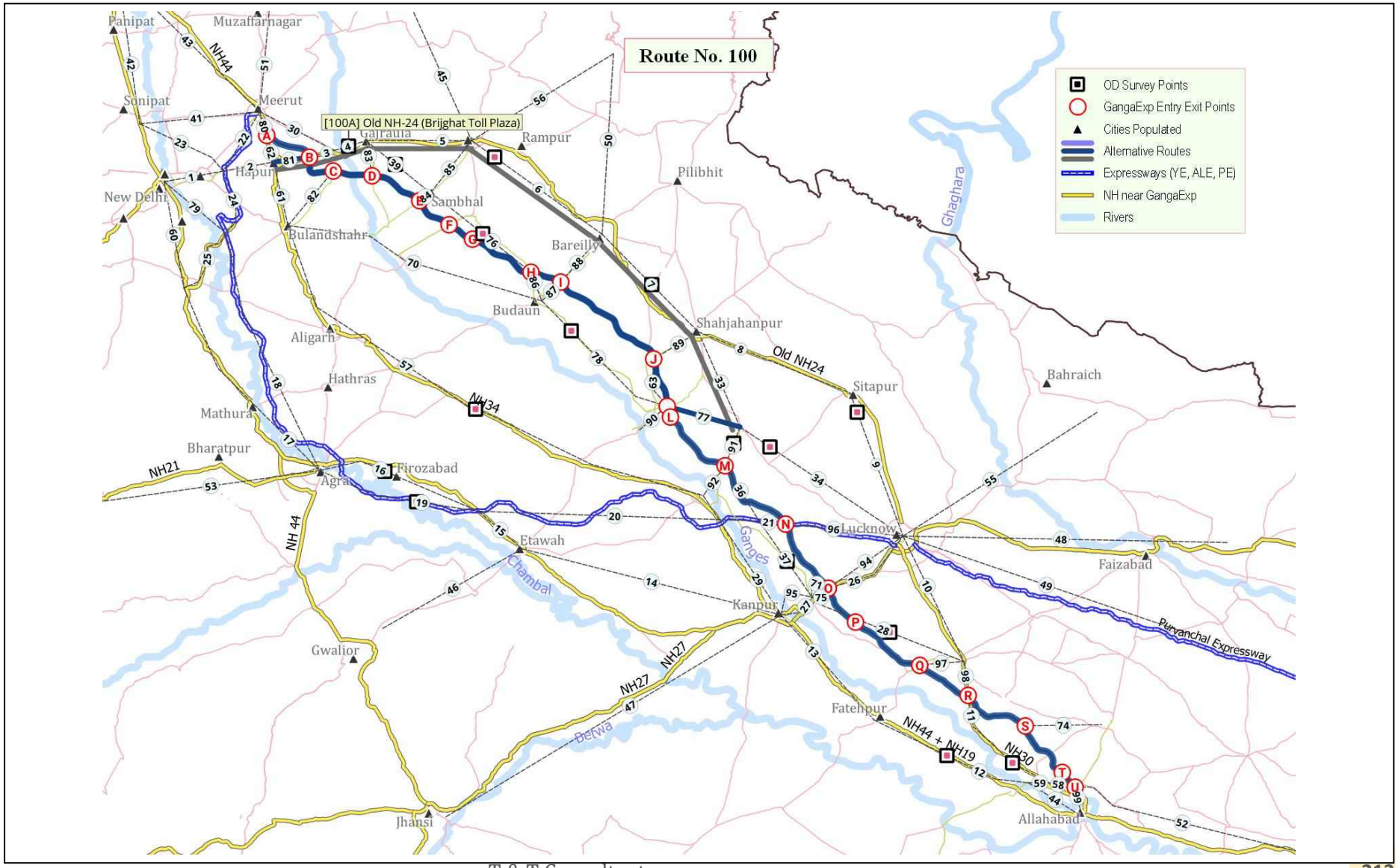

Route No. 96
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[96A] Old NH-24 (Niyamatpur Toll Plaza)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Hapur
New Delhi
Bulandshahr
Sambhal
Bareilly
Pilibhit
Ghaghara
Budaun
Shahjahanpur
Aligarh
Hathras
Mathura
Bharatpur
Firozabad
Agra
Etawah
Chambal
Ganges
Kanpur
Lucknow
Sitapur
Old NH24
Bahraich
Faizabad
Purvanchal Expressway
Gwalior
Jhansi
Fatehpur
Allahabad
NH44
NH21
NH 44
NH34
NH44 + NH19
NH27
NH30
Betwa

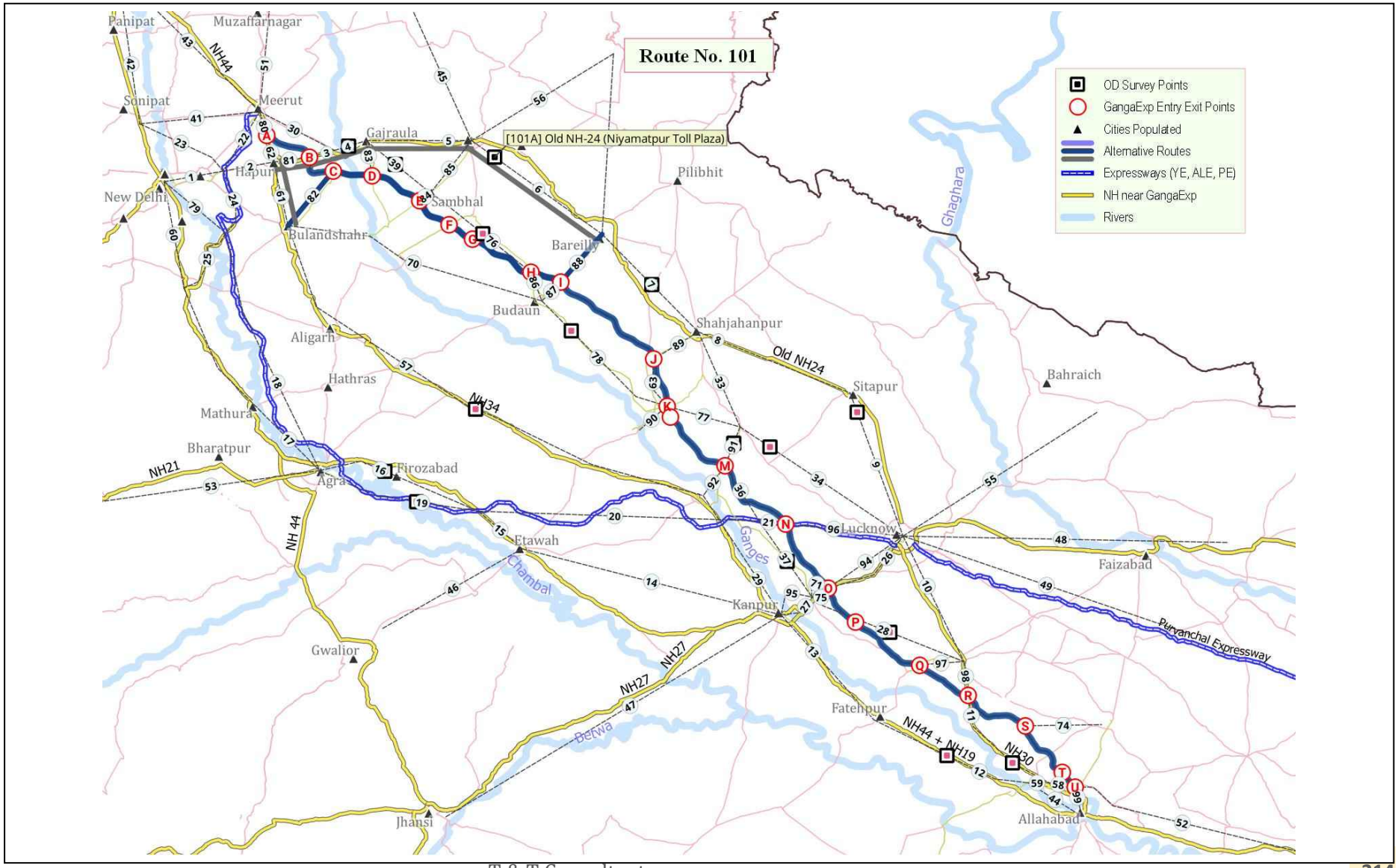

Route No. 97
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[97A] Old NH-24 (Brijghat Toll Plaza)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Hapur
Pilibhit
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Old NH24
Hathras
Sitapur
Bahraich
Mathura
NH34
Bharatpur
NH21
Firozabad
Agra
NH 44
Etawah
Chambal
Ganges
Lucknow
Faizabad
Kanpur
NH44 + NH19
Purvanchal Expressway
Gwalior
NH27
Berwa
Fatehpur
NH30
Jhansi
Allahabad

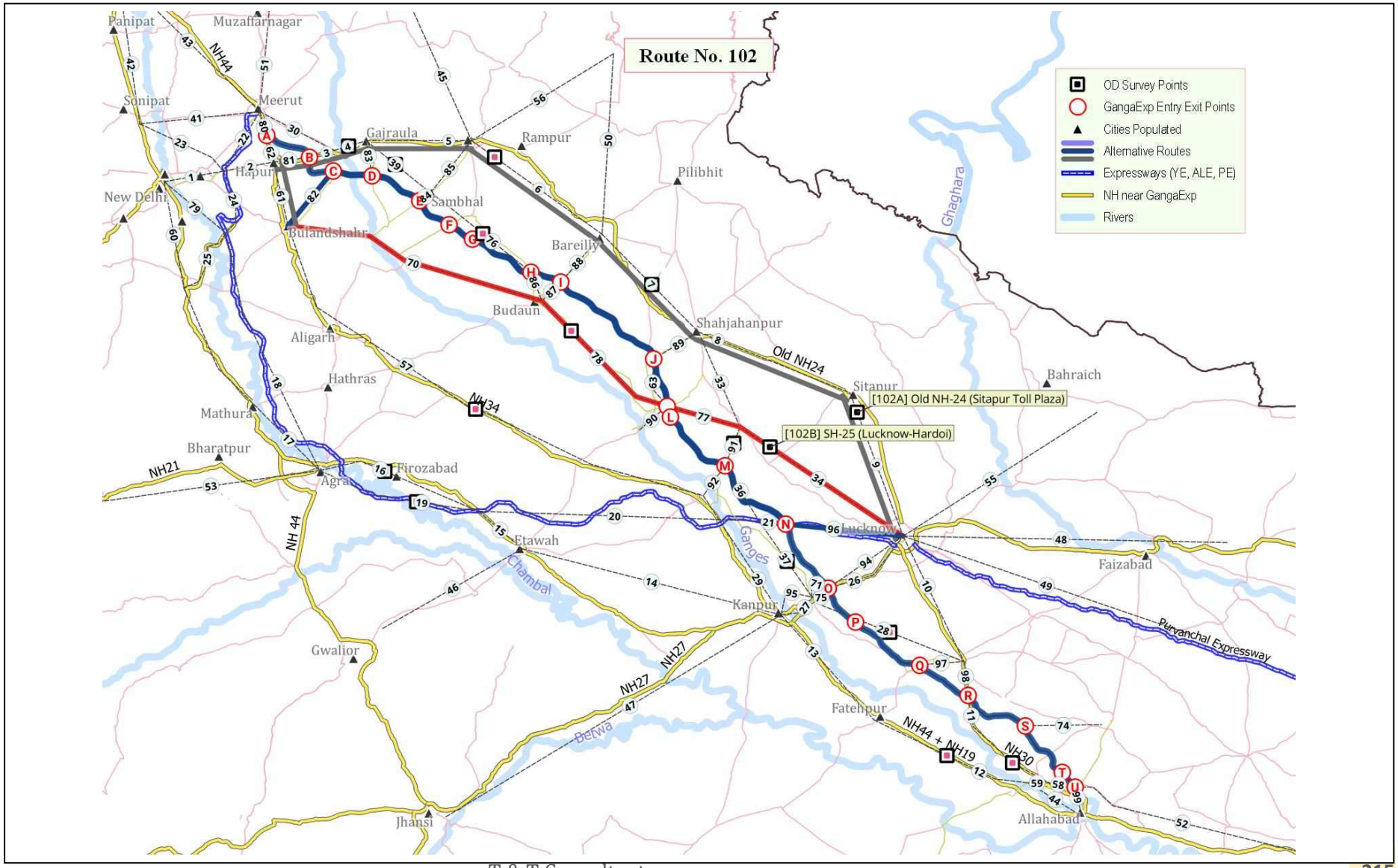
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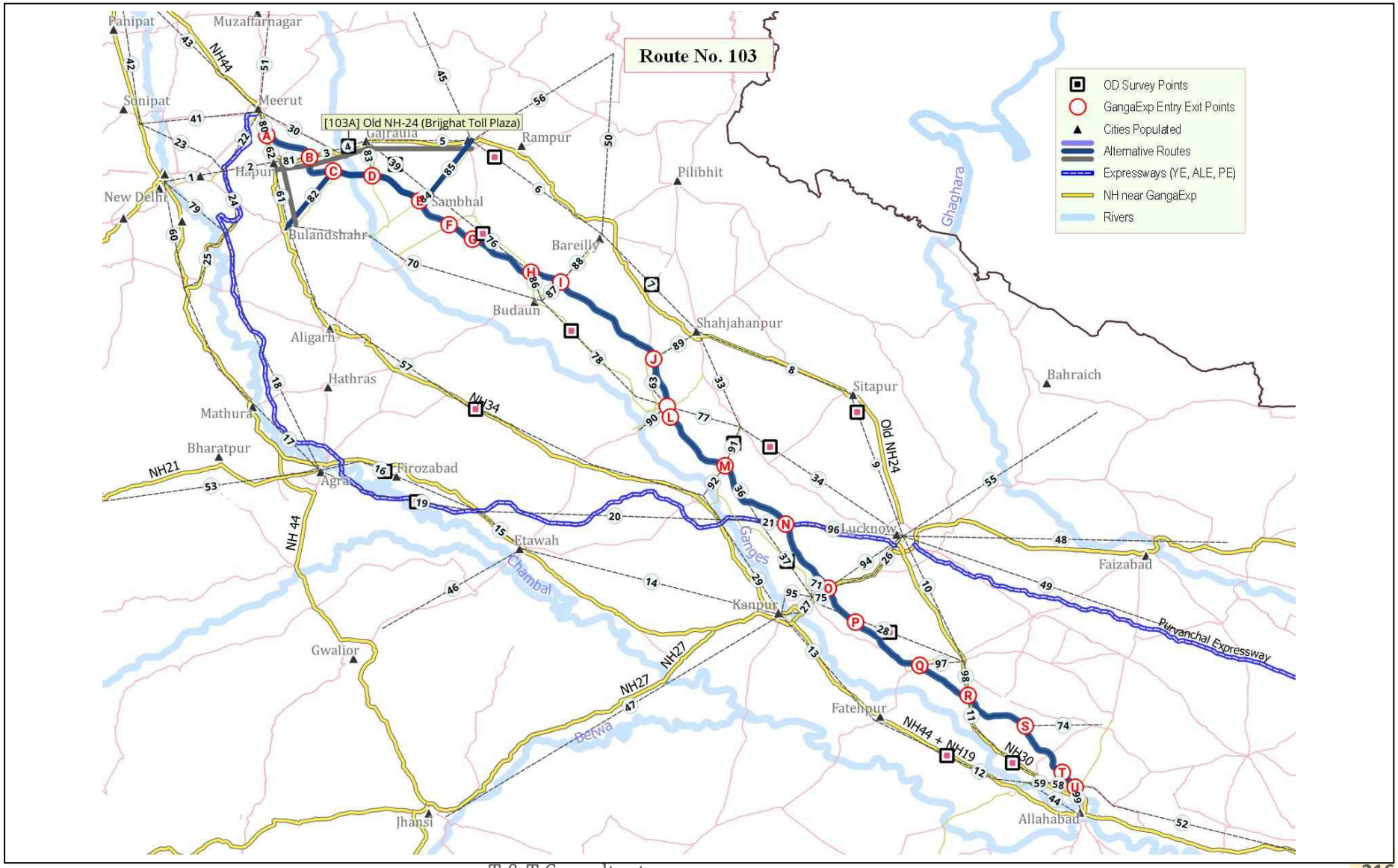

Route No. 98
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[98A] SH-51 (Gajraula-Hasanpur)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Hapur
New Delhi
Bulandshahr
Sambhal
Bareilly
Pilibhit
Ghaghara
Budaun
Shahjahanpur
Aligarh
Hathras
Mathura
Bharatpur
Firozabad
Agra
Etawah
Chambal
Ganges
Kanpur
Lucknow
Sitapur
Bahraich
Faizabad
Purvanchal Expressway
Gwalior
Jhansi
Fatehpur
Allahabad
Berwa
NH44
NH21
NH 44
NH34
NH27
Old NH24
NH44 + NH19
NH30

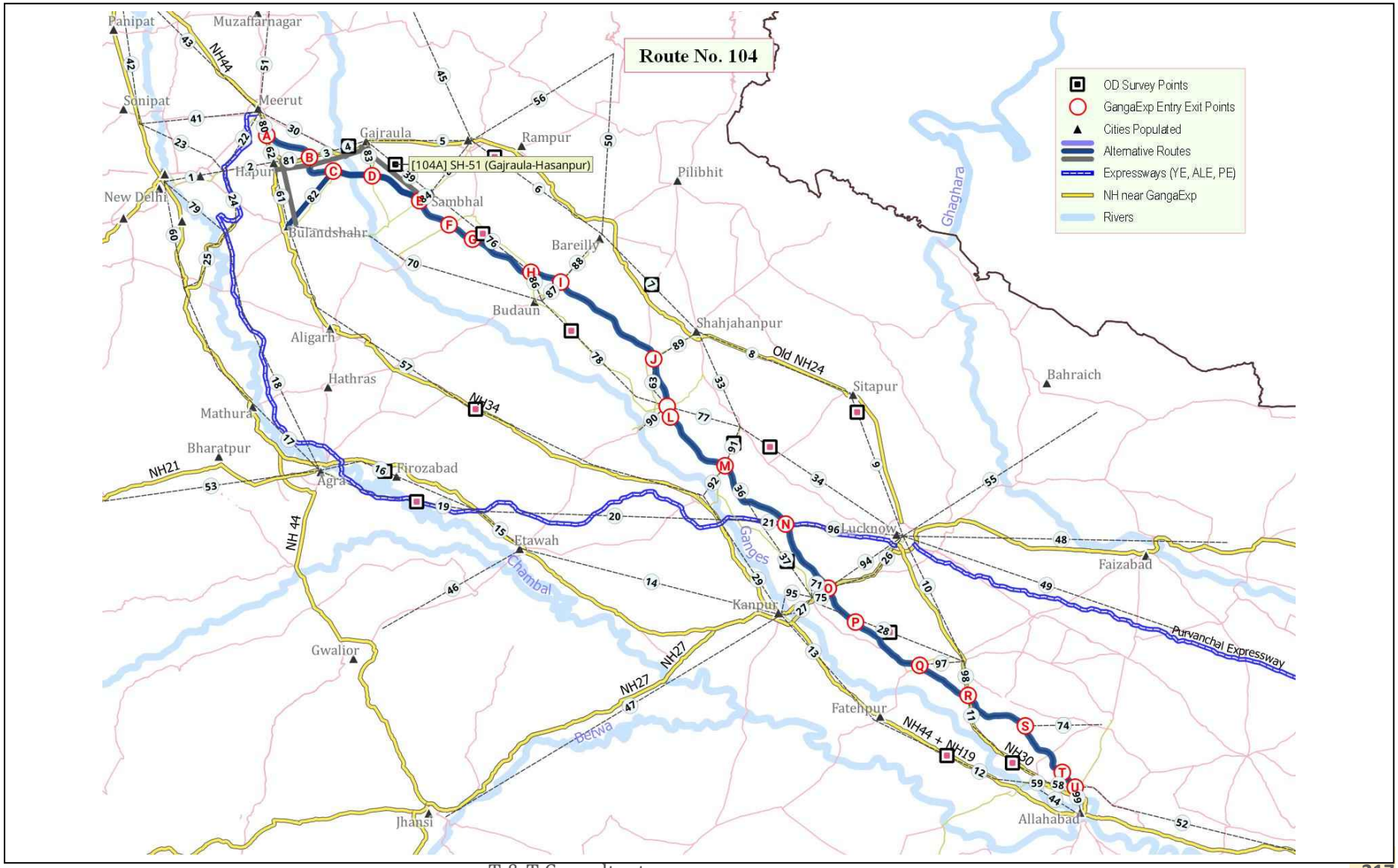

Route No. 99
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[99A] Old NH-24 (Bareilly-Shahjahanpur)
Old NH24
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Budaun
Shahjahanpur
Aligarh
Hathras
Sitapur
Bahraich
Mathura
Bharatpur
Firozabad
Agra
Etawah
Lucknow
Faizabad
Kanpur
Gwalior
Jhansi
Fatehpur
Allahabad
Purvanchal Expressway
Ganges
Chambal
Betwa
Ghaghara
NH44
NH34
NH21
NH 44
NH27
NH30
NH44 + NH19

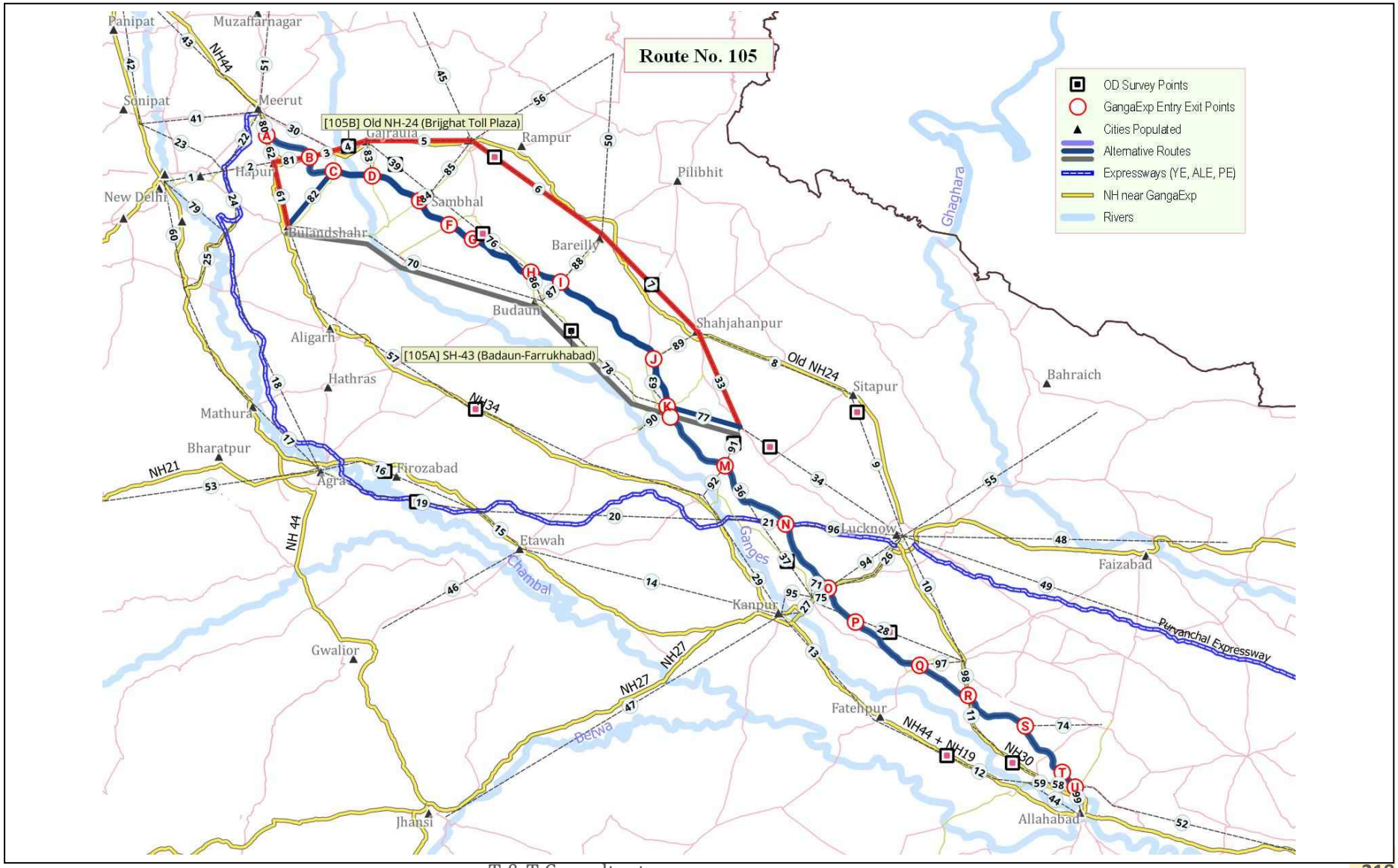

Route No. 100
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[100A] Old NH-24 (Brijghat Toll Plaza)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Hapur
Pilibhit
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Old NH24
Hathras
Sitapur
Bahraich
Mathura
NH34
Bharatpur
NH21
Firozabad
Agra
NH 44
Etawah
Chambal
Ganges
Lucknow
Faizabad
Kanpur
Purvanchal Expressway
Gwalior
NH27
Fatehpur
Betwa
NH44 + NH19
NH30
Jhansi
Allahabad

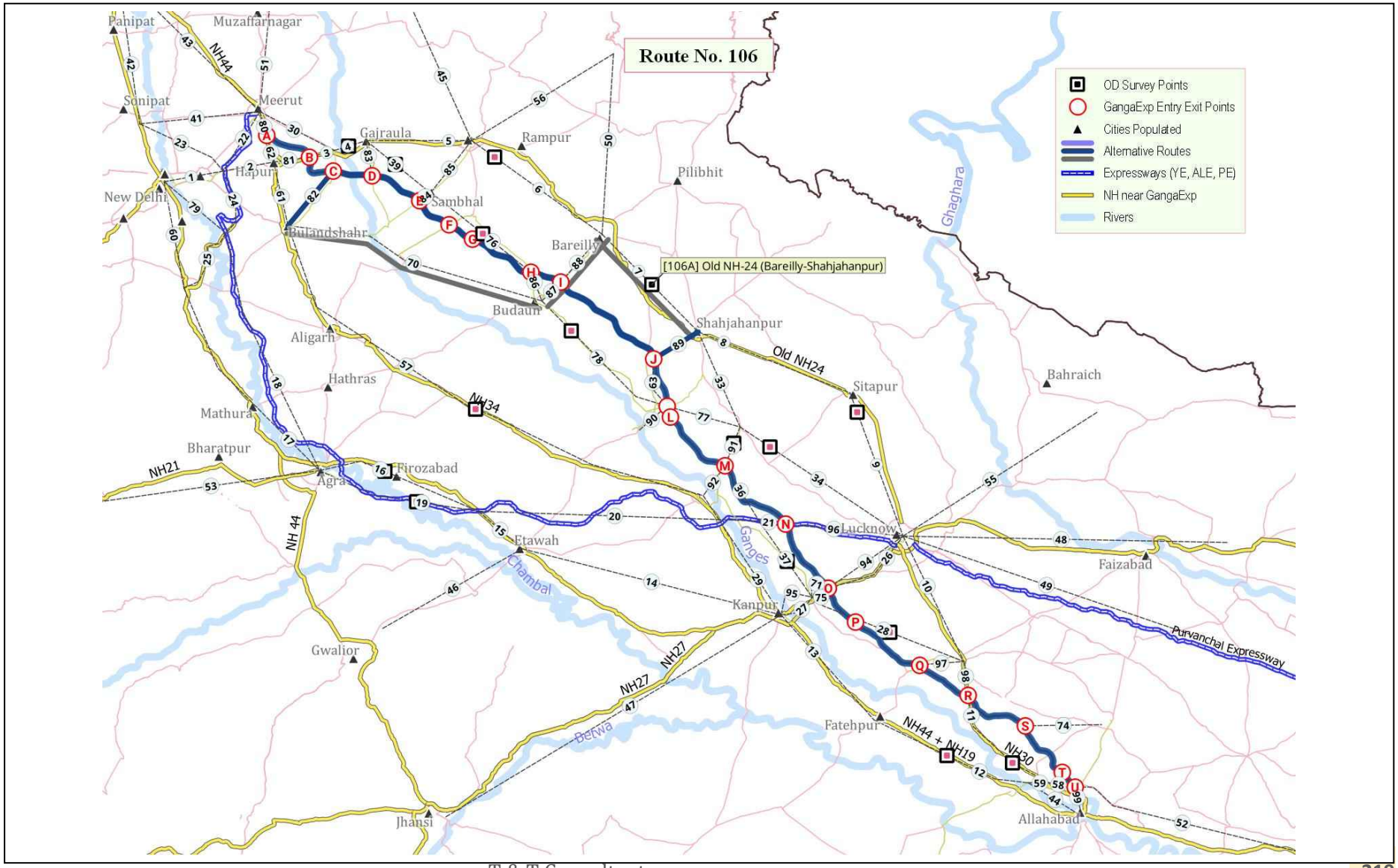

Route No. 101
[101A] Old NH-24 (Niyamatpur Toll Plaza)
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Hapur
New Delhi
Bulandshahr
Sambhal
Bareilly
Pilibhit
Ghaghara
Budaun
Shahjahanpur
Aligarh
Hathras
Mathura
Bharatpur
Agra
Firozabad
Etawah
Chambal
Ganges
Kanpur
Lucknow
Sitapur
Bahraich
Faizabad
Purvanchal Expressway
Gwalior
Jhansi
Fatehpur
Allahabad
Berwa
Old NH24
NH44
NH34
NH21
NH 44
NH27
NH44 + NH19
NH30


Route No. 102
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[102A] Old NH-24 (Sitapur Toll Plaza)
[102B] SH-25 (Lucknow-Hardoi)
Old NH24
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Hapur
Pilibhit
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Hathras
Sitapur
Bahraich
Mathura
NH34
Bharatpur
NH21
Firozabad
Agra
Lucknow
Faizabad
NH 44
Etawah
Chambal
Ganges
Kanpur
Purvanchal Expressway
Gwalior
NH27
Fatehpur
Berwa
NH44 + NH19
NH30
Jhansi
Allahabad


Route No. 103
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[103A] Old NH-24 (Brijghat Toll Plaza)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Hapur
Pilibhit
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Hathras
Sitapur
Bahraich
Mathura
Bharatpur
Firozabad
Agra
Old NH24
Etawah
Lucknow
Faizabad
Chambal
Ganges
Kanpur
Purvanchal Expressway
Gwalior
Fatehpur
Berwa
Jhansi
Allahabad
NH44
NH34
NH21
NH 44
NH27
NH44 + NH19
NH30


Route No. 104
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[104A] SH-51 (Gajraula-Hasanpur)
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Hapur
New Delhi
Bulandshahr
Sambhal
Pilibhit
Ghaghara
Bareilly
Budaun
Shahjahanpur
Aligarh
Hathras
Mathura
Bharatpur
Agra
Firozabad
Etawah
Chambal
Ganges
Kanpur
Lucknow
Sitapur
Bahraich
Faizabad
Purvanchal Expressway
Gwalior
Jhansi
Fatehpur
Allahabad
Berwa
NH44
NH21
NH 44
NH34
NH27
Old NH24
NH44 + NH19
NH30


Route No. 105
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[105B] Old NH-24 (Brijghat Toll Plaza)
[105A] SH-43 (Badaun-Farrukhabad)
Old NH24
Purvanchal Expressway
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Ghaghara
Budaun
Shahjahanpur
Aligarh
Hathras
Sitapur
Bahraich
Mathura
Bharatpur
Firozabad
Agra
Etawah
Lucknow
Faizabad
Ganges
Chambal
Kanpur
Gwalior
Fatehpur
Berwa
Jhansi
Allahabad
NH44
NH21
NH 44
NH34
NH27
NH30
NH44 + NH19


Route No. 106
OD Survey Points
GangaExp Entry Exit Points
Cities Populated
Alternative Routes
Expressways (YE, ALE, PE)
NH near GangaExp
Rivers
[106A] Old NH-24 (Bareilly-Shahjahanpur)
Old NH24
Panipat
Muzaffarnagar
Sonipat
Meerut
Gajraula
Rampur
Pilibhit
Hapur
New Delhi
Sambhal
Bulandshahr
Bareilly
Budaun
Shahjahanpur
Aligarh
Hathras
Sitapur
Bahraich
Mathura
Bharatpur
Firozabad
Agra
Etawah
Lucknow
Faizabad
Kanpur
Gwalior
Jhansi
Fatehpur
Allahabad
Purvanchal Expressway
Ganges
Chambal
Betwa
Ghaghara
NH44
NH34
NH21
NH 44
NH27
NH30
NH44 + NH19

ANNEXURE B

TARGET VALUATION REPORT

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IRB Infrastructure Trust

Meerut Budaun Expressway Limited

Valuation Report

—

December 2024

KPMG Valuation Services LLP
2nd Floor, Block T2 (B Wing),
Lodha Excelus
Apollo Mills Compound
N.M. Joshi Marg, Mahalakshmi
Mumbai – 400 011, India
Telephone: +91 22 3989 6000

Strictly private and confidential

14 December 2024

IRB Infrastructure Trust
(IDBI Trusteeship Services Limited acting on behalf of IRB Infrastructure Trust)

1101, Hiranandani Knowledge Park,
Technology Street, Hill Side Avenue,
Powai, Mumbai – 400 076

MMK Toll Road Private Limited
("Investment Manager")

Office No-11th Floor, 1101
Hiranandani Knowledge Park, Technology Street
Hill Side Avenue, Powai, Mumbai 400 076

Dear Sir,

Valuation Report ("Valuation Report")

This is in accordance with the terms of reference set out in our Letter of Engagement dated 17 September 2024 along with Addendum to the letter of engagement dated 10 December 2024 (together referred as "LoE"), wherein KPMG Valuation Services LLP (Registered valuer entity under Companies (Registered Valuers and Valuation) Rules, 2017 having IBBI Registration No. IBBI/RV-E/06/2020/115) (hereinafter referred to as "KPMG " or "us" or "we" or "Valuer") has been appointed by IRB Infrastructure Trust ("IRBI Trust/Trust" or "the Company"), MMK Toll Road Private Limited ("Investment Manager") and IDBI Trusteeship Services Limited ("Trustee") (together referred as "the Clients" or "You") in relation to carrying out valuation of Meerut Budaun Expressway Limited ("SPV" or "MBEL" or "Target") as on the agreed date of the valuation in accordance with Regulation 21 of the Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 ("SEBI InvIT Regulations") where valuation is required to be conducted by a registered valuer (as defined under section 247 of the Companies Act, 2013) and such valuation report ("Report") is required to be in compliance with the SEBI InvIT Regulations ("Engagement").

The date for the valuation is 30 September 2024 ("Valuation Date").

We hereby enclose our Valuation Report dated 14 December 2024. This is our deliverable and sets out KPMG's conclusions on the valuation of the Target and has been prepared in accordance with the LoE as of Valuation Date.

The report is based on the information provided to KPMG by the management of the Trust ("Management"). In arriving at our conclusion, KPMG has applied generally accepted valuation methodologies as on the Valuation Date.

The Valuation Report is confidential to the Clients and will be used by the Clients only for the purpose, as indicated in this Report, for which we have been appointed. The results of our valuation analysis and our Report cannot be used or relied by the Clients for any other purpose or by any other party for any other purpose whatsoever.

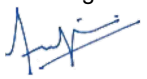
The Valuation Report is issued by us on the express understanding that it shall not be copied, disclosed or circulated or referred to in correspondence or in discussion with any third party or used for any other purpose without KPMG's prior written consent. We are aware that the Report may have to be shared with certain regulatory authorities in India and stock exchanges in India and therefore Report may enter the public domain and hereby provide our consent to such sharing. It is clarified that reference to this Valuation Report in any document and/ or filing with aforementioned regulatory authorities/ stock exchanges in India, shall not be deemed to be an acceptance by the Valuer of any responsibility or liability to any person/ party other than the Clients.

We will not, pursuant to the LoE, perform any management functions for You, nor make any decisions. You are responsible for making management decisions, including accepting responsibility for the results. Additionally, the Clients are responsible for designating a management-level individual or individuals responsible for overseeing the services provided, evaluating the adequacy of the services provided, evaluating any findings or recommendations, establishing and maintaining internal controls, and monitoring ongoing activities.

The Valuation Report does not constitute an offer or invitation to any section of the public to subscribe for or purchase any securities in, or the other business or assets or liabilities of the Target or Clients. This letter forms an integral part of the Valuation Report and should be read in conjunction with the Valuation Report enclosed herein.

The Valuation Report has been prepared by KPMG Valuation Services LLP (IBBI Registration No. IBBI/RV-E/06/2020/115) solely for the purpose as stated above. The Valuation Report forms an integral whole and cannot be split into parts. The outcome of the valuation can only lead to proper conclusions if the Valuation Report as a whole is taken into account.

Yours faithfully
For KPMG Valuation Services LLP
LLP Identification Number - AAP-2732
Registered Valuer Entity under Companies (Registered Valuers and Valuation) Rules, 2017
IBBI Registration No. IBBI/RV-E//06/2020/115



Amit Jain, Partner
IBBI Registration No. IBBI/RV/06/2018/10501

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Glossary

%	Percentage
Bn	Billion
CAGR	Compounded Annual Growth Rate
Capex	Capital Expenditure
CoCo	Comparable Companies
COD	Commercial operation date
CoTrans	Comparable Transactions
Cr	Crore
CWIP	Capital Work In Progress
DBFOT	Design, Build, Finance, Operate and Transfer
DCF	Discounted Cash Flow
EBIT	Earnings Before Interest and Tax
EBITDA	Earnings Before Interest, Tax, Depreciation and Amortization
EV	Enterprise Value
FCFF	Free Cash Flows to Firm
FV	Fair Value
FY	Financial Year
IBEF	India Brand Equity Foundation
IDBI Trusteeship Services Ltd	Trustee
IMF	International Monetary Fund
INR	Indian Rupee
InvIT	Investment Trust
k	Thousands
Kd	Cost of Debt
Ke	Cost of Equity
Km	Kilometer
KPMG	KPMG Valuation Services LLP
LoE	Letter of Engagement
Management	Management of Target
MAT	Minimum Alternate Tax
MBEL	Meerut Budaun Expressway Limited
MMK Toll Road Private Limited	Investment Manager
mn	Million
MoRTH	The Ministry of Road Transport and Highways
NA	Not applicable
NAV	Net Asset Value
NHAI	National Highways Authority of India
NHIDCL	National Highway and Infrastructure Development Corporation Limited
NWC	Net Working Capital
OECD	Organisation for Economic Co-operation and Development
O&M	Operation and Maintenance
PAT	Profit After Tax
PBT	Profit Before Tax
PIB	Press Information Bureau
PV	Present Value
R(f)	Risk free rate of Return
R(m)	Market rate of Return
Rf	Risk-free Rate
SEBI	Securities and Exchange Board of India
Sponsor	IRB Infrastructure Developers Limited
SPV	Special Purpose Vehicle
UPEIDA	Uttar Pradesh Expressways Industrial Development Authority
Valuation Date	30 September 2024
WACC	Weighted Average Cost Of Capital
WPI	Wholesale Price Index
y-o-y	Year on year
YTD	Year to date

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1.
Executive Summary

Overview

Terms of the Engagement

- IRBI Trust is contemplating to acquire 80.4 per cent stake in Meerut Budaun Expressway Limited ("MBEL" or "Target") through acquisition of equity shares and non-convertible debentures ("NCDs") from existing shareholders of the Target ("Proposed Transaction"). We have been appointed by IRBI Trust to undertake equity valuation of the Target in relation to Proposed Transaction..
- The Valuation shall be undertaken in accordance with sub regulation 8 under Regulation 21 of the SEBI InvIT Regulations where full valuation is required to be conducted by a registered valuer and such valuation report is required to be in compliance with the SEBI InvIT Regulations.
- As per the LoE, the valuation is to be carried out as on 30 September 2024. This report has been prepared by KPMG pursuant to terms of LoE.

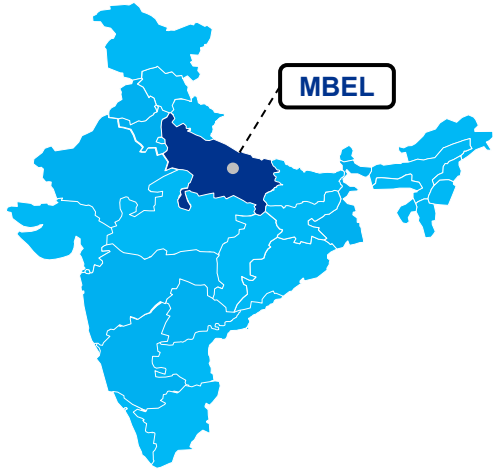
IRBI Trust Overview

- IRB Infrastructure Developers Limited ("IRBIDL" or "sponsor") is one of the largest infrastructure development and construction companies in India in the roads and highways sector. It was incorporated on 27 July 1998 and is based in Mumbai, India.
- The object and purpose of IRBI Trust is to carry on the activity of an infrastructure investment trust under the InvIT regulations. Investment by IRBI Trust shall only be in holding companies, SPVs, infrastructure projects, securities in India or other permitted investments in accordance with the InvIT regulations, the investment strategy and IRBI Trust documents.
- IRBI Trust units are held by IRBIDL as sponsor with 51% stake, Cintra InvIT Investments B.V. with 24% stake and remaining 25% stake is held by GIC through its affiliates.
- We understand that IRBI Trust is contemplating a rights issue, to fund acquisition of 80.4 percent stake in Target including Non-Convertible Debentures ("NCDs") held by existing shareholders of the Target.
- As of 30 September 2024, IRBI Trust owns stake in 15 SPVs.

Source(s): Management information, IRBI Trust website, KPMG Analysis

SPV Overview

- MBEL has entered into concession agreement with Uttar Pradesh Expressways Industrial Development Authority ("UPEIDA") ("Concession Agreement") for construction and operation on Design, Build, Finance, Operate and Transfer ("DFBOT") basis Meerut – Budaun section from 7.9 km to 137.6 km of NH334 stretching across Uttar Pradesh for concession period of 30 years from appointed date.
- As per the Concession Agreement, MBEL will receive grant of INR 1,746 crores as equity support towards construction cost.



Valuation Approach and Methodology

Approach	Method
Income Approach	Discounted Cash Flow Method (DCF)

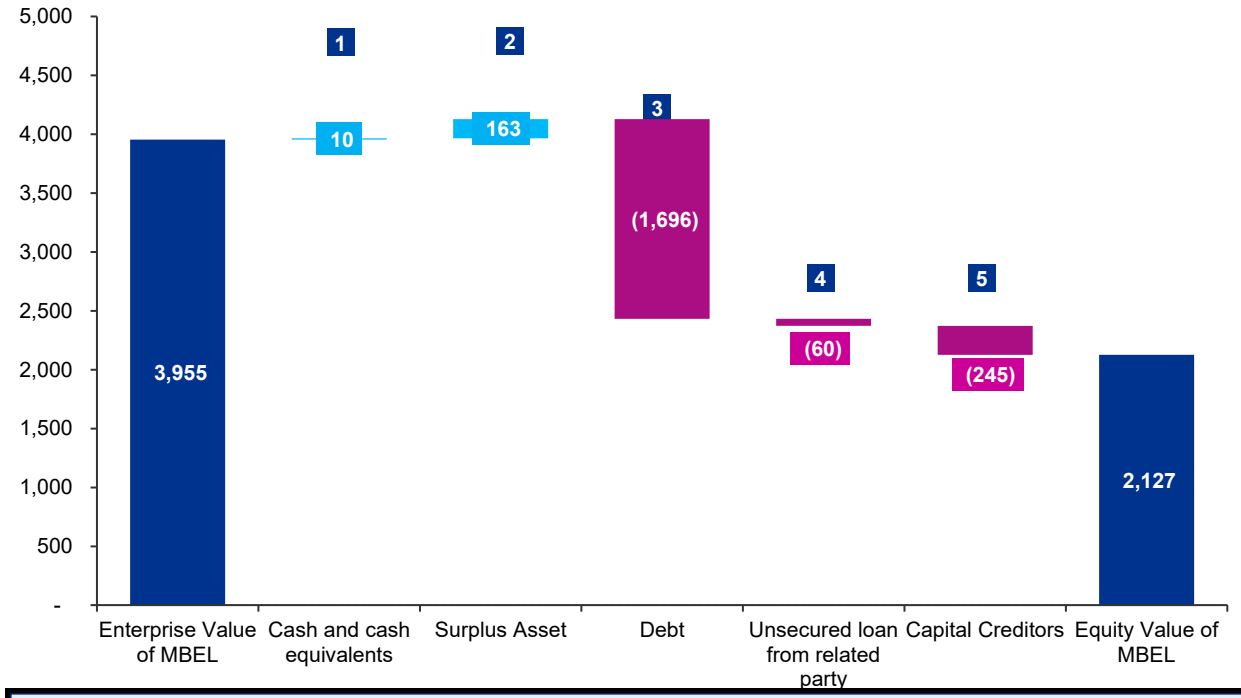
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Valuation Summary

Calculation of Enterprise Value to Equity Value of MBEL

INR Crore



The Enterprise Value of the MBEL is INR 3,955 crores and Equity Value (including NCDs) of 100 per cent stake of MBEL is estimated to be INR 2,127 crores as on 30 September 2024.

Equity value (including NCDs) for 80.4 per cent stake of MBEL is estimated to be INR 1,710 cr.

Source(s): Management information, KPMG analysis

1	Cash and cash equivalents comprise cash in hand, liquid investments and balance with banks as at 30 September 2024.
2	Surplus assets primarily comprise of Grant receivable of INR 131 Cr and GST receivable from concession authority on account of change in law of INR 32 Cr as at 30 September 2024.
3	Debt primarily represents loan from banks and financial institutions of INR 1,696 Cr as at 30 September 2024.
4	Unsecured loan from related party represent repayable loan taken from related parties as at 30 September 2024 to cover project cost against grant receivable.
5	Capital creditors of INR 245 Cr have been considered debt like in nature and adjusted from the Enterprise Value to arrive at the Equity Value of MBEL. Management represented that they do not consider these liabilities as part of the working capital and thus they have not been considered as part of the forecast working capital.
6	Our Valuation conclusion assumes that outstanding Non-Convertible debentures ("NCDs") of INR 1600 Cr issued to shareholders in proportion of their shareholding as a part of their equity contribution in the project cost are treated as quasi equity and not adjusted as debt like item in arriving from enterprise value to equity value. This assumption is based on representation from Management that the acquisition consideration will be inclusive of consideration towards acquisition of 80.4 per cent stake in Target including both equity shares and NCDs held by existing shareholders and debenture holders of the Target.

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2.
Overview

IRBI Trust Overview

Overview

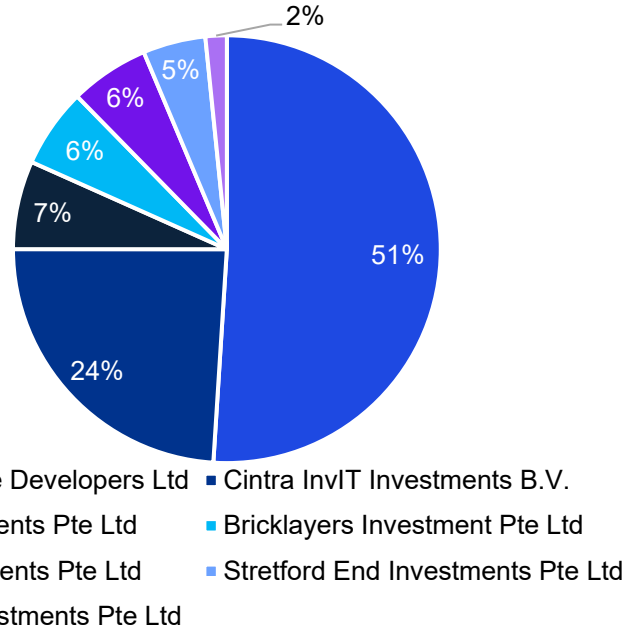
- IRB Infrastructure Developers Limited ("IRBIDL" or "Sponsor") is one of the largest infrastructure development and construction companies in India in the roads and highways sector. It was incorporated on 27 July 1998 and is based in Mumbai, India.
- IRBI Trust has been settled by the Sponsor as an irrevocable trust under the provisions of the Trusts Act in New Delhi, India pursuant to the Indenture of Trust dated August 27, 2019, as amended. The Indenture of Trust is registered under the Registration Act. IRBI Trust is registered with the SEBI as an infrastructure investment trust under the InvIT regulations.
- The object and purpose of IRBI Trust is to carry on the activity of an infrastructure investment trust under the InvIT regulations. Investment by IRBI Trust shall only be in holding companies, SPVs, infrastructure projects, securities in India or other permitted investments in accordance with the InvIT regulations, the investment strategy and IRBI Trust documents.
- As at 30 September 2024 IRBI Trust assets comprised of 15 SPVs. IRBI Trust has acquired 11 DBFOT road assets and 4 TOT road asset. All SPVs of IRBI Trust are revenue generating. Refer subsequent slides for more details.
- IRBI trust is held by IRBIDL as Sponsor with 51% stake, Cintra InvIT Investments B.V. with 24% stake and remaining 25% stake is held by GIC through its affiliates.

Transaction Overview

- IRBI Trust is contemplating to acquire 80.4% stake in MBEL, through acquisition of equity shares and NCDs from existing equity shareholders and debenture holders i.e. IRB Infrastructure Developers Ltd (51 per cent) and Anahera Investment Pte Ltd (49 per cent)
- IRB Infrastructure Developers Limited is sponsor of the Trust and hence this is a related party transaction.

Source(s): Management information, IRBI Trust website

Shareholding Pattern of IRBI Trust as on 30 September 2024



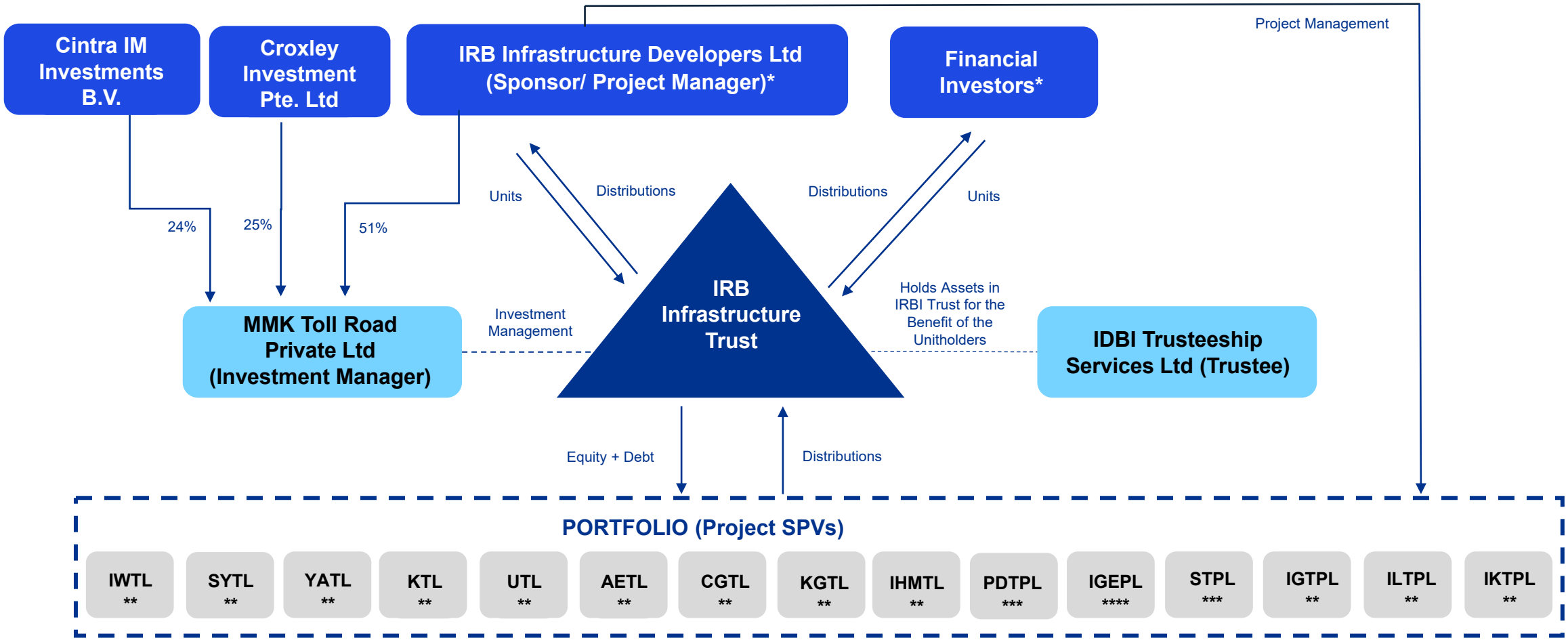
Key related parties of IRBI Trust

Role	Entity Name
Sponsor	IRB Infrastructure Developers Limited
Investment Manager	MMK Toll Road Private Limited
Trustee	IDBI Trusteeship Services Limited

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Structure of the IRBI Trust



** Unitholders in the IRBI Trust*

*** 100% of each project SPV held by the IRBI Trust, together with nominee shareholders.*

**** 99.96% held by the IRBI Trust, with the Sponsor and Sponsor's nominee shareholders holding the remaining 0.04%.*

***** 99.99% of IGEPL held by the IRBI Trust, with the Sponsor and Sponsor's nominee shareholders holding the remaining 0.01%.*

Source(s): IRBI Trust Corporate Presentation, Management

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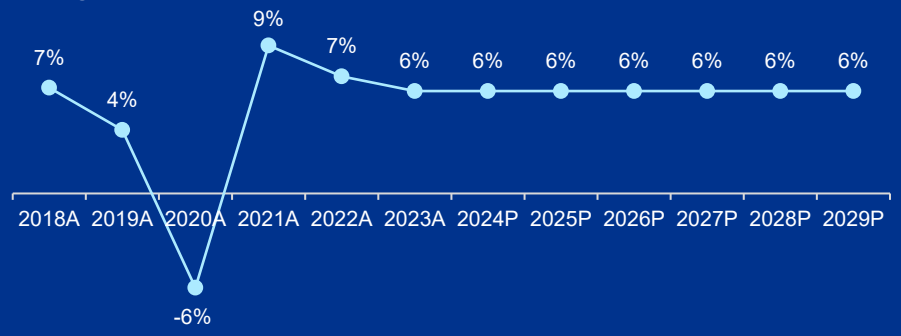
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Industry Overview

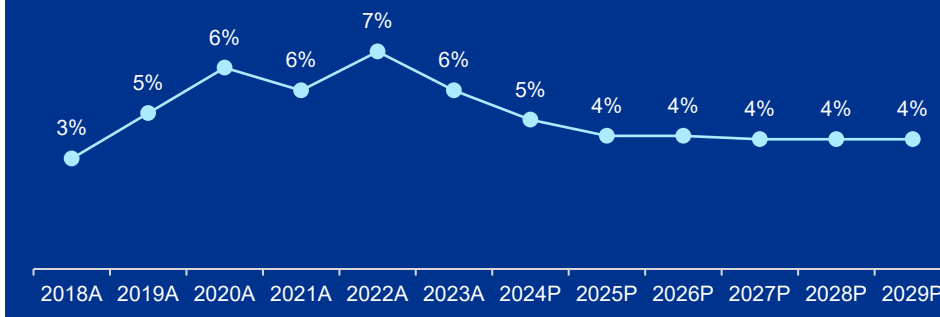
Indian Economy Outlook

Strong economic growth in the first quarter of 2023 helped India overcome the UK to become the fifth-largest economy after it recovered from the COVID-19 pandemic shock. Also, according to IMF economic outlook, India continues to be the fastest-growing economy in the world.

Real GDP growth rate (%)



Annual percentage changes of average consumer prices (%)

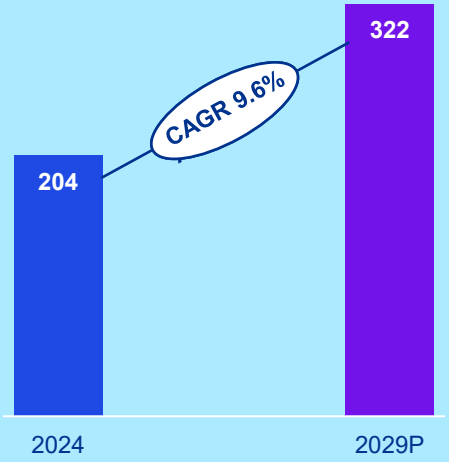


Infra Sector

Infrastructure is a key enabler in helping India become a USD 26 trillion economy by 2047. The government has announced a strong pipeline of infra projects across sectors.

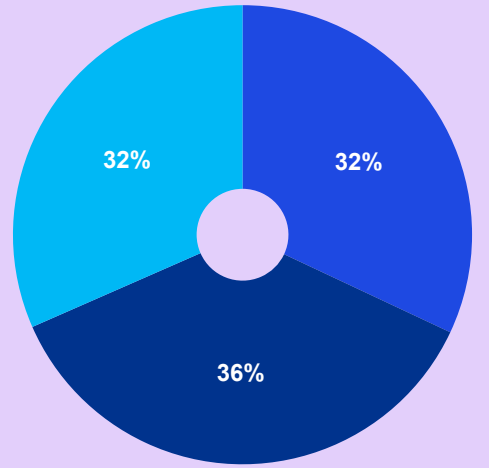
Capital investment outlay for infrastructure is being increased by 33 per cent, which would be 3.3 per cent of GDP and almost three times the outlay in 2019-20.

India Infrastructure market (USD billion)



Construction Industry

Market segmentation of India's Construction industry (2024)



Source(s): International Monetary Fund ("IMF"), India Brand Equity Foundation ("IBEF"), Modor intelligence, EMIS

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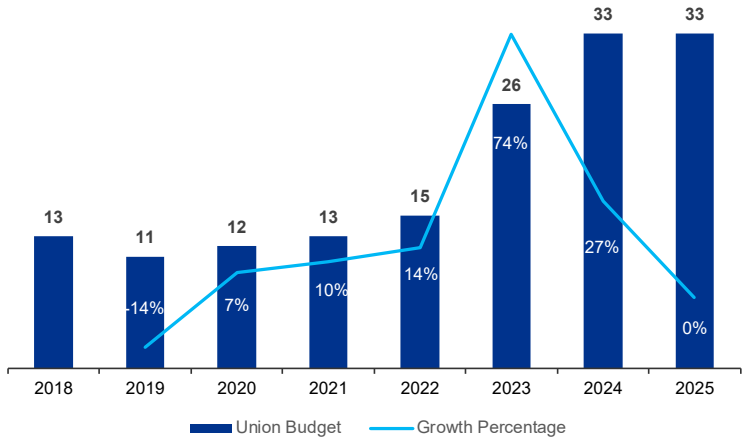
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Road Transport and Highways

Road Transport and Highways sector

- The Ministry of Road Transport and Highways ("MoRTH") formulates and administers policies for road transport, national highways and transport research. It is also involved with the construction and maintenance of the National Highways ("NHs") through the National Highways Authority of India ("NHAI"), and the National Highway and Infrastructure Development Corporation Limited ("NHIDCL"). NHAI is an agency of MoRTH which is also responsible for the toll collection on several highways.
- Under Interim Budget 2024-25, capital investment outlay for infrastructure has been increased by 11.1% to RS 11.1 lakh crore, which is 3.4% of GDP.

Outlay for Roads under the Union Budget (USD billion)

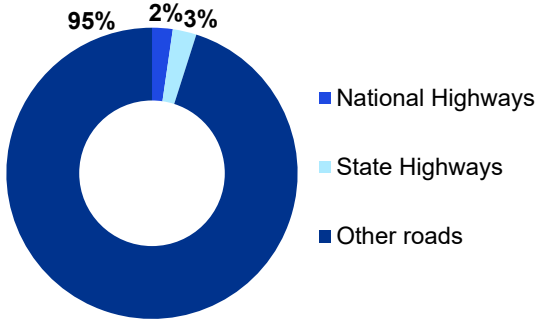


Source(s): MoRTH, IBEF, Invest India

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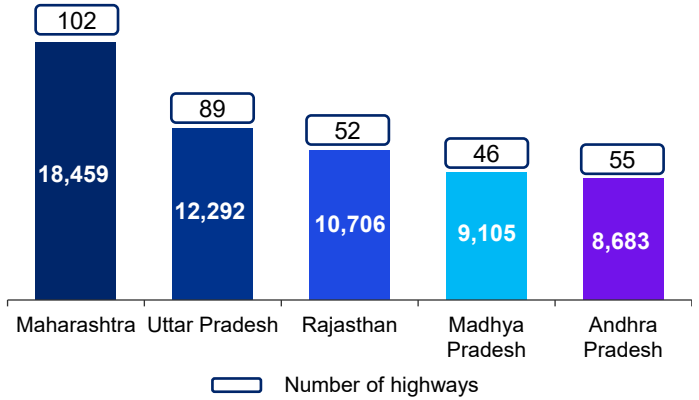
India has the second largest road network in the world of about 67 lakh km. This comprises National Highways, Expressways, State Highways, District Roads, Other District Roads and Village Roads.

Road & Highway – classification breakup



As per the data from Ministry of Road Transport and Highways, National Highways (NHs) make up for about 2.2 per cent (1,46,145 km) of the total road network of India (66,71,083 km).

Top 5 states by length of NHs in India (Km)



National Highways carry over 40 per cent of the total traffic across the length and breadth of the country. Maharashtra has the largest network of National Highways with 18,459 km (12.7%). As per MoRTH, there are 970 highways in India.

(*State-wise split is as per March 2024)[*

36.2%

The market for roads and highways in India is projected to grow at a CAGR of 36.2 per cent during 2016-2025, on account of growing government initiatives to improve transportation infrastructure in the country.

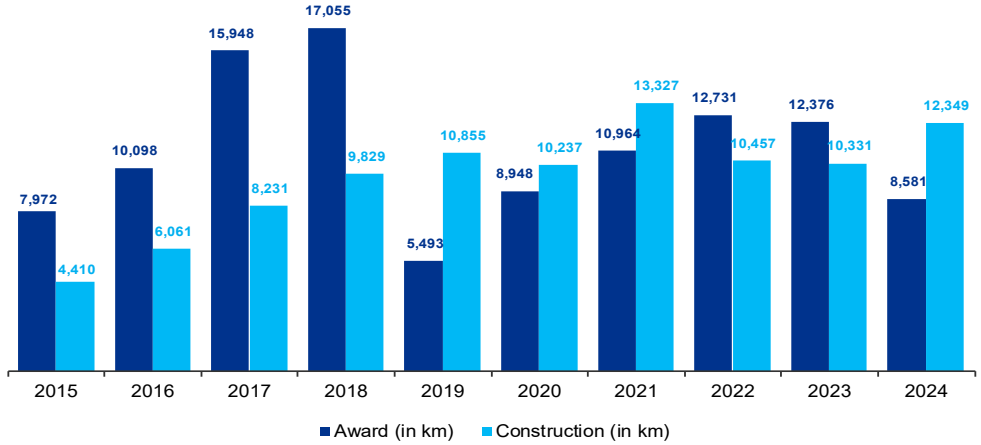
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Key drivers of the sector

Pace of length of highways awarded and constructed (in kms)

The awarding of projects has picked up pace after the sanction of ambitious Bharatmala programme. The Government of India has allocated INR 1.9 lakh crore under the National Infrastructure Pipeline for 2025. The government also aims to construct 23 new national highways by 2025.



13% (2015-2023) — CAGR - Length of highways constructed

1.3 (2030) — Estimated toll collection (in INR lakh crore)

14k (2024) — Road construction target (in km)

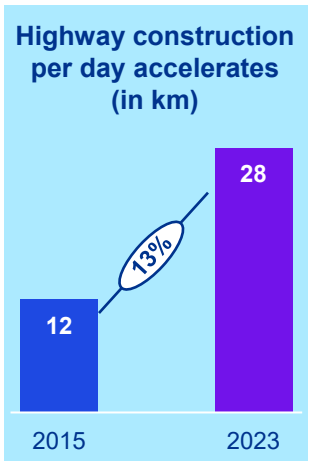
40 km (2024) — Estimated road constructed per day

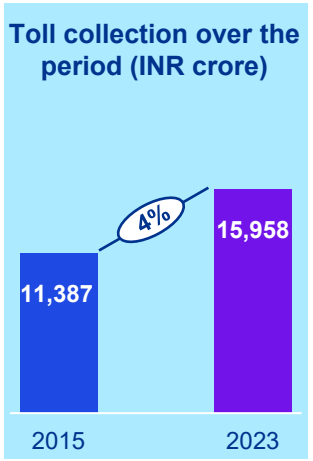
Source(s): MoRTH, Press Information Bureau ("PIB"), Money control

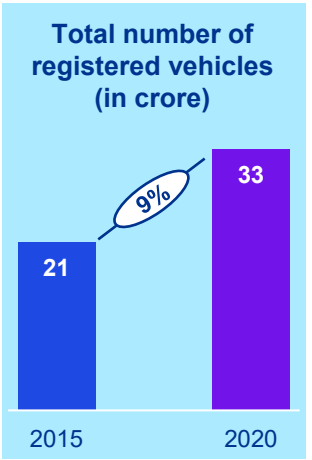
Toll operations efficiency increased due to adoption and growth of FASTag

8.8 Cr As of 31st March 2024, banks have issued over 8.8 crore FASTags

190 Cr The average daily collection via FASTag on NH fee plaza is INR 190.6 crore thereby increasing efficiency in toll operations.







2023 data is as of 05 January 2024
- CAGR

Government has implemented multiple initiatives in the last 9 years to augment the capacity of the National Highway infrastructure in the country. The pace of National Highways construction has increased consistently between 2014-15 and 2022-23 due to the systematic push through corridor-based National Highway development approach.

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Financing in road infrastructure

Financing infrastructure

Investment in road infrastructure is long-term and returns are seen several years after construction. Roads and highways are financed through Government and private sources. Funding from Government sources includes budgetary allocations.

Private financing

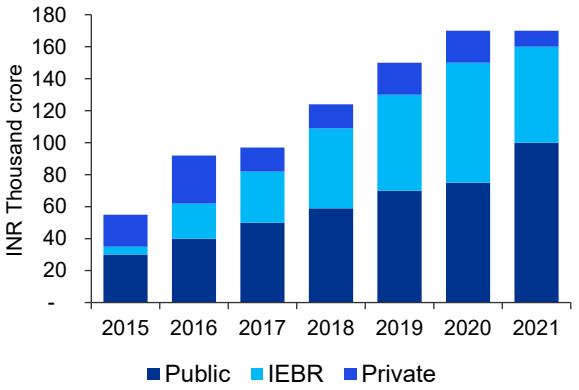
Under private financing, the private developer builds a road, and in return has the right to collect toll for a specified period of time. The developer is responsible for the maintenance of roads during this period.

Public financing

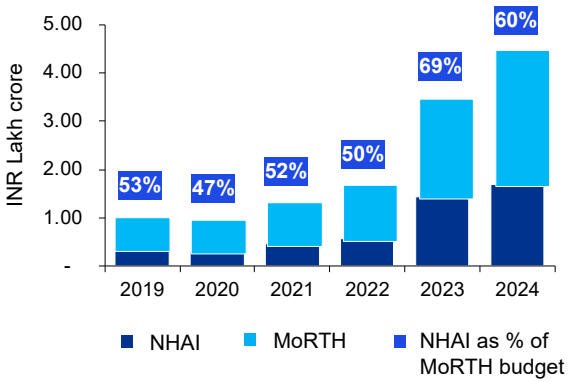
Funding from government sources includes budgetary allocations, which are financed from taxes, cesses, or dedicated road funds. Publicly funded projects are usually given to contractors under various contract models such as the Engineering Procurement Construction (EPC).

Financing in road sector & MoRTH, NHAI budget

Investment sources (Public, Private or Internal and Extra-Budgetary Resources) for road construction projects over the past six years.



With the high share of NHAI funding in MoRTH budget, NHAI is expected to account for 5k - 5.5k km in this fiscal and 5.8k - 6.2k km in the next.



Investment Opportunities in Roads & Highways

5,954	2568	701	392
Projects	Promoters	District	Opportunity (USD billion)

Types of projects awarded by NHAI

a. Engineering Procurement & Construction

Under the EPC model, Government pays private players to lay roads. The private player has no role in the road's ownership, toll collection or maintenance.

b. Build Operate Transfer ("BOT")

Private players build, operate and maintain the road for a specified period before transferring the asset back to the Government. The private player arranges all the finances for the project, while collecting toll revenue/ annuity fee from the Government.

c. Hybrid Annuity Model ("HAM")

HAM is a hybrid model, a mix of the EPC and BOT (build, operate, transfer) models. HAM combines EPC (40 per cent) and BOT-Annuity (60 per cent). On behalf of the government, NHAI releases 40 per cent of the total project cost. The balance 60 per cent is arranged by the developer.

Source(s): PRS Legislative research, IBEF, CRISIL, MoRTH, Invest India

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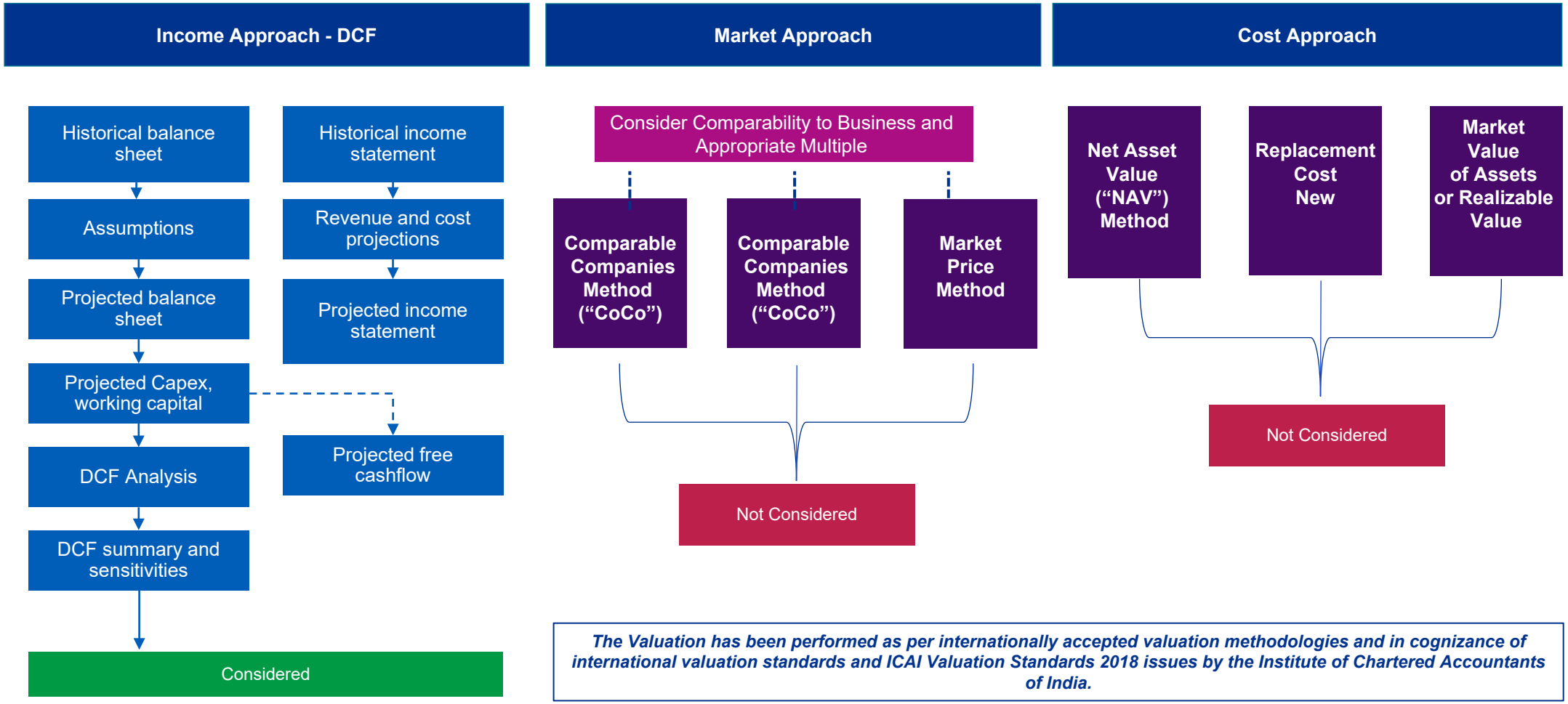
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Valuation Methodology and Approach

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Valuation Methodology and Approach

Methodology and Approach



The Valuation has been performed as per internationally accepted valuation methodologies and in cognizance of international valuation standards and ICAI Valuation Standards 2018 issues by the Institute of Chartered Accountants of India.

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Valuation Methodologies - Income Approach

Discounted Cash Flows ("DCF")

- Under a DCF approach, forecast cash flows are discounted back to the present date, generating a net present value for the cash flow stream of the business. A terminal value at the end of the explicit forecast period is then determined and that value is also discounted back to the Valuation Date to give an overall value for the business.
- A discounted cash flow methodology typically requires the forecast period to be of such a length to enable the business to achieve a stabilized level of earnings, or to be reflective of an entire operation cycle for more cyclical industries.
- The rate at which the future cash flows are discounted ("the discount rate") should reflect not only the time value of money, but also the risk associated with the business' future operations. The discount rate most generally employed is weighted average cost of capital ("WACC"), reflecting an optimal as opposed to actual financing structure.
- In calculating the terminal value, regard must be had to the business' potential for further growth beyond the explicit forecast period. The "constant growth model", which applies an expected constant level of growth to the cash flow forecast in the last year of the forecast period and assumes such growth is achieved in perpetuity, is a common method. These results would be cross-checked, however, for reasonability to implied exit multiples.
- Due to the finite life of the concession period of the Target, we have not computed a terminal value for the valuation of the Target
- The rate at which future cash flows are discounted should reflect not only the time value of the cash flows but also the risk associated with the business' future operations. This means that in order for a DCF to produce a sensible valuation figure, the importance of the quality of the underlying cash flow forecasts is fundamental.
- The DCF approach has been applied in the valuation of the Target.

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Valuation Methodologies - Market Approach

Comparable Companies ("CoCo")

- Under comparable companies method, the value of shares / business of a company is determined based on market multiples of publicly traded comparable companies. Although no two companies are entirely alike, the companies selected as comparable companies should be engaged in the same or a similar line of business as the subject company.
- The appropriate multiple is generally based on the performance of listed companies with similar business models and size.
- The CoCo methodology has been not been applied in the valuation of the Target.
- The list of companies in the road segment have mix of assets which are at different stages of operation / development / revenue mix/ leasing period. Therefore, comparable companies' method is not considered.

Comparable Transactions ("CoTrans")

- Under comparable transactions method, the value of shares / business of a company is determined based on market multiples of publicly disclosed transactions in the similar space as that of the subject company. Due to different purposes of investments, transaction rationale and synergy benefits, different control premiums and minority discounts are embedded in the transaction values.
- Multiples are generally based on data from recent transactions in a comparable sector, but with appropriate adjustment after consideration has been given to the specific characteristics of the business being valued.
- The list of transactions in the road segment have mix of assets which are at different stages of operation / development / revenue mix/ leasing period. Therefore, Therefore, comparable transactions method has not been considered for the valuation of the Target.

Market Price Method

- Under this approach, the value of the business is arrived at considering the market price of the company based on the daily moving averages of the last six-month volume traded weighted average of closing price on the stock exchange where the company's shares are most frequently traded.
- The market price methodology has not been considered in the valuation of the Target as it is not publicly listed or traded on any stock exchange.

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Valuation Methodologies – Cost Approach

Net Asset Value ("NAV") Method

- Under the net asset value approach, total value is based on the sum of net asset value as recorded on the balance sheet.
- A net asset methodology is most applicable for businesses where the value lies in the underlying assets and not the ongoing operations of the business.
- The net assets methodology has not been considered for the valuation of the Target as the Target is operational and the financials are made on a going concern basis.

Replacement Cost New

- The replacement cost of a business is the cost of acquiring similar assets employed in the business and/or reaching a similar level of development. A purchaser, faced with a build versus buy scenario, may be prepared to pay significantly over and above this cost to obtain advantages including time saved in developing a similar business, and risk of failure.
- The replacement cost method quantifies the cost and risk to reach the present stage of development.
- This approach is often used for start-up/non-mature technology or biotech businesses.
- Hence, the replacement cost method has not been considered.

Market Value of Assets or Realizable Value

- Under the market value methodology, total value is based on the sum of market value of asset value less market value of liabilities plus, the value of intangible assets not recorded on the balance sheet.
- This methodology is most applicable for businesses where the value lies in the underlying assets and not the ongoing operations of the business.
- Hence, the market value method has not been considered.

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WACC Analysis

Discount Rate and Terminal Value

Discount rate

In order to determine the discount rate, we have used the WACC methodology as set out below:

WACC = Ke * (E/(D + E)) + Kd * (1-T) * (D/(D + E))

Where:	Ke	=	cost of equity
	E	=	market value of equity
	Kd	=	cost of debt
	D	=	market value of debt
	T	=	corporate taxation rate

The cost of equity is derived using the Capital Asset Pricing Model ("CAPM") as follows:

	Ke	=	Rf + ß * (Rm – Rf) + α
Where:	Rf	=	the current return on risk-free assets
	Rm market	=	the expected average return of the
	(Rm – Rf)	=	the average risk premium above the risk - free rate that a "market" portfolio of assets is earning
	ß	=	the beta factor, being the measure of the systematic risk of a particular asset relative to the risk of a portfolio of all risky assets
	α	=	company specific risk factor (alpha)

Terminal Value

- Due to the finite life of the concession period of the Target, we have not computed a terminal value for the valuation of the Target.

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Summary - WACC

Risk free rate (Rf) 6.9%	• The nominal risk-free rate is based on our understanding of the analysis of 10 year benchmark government of India securities yield as well analysis of the consensus forecast yield.
Equity risk premium 7%	• Equity risk premium is estimated based on KPMG's understanding of prevailing market return in India. We have considered historical long term equity market return in India and considering the risk-free rate of 6.9 per cent, the resulting ERP is estimated ~7.0 per cent.
Re-levered beta 0.8	• Beta is a measure of the risk of the shares of a company. ß is the co-variance between the return on sample stock and the return on the market. In order to determine the appropriate beta factor for the Target, consideration must be given either to the market beta of the comparable quoted companies. • We have considered companies involved in the road operating industry and infrastructure investment trusts. • Betas are low in this industry due to the stable nature of the road operating industry and low level of cash flow volatility due to the relatively steady usage of roads. Refer annexure 3.
Alpha 1%	• Alpha is the company specific risk premium. Given that the project is currently under construction and is a state government project, We have considered the same to be 1%.
Cost of equity 13.5%	• Based on above parameters cost of equity is 13.5%.
Post Tax Cost of Debt (Kd) **7.4 per cent**	• Existing debt facilities of the Target carry interest rate of 10.7 per cent (MCLR +1.75% margin) as on the Valuation Date. Based on discussion with the Management and typical practice in this industry, We understand that interest rates on borrowings will be revised on completion of the construction due to improvement in credit ratings and/or refinancing the debt. Management has estimated cost of borrowings to go down by 75 basis point during the tolling period. Hence, pre-tax cost of debt has been estimated to be c.10.0 per cent. Based on a Pre-tax cost of debt of c.10 per cent and tax rate of c. 25.17 per cent which is the tax rate applicable to the Target, post-tax cost of debt is arrived at by multiplying pre-tax cost of debt by (1-Tax Rate).
WACC **10.2 per cent**	• Project cost for MBEL is financed using 55% debt and 45% equity. Since the project is under construction and comparable companies have multiple projects in different stages of operation, their debt-equity ratio is not directly comparable. Hence, We have used actual Debt to Equity ratio of the Target i.e. 122.2%. • Considering the above cost of equity of 13.5 per cent, the post-tax cost of debt of 7.4 per cent and the debt-to-equity ratio of 122.2%, the estimated weighted average cost of capital (WACC) is 10.2 per cent.

Source: KPMG analysis, Capital IQ

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5.

Valuation of MBEL

Overview

Project details

MBEL has entered into concession agreement with UPEIDA for development, maintenance and management of Ganga expressway for section from km 7.9 to km 137.6 (Meerut - Budaun section) on the NH334 on a DBFOT basis. The project stretch is 129.7 kms, 6 lane road stretching between Meerut and Budaun.
The project is currently under construction and tolling is expected to commence from October 2025.

Concession period

The term of the concession agreement is for a period of 30 years commencing from the appointed date.
Probable extension of concession period is estimated according to article 29 of concession agreement which comes to about 6 years.

Project Cost and Grant

Total project cost is appraised to be INR 6,538 cr. As per concession agreement MBEL will receive a grant of INR 1,746 crore from UPEIDA as equity support for towards construction cost. The Grant due to be received till 30 September 2024 is INR 341.6 crore and the amount of grant pending to accrue is INR 1,274.41 crore.

Remaining project cost of INR 4,792 cr is proposed to be financed in 55:45 ratio of debt and equity. 100 per cent equity contribution in project cost amounting to INR 2,133 cr has already infused by shareholders in form of equity shares and NCDs.

Source(s): Management information, financial statements of Target

Highlights

Particulars	Details
Project location	Meerut-Budaun stretch on NH334
Concessionaire	MBEL
State	Uttar Pradesh
Tollable length (kms)	129.7
Concession agreement date	06-Jan-2022
Appointed date	12-Oct-2022
Estimate completion date	10-Oct-2025
Concession Period	30 years from Appointed Date
Scheduled Concession end date	10-Oct-52
Expected Concession end date	10-Oct-2058

Shareholding as at 30 September 2024

Particulars	Stake %
IRB Infrastructure Developers Ltd and its nominees	51%
Anahera Investment Pte Ltd	49%

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Key Assumptions

a. Modification in concession period

- As per Clause 29.2 of the concession agreement between UPEIDA and MBEL, *"In the event actual average traffic shall have fallen short of the target traffic by more than 5%, then for every 1% shortfall as compared to the target traffic, the concession period shall, subject to payment of concession fee and additional concession fees in accordance with this agreement, be increased by 1% thereof; provided such increase in concession period shall not in any case exceed 20% of the concession period"*.

- Forecast traffic is estimated to be lower than target traffic by more than 20 per cent in all target traffic dates. Hence, Management has considered maximum possible extension in the concession period, 6 years and revised concession period till 10 October 2058 in the forecast. Thus, the explicit period for the current valuation analysis exercise has been considered from 1 October 2024 to 10 October 2058.

- Calculation of 20 per cent extension in the concession period as per the above explanation as follows:

Particulars						
Target Traffic year	**2025-26**	**2030-31**	**2035-36**	**2040-41**	**2045-46**	**2050-51**
Weighted Average daily traffic forecast	5,649	8,042	10,998	14,654	18,267	22,420
Target average daily traffic	25,719	40,759	61,199	87,256	1,18,274	1,48,644
Revised target traffic		32,607	48,959	69,805	94,619	1,18,915
Percent difference from target traffic	(78%)	(60%)	(78%)	(79%)	(81%)	(81%)
Percent difference exceeding 5%	(73%)	(55%)	(73%)	(74%)	(76%)	(76%)
Percent difference exceeding 5% Upto 20%	(20%)	(20%)	(20%)	(20%)	(20%)	(20%)

Source: Traffic Study Report

b. Revenue

- Toll revenue has been considered basis the pessimistic scenario presented in the "Traffic Study for Ganga Expressway" ("Traffic Study Report") prepared by an independent consultant appointed by the Management.

- Traffic volume for the forecast period has been considered based on traffic report prepared by independent consultant in December 2024, which considers the GDP growth rate of India (as per OECD forecast and National Rail plan) and elasticity value of different vehicle type for computing the traffic growth rate. Please refer Section 4 of the Traffic Study Report for Ganga Expressway for detailed traffic volume analysis.

Source(s): Management information

- Annual revision of toll rate for the forecast period shall be in accordance with The Uttar Pradesh Expressway (Levy of Tolls and fixing of Fees and Realization Thereof) (Fourth Amendment) Rules, 2017 and amendment thereto. As per the said rules, the applicable base rate shall be revised annually on April 1 to reflect the increase in wholesale price index ("WPI") but such revision shall be restricted to 40% of the increase in WPI on overall basis during the concession period. As given in the traffic report, WPI has been projected to grow by 4%. Please refer section 5.2 of the Traffic Study Report base toll rate and toll rate estimates.

c. Periodic maintenance & routine maintenance costs

- Periodic and routine maintenance is based on the agreement with IRB Infrastructure Developers Limited till FY 2032. For the forecast period post FY 32 the periodic and routine maintenance cost have been considered based on the technical assessment done by the management and forecast submitted to the lenders.

d. Depreciation & amortization

- Management has forecast project cost net of grant to be depreciated in proportion to forecast revenue.

e. Tax

- Management represented that the Target has adopted the new tax regime. Thus, tax outflows for the forecast have been calculated based on the new regime of income tax.

f. Capex

- MBEL has entered into fixed price EPC contract for construction of the expressway with the sponsor. EPC cost for the project is agreed at INR 5,912 Cr excluding GST. As at Valuation Date INR 1,742 cr of project cost including EPC Cost, contingencies and pre operative expenses (excluding interest during construction) are pending to be incurred of which INR 1,274 cr is to funded from grant to be received from UPEIDA. Balance capex of INR 468 cr is forecast to be incurred between Valuation Date to construction completion date which is expected to be 10 October 2025.

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Discounted Cash Flows (1/3)

Discounted Cash Flow													
INR crores		**FY2025 6 months**	**FY2026 12 months**	**FY2027 12 months**	**FY2028 12 months**	**FY2029 12 months**	**FY2030 12 months**	**FY2031 12 months**	**FY2032 12 months**	**FY2033 12 months**	**FY2034 12 months**	**FY2035 12 months**	**FY2036 12 months**
Revenue		-	140	331	361	391	426	465	509	548	594	644	699
Less: routine and periodic maintenance		-	16	72	76	78	81	169	176	181	93	96	100
Less: Fastag Expense		-	0	1	1	1	1	2	2	2	2	2	2
EBITDA	**[A]**	-	**123**	**257**	**285**	**312**	**344**	**295**	**332**	**365**	**498**	**546**	**597**
EBITDA margin		-	*88%*	*78%*	*79%*	*80%*	*81%*	*63%*	*65%*	*67%*	*84%*	*85%*	*85%*
Depreciation		-	(15)	(35)	(38)	(42)	(45)	(50)	(54)	(59)	(64)	(69)	(75)
EBIT		-	**108**	**222**	**246**	**270**	**298**	**245**	**277**	**307**	**435**	**477**	**522**
EBIT margin		-	77%	67%	68%	69%	70%	53%	54%	56%	73%	74%	75%
Less: Tax on EBIT	[B]	-	(15)	(31)	(37)	(44)	(52)	(40)	(49)	(58)	(91)	(103)	(116)
Change in working capital	[C]	-	(119)	-	-	-	-	-	-	-	-	-	-
Less : Capex	[D]	(242)	(226)	-	-	-	-	-	-	-	-	-	-
Free cash flows to the firm	**E = [A+B+C+D]**	**(242)**	**(237)**	**227**	**247**	**267**	**291**	**255**	**283**	**308**	**407**	**443**	**481**
Discounting period		0.25	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00
Discount factor	[F]	0.98	0.91	0.82	0.75	0.68	0.62	0.56	0.51	0.46	0.42	0.38	0.34
Present value of cash flows	**[E*F]**	**(236)**	**(215)**	**187**	**185**	**181**	**179**	**143**	**143**	**142**	**170**	**168**	**166**

Source(s): Management information, KPMG analysis

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Discounted Cash Flows (2/3)

Discounted Cash Flow													
INR crores		FY2037 12 months	FY2038 12 months	FY2039 12 months	FY2040 12 months	FY2041 12 months	FY2042 12 months	FY2043 12 months	FY2044 12 months	FY2045 12 months	FY2046 12 months	FY2047 12 months	FY2048 12 months
Revenue		756	815	882	954	1,023	1,098	1,172	1,256	1,340	1,434	1,535	1,637
Less: routine and periodic maintenance		102	105	217	224	229	117	120	124	126	129	265	273
Less: Fastag Expense		3	3	3	3	3	4	4	4	4	5	5	5
EBITDA	**[A]**	**652**	**707**	**662**	**727**	**790**	**977**	**1,048**	**1,128**	**1,209**	**1,300**	**1,264**	**1,359**
EBITDA margin		*86%*	*87%*	*75%*	*76%*	*77%*	*89%*	*89%*	*90%*	*90%*	*91%*	*82%*	*83%*
Depreciation		(81)	(88)	(95)	(103)	(110)	(118)	(126)	(135)	(145)	(155)	(166)	(177)
EBIT		**570**	**619**	**567**	**624**	**680**	**859**	**921**	**992**	**1,065**	**1,145**	**1,099**	**1,181**
EBIT margin		75%	76%	64%	65%	66%	78%	79%	79%	79%	80%	72%	72%
Less: Tax on EBIT	[B]	(130)	(144)	(133)	(149)	(165)	(212)	(230)	(250)	(270)	(293)	(284)	(308)
Change in working capital	[C]	-	-	-	-	-	-	-	-	-	-	130	-
Less : Capex	[D]	-	-	-	-	-	-	-	-	-	-	-	-
Free cash flows to the firm	**E = [A+B+C+D]**	**522**	**563**	**530**	**578**	**625**	**765**	**818**	**878**	**939**	**1,007**	**1,110**	**1,051**
Discounting period		12.00	13.00	14.00	15.00	16.00	17.00	18.00	19.00	20.00	21.00	22.00	23.00
Discount factor	[F]	0.31	0.28	0.26	0.23	0.21	0.19	0.17	0.16	0.14	0.13	0.12	0.11
Present value of cash flows	**[E*F]**	**163**	**160**	**137**	**135**	**133**	**147**	**143**	**139**	**135**	**132**	**132**	**113**

Source(s): Management information, KPMG analysis

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Discounted Cash Flows (3/3)

Discounted Cash Flow												
INR crores		FY2049 12 months	FY2050 12 months	FY2051 12 months	FY2052 12 months	FY2053 12 months	FY2054 12 months	FY2055 12 months	FY2056 12 months	FY2057 12 months	FY2058 12 months	FY2059 6 months
Revenue		1,746	1,864	1,995	2,136	2,270	2,427	2,588	2,772	2,951	3,160	1,783
Less: routine and periodic maintenance		277	141	144	148	155	163	368	382	394	198	110
Less: Fastag Expense		6	6	7	7	8	8	9	9	10	11	6
EBITDA	**[A]**	**1,462**	**1,716**	**1,844**	**1,980**	**2,108**	**2,256**	**2,212**	**2,381**	**2,547**	**2,952**	**1,668**
EBITDA margin		*84%*	*92%*	*92%*	*93%*	*93%*	*93%*	*85%*	*86%*	*86%*	*93%*	*94%*
Depreciation		(189)	(202)	(216)	(231)	(246)	(263)	(280)	(300)	(320)	(342)	(188)
EBIT		**1,273**	**1,514**	**1,628**	**1,749**	**1,862**	**1,993**	**1,931**	**2,080**	**2,228**	**2,609**	**1,479**
EBIT margin		73%	81%	82%	82%	82%	82%	75%	75%	75%	83%	83%
Less: Tax on EBIT	[B]	(334)	(398)	(430)	(464)	(496)	(534)	(523)	(565)	(607)	(709)	(402)
Change in working capital	[C]	-	-	-	-	-	-	-	-	-	-	-
Less : Capex	[D]	-	-	-	-	-	-	-	-	-	-	-
Free cash flows to the firm	**E = [A+B+C+D]**	**1,128**	**1,318**	**1,414**	**1,516**	**1,611**	**1,722**	**1,689**	**1,816**	**1,940**	**2,243**	**1,266**
Discounting period		24.00	25.00	26.00	27.00	28.00	29.00	30.00	31.00	32.00	33.00	33.76
Discount factor	[F]	0.10	0.09	0.08	0.07	0.07	0.06	0.05	0.05	0.05	0.04	0.04
Present value of cash flows	**[E*F]**	**110**	**117**	**114**	**111**	**107**	**104**	**92**	**90**	**87**	**92**	**48**

Valuation conclusion	
INR Crore	
Present value of cash flows	3,956
Present value of release of working capital	(0)
Enterprise Valuation	**3,955**
Less: term loan from bank & financial institutions	(1,696)
Less: capital creditors	(245)
Less: unsecured loan from related party	(60)
Add: surplus assets	163
Add: cash and cash equivalent	10
Equity Value (100% Stake) including NCD's	**2,127**
Equity Value (80.4% Stake) including NCD's	**1,710**
WACC	**10.2%**

Present value of release in working capital represent negative working capital of INR 11 Cr released at the end of the concession period.

Basis the above and using a WACC of 10.2%, the Enterprise Value of MBEL on 30 September 2024 is INR 3,955 crore and Equity Value of 100% stake (including NCDs) is 2,127 crore.

Refer page no 22 for detailed WACC analysis

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6.

Valuation Conclusion

Valuation Conclusion

Equity Value of Target

Valuation conclusion	
INR Crore	
Present value of cash flows	3,956
Present value of release of working capital	(0)
Enterprise Valuation	**3,955**
Less: term loan from bank & financial institutions	(1,696)
Less: capital creditors	(245)
Less: unsecured loan from related party	(60)
Add: surplus assets	163
Add: cash and cash equivalent	10
Equity Value (100% Stake) including NCD's	**2,127**
Equity Value (80.4% Stake) including NCD's	**1,710**

The Enterprise Value of the MBEL is INR 3,955 crores and Equity Value (including NCDs) of 100 per cent stake of MBEL is estimated to be INR 2,127 crores as on 30 September 2024.

Enterprise value adjustments

1	Cash and cash equivalents comprise cash in hand and balance with banks as at 30 September 2024.
2	Surplus assets primarily comprise of Grant receivable of INR 131 Cr and GST receivable from concessionaire on account of change in law of INR 32 Cr as at 30 September 2024.
3	Debt primarily represents loan from banks and financial institutions of INR 1,696 Cr as at 30 September 2024.
4	Unsecured loan from related party represent repayable loan taken from related parties as at 30 September 2024 to cover project cost against grant receivable.
5	Capital creditors of INR 245 Cr have been considered debt like in nature and adjusted from the Enterprise Value to arrive at the Equity Value of MBEL. Management represented that they do not consider these liabilities as part of the working capital and thus they have not been considered as part of the forecast working capital.
6	Our Valuation conclusion assumes that outstanding Non Convertible debentures (“NCDs”) of INR 1600 Cr issued to shareholders in proportion of their shareholding as a part of their equity contribution in the project cost are treated as quasi equity and not adjusted as debt like item in arriving from enterprise value to equity value. This assumption is based on representation from Management of the Trust that the acquisition consideration will be inclusive of consideration towards acquisition of 80.4 per cent stake including both equity shares and NCDs.

Source(s): Management information, KPMG analysis

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7.

Annexures

Annexure 1: Sources of Information

This Report is prepared based on the below sources of information as provided to us by the Management:

The following information provided to KPMG by Management was used in preparation of the Valuation Report:

- Financial projections of MBEL from 01 October 2024 till the end of the concession period
- Limited review financial statements of MBEL for half year ended on 30 September 2024
- Other data for MBEL which is as follows –
    - Concession Agreement with UPEIDA
    - Traffic Report prepared by T&T consultants
    - Extract of O&M agreement with IRBIDL
    - Extract of Project Implementation agreement with IRBIDL
    - Monthly Progress report prepared by external agency
    - Project cost certificate
- List of approvals, permits, licenses and litigations for MBEL as at 30 September 2024.
- Management has provided project cost certificate and monthly progress report from external agency for physical and financial progress, project cost incurred and pending to be incurred as on 30 September 2024.
- Management has provided Traffic Study Report prepared by T&T Consultants (appointed independently by Client) dated December 2024 for MBEL. Management has confirmed that the traffic Study Report shared is the most recent study available. Forecast revenue has been considered from “Pessimistic Scenario” presented in the aforesaid Traffic Study Report for the Target. Considering technical nature of the traffic study and forecast, We have relied on work of the aforesaid consultant.
- Based on Management representation We have considered appointed date for the commencement of the concession period to be 12 October 2022.
- Management has informed us that routine and periodic maintenance for MBEL has been considered from a technical feasibility study performed by the Management. Given the technical nature of this study, review of the same is not part of our scope of work. Hence, We have considered the routine and periodic maintenance based on Management representation
- Given the nature of the liability, capital creditors of INR 245 Cr outstanding in the books of the SPVs have been considered debt like in nature and adjusted from the enterprise value to arrive at the equity value of the Target.
- Existing debt facilities of the Target carry interest rate of 10.7 per cent as on the Valuation Date. Based on discussion with the Management and industry practice, We understand that interest rates on borrowings will be revised on completion of the construction due to improvement in credit ratings and/or refinancing the debt. Management has estimated cost of borrowings to go down by 75 basis point during the tolling period. Hence, we have considered the cost of borrowing of 10.0 per cent.

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Annexure 1: Sources of Information

- Besides the above, there may be other information provided by the Management which may not have been perused by us in any detail, if not considered relevant for our defined scope.
- In addition to the above, we have also obtained such other information and explanations from the Management, either verbally or in written form, as were considered relevant for the purpose of the valuation. We had discussions with the key members of the Management.
- The following external sources were used in the preparation of the report:
  - External databases such as Capital IQ, Mergermarket, etc.
  - Relevant information made available to us by Management at our request.
  - Publicly available information and secondary information.

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Annexure 2: Beta Computation

Beta computation 30 September 2024	Market Capitalization	Total Debt	Debt / Equity	Debt / Total Capital	Beta	Tax Rate	Unlevered Beta	Target's Debt Equity	Target's Tax Rate	Re Levered Beta
IRB Infrastructure Developers Limited	396,786	186,490	47.0%	32.0%	1.5	25.2%	1.1	122.2%	25.2%	2.1
PNC Infratech Limited	124,798	80,165	64.2%	39.1%	1.2	25.2%	0.8	122.2%	25.2%	1.5
Dilip Buildcon Limited	79,189	72,404	91.4%	47.8%	1.5	25.2%	0.9	122.2%	25.2%	1.7
Bharat Road Network Limited	4,310	14,578	338.2%	77.2%	0.7	25.2%	0.2	122.2%	25.2%	0.4
National Highways Infra Trust	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
India Infrastructure Trust	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bharat Highways InvIT	47,817	11,376	23.8%	19.2%	0.4	25.2%	0.3	122.2%	25.2%	0.6
India Grid Trust	108,762	186,972	171.9%	63.2%	0.4	25.2%	0.2	122.2%	25.2%	0.4
Powergrid Infrastructure Investment Trust	84,743	5,692	6.7%	6.3%	0.5	25.2%	0.4	122.2%	25.2%	0.8
IRB InvIT Fund	37,475	25,123	67.0%	40.1%	0.4	25.2%	0.3	122.2%	25.2%	0.6
G R Infraprojects Limited	161,816	38,028	23.5%	19.0%	1.0	25.2%	0.9	122.2%	25.2%	1.7
Median			**64.2%**							**0.8**

Note:
(a) Market capitalization of comparable companies has been considered based on 3-month volume weighted average share prices till 30 September 2024.
(b) Beta has been computed based on 1-year daily average adjusted beta.
(c) Although, India Infrastructure Trust and National Highways Infra Trust are a part of our comparable companies set, they have been excluded while calculating the beta due to low trading.

Source(s): KPMG analysis based on data sourced from S&P Capital IQ database.

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Annexure 3: Other disclosures as required under SEBI InvIT Regulations

The following disclosures are as at 30 September 2024 for the Target

1. **Valuation of the project in the previous 3 years:** Management has represented that no previous valuation of the project has been undertaken.
2. **List of one-time sanctions/approvals which are obtained or pending/ List of up to date/overdue periodic clearances:** Refer annexure 3a for the aforementioned information.
3. **Estimates of already carried as well as proposed major repairs and improvements along with estimated time of completion:** Refer annexure 3b for the aforementioned information.
4. **Purchase price of the project by the InvIT:** Not Applicable as acquisition is not yet completed
5. **On-going and closed material litigations including tax disputes in relation to the assets, if any:** Management represented that there are no on-going and closed material litigations in the Target.
6. **Statement of assets**: Refer Annexure 3c for the aforementioned information.
7. **Revenue pendencies including local authority taxes associated with InvIT asset and compounding charges, if any:** Management represented that there are no revenue pendencies including local authority taxes and compounding charges with respect to the Target.
8. **Vulnerability to natural or induced hazards that may not have been covered in town planning/ building control:** Management represented that there are no such natural or induced hazards which have been not considered in town planning/building control with respect to the Target.
9. **Latest pictures of the SPV:** Refer annexure 3d for the aforementioned information.
10. **Related party transaction:** Management has represented that IRBI Trust shall acquire 80.4 per cent stake in MBEL from IRB Infrastructure Developers Ltd and Anahera Investments Pte. Ltd., who are also shareholders and related party of IRB Infrastructure Trust. IRB Infrastructure Developers Limited is sponsor of the Trust.
11. **Nature of interest in SPV:** IRBI Trust proposes to acquire 80.4 per cent stake in MBEL by way acquisition of equity shares and 80.4 per cent of outstanding NCD's from existing shareholder and debenture holders of the Target.
12. **Date of site inspection**: During the month of December 2024.

Source(s): Management information, KPMG analysis

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Annexure 3: Other disclosures as required under SEBI InvIT Regulations

The following disclosures are as at 30 September 2024 for the Target

13. In term of the SEBI InvIT Regulations, we hereby confirm that:

- We are competent to undertake the valuation.
- We are independent and have prepared this Report on fair and unbiased basis.
- The Valuation has been performed as per internationally accepted valuation methodologies and in cognizance of international valuation standards and ICAI Valuation Standards 2018 issued by the Institute of Chartered Accountants of India.
- KPMG is not affiliated to the Client in any manner whatsoever. Further KPMG does not have a prospective interest in the Target which is the subject of this Valuation and KPMG's fee is not contingent on an action or event resulting from the analysis, opinions or conclusions in the Valuation.

Caveat to disclosures
KPMG has not independently verified the documents related to disclosures mentioned in the annexures and have relied on Management representation for the same.

Source(s): Management information, KPMG analysis

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Annexure 3a: One-time sanctions and approvals and overdue periodic clearances

Sr.No	Description	Remarks
a.	Permission of State government for extraction of boulders from quarry.	Received
b.	Permission of Village Panchayat & Pollution control board for installation of crushers	Received
c.	License for use of explosives.	Received
d.	Permission of state government for drawing water from Rivers & reservoir.	Not Applicable
e.	License from Inspector of factories or competent authorities for setting up Batching Plant.	Received
f.	Clearance from Pollution control board for Setting up Batching Plant	Received
g.	Permission of Village Panchayat & Pollution control board for Asphalt Plant	Received
h.	Permission of Village Panchayat & State government for Borrow earth	Received
i.	Permission of State Government for Cutting of trees	Received
j.	Any other permits or clearance required under applicable Laws	Received

Source(s): Management information

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Annexure 3b: Estimates of already carried as well as proposed major repairs and improvements

Estimates of already carried as well as proposed major repairs and improvements												
INR Crore												
Name of the Target	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032	FY2033	FY2034	FY2035	FY2036	FY2037
Meerut Budaun Expressway Limited	0	-	-	-	-	85	88	91	-	-	-	-
	FY2038	FY2039	FY2040	FY2041	FY2042	FY2043	FY2044	FY2045	FY2046	FY2047	FY2048	FY2049
	-	109	112	115	-	-	-	-	-	133	137	139
	FY2050	FY2051	FY2052	FY2053	FY2054	FY2055	FY2056	FY2057	FY2058	FY2059		
	-	-	-	-	-	197	202	206	-	-		

Source(s): Management information

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Annexure 3c: Statement of Assets

Statement of Assets					
INR Crore					
Name of the Target	Net tangible assets	Intangible Assets	Other non current assets	Total Non current assets	Total Current assets
Meerut Budaun Expressway Limited	-	4,259	-	4,259	194

Source(s): Management information

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Annexure 3d: Site pictures






Source(s): Site visit conducted in December 2024

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8.

Scope & Limitations

Scope & Limitations (1/3)

Terms of Engagement

- KPMG Valuation Services LLP ("KPMG" or "we" or "us" or "Valuer") has been appointed by IRB Infrastructure Trust ("IRBI Trust/Trust" or "the Company"), MMK Toll Road Private Limited ("Investment Manager") and IDBI Trusteeship Services Limited ("Trustee") (together referred as "the Clients" or "You") in relation to carrying out valuation of Meerut Budaun Expressway Limited ("MBEL" or "Target") as on the 30 September 2024 in accordance with sub regulation 8 under Regulation 21 of the Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 where valuation is required to be conducted by a registered valuer (as defined under section 247 of the Companies Act, 2013) and such valuation report ("Report") is required to be in compliance with the SEBI InvIT Regulations ("Engagement"or"Valuation").
- The terms of the Engagement are set out in our letter of engagement dated 17 September 2024 along with Addendum to the letter of engagement dated 10 December 2024 (together referred as "LoE").
- The date of Valuation is 30 September 2024 ("Valuation Date").
- This Report sets out KPMG's conclusions on the Valuation and has been prepared in accordance with LoE. Our Report is confidential to the Client and will be used by the Client only for purposes mentioned in the LoE. The Report will be issued by us on the express understanding that it shall not be copied, disclosed or circulated or referred to in correspondence or discussion with any third party. This Report is confidential to the Client and it is given on the express understanding that it is not communicated, in whole or in part, to any third party without KPMG's prior written consent. Neither the Report nor its content may be used for any other purpose without prior written consent of KPMG. This Report has a limited scope as specified in it. KPMG will not accept any responsibilities to any other party to whom the Report may be shown or who may acquire a copy of the Report.
- We are not responsible to any other person/ party for any decision of such person/ party based on this Report. Any person/ party intending to provide finance/ invest in the shares/ businesses of the Target/ their holding companies/ subsidiaries/ group companies, if any, shall do so after seeking their own professional advice and after carrying out their own due diligence procedures to ensure that they are making an informed decision. If any person/ party (other than the Client) chooses to place reliance upon any matters included in the report, they shall do so at their own risk and without recourse to the Valuer. It is hereby notified that usage, reproduction, distribution, circulation, copying or otherwise quoting of this Report or any part thereof, except for the purpose as set out earlier in this report, without our prior written consent, is not permitted, unless there is a statutory or a regulatory requirement to do so.
- We are aware that the Report may have to be shared with certain regulatory authorities in India and stock exchanges in India. We also understand from you that the Report may be included in the offer document for the rights issue and therefore, we understand that the Report may enter public domain and hereby provide our consent to such sharing subject to the following:
  - You shall indemnify and hold us harmless against any loss that may be incurred by us arising out of or relating to sharing of the Report with regulatory authorities in India or stock exchanges in India, or the Report entering the public domain as mentioned herein, as also against all costs, charges and expenses (including legal expenses) suffered or incurred by us on account of the aforesaid. In this clause "us" shall include all Firm Persons and "you" shall include Other Beneficiaries (as these terms have been defined in the LoE).
  - Such Report shall be disclosed in full and strictly in such forms as KPMG has provided to the Client without any deviation.
  - KPMG shall not be liable to any person or party for any reason and under any circumstances.
  - The readers of the Report shall not bring any claim against KPMG for matters arising out of or consequent upon disclosure of the Report.
  - The Report shall be issued with all the disclaimers as provided by KPMG at the time of issuance of the Report.

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Scope & Limitations (2/3)

Disclosure of Interest/Conflict

- KPMG is not affiliated to IRBI Trust in any manner whatsoever. Further, KPMG does not have a prospective interest in the business which is the subject of this engagement.
- KPMG's fee is not contingent on an action or event resulting from the analyses, opinions or conclusions in this Report.
- You are aware that KPMG is already providing/has provided valuation services to IRB InvIT Fund and IRBIDL. Notwithstanding the aforesaid past/ongoing relationship with you, we do not perceive any conflict in undertaking this engagement.
- We have previously carried out valuation of IRBI Trust and its SPVs as per SEBI InvIT Regulations in FY2024 and for period ending September 2024, pursuant to appointment as a registered valuer by IRBI Trust.

Basis of Value

- The report has been prepared on the basis of "Fair Value" as at Valuation Date. The generally accepted definition of "Fair Value" is the value as applied between a hypothetical willing vendor and a hypothetical willing prudent buyer in an open market and with access to all relevant information.

Premise of Value

- The report has adopted "Going Concern Value" as the premise of value in the given circumstances. The generally accepted definition of Going concern value is the value of a business enterprise that is expected to continue to operate in the future.
- The valuation has been performed as per internationally accepted valuation methodologies and in cognizance of international valuation standards and ICAI Valuation Standards 2018 issued by the Institute of Chartered Accountants of India.

Scope and Limitations

- This Report is based on the information provided by the Clients and has been confirmed by the Clients. KPMG have not independently verified or checked the accuracy or timeliness of the same. KPMG have indicated within this Report the sources of the information presented and have satisfied ourselves, so far as possible, that the information presented is consistent with other information which is made available to us in the course of our work in accordance with the terms of this engagement letter. KPMG have not, however, sought to establish the reliability of the sources by reference to other evidence, except as may be specifically agreed in writing between us.
- KPMG has read, analyzed and discussed the financial information and underlying management assumptions pertaining to the Target as provided by the Management. This information has been solely relied upon by KPMG for the Valuation.
- We have based our analysis on the historical audited financial statements of the Target and limited review financial statements of the Target for the period from 01 April 2024 to 30 September 2024. Additionally, our analysis is based on the business plan of the Target for the period from 1 October 2024 to the end of the concession period as provided by the Management ("Management Business Plan") and key underlying assumptions. Any changes in the assumptions or methodology used to consolidate the financial statements may significantly impact our analysis and therefore the Valuation.
- KPMG has read and analyzed but have not commented on the appropriateness of or independently verified the Management Business Plan and underlying data and assumptions and accordingly provided no opinion on the same. If there were any omissions, inaccuracies or misrepresentations of the information provided by the Management, this may have a material effect on our findings and therefore the Valuation.
- The realization of the projections in the Management Business Plan will be dependent on the continuing validity of assumptions on which it is based. Our analysis therefore will not and cannot be directed to providing any assurance about the achievability of the future plans. Since the projections relate to the future, actual results are likely to be different from the projected results because events and circumstances do not occur as expected and the differences may be material.

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Scope & Limitations (3/3)

- This Report makes reference to 'KPMG analysis'. This indicates only that we have (where specified) undertaken certain analytical activities on the underlying data to arrive at the information presented.
- Our work did not constitute an audit of the financial statements and accordingly, we do not express any opinion on the truth and fairness of the financial position as indicated in this Report. Our work did not constitute a validation of the financial statements of the Target, and accordingly, we do not express any opinion on the same.
- We have carried out the Valuation based on Management Business Plan received. Our scope of work does not include any commercial / legal / technical due diligence or carrying out any environmental / technical feasibility analysis or comparison of Management Business Plan with approved budgets / annual operating plans of the Target. We have relied on Management's representation on such considerations and any changes in the same may significantly impact our analysis and therefore the Valuation.
- Wherever applicable, we have relied upon the legal opinion document / affidavit copies provided by Management in relation to the current status of the projects. We have not carried out / sought any independent legal opinion, nor have we verified the accuracy of the legal opinion shared. Any discrepancy in the same may significantly impact our analysis and therefore the Valuation.
- Our opinion is based on prevailing market, economic, and other conditions at the Valuation Date. It should be appreciated that these conditions can change over relatively short periods of time, not only as a result of internal factors, but because of external factors, which could impact the value, either positively or negatively.
- For our analysis, we have relied on published and secondary sources of data, whether or not made available by the Clients. We have not independently verified the accuracy or timeliness of the same.
- Neither KPMG nor any of its affiliates worldwide are responsible for updating this Report because of events or transactions occurring subsequent to the date of this Report. Any updates or second opinions in this Report cannot be sought by the Management from external agencies including global offices of KPMG without the prior written permission of KPMG.
- KPMG has not considered any finding made by other external agencies in carrying out the Valuation analysis other than the one mentioned herein.
- For the purpose of the Valuation, our scope does not include valuation or legal due diligence of current assets and liabilities and as represented by the Management, the same has been considered at their respective book value.
- For the purpose of this Engagement and Report, we have made no investigation of, and assume no responsibility for the title to, or liabilities against the Target. Our conclusion of value assumes that the title to the assets and liabilities of the Target reflected in the financial statements as on Valuation Date is intact as at the date of this Report.
- Any discrepancies in any table/ annexure between the total and the sums of the amounts listed are due to rounding-off.
- The Report should be read in the light of these limitations, and we caution that had these matters been within the scope of our review, our conclusions may have changed, and that change could be material.
- The information presented in this Report does not reflect the outcome of any due diligence procedures. The reader is cautioned that the outcome of due diligence process could change the information herein and our Valuation, and that change could be material.
- This Report forms an integral whole and cannot be split in parts. The outcome of the Valuation can only lead to proper conclusions if the Report as a whole is taken into account.

Management representation

- This Report is prepared on the basis of the sources of information listed in Annexure 1. KPMG has relied upon written representation provided by the Management that the information contained in the Report is materially accurate and complete, fair in its manner of portrayal and therefore forms a reliable basis for the Valuation.

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