

Notice Inviting RFP

NIT No.:

4761

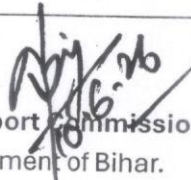
Dated:

10-06-26

The Transport Department, Government of Bihar invites proposal for "Selection of a vendor for establishment of Automated Testing Stations (ATS's) at 4 identified places (Aurangabad, Jehanabad, Nawada & Sahasra) in Bihar State including operation and maintenance of ATS for 1 year"

The tender document will be available on e-Tendering website (<https://eproc2.bihar.gov.in>). The bidders are requested to submit the requisite Tender Fee, Tender Processing Fee and EMD along with the proposal through online (<https://eproc2.bihar.gov.in>) on or before the last date of bid submission. Important dates of this RFP are mentioned below:

Important Dates		
1	Date of uploading N.I.T. & other Documents (online) (Date of Publication)	10.06.2026
2	RFP download Start Date (online) and Time	10.06.2026 at 05:00 PM
3	Last Date and Time of sending the Pre-bid queries/clarifications (only through e-mail)	15.06.2026 at 05:00 PM
4	Date of Pre-bid Meeting (offline)	18.06.2026 at 3:00 PM
5	Last Date & Time of submission of proposals	02-07-2026 at 04:00 PM
6	Date & Time of opening Pre-Qualification & Technical proposal(s) (online)	02-07-2026 at 05:00 PM
7	Opening of Financial proposals (online) and declaration of result	To be notified later


State Transport Commissioner
Government of Bihar.



TENDER DOCUMENT

**Selection of Vendors for Establishment
of Automated Testing Stations (ATS) at 4 identified places
(Aurangabad, Jehanabad, Nawada & Sahasra)
in Bihar State including Operation and Maintenance of ATS
for 1 year**

Tender No. 4761 **Date** 10.06.26

Transport Department, Government of Bihar

Issued By:

Transport Commissioner Office,
2nd Floor, Visveswaraya Bhawan,
J L N Marg Patna - 800001
Tel: [0612-2547448](tel:0612-2547448)
Email ID: stcbihar@bihar.gov.in

1. Disclaimer

- 1 This Tender Document is being issued by Transport Department, Government of Bihar for the selection of a vendor for establishment of Automated Testing Stations (ATS's) at 4 identified places (Aurangabad, Jehanabad, Nawada & Sahasra) in Bihar State including operation and maintenance of ATS for 1 year. This hereinafter referred to as the "Works".
- 2 The information contained in this Tender Document is being provided for the limited purposes of enabling the interested parties ("Bidders") to submit a binding proposal ("Bid") for performing, executing and implementing the Works and for no other purpose. In no circumstances shall Transport Department, Government of Bihar, or their employees, advisers, consultants, contractors, servants and/or agents incur any liability arising out of or in respect of the issue of this Tender Document, or the selection procedure.
- 3 The use of the Tender Document in any manner contrary to any applicable law is expressly prohibited. The Bidders shall inform themselves and shall observe any applicable legal requirements.
- 4 The information does not purport to be comprehensive or to have been independently verified. Nothing in this Tender Document shall be construed as legal, financial or tax advice. Transport Department, Government of Bihar will not be liable for any costs, expenses, however so incurred by the Bidders in connection with the preparation and submission of the Bids.
- 5 Transport Department, Government of Bihar reserves the right to amend this Tender Document, and any information contained herein at any time to the Bidders. The amendment document shall be notified through website and such amendments shall be binding on those concerned.
- 6 Nothing in this Tender Document is, nor shall be relied upon as, a promise or representation as to Transport Department, Government of Bihar ultimate decision in relation to the selection process of the successful Bidder for the execution of the Contract (defined hereinafter). The Bidder(s) shall not, therefore, assume that they will have the opportunity to revise their Bids following submission except as provided in this Tender Document, without assigning any reason whatsoever. However, Transport Department, Government of Bihar reserves the right to change the basis of or the procedures (including the timetable) relating to the bidding process, reject any, or all, of the Bids, not to invite a Bidder to proceed further, not furnish a Bidder with additional information nor otherwise to negotiate with a Bidder at any time. Transport Department, Government of Bihar does not undertake to accept the lowest or indeed any Bid, without assigning any reason.
- 7 No person other than the one authorized by Transport Department, Government of Bihar to give any information or to make any representation not contained in this Tender Document and, if given or made, any such information or representation shall not be relied upon as having been so authorized in writing.
- 8 Canvassing in any form shall result in rejection of the bid.
- 9 The applicant shall be deemed to have duly considered all terms of this Invitation for the bid document and acknowledge that it intends to submit bid offer in accordance with the provisions of this document having accepted the terms and conditions as have been incorporated herein and / or that may be incorporated by Transport Department, Government of Bihar through any Addendum/s.

- 10 This Tender Document is confidential and personal to each Bidder. The Bidders shall note that they are required to sign and submit as part of the Technical Bid, as provided in "Form b) Letter of Undertaking" of this Tender Document, a Letter of Undertaking to Transport Department, Government of Bihar which, inter alia, prohibits disclosure of any information as therein defined to any person or body corporate except as permitted by such Letter of Undertaking. Any failure to furnish or comply with the terms of the Letter of Undertaking shall entitle Transport Department, Government of Bihar to disqualify the relevant Bidder.
- 11 Any summaries or descriptions of documents or contractual arrangements contained in any part of this Tender Document are only indicative and cannot be and are not intended to be comprehensive, nor any substitute for the underlying documentation (whether existing or to be concluded in the future), and are in all respects qualified in their entirety by reference to them.
- 12 Transport Department, Government of Bihar, its employees, advisers, consultants, contractors, servants, agents do not accept any responsibility for the legality, validity, effectiveness, adequacy or enforceability of any documentation executed, or which may be executed, in relation to the Works. Transport Department, Government of Bihar shall enter into a contract individually, with the successful Bidder for performance, execution and implementation of the Works ("Contract"). No legal or other obligation shall arise between the successful Bidder and Transport Department, Government of Bihar unless and until the Contract has been formally executed by Transport Department, Government of Bihar and the successful Bidder and any conditions precedent to the effectiveness of the Contract have been fulfilled. Transport Department, Government of Bihar reserves the right not to proceed with the bidding process and to cancel the selection procedure, or any part thereof, at any time.
- 13 Nothing in this Tender Document shall constitute the basis of the Contract which may be concluded in relation to performance, execution and implementation of the Works nor shall such documentation/information be used in construing the Contract. Each Bidder must rely on the terms and conditions contained in the Contract, when, and if, finally executed, subject to such limitations and restrictions which may be specified in such Contract. Any reference to this Tender Document in the Contract with Transport Department, Government of Bihar or any correspondence between Transport Department, Government of Bihar and the Bidder shall not be construed as this Tender Document forming part of such contract.
- 14 The Bidder is prohibited from any form of collusion or arrangement by a Bidder (or its advisers or consultants) in an attempt to influence the selection, award process or any other process. Giving or offering of any gift, bribe or inducement or any attempt to any such act on behalf of the Bidder towards any officer / employee of Transport Department, Government of Bihar or to any other person in a position to influence the decision of Transport Department, Government of Bihar or any other person associated with the bidding process, for showing any favour in relation to this Bid or any other contract, shall render the Bidder to such liability / penalty as Transport Department, Government of Bihar may deem proper, including but not limited to rejection of the Bid and forfeiture of the Earnest Money Deposit.
- 15 Laws of the Republic of India are applicable to this Tender Document. The courts at Patna shall have exclusive jurisdiction in relation to any disputes arising from this Tender Document.
- 16 Each Bidder's acceptance of delivery of this Tender Document constitutes its

agreement to, and acceptance of, the terms set forth in this Disclaimer. By acceptance of this Tender Document, the recipient agrees that this Tender Document and any information herewith supersedes document(s) or earlier information, if any, in relation to the subject matter hereof.

- 17 All documents and communication will be in English only. Any document which is submitted in any other language, other than English will be acceptable only if accompanied by self- certified English translated version. Transport Department, Government of Bihar will have the right to verify the same independently.
- 18 Arbitration: -The disputes or differences, arising from this Invitation for bid document or in any manner connected therewith shall be subject to the following dispute resolution mechanism:
- 19 Any dispute shall initially be referred to the designated Senior Management of the parties for amicable settlement. Parties shall nominate two persons each from their Senior Management within ten days of a dispute arising.
- 20 If no amicable settlement is arrived at within 30 days, then any party may refer the dispute to a Sole Arbitrator to be nominated by the Transport Department, Government of Bihar. The place of arbitration shall be Patna. All arbitration proceedings shall be conducted in English and in accordance with the provisions of the Arbitration and Conciliation Act 1996 as amended from time to time.
- 21 The Arbitration award will be final and binding upon the parties, and each party will bear its own costs of arbitration and equally share the fees of the arbitral tribunal unless the arbitral tribunal decides otherwise.
- 22 All disputes shall be subject to the exclusive jurisdiction of Courts at Patna only.
- 23 Governing Law: Indian laws, both substantive and procedural, shall govern.

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2. Tender Document

2.1. Introduction

Globalizations with the fast-growing economy have changed the world scenario in every endeavor. With the boom in the automobile industries number of vehicles plying on the Indian roads has increased tremendously over the last few decades. Every day there are new vehicles getting added on Indian Road.

Each year nearly one million people die worldwide in traffic accidents; approximately 23-24 million people suffer injuries. The precarious situation of road worthiness also affects. Even though the new technology vehicles meeting stringent emission and safety standards are introduced in the market, there are still a lot of old vehicles operating on the roads. Poor maintenance and servicing of an outdated fleet constitutes an increase in risks to persons and to environment emanating from the operation of such vehicles. Even new vehicles with the state-of-the-art technologies, deteriorate in service and need to be maintained properly if they are to continue to operate at the desired emission levels for which they are designed and manufactured.

The rapid increase in public means of transportation, the improvement of vehicle performance capability and servicing becomes an ever-increasing urgency. An effective air pollution control and thus, a decrease of vehicles emissions, improvement of roadworthiness can be achieved by the implementations of an effective vehicle inspection system.

The vehicle Inspection & Certification i.e. Fitness testing for transport vehicles is critical to maintain public safety on roads and averting road accidents. The Central Motor Vehicle Rules (CMVR), 1989, provides an elaborate procedure for vehicle inspection by RTO officials on different parameters before they are certified as fit to operate on roads. The fitness certificates are for a specific period and are subject to renewal. Thus, vehicle fitness testing in Automated Testing Stations (ATS's) is an effective tool to improve the condition of the in-use vehicle fleet.

Transport Department, Government of Bihar, has declared its intention to set up Automated Testing Stations (ATS's) at 4 identified places in Bihar State.

Transport Department, Government of Bihar invites e-tender for execution from the Bidders in the prescribed proforma for performing, executing and implementing the Works on the terms and conditions contained in this Tender Document and in the Contract. Brief description of Works and the timelines for tenders are summarized in the table below.

Description of Work	This Tender Document is being issued by Transport Department, Government of Bihar for selection of a successful bidder for Construction of Automated Testing Stations (ATS's) (comprising of Test Sheds, admin buildings & associated structures) at 4 identified places in Bihar State including Civil, Mechanical, Plumbing, Electrical, I.T., Fire Fighting System Works. Site development including Roads, Parking, Security Room & Landscaping, Plumbing, Equipment Foundations including allied services like test shed trimix flooring, epoxy coating for the flooring, conduiting for cables including 3 phase & Single phase cables, Compressor piping, Drainage, Water Supply, Sewage, Internal and External Electrification and Furniture Planning & Procurement including all statutory and local bodies approvals/ clearances. Supply, installation of identified test equipment/system including integration of test systems and system checking, testing and commissioning of Vehicle Inspection Equipment's at 4 nos. ATS's. Supply installation & commissioning of necessary utilities like DG sets, UPS, Air compressor, Metering Kiosk, Transformer, Air conditioners, Water coolers with RO purifiers etc., calibration tools, special tools, and requisite software for smooth operation of the ATS's with necessary reports. Supply, installation & commissioning of suitable exhaust gas handling system & provision for fresh air ducting for all underbody inspection pits. Maintenance of ATS's for 1 Years after the commissioning of equipment with trained Technicians, Supervisors and operators for complete in-use vehicle tests, including all tests mentioned in CMVR 1989, and BMVR, both as amended from time to time. Additional tests, if any, required by Transport Department, Government of Bihar for ensuring optimum safety and emission performance of in-use vehicles shall also be performed. Comprehensive Annual Maintenance Contract for 3 years after completion of warranty period of 2 years. Preparation of Manuals & imparting induction training and refresher training to the officers of Transport Department, Government of Bihar.
Earnest Money Deposit	Rs. 2,00,000/- (Rupees Two Lakhs Only). EMD to be submitted through the payment gateway at E – Tender portal (https://eproc2.bihar.gov.in) OR through irrevocable Bank Guarantee (BG) or Demand Draft (DD) drawn in favour of "Transport Commissioner, Bihar State" issued by nationalized or scheduled banks having head office in India, payable at Patna as per the format given in Form c). <u>Time of submission for Physical EMD:</u> The scanned copy of the EMD (BG / DD) has to be submitted along-with the technical bid documents on the e-tendering application. Further, the original EMD document has to be submitted during the period between Online Submission End Date and Opening of Technical Bids.

2.2. Bid Information Sheet

1	Sale of Tender Document	Tender Documents can be downloaded from 17:00 hrs on 10-06-2026 from the e-Procurement portal (https://eproc2.bihar.gov.in)
2	Tender Processing Cost	Rs. 5000 + 18% GST/- (Rs. 5900/-)
3	Earnest Money Deposit (EMD) (Refundable)	INR 2,00,000 only (Rupees Two Lakhs only) through online payment in e-Procurement portal (https://eproc2.bihar.gov.in) or DD or Bank Guarantee can be submitted as EMD.
4	Last Date for Submission of Pre-Bid Queries (If any)	Up to 17.00 hrs. on 15-06-2026 by email to stcbihar@bihar.gov.in
5	Pre-Bid Meeting to clarify the Queries submitted	On 18-06-2026 at 15.00 hrs. at Transport Commissioner office, Patna.
6	Submission of Bids (Refer appropriate clauses for details)	Up to 16.00 hrs. on 02-07-2026 through e-procurement portal. (https://eproc2.bihar.gov.in)
7	Opening of Technical Bids	17.00 hrs. on 02-07-2026 at Transport Commissioner office, Patna. (https://eproc2.bihar.gov.in)

2.3. Modalities

The Tender Documents will have to be downloaded directly from the websites mentioned above. The amount of **Rs. 5000 + 18% GST/- (Rs. 5900/-)** should be paid through e-procurement Portal.

- A complete set of tender documents is available at <https://eproc2.bihar.gov.in> for viewing and download. All the notification & details, terms and conditions regarding this tender notice hereafter will be published online on e-tendering website <https://eproc2.bihar.gov.in>. The guidelines to download the tender documents and online submission of bids and procedure of tender opening can be downloaded from website <https://eproc2.bihar.gov.in>. The bidders are advised to go through the manuals in detail to understand the bid submission process.
- The bidder needs to submit their bids online on <https://eproc2.bihar.gov.in>. The bidders are required to fill the tender online as per the timelines provided. The tender fee has to be paid online, scanned copy of online EMD payment receipt) has to be submitted along with technical bid.
- The bidders must make the payments towards tender fee by taking sufficient margin for time lags between the online payment and settlement / realization and other Banking Procedures in the pooling account and reflection of the same in the online tender system. The tender fee shall be non-refundable.
- The Transport Commissioner, Bihar State, reserves the right to accept or reject any or all the tenders without assigning any reason whatsoever.
- For MSME bidders claiming Tender Fee exemption, a certificate (which is valid as on date of submission of bid) of registration with NSIC to be uploaded as a part of Key Submission. However, Earnest Money Deposit (EMD) exemption is not allowed.
- The bidders must possess compatible digital Signature Certificate of Class-III to participate in the e-tendering process.
- Bidder may contact helpline support numbers mentioned on the <https://eproc2.bihar.gov.in>.

3. Instructions to Bidders

- 3.1. The Bidder must ensure that he meets all the requirements spelt in **“Annexure III – Pre-Qualification Criteria”**.
- 3.2. The Bidders are expected to carefully examine all the contents of the Tender Document including instructions, conditions, terms, specifications and drawings and take them fully into account before submitting their Bid. Failure to comply with the requirements as detailed in these documents shall be at the Bidder's own risk. Bids which are not responsive to the requirements of the Tender Document will be rejected.
- 3.3. While all efforts have been made to avoid errors in the drafting of the Tender Document, the Bidders are advised to check the same carefully. No claim on account of any errors detected in the Tender Document shall be entertained.
- 3.4. Bidders should study Tender Documents carefully and thoroughly before quoting and get clarifications, if required, from Transport Department, Government of Bihar in this context.
- 3.5. The Bid prepared by the Bidder and all correspondence and documents relating to the tender exchanged between the Bidder and Transport Department, Government of Bihar shall be in the English language.
- 3.6. Each of the Bid documents should be stamped and signed by the person or persons submitting the Bid in token of his/their having acquainted himself / themselves with the Tender Documents in entirety including all the Annexures and Forms. Any Bid not complying with the terms and conditions as set out in this Tender Document and / or not signed by authorized person may be rejected at the discretion of Transport Department, Government of Bihar. All documents submitted are subject to verification with the originals and the originals of the documents uploaded shall be produced for verification upon intimation. If the certificates / supporting documents submitted are in any other language apart from English, then apostilled & notarized sworn translation of the same in English has to be submitted. If translated document is not submitted, then the original document will not be considered for evaluation.
- 3.7. The Bid submitted on behalf of a Firm shall be signed by all the Partners of the Firm or by a Partner who has the necessary authority (supported with documentary evidence) on behalf of the Firm to submit the Bid.
- 3.8. The Bidder must obtain for himself on his own responsibility and at his own expenses all the information which may be necessary for the purpose of preparation and submission of the Bid and for entering into a Contract, must inspect the sites of Works, acquaint himself with all local conditions, means of access to the sites, nature of the Works and all matters pertaining thereto.
- 3.9. The bidder shall fill the 'Form m) Contact Details form' issued with this Bidding document and upload the same along with the bidding documents and Transport Department, Government of Bihar would use these details to communicate with the bidder in case of issuance addenda & verification of Originals of the Documents submitted.
- 3.10. Transport Department, Government of Bihar may apply the provisions of Public Procurement (Preference to Make in India, Order 2017 issued by Department of Industrial Policy & Promotion & its subsequent revisions and Aatma-Nirbhar Bharat Abhiyan) wherever applicable as per guidelines of

Govt. of India. Any Indian manufacturer (Class-I local supplier) having valid technology transfer will be considered as OEM of Major equipment (as defined in 1.2 of Annexure - III) and allowed to utilize the credential of the principal OEM with which it has valid Technology Transfer Agreement. Indian manufacturer (Class-I local supplier) at the time of bidding shall be required to provide a certificate from the statutory auditor or cost auditor of the company giving the percentage of local content. Subcontracting to Indian company is allowed provided technology transfer agreement with Indian company for the entire / extended project period has been executed & who will manufacture equipment in India.

- 3.11. As per Ministry of Finance, Department of Expenditure, Public Procurement Division Order (Public procurement No. 1) F.No.6/18/2019-PPD dated 23rd July, 2020 regarding Restrictions under Rule 144 (xi) of General Finance Rules (GFRs), 2017, Any Bidder (including members of consortium) from a country which shares a land border with India will be eligible to bid in any procurement whether of goods, services (including consultancy services and non-consultancy services) or works (including turnkey projects) only if the bidder is registered with the Competent Authority. In work contracts, including turnkey contracts, contractors shall not be allowed to sub-contract to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority. A certificate of compliance with this order should be submitted by bidder along with technical bid, if applicable. Bidder shall submit the declaration about country of origin for the Quoted equipment in technical bid.
- 3.12. Procurement under this RFP shall be governed by the applicable provisions of Bihar Financial Rules and related Government of Bihar notifications. Relevant Government of India procurement guidelines shall be followed wherever applicable.

4. Scope of Work

- 4.1. The scope of Work shall be as described under "Annexure I - Scope of Work".
- 4.2. The successful Bidder shall perform, execute and implement the Works strictly in accordance with Drawings, details, specifications, standard engineering practices and instructions of Transport Department, Government of Bihar and in accordance with the terms and conditions of the Contract to ensure that the Works proceed smoothly without any delay and to the satisfaction of Transport Department, Government of Bihar.
- 4.3. The Work shall be carried out strictly in compliance with the requirements of the project conditions.
- 4.4. Any subcontracting by the successful Bidder for performance, execution and implementation of the Works shall be with the prior consent of Transport Department, Government of Bihar.
- 4.5. The successful Bidder should make his own arrangement to obtain all materials required for performing, executing and implementing the Works.

5. Earnest Money Deposit

- 5.1. The Bids shall be accompanied by an **Earnest Money Deposit of Rs. 2,00,000/- (Rupees Two lakhs Only)** submitted through the payment gateway at Eproc-Tender portal (<https://eproc2.bihar.gov.in>) OR through irrevocable Bank Guarantee (BG) or Demand Draft (DD) drawn in favour of "Transport Commissioner, Bihar State" issued by nationalized or scheduled banks having head office in India, payable at Patna as per the format given in Form c).
Time of submission for Physical EMD: The scanned copy of the EMD (BG / DD) has to be submitted along-with the technical bid documents on the e-tendering application. Further, the original EMD document has to be submitted during the period between Online Submission End Date and Opening of Technical Bids.
- 5.2. A Bid which is not accompanied by such Earnest Money Deposit will be construed as non-compliant bid and shall be summarily rejected.
- 5.3. EMD of disqualified Bidders will be returned within 30 days after deciding technically qualified bidders.
- 5.4. No interest shall be paid on the EMD whatsoever.
- 5.5. The Earnest Money Deposit of the successful Bidder will be returned upon acceptance of the Work Order, by the successful Bidder, and furnishing the **Performance Bank Guarantee of Rs. 1,00,00,000/- (Rupees One Crore Only)** in the form of DD or Bank Guarantee which will be valid till the completion of 1 year of O&M plus 06 month. Post successful completion of 1 year of O&M, bidder need to submit the PBG equivalent to 10% of total AMC cost (quoted by bidder and accepted by the Transport Department) valid till the completion of AMC plus 06 month. Initial submitted Performance Bank Guarantee (PBG) will be released post submission of PBG for AMC.
- 5.6. Transport Department shall forfeit Earnest Money in case, such Bidder –

1. fails to start the work as may be indicated in the Letter of Award or fails to execute the Contract within a period of 30 days from the date of issue of the Letter of Award.
2. without the written consent of Transport Department, Government of Bihar, has withdrawn its Bid during the validity period of the Bids and any extensions thereto.
3. After opening of the financial bid, alters the quoted rates/conditions in the Bid.
4. Fails to provide /furnish the Performance Bank Guarantee within stipulated period mentioned in the Letter of Award.
5. If a bidder submits a non-responsive bid.
6. If a Bidder withdraws his bid or increases his quoted prices during the period of bid validity or its extended period, if any.
7. If during the bid process, a bidder indulges in any such deliberate act as would jeopardize or unnecessarily delay the process of bid evaluation and finalization.
8. If during the bid process, any information is found false/fraudulent/mala fide, then Transport Department, Government of Bihar shall reject the bid and, if necessary, initiate action provided.
9. If a bidder engages in a corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice.
10. In the case of successful bidder, if he/she fails within the specified time limit –to sign and return the duplicate copy of LOA in accordance with the terms thereof; to sign the contract within the time specified by Transport Department, Government of Bihar; or to furnish the Performance Bank Guarantee within the period prescribed in the contract.
11. During the bid process, if a Bidder indulges in any such deliberate act as would jeopardize or unnecessarily delay the process of bid evaluation and finalization.

6. Submission of Bids

E-submission of bid documents would comprise of the following submissions.

Sr. No.	Submission	Links under which documents are to be uploaded at Bid Submission
1	Tender Processing Cost	Tender Processing Fee
2	Technical Bid Submission	Upload Bid Document
3	Financial Bid Submission	Upload Bid Document
4	Declaration	Declaration

6.1. Technical Bid Submission

The documents listed at para 7.2.2 of the Tender document shall be filled as per the formats provided, shall be duly signed by the authorized signatory and the same shall be scanned and uploaded under the respective links provided for each document under the sub-criteria “Upload Technical Bid Documents”.

6.2. Financial Bid Submission

The documents shall be filled as per the format provided, shall be duly signed by the authorized signatory and the same shall be scanned and submitted/uploaded under the respective links provided for each document under the sub-criteria "Upload Bid Documents".

- ✓ Care shall be taken to upload the Financial Bid document only against the slot/link specified for "Financial Bid" and not to be uploaded in any other slots/links.
- ✓ The Bidder shall complete the Financial Bid submission process by filling in the quoted amount (inclusive of taxes) on the blank space provided next to "**Service Fee**" under the "**Financial Offer**" link.

6.3. Declaration

The Bidder shall comply with the declaration criteria by selecting the compliance options provided in the Declaration web page.

6.4. Completion of Bid Submission

- a. The Bidder shall complete the Bid Submission process by clicking on the "Submit Bid" link provided at the bottom of the "Bid Submission Summary/Overview" web page.
- b. The Bidder shall ensure that a "Green Tick" is displayed at the Status icons provided against each of the five Bid Submission criteria (Tender document Fee, EMD, Upload Technical Bid Documents, Upload Financial Bid Documents and Declaration).
Bidders are required to submit their Bids in two parts through e-procurement portal before the closure of bid submission date/time.

7. Instructions to Bidders

7.1. General Instructions

- a) This is an E-tender; Interested tenderers/Bidders may download the tender document from <https://eproc2.bihar.gov.in> and submit their bids online at e-procurement portal website: <https://eproc2.bihar.gov.in>
- b) Bidders should strictly follow the date & time schedule mentioned under the Tender enquiry on e-procurement portal <https://eproc2.bihar.gov.in>
- c) Bids received on e-tendering portal only will be considered. Bids in any other form sent through sealed cover/email/post/fax etc. will be rejected.
- d) Transport Department, Government of Bihar will not be responsible for any delay in submitting /uploading the offer on tender portal. Hence, bidders are advised to upload their bids well in advance.
- e) The request for extension to "Bid submission end date" should be avoided, in case extension is inescapable, Transport Department, Government of Bihar can take the decision.

- f) For tender content related doubts bidder should contact Transport Department, Government of Bihar contact person, contact details are given in Table above.
- g) While submitting the tender, if any of the prescribed conditions are not fulfilled or are incomplete in any form, the tender is liable to be rejected. If any tenderer stipulates any condition of his own, such conditional tender is liable to be rejected.
- h) All the tender documents & financial bid to be uploaded as per this tender are to be digitally signed by the bidder.
- i) GST registration no. details should be submitted in technical bid.
- j) Bids received after the due date and the specified time (including the extended period if any) for any reason whatsoever, shall not be entertained and shall not be opened in the e-Tendering system.
- k) Transport Department, Government of Bihar reserves the right to revise the scope of work or specifications considered necessary in the bid process through Addenda/ Corrigenda well within the last date of submission of bids.

7.2. Part – 1: The Technical Bid

- 7.2.1. Bidders are required to submit their Bids through e-procurement portal before the closure of bid submission date/time. Proper care should be taken to ensure that the Technical and Financial Bid documents are uploaded in the respective links only.
- 7.2.2. The Technical Bid shall contain supporting documents for the eligibility criteria defined in Annexure III along with duly filled Forms (scanned & uploaded):
 - Form a) - Letter for Submission of Technical Proposal
 - Form b) - Letter of Undertaking
 - Form c) - Earnest Money Deposit as Bank Guarantee Format
 - Form d) - Power of Attorney Format
 - Form e) - Performance Bank Guarantee (format only)
 - Form f) - Deviations Suggested
 - Form g) - Detailed Technical Specifications
 - Form h) - References
 - Form i) - Service Support
 - Form j) - Bidder's Organization, Company Profile and Sub-Contractors
 - Form k) - Description of Approach, Methodology, Work and Training Plan
 - Form l) - Financial Proposal (without prices)
 - Form m) - Contact Details
 - Form n) - Compliance Sheet cum Index Page

In compliance to the provisions of rules for “Recognition, Regulation & Control of Automated Testing Stations” notified by Ministry of Road Transport & Highways (MoRTH), Govt. of India as Chapter-XI in CMVR, bidders shall submit an Undertaking stating “They are not a vehicle manufacturer or service station or automobile dealer or any person related to repair of vehicle or manufacturing or sale of vehicle or automobile spares or scrapping of vehicles”.

Note: The Lead Bidder’s Authorized Signatory shall sign and countersign each and every page of the Proposal Document, including the duly signed copy of the RFP document and all addenda/corrigenda issued, if any.

7.3. Part – 2: The Financial Bid

The Amount quoted shall be inclusive of all applicable statutory taxes (including GST). Further the breakup of prices shall be provided as per Proforma (Form I - Financial Proposal). Proforma shall be duly filled and signed by an authorized signatory from the Bidder’s Company.

- 7.3.1 The Bidders shall quote for the entire works such that the total contract value covers all its risks, obligations and liabilities set out in or to be reasonably inferred from this Tender Document including but not limited to matters in respect of the Site developments, complete building & construction of ATS’s, supply of utilities, supply of exhaust gas handling system, delivery of Test lane equipment up to site, insurance, freight costs, customs clearances, interface management, detailed design, detailing, coordination, value engineering, specialist system procurement, erection and/or installation, testing, commissioning, documentation, training of Transport Department officers, defects remediation, complete operation and maintenance of the ATS’s for 1 year, reporting to Transport Department, Government of Bihar. However, in case of imported equipment, prices quoted shall include all taxes and charges including, but not limited to transit insurance charges from FOB port of shipment or Airport upto the site, including charges for Custom Clearances, etc.
- 7.3.2 The prices shall be quoted in Indian Rupees only. The amounts shall be quoted in figures and words and in case of inconsistency, the words shall prevail.
- 7.3.3 Manner of submission
 - i. The two-part Bid shall be submitted online up to the said date and time.
 - ii. Transport Department, Government of Bihar may, at its discretion, extend the deadline for submission of Bids by issuing an addendum, in which case all rights and obligations of Transport Department, Government of Bihar and the Bidders previously subject to the original deadline will thereafter be subject to the extended deadline.
 - iii. Transport Department, Government of Bihar reserves the right to, without limitation, without incurring any obligation or liability vis-à-vis any Bidder and without expressing any cause or reason thereof, at any time

and at its sole discretion to independently verify, disqualify, reject and/or accept any and all Bids or other information and/or evidence submitted by or on behalf of any Bidder, including without limitation pursuant to and/or in connection with:

- (a) Receipt of a Bid after the submission deadline.
 - (b) failure to submit necessary supporting documentation following a specific request by Transport Department, Government of Bihar.
- iv. All the Bid documents have to be uploaded on the e-procurement portal only. Any document submitted manually or by other means would not be accepted.

7.4. Deviations

- 7.4.1 In case, the Bidder fails to respond to any of the requirements, the Bidder is given the opportunity of explaining why the proposed solution is equivalent or better to the Minimum Requirement by filling document "Form f) Deviations Suggested".
- 7.4.2 In case, Transport Department, Government of Bihar finds any deviation which is not declared as part of the deviation form submitted by the Bidder, Transport Department, Government of Bihar reserves the right to reject the bid summarily without assigning any reasons.

7.5. Amendment to Tender Document

- 7.5.1 Addenda / Corrigenda to the Tender Document may be issued by Transport Department, Government of Bihar prior to the last date of submission of the Bids to clarify the documents or to reflect any modifications etc. All such addenda / corrigenda shall be treated as an integral part of the Tender Document. All such addenda / corrigenda shall be notified only in the e-procurement portal.
- 7.5.2 In order to afford prospective Bidders reasonable time for preparing their tenders after taking into account such amendments, Transport Department, Government of Bihar may, at its discretion, extend the deadline for submission of tenders.
- 7.5.3 In case after issuance of addenda, any Bidder who has already submitted its Bid, does not resubmit its Bid, it shall be deemed that such Bidder does not intend to modify its Bid on the basis of the addenda and the addenda have been taken into account.

7.6. Site Visit

The Bidder, at its own responsibility and risk may visit and examine the sites of work and its surroundings. The costs of visiting the Sites shall be at the Bidder's own expense and will not be reimbursed by Transport Department, Government of Bihar. The Transport Department, Government of Bihar will arrange for the

Bidder and any of its personnel or agents to gain access to the relevant office of proposed site and information, provided that the Bidder gives the Transport Department adequate notice of a proposed visit of prior to at least Five (5) working days. No site visits shall be arranged or scheduled after the Last Date (deadline) for the submission of the Bids and prior to the award of Contract, unless specifically approved by Transport Department in writing. Soil strata data along with structural drawing will be provided by Respective department to the successful bidder.

7.7. Validity of Bids

- 7.7.1 Bids shall be unconditional, firm and remain valid and open for acceptance for a period of 120 days & should be extendable for additional period of 60 days on request by Transport Department, Government of Bihar, without any additional cost, from the last date of submission of Bids. Any Bid having validity lower than that specified above shall be rejected by Transport Department, Government of Bihar as being non-responsive.
- 7.7.2 If a Bidder withdraws or revokes his offer after last date of submission of Bids, the Bidder is liable to be disqualified, and the Earnest Money Deposit submitted by such Bidder is liable to be forfeited. Any Bidder shall not be allowed to carry out any revision / correction / modification in his Bid after the last date of submission of Bids.
- 7.7.3 In case Transport Department, Government of Bihar calls the Bidder for clarifications then this shall not amount to cancellation or withdrawal of original offer. Transport Department, Government of Bihar reserves the right to finalize the technical evaluation by conducting such seeking clarifications, till the start date/time of the financial bid opening and prior to declaration of technical evaluation.
- 7.7.5 Transport Department, Government of Bihar will issue the Work Order within 120 days from the date of award of contract. The validity of Bid / Work Order will be One years including the five years of Warranty and AMC period post commissioning which can be further extended as per terms and conditions mentioned in this tender document. Performance Bank Guarantee has to be submitted by successful bidder at the time of signing of contract, which will be before issuance of Work Order.

7.8. Clarifications to Bidder's queries

The Bidders are requested to raise their queries, if any, by email at stcbihar@bihar.gov.in up to the mentioned time. Transport Department, Government of Bihar will address all the queries received from all the Bidders in the Pre-Bid meeting only. The responses will be uploaded on the e-procurement website. The queries and responses thereto, would be uploaded without identifying the source of queries. The queries should necessarily be submitted in the following format in editable excels.

S. No	RFP Document Reference(s)	Section & Page Number(s)	Content of RFP requiring Clarification(s)	Points of Clarification
1.				
2.				
3.				
4.				

Transport Department, Government of Bihar reserves the right not to respond to questions raised or provide clarifications sought, in their sole discretion, if it is considered that it would be inappropriate to do so. Nothing in this section shall be taken or read as compelling or requiring Transport Department, Government of Bihar to respond to any question or to provide any clarification.

7.9. Bid Evaluation Process

The bidding evaluation process will be as follows:

- **EMD of Rs. 2,00,000/- (Rupees Two lakh Only)** shall be submitted through the payment gateway at E – proc portal (<https://eproc2.bihar.gov.in>) OR through irrevocable Bank Guarantee (BG) or Demand Draft (DD) drawn in favour of "**Transport Commissioner, Bihar State**" issued by nationalized or scheduled banks having head office in India, payable at Patna as per the format given in Form c).
- **Time of submission for Physical EMD:** The scanned copy of the EMD (BG / DD) has to be submitted along-with the technical bid documents on the e-tendering application. Further, the original EMD document has to be submitted during the period between Online Submission End Date and Opening of Technical Bids. Any bid submitted without EMD and Tender document fee will be disqualified.

7.10. Technical Bids Opening

- 7.10.1 The Bids shall be opened online as per the prescribed schedule. (Bidders may present at Transport Commissioner, Government of Bihar office if they wish).

7.11. Technical Bid Evaluation

- 7.11.1 During the technical bid evaluation process, Transport Department, Government of Bihar may ask clarifications from the bidder through E-mail/ Fax, for confirming and consolidating their technical offers. All such clarifications are required to be answered by the bidder by E-mail/Fax, within the time specified by Transport Department, Government of Bihar. The signed hard copies of the same need to be submitted to Transport Department, Government of Bihar and shall be deemed to be the part of the tender documents.

7.11.2 All valid bids shall be evaluated as per “**Annexure VI - Evaluation Parameters**” to determine technically qualified bids.

7.11.3 The result of technical bid evaluation will be published on online portal.

7.11.4 Financial bids of only the technically qualified bidders shall be opened.

7.12. Financial Bids Opening

7.12.1 The Financial Bids of all the technically qualified Bidders shall be opened online.

7.11.2 This will be a segregated bid evaluation system.

7.13. Financial Bid Evaluation

7.13.1 All valid financial bids shall be evaluated/ scrutinized as per “**Annexure VI - Evaluation Parameters**”.

7.14. Determination of the Successful Bidder

7.14.1 The evaluated bid shall be determined as per “**Annexure VI- Evaluation Parameters**”.

7.14.2 The Bidder with the lowest cost as per the evaluation parameters shall be deemed as the successful Bidder (“Successful Bidder”) as per the segregated bid evaluation system.

7.15. Notification and Issue of Letter of Award

7.15.1 After selection, a Letter of Award (LOA) shall be issued, in duplicate, by the Authority to the selected bidder and the selected bidder shall, within 7 (seven) days of receipt of LOA, sign and return the duplicate copy of the LOA in acknowledgement thereof.

7.15.2 At the same time, the selected bidder shall also pay a Performance Bank Guarantee in the form of Demand Draft (DD) or an irrevocable Bank Guarantee in favour of "Transport Commissioner, Bihar State" issued by nationalized or scheduled banks, having head office in India, payable at Patna only. Performance Bank Guarantee has to be submitted by successful bidder before signing of contract, which will be before issuance of Work Order.

7.16. Transport Department, Govt. of Bihar right to accept or reject any or all Bidders.

Transport Department, Government of Bihar reserves the right to accept or reject any bid, and to annul the tender process and reject all Bids, at any time prior to award of Contract without assigning any reasons for such acceptance / rejection, or to divide the Contract between / amongst Bidders without thereby incurring any liability to the affected Bidder or Bidders or any

obligations to inform the affected Bidder or Bidders of the grounds for Transport Department, Government of Bihar action. The Bidders shall not have any cause of action or claim against Transport Department, Government of Bihar for rejection of their bids.

7.17. Non-Exclusivity

The right of the Successful Bidder to perform executes and implements the Works or any part thereof pursuant to the Contract, is not exclusive and shall not prevent Transport Department, Government of Bihar from granting a similar right to other parties.

7.18. Process to be Confidential

- i. Except the public opening of Bids, information relating to the examination, clarification, evaluation and comparison of Bids and recommendations concerning the award of Contract shall not be disclosed to Bidders or other persons not officially concerned with such process.
- ii. Any effort by a Bidder to influence Transport Department, Government of Bihar or any of its functionaries in the process of examination, clarification, evaluation and comparison of tenders and in decisions concerning award of contract, may result in the rejection of the Bid.
- iii. As part of his Technical Bid, the Bidder shall be required to furnish an undertaking for confidentiality as "Form b) - Letter of Undertaking".

7.19. Performance Bank Guarantee

The bidder shall submit Performance Bank Guarantee of Rs. 1,00,00,000/- (Rupees One Crore Only) in the form of Demand Draft (DD) or an irrevocable Bank Guarantee in favour of "Transport Commissioner, Bihar State" issued by nationalized or scheduled banks, having head office in India, payable at Patna only at the time of signing of contract, which will be before issuance of Work Order. All charges whatsoever such as premium; commission etc. with respect to the Performance Bank Guarantee shall be borne by the bidder.

Format of performance bank guarantee is given in Form E).

The Performance Bank Guarantee of the Successful Bidder will be invoked and forfeited if the Successful Bidder fails to comply with the conditions of Work order.

The Performance Bank Guarantee of successful bidder will be returned upon completion of entire period of 5 years of successful operation plus six months. Performance Bank Guarantee has to be provided in the name of State Transport Commissioner, Bihar State.

The Performance Bank Guarantee may be discharged/ returned by Transport Department, Government of Bihar upon being satisfied that there has been due performance of the obligations of the Bidder under the contract. However, no interest shall be payable on the Performance Bank Guarantee.

In the event of the Bidder being unable to service the contract for whatever reason Transport Department, Government of Bihar would invoke the Performance Bank Guarantee. Notwithstanding and without prejudice to any rights whatsoever of Transport Department, Government of Bihar under the contract in the matter, the proceeds of the Performance Bank Guarantee shall be payable to Transport Department, Government of Bihar as compensation for any loss resulting from the bidder's failure to complete its obligations under the Contract. Transport Department, Government of Bihar shall notify the Bidder in writing of the exercise of its right to receive such compensation within 15 days, indicating the contractual obligation(s) for which the Bidder is in default.

Transport Department, Government of Bihar shall also be entitled to make recoveries from the bidder's bills, performance bank guarantee, or from any other amount due to him, the equivalent value of any payment made to him due to inadvertence, error, collusion, misconstruction or misstatement.

The Performance Bank Guarantee shall be forfeited and encash either wholly or partly, inter alia, in the following cases:

- If the Successful Bidder withdraws from the project midway during the project term, If during the project term, there is any incident of gross professional negligence resulting in delayed service, or adversely affecting the quality of the work.
- Any act or acts of the successful bidder which render the project un-operational and Transport Department, Government of Bihar establishes sufficient reasons to forfeit the Performance Bank Guarantee.

Successful Bidder defaults on any condition(s) laid in this document, or breach SLAs as defined in the tender document or violated of any provision of the Contract Agreement.

Successful Bidder is found to have made misleading or false representation in the forms, statements and attachments submitted or attached to the bid, or, The bidder is found indulging in corrupt, fraudulent practices or coercive practices.

7.20. Terms Of Payment

The terms of payment shall be as described in “**Annexure VIII – Terms of Payment**”.

7.21. General

- a. Transport Department, Government of Bihar reserves the right to, without limitation, without incurring any obligation or liability vis-à-vis any Bidder and without expressing any cause or reason thereof, at any time and at its sole discretion amend or supplement the Tender Document and/or the selection process or the dates or other terms and conditions relating thereto, suspend and/or cancel the selection process.
- b. Transport Department, Government of Bihar reserves the right to, without limitation, without incurring any obligation or liability vis-à-vis any Bidder and without expressing any cause or reason thereof, at any time and at its sole discretion to independently disqualify, reject and/or accept any and all Bids or other information and/or evidence submitted by or on behalf of any Bidder, including without limitation pursuant to and/or in connection with receipt of a Bid after the submission deadline and/or determination that bidder will be able to fulfil the requirements of the tender document based on the qualification criteria specified in the document.
- c. The decisions and/or the exercise of discretion by Transport Department, Government of Bihar shall not be challenged by any Bidder and are final.
- d. Any failure by Transport Department, Government of Bihar to exercise any rights hereunder, pursuant hereto and/or in connection herewith shall not be a waiver of those or any other rights unless expressly stated as such in writing by Transport Department, Government of Bihar.
- e. The Bidders and their respective officers, employees, agents and advisers must not engage in any collusive tendering, anti-competitive conduct or any other similar conduct with any other Bidder or any other entity in relation to the preparation or evaluation of Bids or otherwise in any aspect of the Works.

8. Annexures

The Annexures to this document are as listed below –

<i>Annexure I</i>	<i>: Scope of Work</i>
<i>Annexure II</i>	<i>: Site Description</i>
<i>Annexure III</i>	<i>: Pre-qualification Criteria</i>
<i>Annexure IV</i>	<i>: Equipment Details</i>
<i>Annexure IV-A</i>	<i>: IT Equipment Specifications</i>
<i>Annexure V</i>	<i>: Characteristics of Vehicles to be tested</i>
<i>Annexure VI</i>	<i>: Evaluation Parameters</i>
<i>Annexure VII</i>	<i>: Acceptance Criteria</i>
<i>Annexure VIII</i>	<i>: Terms of Payment</i>
<i>Annexure IX</i>	<i>: General Conditions of Contract (GCC)</i>

8.1. Annexure I : Scope of Work

1. General

The scope of work this tender is to set up Automated Testing Stations (ATS's) at 4 identified places in Bihar State including operational and maintenance of ATS's for 1 year. The detailed scope of work is as follows:

- Construction of Automated Testing Stations (ATS's) (comprising of Test Sheds, admin buildings & associated structures) at 4 identified places in Bihar State including Civil, Mechanical, Plumbing, Electrical, I.T. & Fire Fighting System Works fulfilling statutory requirement i.e. obtaining Fire NOC in accordance with norms conforming to local bodies (BUIDCO/ Municipal Corporation/Municipal council /Nagar panchayat etc.). The Transport Department will facilitate and provide necessary assistance as per applicable procedures.
- Site development including Roads (approach road is not required to be constructed by the bidder), Boundary Walls, Parking, Security Room & Landscaping, Plumbing, Equipment Foundations including allied services like test shed trimix flooring, epoxy coating for the flooring, conduiting for cables including 3 phase & Single phase cables, Compressor piping, Drainage, Water Supply, Sewage, Internal and External Electrification and Furniture Planning & Procurement including all statutory and local bodies approvals/ clearances.
- Supply, installation of identified test equipment/system including integration of test systems and systems checking, testing and commissioning of Vehicle Inspection Equipment's at 4 nos. ATS's.
- Supply, installation & commissioning of necessary utilities like DG sets, UPS, Air compressor, Metering Kiosk, Transformer, Air conditioners, Water coolers with RO purifiers etc., calibration tools, special tools and requisite software for smooth operation of the ATS's with necessary reports.

- Supply, installation & commissioning of suitable exhaust gas handling system & provision for fresh air ducting for all underbody inspection pits.
- Operation and maintenance of ATS's for 1 year after the commissioning of equipment with trained Technicians, Supervisors and operators for complete in-use vehicle tests, including all tests mentioned in CMVR. Additional tests, if any, required by Transport Department, Government of Bihar for ensuring optimum safety and emission performance of in-use vehicles shall also be performed. Visual inspection tests both as per CMVR as well as BMVR shall be carried out by the officials of the Transport Department and should be assisted by the operator as per requirement of the Transport Department.
- Comprehensive Annual Maintenance Contract for 3 years after completion of warranty period of 2 years.
- Preparation of Manuals & imparting induction training and refresher training to the officers of Transport Department, Government of Bihar.

The successful bidder shall be expected to complete the works by the intended completion date specified in the contract.

All bidders shall provide a preliminary description of the proposed work method and schedule, including drawings and charts, as necessary. The proposed Approach and Methodology should include program of construction backed with equipment planning and deployment duly supported with broad calculations and quality assurance procedures proposed to be adopted justifying their capability of execution and completion of work as per technical specifications, within stipulated period of completion.

- Note:
1. The work shall be carried out in accordance with CPWD/PWD Specifications 2019 (Civil), NBC 2016 – Part 8 (Building Services – Electrical) or its latest revision, and relevant Indian Standards (IS) codes, unless otherwise specified.
 2. The indicative dimensions of the boundary wall shall be: height – 6 feet and width – 10 inches, or as deemed appropriate

2. Detailed Scope of Work

The Bidder shall be responsible to execute the total scope of work mentioned above in Clause no. 1. The bidder shall be responsible for conducting the site survey and preparing the design. The design shall be submitted to the Department for review and approval, and the bidder shall incorporate all changes, modifications, or clarifications as directed by the Department before submission of the final approved design. The Bidder is requested to take into account all information provided in the Tender Document and its Annexures. The offer shall be suitable to the requirements listed in the complete document.

The locations of 4 nos. ATS's proposed in Bihar State & No. of inspection lanes to be established in respective ATS are indicated in below Table 1.

Table 1: Details of ATS's

Sr. No.	Locations of ATS's in Bihar State	No. of Lanes		
		Two-Wheeler Inspection Lanes	Light Duty Vehicle Inspection Lanes	Heavy Duty Vehicle Inspection Lanes
1.	Aurangabad	1	1	1
2.	Jehanabad	1	1	1
3.	Nawada	1	1	1
4.	Saharsa	1	1	1
Total No. of Lanes		4	4	4

2.1 Civil Work

Each ATS to be established will consist of Test Shed, Admin building, Parking area, for "To be tested" & "Tested vehicles", Internal roads and Equipment foundations.

2.1.1 Test Shed

The Test Shed is considered as a state-of-the-art of ATS which consist of Test Lane equipment, IT System, CCTV System & Fire Fighting System works etc.

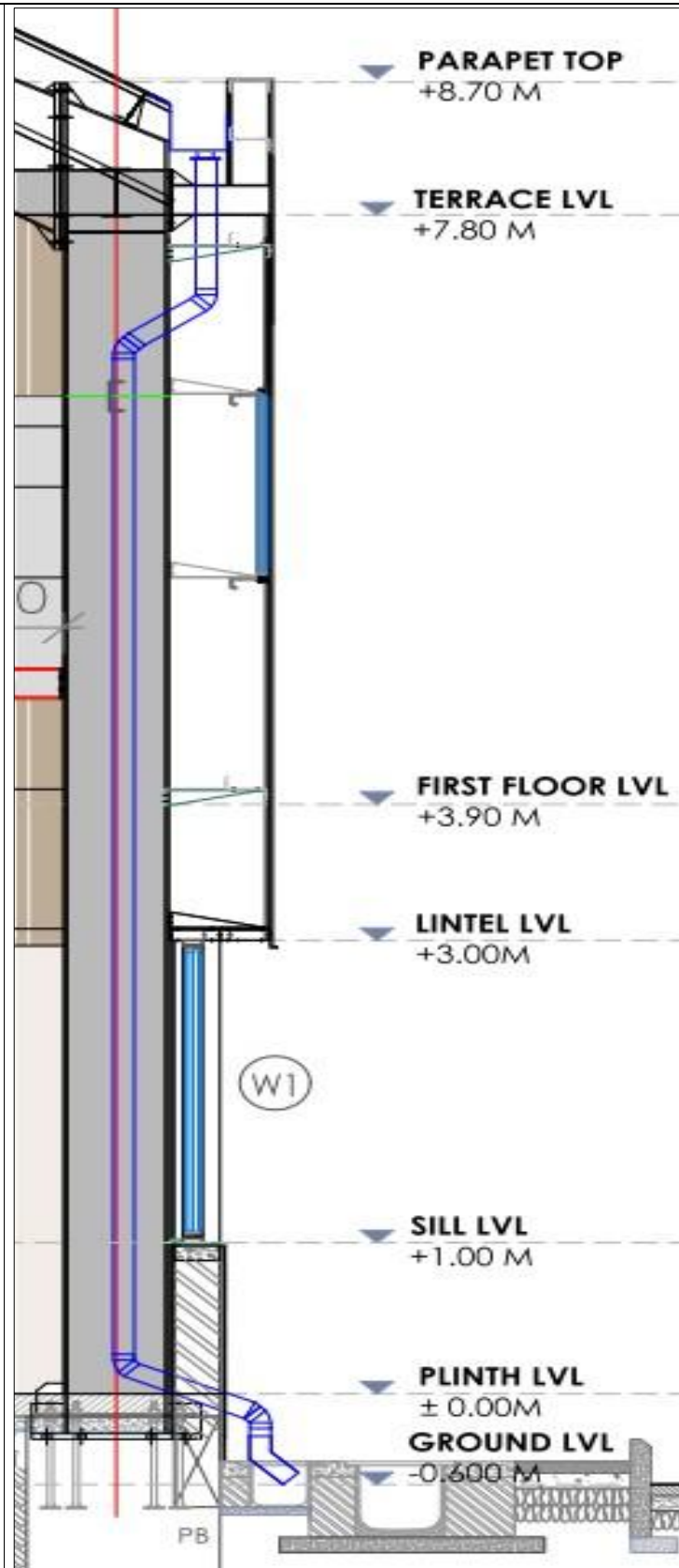
Inspection Test Shed shall keep equipment foundations for all the inspection Equipment's, power Supply points for all inspection equipment's. Additionally, required electrification including indoor and outdoor lighting, lightning protection and proper earthing of all buildings should be carried out by bidder only.

Details of Pre-Engineered Building for Test Sheds of ATS's are as follows:

- I) Building Description
Refer enclosed indicative Drawings for technical details.
- II) Building Usage:
Proposed ATS for 3 Lane Test shed is indicative.

LENGTH	36.37M O/O OF BUILDING (steel line)
WIDTH	14 M O/O OF BUILDING (steel line)
TIE LEVEL	Test shed @7.65 M Tie level from finish floor level.
C/C COLUMNSPACING	1 Bay – 5.826 M c/c (GRID 1-2) - TEST SHED 1 Bay – 1.145 M c/c (GRID 2-3) 3 Bays – 7.00 M c/c (GRID 3-6) 1 Bay – 6.971 M c/c (GRID 6-7) 1 Bay – 6.912 M (GRIDS A-B) TEST SHED 2 Bays – 7.00 M (GRIDS B-D) TEST SHED 1 Bay – 6.912 M (GRIDS D-E) TEST SHED 1 Bay – 6.517 M (GRIDS E-F) FOR UTILITY 1 Bay – 3.771 M (GRIDS F-G) FOR STAIRCASE
ROOF SLOPE	Screw down system roof with slope 1: 10 at 6 degrees
WIND BRACING	Only Portal bracings are allowed.
TYPE OF BRACING ON WALL	Cross bracing up to 5m ht.
TYPE OF BRACING FOR ROOF	Cross Bracing
ROOF PANEL	Screw down system, 0.50 mm thick Pre-Coated Bare Galvalume Roof

ROOF INSULATION	Fiber glass wool insulation WMP 50 (of make Uptwiga) of 24 kg/cu.m. density and 50 mm thick with white backing having embedded mesh with ultimate White Lamination
GIRTS	Sidewall girts and End wall girts are mounted on the exterior face of the main column. The wall girts at 3m level from FFL (ground floor window) and at 3.28 m level from FFL (ground floor window) should be 2 nos 'C'-section as per Drawings to fix Aluminum window. The gap below shall be covered with soffit panel from under. Soffit panel to match the sheet color. 'C' girt for window should be designed to take the load of Aluminum window. All Secondary members (purlins and girts) to be galvanized. Note: please refer window section given below:



ACCESSORIES

1. Flashing should match sheeting color.
2. Gutters of GI.
3. Downspouts **(from inside of building)** of PVC (should match with column color). Downspouts to be extended up to **FRL**.
Z-Type Aluminum horizontal louvers for toilet shaft.

ROOF LIGHTING	2 mm thick Polycarbonate Day lighting panels sheets to be provided as shown on drawing. Safety net to be provided below day lighting panels.
FRAMED OPENINGS	‘A’ SIDE ELEVATION 1 no. of framed openings (W1 = 2.00 x 2.00 m) from grid 5 to 7. ‘B’ SIDE ELEVATION 4 nos. of framed openings (RS= 4.00 x 6.00 m) from grid A to E. ‘C’ SIDE ELEVATION 1 no. of framed openings (W1 = 2.00 x 2.00 m) from grid 1 to 7. ‘D’ SIDE ELEVATION 4 nos. of framed openings (RS = 4.00 x 6.00 m) from grid E to A. Sectional door load to be considered on Framed Openings. MS brackets 450mm should be provided to support rolling shutter from inside.
CANOPY	‘B’ SIDE Canopy = 27.82m X 2.50m PEB canopy @ 6.00M HEIGHT ‘D’ SIDE Canopy = 28.35m x 2.50m PEB canopy @ 6.00M HEIGHT ‘D’ SIDE Canopy = 10.29m x 2.50m PEB canopy @ 3.28M HEIGHT
PAINT FINISH	Factory applied two coat of zinc chromate red oxide primer and two coats of synthetic enamel spray painting on structure on site (with proper enclosed area) as per approved color (RAL no.).
VENTILATORS	Turbo ventilators on Roof to be designed for four air changes.
MEZZANINE LOAD	Mezzanine at 3.90 m Ht. with Load of 350 kg/sqm. Steel Staircase in PEB scope.
EOT CRANE	-
MONKEY LADDER	-
FASCIA	Fascia as shown in drawing.

2.2 Notes:(Indicative)

- 1 PEB Design shall be as per **ASI**.
- 2 Drawings should be followed for details along with **General Features**.
- 3 **250 Kg/ Rmt.** Load of services to be considered on each column (including Gable end columns for services support) and Service Bracket of **600 mm wide** at **4.60M** Level for **200kg load** to be provided.
- 4 Consider **25kg/Sq.m.** load of sprinkler & light fittings on roof purlin. **25kg/Sq.m.** for solar Load.
- 5 Steel line (wall cladding) **500 mm** projected outside the column face on all sides of shed.
- 6 Two coats of synthetic enamel should be **spray painted** on PEB Members (not by brush application).
- 7 Services support may be welded to the column & rafters **if required**.
- 8 All PEB columns should be **200 mm bellow FFL (STIFFENER PLATES SHOULD BE BELLOW FFL)**.
- 9 All sheeting screw should have cap of sheeting color (for wall cladding).
- 10 Safety nets should be provided below sky light panel.
- 11 **NO 'C'** sections Wall girt should be provided at **3m level and at 3.28 m level from FFL**. The internal wall c-sections shall be heavy duty to avoid sagging. (sagging will create gap between window top and wall girt) PDA drawing. Shall be followed for the 'C' sections fixing detail.

2.2.1 Indian Standard Codes to be followed for Loading, Member Design, Deflection limits and Load Combinations:

List of Reference IS codes:

- IS:875-I Code of Practice for Design Dead Loads for Building and Structures
- IS:875-II Code of Practice for Design Imposed Loads for Building and Structures
- IS:875-III 2015 Code of practice for design loads (other than earthquake) for buildings and structures.
- IS:1893 2016 Criteria for earthquake resistant design of structures.
- IS:4326 Code of Practice for earthquake resistant design and construction of buildings
- IS:800 2007 Code of practice for use of structural steel in general building construction
- IS:801 Code of practice for use of cold-formed light gauge steel structure members
- IS:806 Code of practice for use of steel tubes in general building construction
- IS:808 Dimensions for hot rolled steel beam, column channel and angle section
- IS:811 Specification for cold formed light gauge structural steel sections
- IS:813 Scheme of symbols for welding
- IS:1079 Hot rolled carbon steel sheet and strip – specification
- IS:2062 Hot rolled medium and high tensile structural steel – specification

- IS:4923 Hollow steel sections for structural use.
- IS:1161 Steel tubes for structural purpose
- IS:4736 Hot dip zinc coatings on mild steel tubes
- IS:4759 Hot dip zinc coatings on structural steel and other allied products specification
- IS:1868 Anodic coatings on aluminum and its alloys
- IS:2395-I Paintings of concrete, Masonry and plaster surfaces – code of operations and workmanship
- IS:2395-II Code of practice for painting concrete, masonry and plaster surfaces: schedule
- IS:1477-I Code of practice for painting of ferrous metals in buildings: pre-treatment
- IS:1477-II Code of practice for painting of ferrous metals in buildings: painting
- IS:19805 Code of practice for structural use of un-reinforced masonry
- IS:3067 Code of practice for general design details and preparatory works for damp/water proofing
- SP:6 Handbook for structural engineers (all parts)
- SP:7 National Building Code of India
- SP:16 Design Aids for reinforced concrete to IS:456
- SP:20 Handbook on masonry design and construction
- SP:22 Explanatory Handbook on codes for earthquake engineering
- SP:24 Explanatory Handbook on Indian Standard Code of Practice for plain and reinforced concrete
- SP:25 Handbook on causes and prevention of cracks in buildings
- SP:32 Handbook on functional requirements of industrial buildings
- SP:34 Handbook of concrete reinforcement & detailing

2.2.2 Erection of Structures:

- 1 Bidder shall erect the structural items such as columns, rafters, beams, Purlins, tie rods, sheets, wall cladding/roofing insulation, hardware etc. after approval from the Transport Department, Government of Bihar for drawings / BOM.
- 2 Bidder shall also carry out necessary finishing activities such as painting touch up etc.
- 3 Bidder shall deploy qualified/competent team at site to carry out the above erection activity.
- 4 Bidder shall also deploy their specialized team during plinth casting of J bolts / alignment (base) plates etc.
- 5 Site modification for primary and secondary members are not allowed.

2.2.3 General

Following shall be submitted/Confirmed by Successful Bidders to the Transport Department, Bihar for approval:

1. Structural design calculations including STAAD. Pro 3D analysis along with Base Plate Sizes and Anchor Bolt Plan.
2. GA drawings along with BOM.
3. Erection Methodology
4. Safety Measures
5. Bidder shall supply the structural materials such as columns, rafters, beams, purlins, tie rods, sheets, wall cladding/roofing insulation, hardware etc. to the site as per the approved drawings. Cladding/roofing insulation, hardware etc. to the site as per the approved drawings.
6. Raw materials for steel sections, sheets etc. shall be of reputed make such as Jindal, RINL, SAIL, Tata steel etc.
7. Bidder shall take prior approval from the Transport Department, Government of Bihar for the make prior to proceeding with procurement action.
8. Bidder shall also supply the J bolts/nuts/washers, alignment plates and other related hardware that are used for positioning and anchoring of the PEB structures to the RCC foundation.
9. All the items shall be supplied directly to the project site.
10. Proper Co-ordination with Civil and Services Contractor is Must during Erection and finishing of the Structure.

2.3. Admin Building

Admin building shall consist of (indicatively, to be finalized in consultation with the Transport Department as per directions of the Transport Department) as per the layout plan:

- One HOD room with attached washroom
- Conference room for 10 persons (as per the layout plan)
- Waiting hall for at least 20 persons waiting, along with reception, vehicle papers checking, token issue counters.
- Staff room with Asst. HOD's half cabin
- Storage room
- Record room
- Certificate issue room with counter
- UPS & server room
- Washrooms (Male -2 & Female - 1)
- Dining hall (Without Kitchen)

2.4. Construction of Equipment Foundations including flooring

The bidder shall deploy an Implementation Team with demonstrable skills and experience in order to achieve the requested quality of design, construction & civil work of equipment foundations including allied services like test shed trimix flooring, epoxy coating for the flooring, conduiting for cables including 3-phase & Single-phase cables & drainage, compressor piping, fresh air ducting for all underbody inspection pits etc.

All the civil work of equipment foundations will be executed by successful bidder as per CPWD norms. Wherever CPWD norms are not applicable, the successful bidder will take consent from Transport Department, Government of Bihar for execution of civil work of equipment foundations. Thickness of Epoxy coating should be at least 3 mm. Color scheme for epoxy coating of test shed flooring will be provided by Transport Department, Government of Bihar.

2.5. Utilities

The bidder is responsible for supply, installation & commissioning of utilities required for each ATS mentioned in **Table 2**. The bidder should note that the capacity of utilities given below are for 3 lanes (one two-wheeler, one HMTV and one LMTV lane) ATS Centre & it will vary w.r.t. no. of lanes. Before procurement, the bidder shall submit the details site-wise, and procurement shall be done only upon written approval from the Transport Department. Bidder may also suggest utilities of similar specification.

Table 2: Utilities required for each ATS

Sr.No.	Description of Utilities	Quantity	Capacity	Preferred / Equivalent Make	Remarks
1	DG set	1	100 KVA	Kirloskar-Oil Engines Cummins Ashok Leyland Mahindra Powerol Greaves Volvo	Outdoor, With AMF panel Compliant to latest CPCB-IV norms, DG Set Foundation, cable containment along with other necessities.
2	Air Compressor	1	10 bar	Ingersoll Rand Elgi Equipment's Limited Atlas Copco	In Test shed for supply to equipment as per IS certified
3	Air Compressor (for Tyre filler)	1	3 HP motor	Ingersoll Rand Elgi Equipments Limited Atlas Copco	For inflating tyres as per IS certified
4	UPS	1	20 KVA	Emerson Luminous Novature Vertiv Numeric	Test shed area, for supply to equipment PC's Half an hour backup time with maintenance free batteries
5	UPS	1	6 KVA	Emerson Luminous Novature Vertiv Numeric	30 Min Power backup time with maintenance free batteries.
6	Internet	1	1 connection		Minimum 5 Mbps speed
7	IP Phone, EPBX	1	1x10 connections		
8	Air Conditioners	3	1.5 T	Blue Star Voltas LG	For Server room, HOD room, conference room Split type
9	Transformer	1	320 kVA	RPG Kirloskar Voltamp	Outdoor Oil filled Air cooled, Foundation, cable containment along with other

Sr.No.	Description of Utilities	Quantity	Capacity	Preferred / Equivalent Make	Remarks
				Raychem	necessaries.
10	Metering Kiosk	1	11 kV	Hupen	
11	Furniture	For office use & citizen waiting area as per requirement of ATS			
12	Water cooler with RO	2	20 Ltr.	Blue Star Voltas	For drinking water
13	9u Network Rack or better	2			IP 55 rated or better
14	42u Network Rack or better	1			IP 55 rated or better

Bidder is requested to fill & comply with the technical specifications of utilities mentioned in **Form G): Detailed Technical Specifications**.

2.6. Test Lane Equipment

The scope of this tender is to procure Test Lane Equipment and their installation, commissioning and integration in the Automated Testing Stations (ATS's) to be established at 4 identified places in Bihar State. Following equipment are required for these 4 nos. Automated Testing Stations (ATS's). Technical specifications of equipment are given in **Annexure IV**.

Table 3: List of equipment's

S. No.	Equipment	UoM	QUANTITY
1	Common Equipment		
i	Bogie Roller Set for 4 lanes (Embedded for heavy commercial vehicles with multi axles having more than one live axle) (Refer definition of one set of Bogie roller in Annexure IV: Equipment details, clause no. 2.2.2)	Nos.	4 set
ii	Free wheel Trolley for 8 lanes (Portable for All wheel Drive Light Commercial vehicles)	Nos.	4 set
iii	Toeing trolley or rail Trolley (For front wheel of 3-Wheeled vehicle): 1 per ATS (for 4 ATS's)	Nos.	4
iv	Calibration Equipment set	Nos.	4
v	Automatic Tyre pressure filler and indicator	Nos.	8
vi	Number Plate Reader (NPR) Camera (Digital Camera with online connectivity to the PC) (for 4 ATS's)	Nos.	12
vii	IR Illuminator	Nos.	12
viii	Global Positioning System enabled camera: 1 no. per lane (for 4 ATS's)	Nos.	12
ix	Desktops (as per Annexure IV-A): 4 nos. per ATS for administrative purpose & 3 nos. per lane for lane equipment operation (for 4 ATS's)	Nos.	52
x	Speed dome camera (as per Annexure IV-A) (for 4 ATS's)	Nos.	12
xi	Printer: 3 nos. per ATS for printing reports /certificates (as per Annexure IV-A) (for 4 ATS's)	Nos.	12

S. No.	Equipment	UoM	QUANTITY
xii	Sticker Printer: 2 nos. per ATS (as per Annexure IV-A) (for 4 ATS's)	Nos.	8
xiii	Token printer: 2 nos. per ATS (for 4 ATS's)	Nos.	8
2	Server, CCTV, Audio paging, Smart TV with CCTV viewer, LED displays, LAN Network (As per clause 1.4 IT Platform of Annexure IV – Equipment Details & IV-A)		
i	Server: 2 nos. per ATS (1 no. as a main server & 1 no. as a backup server) (for 4 ATS's)	Nos.	8
ii	CCTV: 10 nos. per ATS for test shed & admin block (total 40 nos.) and 2 nos. for each under body inspection pit (total 24 nos.) (for 4 ATS's)	Nos.	64
iii	Audio paging: 1 no. per ATS (for 4 ATS's)	Nos.	4
iv	Smart TV with CCTV viewer: 1 no. per ATS (for 4 ATS's)	Nos.	4
v	LED displays: 3 nos. per lane (for 4 ATS's)	Nos.	36
vi	LAN Network: (for 4 ATS's) (With other associated items)	Lumpsum	Necessary LAN network hardware with cables shall be provided.
vii	Installation Cost (Equipment) etc.	Lumpsum	1
viii	Integration with Vahan, Sarathi, NIC, SMS Gateway etc.	Lumpsum	1
ix	Software for (NPR & ATS)	Lumpsum	1
x	PTZ Camera	Nos.	12
xi	8 Port L2 (Industrial PoE) Switch	Nos.	16
xii	L3 Switch 24 Port (Industrial PoE)	Nos.	4
xiii	64 Channel NVR	Nos.	4
3	Light Duty Vehicles Inspection Lane		
i	Roller brake tester	Nos.	4
ii	Suspension tester	Nos.	4
iii	Side slip tester	Nos.	4
iv	Joint Play tester	Nos.	4
v	Electronic Steering gear play detector	Nos.	4
vi	Semi-Automatic Head light tester	Nos.	4
vii	Smoke meter (Opacimeter)	Nos.	4
viii	Exhaust gas analyzer	Nos.	4
ix	Speedometer Tester	Nos.	4
x	Sound level Meter	Nos.	4
xi	OBD scan tool	Nos.	4
xii	Test fingers	Nos.	4
xiii	Insulation Tester	Nos.	4
4	Heavy Duty Vehicles Inspection Lane		
i	Roller brake tester	Nos.	4
ii	Joint Play tester	Nos.	4
iii	Electronic Steering gear play detector	Nos.	4
iv	Side slip tester	Nos.	4
v	Semi-Automatic Head light tester	Nos.	4
vi	Smoke meter (Opacimeter)	Nos.	4
vii	Exhaust gas analyzer	Nos.	4
viii	Speedometer Tester	Nos.	4

S. No.	Equipment	UoM	QUANTITY
ix	Sound Level Meter	Nos.	4
x	OBD scan tool	Nos.	4
xi	Test fingers	Nos.	4
xii	Insulation Tester	Nos.	4
5	Two-Wheeler Vehicles Inspection Lane		
i	Roller brake tester	Nos.	4
ii	Axle weight measurement device	Nos.	4
iii	Semi- Automatic Head light tester	Nos.	4
iv	Exhaust gas analyzer	Nos.	4
v	OBD scan tool	Nos.	4
vi	Test fingers	Nos.	4
vii	Insulation tester	Nos.	4

The purpose of CCTV cameras to be installed in underbody inspection pits is to monitor & record underbody inspections being carried out by operator. CCTV footage of underbody inspections, need to be stored on central server of the ATS.

The bidder shall have total responsibility for the process including all phases of design, manufacture, assembly and functional testing of the equipment, shipment, installation, commissioning, integration of systems, training and system checking for all the elements listed above. The bidder shall give the final cost which includes basic cost of equipment, all the applicable taxes including GST, duty, freight and insurance charges, transport charges up to destination, installation and commissioning and trainings. The expenses of any fuel at the time of installation and commissioning of equipment have to be borne by the successful bidder.

2.6.1. Software

Bidder shall ensure the system upgradation with the latest software version free of cost for the first two years under warranty. The comprehensive AMC charges for next three years should include software upgradation charges also. The referred system upgradation shall be applicable in the event of:

- Critical releases on the software
- New Operating System adoption
- Accumulation of minor upgrades in the software
- Any changes in the test limits or test procedure or reporting requirement.

If Hardware upgradation is required in order to achieve the software upgradation, this will also be included free of charge. This includes, as an example, the computer, connections and communication cards. The supplier is also responsible for completing the tests for commissioning the upgraded software. This software should have provision to match and compile the data of any new software developed by any other agency in other ATS's in the country. If any upgradation of the software system is required for integration with other external software, the supplier shall provide full cooperation and if required develop any new software which would eventually result in compilation with other software's. Required help for integration of software with other external software shall be provided by

Transport Department, Government of Bihar/NIC. Hardware required for networking with other ATS's should be provided by successful bidder only.

Each test lane should be designed to facilitate 3 to 4 individual test positions to achieve the maximum test throughput. In general, throughputs of minimum Twelve (12) Two-Wheelers per hour for the light duty lane, minimum Eight (8) vehicles per hour for the light duty lane and minimum six (6) vehicles per hour per lane for the heavy-duty lane should be achievable with trained inspectors. The test lane instruments must be designed to achieve the required throughput and duty cycle.

Presently the Transport Department is using VAHAN software developed by NIC for registration of vehicles. The bidder is required to integrate their system software to link with above module for vehicle data. At the end of operation/AMC all data has to be handed over to the Transport Department, Government of Bihar including software integration protocols. The bidder should also provide all integration protocols of software which are required for integration with other software's.

The appointment for vehicle fitness test at ATS shall be booked electronically, through the **Automated Fitness Management System (AFMS)** portal set up by NIC / Central Government etc.

The following documents and information shall be indicatively fetched / uploaded at the time of booking a slot for fitness test at ATS, namely: -

- (i) Registration Certificate of Vehicle, along with Form 25 of CMVR, wherever applicable.
- (ii) valid Insurance Certificate.
- (iii) last valid Permit, wherever applicable.
- (iv) Mobile number and email ID of the registered owner or authorized signatory.

The other details related to the vehicle, not limited to the following, shall be fetched automatically from the VAHAN database, namely: -

- (i) Chassis Number;
- (ii) Engine number;
- (iii) Fuel;
- (iv) Vehicle Class;
- (v) Vehicle Category;
- (vi) Make and Model;
- (vii) Gross Vehicle Weight (GVW);
- (viii) Month and Year of Manufacture;
- (ix) Speed Governor Serial Number, wherever applicable.
- (x) Date of last fitness test conducted; and
- (xi) Result of the last fitness test (Fit / Fail / Conditional), including reason for failure, if available.

Lane operation software shall have security locks for operator and vehicle. At each test station, test operation will commence after scanning the operator Id. Card. & Registration plate number. Display of testing station in a test lane shall not indicate any test result. All test results shall be masked on the test lane with encrypted test

data. The test report shall be generated automatically and digitally signed with relevant details, immediately after completion of all tests.

The test data and report generated shall be kept in a safe and secured facility and uploaded on the electronic portal. Photographs of vehicle and its Chassis and Engine number shall be captured by Global Positioning System enabled camera and shall be kept in a secured facility and uploaded on the electronic portal along with the tests data and report. The results shall also be integrated with VAHAN Database.

Test report so generated shall be sent to the registered owner or authorized signatory through physical and electronic mode and the test report shall include the following, namely: -

1. ATS Name and registration number.
2. date and time of the test.
3. vehicle details – Registration number, Type, Make and Model.
4. visual check details.
5. measured and permissible values of functional tests.
6. date of calibration of each equipment of the ATS on which tests are conducted.
7. list of functional tests or visual checks failed by the vehicle, in case certificate of fitness is not granted.
8. unique QR code

The vehicle test report so generated shall be as per the format given in “**Form 69 - FORM FOR VEHICLE TEST REPORT**” of CMVR as amended from time to time. Software should have the facility to print the vehicle fitness test pass sticker in the format as specified in CMVR.

2.6.2. Calibration

Each equipment shall be supplied with all the required calibration certificates.

All measuring devices shall be calibrated, and traceable calibration certificates shall be available by the time of inspection on-arrival and shall be included in the documentation delivered by the supplier. Calibration plan shall be included. The calibration plan shall be approved by the Transport Department, Bihar. Any recommendations of the Transport Department, Bihar shall be adhered to, by the bidder.

Arrangement of calibrated material for the on-arrival inspection and final acceptance is the responsibility of the equipment supplier.

Calibration tools and plan need to comply with International Standards and Accreditation, i.e. ISO/IEC 17025:2017 and / or NABL. Calibration facility and traceability to national and international laboratories should be provided.

The Smoke Meter (Opacimeter) and Exhaust Gas Analyzer shall comply with CMVR Rule 116 (3) or AIS-137 (Part 8). For the remaining equipment, in case of non-availability of recognized accreditation agency, the Bidder shall submit thorough explanations on the calibration procedure used. The same shall be approved by the Transport Department, Bihar. Any changes/ recommendations of the Transport Department, Bihar shall be adhered to, by the bidder at no extra cost to the Transport Department, Bihar.

Calibration equipment as described in **Annexure IV**, shall also be available with the Bidder in order to maintain the required performances of all the testing equipment included in this tender. The equipment should not operate if its calibration due date is over or its next calibration due date is not updated in the software. The interlock for the same should be provided in the software.

2.6.3. Climatic Conditions

The bidder is responsible for the declared performances to be reached under the climatic condition appearing in “**Annexure II - Site Description**”.

2.6.4. Health & Environmental Requirements

All above equipment's must meet the Environmental, Health and Safety aspects (CE or equivalent). Certificates shall be included in the Documentation. If hazardous material is used, please provide MSDS (Material Safety Data Sheet).

2.6.5. Documentation

At the time of equipment delivery, the supplier is required to provide, for each equipment, manuals in English & Hindi languages containing description of the equipment with detailed drawings, instructions on the operation of the system, detailed software control commands, safety systems, calibration plan and procedure, full maintenance plan and procedure details.

Calibration certificates shall be included in the documentation.

Documentation (for each ATS) shall be delivered in Two Hard Copies and in Two Soft Copies (in pen drives).

Inspection on-arrival and Acceptance Tests

An inspection on-arrival of the equipment to be supplied shall be performed in the presence of a team of 4 – 5 persons for each site as decided by Transport Department, Government of Bihar. All arrangement in consultation with Transport Department, Government of Bihar shall be made by the bidder. Bidder shall be responsible for all the costs towards inspection, Travel, Lodging and Boarding of the team etc. These tests shall be carried out at the premises identified by the bidder in India, preferably in the state of Bihar (during pre-acceptance tests), or at

the respective sites of ATS's in Bihar (after commissioning of equipment), as per **"Annexure VII - Acceptance Criteria"**.

Certificates of calibration from recognized accreditation agency, as per **"Annexure**

VII - Acceptance Criteria" shall be submitted. If re-inspection by the team is required by any circumstances, total expenses for revisit shall be borne by the successful bidder.

Demonstration of the performance of the supplied equipment shall be performed as per tests described in **"Annexure VII - Acceptance Criteria"**. The successful bidder shall provide detailed acceptance procedure during the design review meeting.

2.6. Exhaust Gas Handling System

Suitable exhaust gas handling system (to take care of exhaust of the vehicle under test) is to be selected & supplied, installed & commissioned by the bidder for all 4 ATS's. The exhaust gas handling system shall maintain proper ventilation inside the test shed.

Minimum requirements of Exhaust gas handling system are as follows.

- LCV and Two-wheeler Lane:
Vehicle Exhaust Flow: 550m³/hr
Vehicle Exhaust Temperature: 80°C to 100°C
- HCV lane:
Vehicle Exhaust Flow: 1500m³/hr
Vehicle Exhaust Temperature: 100°C to 110°C

Blower should be designed considering above vehicle exhaust flow & temperature. Dilution of the vehicle exhaust should be carried out considering vehicle exhaust temperature. Suitable extraction unit should be provided along with each blower. Suction Velocity of exhaust at the end of extraction unit is to be in the range of 13 -15 m/s. Suitable standard flexible hoses with required length need to be provided. While all blowers in working condition, noise level should be below 80dB inside the test shed.

Bidder should also provide fresh air ducting for all underbody inspection pits.

2.8. Operation and Maintenance of ATS's for 1 years

The Successful Bidder is required to operate all 4 nos. ATS's including utilities for a period of 1 Years from the date of successful commissioning of test lane equipment's. The cost of operation must include cost of manpower, consumable including water, electricity, internet, telephone, gases, fuel etc., maintenance and spares and all other associated costs. All cost for obtaining electricity and its connection should be considered by the bidder in the total bidding price itself. The bidder will be responsible for providing housekeeping, security, maintenance of construction and utilities and servicing of all utilities for a period of 1 Years of

operation. Transport Department, Government of Bihar will collect the test fees & issue fitness certificate. The bidder will be responsible for providing test report to the Transport Department, Government of Bihar authority. The Bidder shall deploy requisite number of Trained Office staff, Technicians, Operators, Supervisors and Managers at the ATS for operation of the equipment, testing of vehicles and issuing a Fitness Test report. The bidder is required to provide the organization chart for operation of the ATS. The standard operating procedure of the ATS shall be displayed in the waiting area for public as well as staff.

Eventually, the ATS is expected to run in two shifts as and when the number of vehicles increases beyond one shift operation.

The bidder is required to establish QA/QC document for following operations:

- Test procedures for testing vehicles in the lane
- Calibration procedure and plan
- Maintenance procedure and plan
- Data Management (Data storage, mining, archiving, etc.) & Networking
- Optimization for vehicle throughput, detail flow of the Testing process to be followed including customer handling process
- Test report customization and generation
- Interact with Vehicle operators for Testing vehicles
- Check relevant documentation

The Bidder is required to independently operate all 4 ATS's. The bidder should be able to do the following for running of operations.

1. Equipment management

1. Bidder or his consortium partner should also have experience of running computerized inspection centers.
2. The Bidder or its consortium should have experience in inspecting a wide range of vehicles, including Two-Wheelers, Light Commercial Vehicles (LCVs) and Heavy Commercial Vehicles (HCVs).
3. The bidder or his consortium should have successful track record of operating the lanes and testing the vehicles.

2. Manpower management

The bidder shall deploy one dedicated person as a point of contact for entire project duration for coordination between the Transport Commissioner's office, Regional Transport Offices and ATS's etc. Details of the same need to be given in the technical bid.

1. Additionally, the bidder should be able to deploy required manpower like Centre Head / Manager, Trained Technicians, Operators, Supervisors and drivers at the ATS's for operation of the equipment, testing of vehicles and issuing a Fitness Test report.
2. The minimum requirement of manpower on the basis of number of lanes per shift shall be as under:

Sr. No.	Designation	Minimum manpower requirement	Minimum Qualification
1	Centre Head/Manager	1	Diploma in Automobile or Mechanical or Electrical or Electronic Engineering or related disciplines with at least five years of professional experience which includes at least two years of experience in vehicle inspection, manufacturing or repair and shall have thorough knowledge of the Act and the rules made thereunder.
2	Lane in-charge / Supervisor	1 per lane	Diploma in Motor Mechanics or Diploma in Mechanical or Automobile or Electrical stream from recognized institution with minimum three years of experience in automobile repair and maintenance.
3	Lane Operator	2 per lane	Diploma in Motor Mechanics or Electrical or Computer stream from recognized institution with minimum two years of experience in automobile repair and maintenance.
4	Information technology in-charge/System Analyst	1 (up to 2 Lanes) 2 (up to 4 lanes)	Diploma in Computer Science or Information technology or Electronics and Communication Engineering or related disciplines from recognized institution with at least three years of experience in hardware, software and networking.
5	Data Entry Operator	1	Diploma in Computer Application with basic computer knowledge.
6	Driver (Two-Wheeler, Light Motor Vehicle /Heavy Motor Vehicle)	2 per lane	Driving license with minimum five years of driving experience (Light Motor Vehicle or Heavy Motor Vehicle).
7	Maintenance Technician	1 for every 2 lanes	Diploma in Air Conditioning and Refrigeration or Industrial Training Institute Electrician or Diploma in Mechanical or Electrical from recognized institution with minimum two years of experience in electrical maintenance.

3. The bidder should manage the team of operators for smooth and efficient running of ATS's and maintain the record of manpower working in the ATS's. The bidder should furnish the required details of manpower utilization periodically.

4. The bidder is required to comply with the legal requirements of deployed manpower as per applicable Indian governing laws including labour laws.

5. The bidder is required to ensure to follow Industrial safety norms manpower deployed at the operation lane.

6. Trainings

1. Bidder should have in-house team for providing training to inspectors, other staff and DoT officials for inspection. In addition to English and Hindi, Bidder is required to provide training in Hindi language.
2. Bidder should have in-house team to provide update trainings as and when required for the operators and inspectors.

7. Operation procedures

1. Bidder should have duly defined Operation procedures for inspecting and testing of vehicles.
2. The standard operating procedure of the ATS shall be displayed in the waiting area for public as well as staff.
3. Bidder should provide manuals in English, and Hindi for testing and inspection of vehicles in soft copy and hard copies.

8. Calibration

1. Bidder should have a scheduled calibration and maintenance plan for all the equipment.
2. Bidder is also required to maintain the inventory of tools and consumable items to be used in calibration of all equipment.
3. Bidder should clearly define the calibration and test procedure for the equipment's.

For all the above points, the details shall be submitted to the Transport Department, Bihar for approval before the commissioning. Any changes/ recommendations suggested by the Transport Department, Bihar shall be adhered to.

9. Spare parts Management

Bidder should keep the inventory of the spare parts required for the smooth running of operations.

10. Software Management

- 10.1. Software – Bidder should have their own software which should have the following features.

- (a) Bidder should have their own software to be installed on the LAN.
- (b) Bidder should be able to maintain and manage their software.
- (c) Bidder should be able to update the software free of cost as and when required i.e. whenever there is any kind of change in Chapter XI of Central Motor Vehicle Rule for Recognition, Regulation and Control of Automated Testing Station and under Bihar Motor Vehicles Rules (BMVR) or any modification in software is required for meeting testing requirements and provide all necessary integration software details including the necessary API and the SDK to Transport Department, Government of Bihar or their authorized representatives.

- 10.2. Data management

- (a) Bidder should be able to do data management in the software like data storage, mining, archiving etc.
- (b) Successful Bidder shall setup required servers at each ATS and additionally setup a central server on-premises or on cloud (with prior approval of Transport Department, Bihar, from MEITY empaneled agency) to store all the information centrally as well as de-centrally. The central

server shall be able to display information centrally to the Transport Commissioner's office in real-time.

- (c) Test data & CCTV footage of vehicle testing in ATS's should be stored on central server on-premise or on cloud for a period of minimum 1 year. Location for on-premises central server shall be discussed with successful bidder.

The data generation, processing and storage shall be done in a manner so as to ensure that, -

- (a) the database is stored in a data management software platform to enable easy exchange and analysis of data with other platforms.
- (b) all automated test results shall be automatically transmitted to a servers installed in the ATS and visual checks data, including photographs, shall also be transferred on the same server; (read with Annexure IV – visual inspection)
- (c) the fitness criteria for pass or fail shall be automatic and in accordance with Central Motor Vehicle rule 1989.

11. Test Runs

Bidder should periodically carry out in service checks on a defined frequency on all lanes to ensure smooth and correct running for lanes without hampering the routine operations.

12. Extension of contract beyond 1 years:

- (i) After initial One years of operation & maintenance (post commissioning), Transport Department, Government of Bihar reserves the right to extend the contract to the Successful Bidder based on mutual agreement between Transport Department and the Successful Bidder. The yearly Operations and Maintenance cost shall be subject to the discretion and approval of the Transport Department and may be allowed with a maximum increase of fifteen percent (15%) over the original quoted and accepted yearly O&M cost.
- (ii) Transport Department, Government of Bihar may consider this proposal after satisfying itself about the technological and commercial soundness of the proposal. Based on the satisfaction of Transport Department, Bihar, it may enter into negotiations with the Successful Bidder for renewal of this Contract.
- (iii) Upon successful conclusion of negotiations, the Successful Bidder shall upgrade the systems / technology / equipment etc., as required and agreed between the Transport Department, Bihar and the Successful Bidder, and support the same for a further period of at least 1 year up to maximum as agreed.
- (iv) Extension term shall have substantially same terms and conditions as the original contract.

- (v) The Successful Bidder shall submit fresh Performance Bank Guarantee (in the form of Demand Draft (DD) or an irrevocable Bank Guarantee) of for the new period and execute agreements as directed by Transport Department, Government of Bihar.
- (vi) Such extension shall be completed six (6) months prior to expiry of current agreement date.

13. Warranty, Technical Service and Maintenance

Since the maintenance of the ATS's will have to be done by the Bidder, all responsibility of Warranty and Maintenance will have to be borne by the Bidder to the satisfaction of Transport Department, Government of Bihar. Inability of checking vehicles in a particular test lane will be considered as break-down and any machine in a test lane should not break down for more than 24 hrs. and none of the test lanes should be non-operational for more than 15 hours per Month.

The Bidder is expected to perform at a throughput efficiency of typically minimum Six (6) vehicles per hour for Heavy Duty Lanes, minimum Eight (8) vehicles per hour for Light Duty Lanes and minimum Twelve (12) vehicles per hour for Two-Wheeler lanes capable of 24x7 operations.

In case the lane is non-operational due to breakdown of any equipment, it could result in Penalizing the Operator of the ATS's as mentioned in Clause 3.2.

The requirements for the Service Support are:

a. Service Support

In the event of unsatisfactory performance of the bidder in operating the Centers ATS's, the Transport Department, Government of Bihar will have right to select another vendor for operations of the ATS. In such case, the Performance Bank Guarantee amount paid by successful bidder shall be forfeited and the successful bidder shall provide necessary operational training to new operator. However, the responsibility of providing the comprehensive AMC and warranty services remains with the successful bidder only when the alternate selected operator operates the installed equipment in right manner, responsibly and exactly as per the advice of equipment manufacturer. The performance of bidder during operation of ATS's shall be evaluated through periodic audit of ATS's. No additional payment for training will be given to bidder.

The Bidder is required to have a service support set up in India, preferably in the state of Bihar with sufficient trained manpower.

The Bidder shall commit a maximum response time of 24 hours after the breakdown is reported by the Transport Department, Government of Bihar representative, which is accepted by the Bidders' operator or Technician, which means that in case of any breakdown within 24 hours, the Bidder's personnel

should reach the site, assess the cause of the breakdown and take necessary action to resolve the issue.

The Bidder is requested to fill the corresponding part of “**Form i) Service Support**”.

b. Warranty

The Bidder shall be required to provide a comprehensive warranty of minimum two years after completion of successful installation and commissioning at site, for equipment supplied under this tender, including the following -

- Ideally, the Bidder shall commit 98% of uptime.
- Force Majeure events and pre-approved Scheduled Maintenance (including Preventive Maintenance) will be excluded from the uptime and availability calculations, provided that such maintenance is conducted during mutually agreed maintenance windows and adequate prior notice is given.
- Any preventive maintenance and / or repair for breakdown shall be carried out by the Bidder at his own cost during warranty period. No charge on this account (including cost of calibration, spare parts, wear parts, consumables to be changed during maintenance, travel and accommodation expenses, etc.) will be borne by Transport Department, Government of Bihar.
- The preventive maintenance will be carried out by bidder, at a frequency specified by the Bidder at time of Technical Bid Submission. Any suggestions / directions in this regard of the Transport Department, Bihar shall be adhered to. Every three months, the bidder's representative will be required to inspect the equipment and submit a report on overall health & maintenance status of the equipment.
- In case a lane is non-operational / partially operational (i.e. not fully operational) for more than 15 hours in a Month, Rs. 1,000 charges per hour/per non-operational lane would be deducted from the subsequent bill of operations of next month. This clause is pertaining to non-operation / partial operation of lanes due to breakdown of one or more lane equipment, unavailability of one or more manpower, spare parts, utilities or any other operation related issues.
- In case of lane being operational without necessary valid calibration and certificate from the designated authority / organization, Rs. 10,000 charges per day operations per lane would be deducted from the subsequent bill of operations of next month.
- In case of downtime of desktop, Camera / CCTV, or any other lane IT components for more than 15 hours in a month for each component, Rs. 1,000 charges per hour/per lane would be deducted from the subsequent bill of operations of next month.
- In case of downtime of server, software, network or any other ATS level IT components, DG set or any other utilities for more than 15 hours in a Month for each component, Rs. 1,000 charges per hour would be deducted from the subsequent bill of operations of next month.

- In case of Information Security Breach, Data leakages, guidelines and requirements breach, Rs. 50,000 per week charges per such breach reported would be deducted from the subsequent bill of operations of next month. (for clarity, such breach shall be resolved within one week from the date of breach report).

As required in the conditions above, the Bidder shall include under the Warranty conditions both preventive and corrective maintenance during the Warranty period. This includes all scheduled preventive maintenance, as well as assistance in case of breakdown, not limited to the scheduled visits, but committing to the 24 hours response time after breakdown is reported by Transport Department, Government of Bihar representative and accepted by Bidders' operator / technician operating the ATS, independently from the cause of the breakdown. Both spare parts and labour shall be covered by these conditions in case of breakdown happening due to normal use of the facilities, and in no case Transport Department, Government of Bihar shall be charged for labour costs or spare part cost or any other costs associated to any kind of breakdown during this Warranty period.

The Bidder is requested to fill the corresponding part of "Form i) Service Support", explicitly stating his agreement with each and all of the above conditions.

Successful Bidder shall be responsible for maintaining the above requirements for the entire period of contract without exception. Successful Bidder shall ensure that during the entire contract period, all equipment are supported by OEM warranty support. Any equipment approaching end of life cycle as per its OEM's policy, should be replaced with new equipment, at no extra cost to Transport Department, Government of Bihar. Any technology upgrade, replacement of hardware, software etc. required for the same, shall be provided by Successful Bidder at no extra cost to Transport Department, Government of Bihar.

The maximum penalty per quarter for the Successful Bidder shall be limited to 5% of the total Quarterly billing. Beyond such limit, Transport Department, Government of Bihar reserves right to consider it has reached "Breach Level". Post which, Transport Department, Government of Bihar reserves right to invoke Termination Clause. The maximum penalty for entire project period shall be limited to 5% of total project cost. Post which, Transport Department, Government of Bihar reserves right to invoke Termination Clause.

14. Comprehensive Annual Maintenance Contract (AMC)

The bidder will be responsible for providing 3 years Comprehensive AMC services after completion of initial 2 years' warranty period. - With all Terms & Conditions same as Warranty except the payment schedule which is as per 5(a) of **Annexure-VIII: Terms of Payment**.

Spares, Consumables & Wear Parts

The Bidder is required to have critical / essential spare parts stored in India. The Bidder shall be required to provide a list of critical / essential spare parts (not consumables) without prices (to be included in "**Form I - Service Support**").

The bidder shall provide the list of the consumables including the quantity required per year during the Technical Bid submission.

15. TRAINING SUPPORT

1. On-arrival inspection training

Two training courses shall be included in the offer. These two courses will happen at the site of bidder's choice in India preferably in the state of Bihar (during pre-acceptance tests), or at the respective ATS's (after commissioning of equipment), at no cost to the Transport Department, Government of Bihar.

- Operational training shall include basics and functioning of the system, system design and the flow schematics, system functions and parameterization, operation and troubleshooting.
- Maintenance training shall include maintenance of the system and utilities interface.

Operational training shall be based on the same kind of system (software release and functions) to be supplied to Transport Department, Government of Bihar for ATS's. Maintenance training shall be based on the same actual equipment to be shipped and installed at ATS's.

Travelling, boarding, lodging and any incidental costs shall be sole responsibility of the Successful Bidder at no extra cost to the Transport Department, Government of Bihar. Minimum 10 nos. Department officials per ATS need to be trained.

2. Induction training and refresher training

During installation & commissioning of equipment at ATS's, induction training should be imparted to the Transport Department officers. Induction training should include class-room training & on-job training based on the actual equipment installed at ATS's along with maintenance training.

Additionally, for a period of one month prior to completion of 1 years' maintenance period, the bidder should organize a refresher training for the Transport Department Officers (minimum 10 nos. Department officials per ATS). The refresher training should cover training on operation of equipment, regular maintenance of equipment & utilities, lane operation & management software & overall management of ATS's.

16. Timelines

The successful bidder shall deploy an Implementation Team with demonstrable skills and experience in order to achieve the Timelines mentioned in the table below:

Timeline Table

S. No.	Activity	Timeline for the Bidder for Each ATS Location
1	Issuance of LOA to the Successful Bidder	T ₀
2	Submission of Performance Bank Guarantee by Successful Bidder	T ₀ + 15 days
3	Signing of Agreement (between State Transport Authority and Successful Bidder)	T ₀ + 30 days
4	Handing over the site to the Successful Bidder.	T ₀ + 30 days (T ₁)
5	Completion of construction of all ATS location awarded to successful bidder	T ₁ + 240 days
6	Delivery of equipment at site by Successful Bidder	T ₁ + 60 days (T ₂)
7	Installation & commissioning of equipment by Successful Bidder	T ₂ + 60 days (T ₃)
8	Delivery of utilities at sites	T ₁ + 60 days
9	Installation & commissioning of utilities at sites	T ₁ + 90 days
10	Deployment of operating manpower along with their CVs by the Successful Bidder	T ₃ + 5 days
11	Training of State Transport Authority Official by Successful Bidder	T ₃ + 07 days
12	Application for Pre-Commissioning Audit of equipment by the Successful Bidder to ICAT	T ₃ + 10 days (T ₄)
13	Pre-Commissioning Audit Report by ICAT to the Successful Bidder and a copy to the State Transport Authority	T ₄ + 07 days (T ₅)
14	Application for Issuance of Completion Certificate by the Successful Bidder to the State Transport Authority	T ₅ + 2 Working days (T ₆)
15	Issuance of Completion Certificate by the State Transport Authority to the Successful Bidder to commence the work	T ₆ + 5 Working days (T ₇)
16	Commencement of operation of the ATS	T ₇ + 2 Working days

Timelines For Civil Work Milestones (From T₁ As Per the Timeline Table)

S. No.	Description of Milestone (Physical)	Time Allowed in Months
1	Planning, Design & Engineering Works–Topographical Survey, Geo Technical Investigation, Planning, Designing and obtaining approvals of the same from the local body, client deptt., vetting of structural design, all complete. Preparation of all architectural working drawing, landscape drawings, detailed drawings, structural drawings and MEP / E&M services drawings including obtaining all approval of all local bodies / statutory bodies, all authorities concerned, as may be applicable for the work, all complete as per direction of engineer-in-charge to start the construction activities.	T ₁ + 1 Month
2	Sub-structure workup to Plinth Level (excavation, Foundation, Tie beams, Backfilling Etc.)	T ₁ + 3 Months
3	Superstructure work (Steel / RCC)	T ₁ + 4 Months
4	Internal and External Finishing Works	T ₁ + 5 Months
5	Internal Services/ installation of equipment's/ Connection to External Services.	T ₁ + 6 Months
6	Testing and commissioning of services	T ₁ + 7 Months
7	Handing Over	T ₁ + 8 Months

8.2. Annexure II: Site Description

Introduction

This document is intended to provide additional information to the bidder on the general description of the ATS's.

The Bidder is requested to include along with his offer a proposal for the implementation of the equipment, by pasting a detailed layout for each Test Lane in “**Form I)**”.

General Description

The Bidder shall be deemed to have obtained all necessary information as to risks, contingencies and other circumstances which may influence or affect the Bid or Works.

The Bidder shall be deemed to have inspected and examined Sites, their surroundings, and other available information, and to have been satisfied before submitting the Bid as to all relevant matters, including (without limitation):

1. the form and nature of Sites, including sub-surface conditions,
2. the climatic conditions,
3. the extent and nature of the work and Goods necessary for the execution and completion of the Works and the remedying of any defects,
4. laws, procedures and labour practices of the Country,
5. access, accommodation, facilities, personnel, power, transport, water and other services,
6. availability of required materials

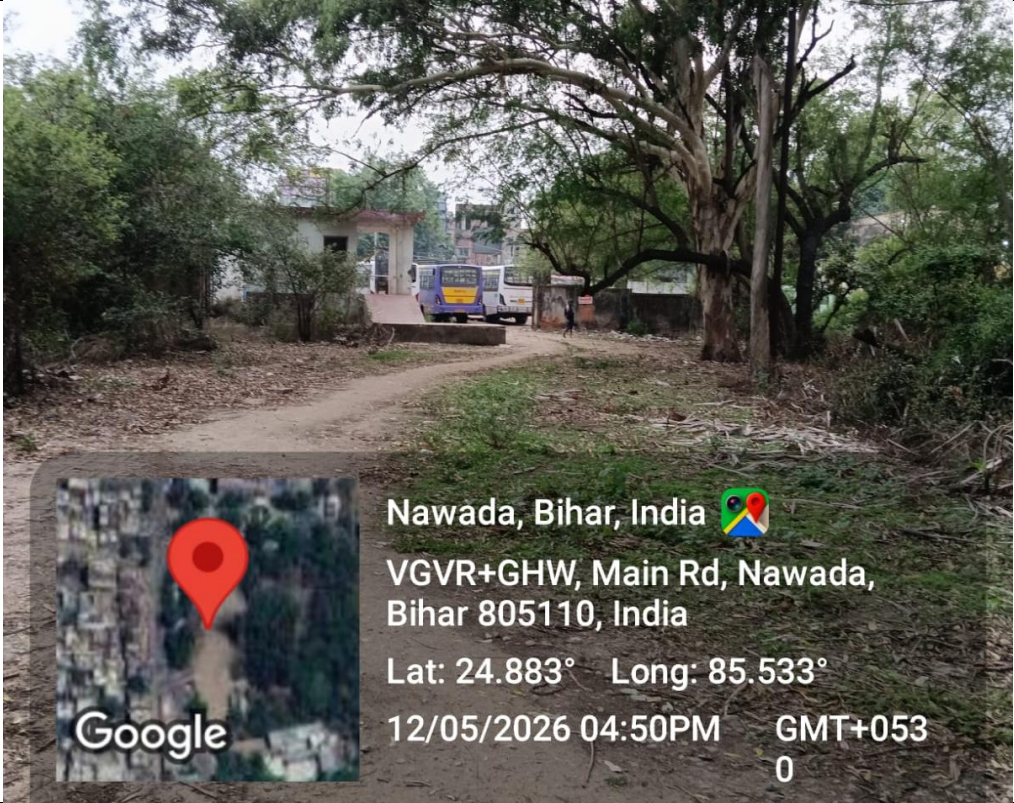
Indicative details of ATS sites are mentioned in the Table below.

Sr. No.	Name of ATS's	Total No. of Lanes	Indicative Test shed Dimensions (W x L) in meters	Admin block & Utility room Area (m2)	Detailed address of sites of ATS's	Latitude / Longitude
1	Aurangabad	3	19 x 35	200	Aurangabad Bus Stand	24.747767, 84.384253
2	Jehanabad	3	19 x 35	200	Jehanabad Bus Stand	25.224155, 84.996832
3	Nawada	3	19 x 35	200	Nawada Bus Stand	24.883, 85.533
4	Saharsa	3	19 x 35	200	Saharsa Bus Stand	25.885272, 86.593577

These coordinates shall be considered for the purpose of site assessment, planning, and execution by the bidder. The bidder is advised to conduct due diligence, including site visits if required, to assess ground conditions, accessibility, and infrastructure availability at the above-mentioned locations before submission of the proposal. Any assumptions made by the bidder regarding site conditions shall be deemed to have been factored into the bid.

The GPS-referenced images of the aforesaid locations are provided for reference.

Sl. No.	District	GPS Image
1	Aurangabad, Bihar	 औरंगाबाद, बिहार, भारत P9xm+4j7, औरंगाबाद, बिहार 824101, भारत Lat 24.747767° Long 84.384253° सोमवार, 27/04/2026 10:25 AM GMT +05:30
		Latitude: 24.747767° Longitude: 84.384253°
2	Jehanabad, Bihar	 Jehanabad, Bihar, भारत Maa Bhagwati Nursing Home Near Bsnl Exchange, 6xfw+ppc, Kaji Sarai Kako-imaliya Rd, Jagdish Nagar, Jehanabad, Bihar 804417, भारत Lat 25.224155° Long 84.996832° शुक्रवार, 08/05/2026 08:24 AM GMT +05:30
		Latitude: 25.224155° Longitude: 84.996832°

3	Nawada, Bihar	 Nawada, Bihar, India 📍 VGVR+GHW, Main Rd, Nawada, Bihar 805110, India Lat: 24.883° Long: 85.533° 12/05/2026 04:50PM GMT+0530 Latitude: 24.883° Longitude: 85.533°
4	Saharsa, Bihar	 Saharsa, Bihar, India 🇮🇳 Vhvpv+497, Police Line, Saharsa, Bihar 852201, India Lat 25.885272° Long 86.593577° Tuesday, 12/05/2026 02:59 PM GMT +05:30 Latitude: 25.885272° Longitude: 86.593577°

8.3. Annexure III: Pre-Qualification Criteria

Bidder's Company requirements

1. Bidder

The bidder or his consortium (called as "Bidder") is the company which has sufficient knowledge of establishment of Vehicle Inspection centers and have the capability to supply complete value of the tender and operate the Centers independently. In case the minority of the value of the Tender is outsourced, the Bidder should be able to provide documental evidence of possessing a formal agreement with the company outsourced (supporting documents to be submitted along with the tender). The bidder would be the purchaser of the tender document and Transport Department, Government of Bihar would interact only with this bidder in terms of entertaining him for tender document clarifications, evaluating him and considering him for selection, award of contract and the subsequent execution of the contract.

2. Consortium

In case of Consortium, the maximum no. of members are restricted to three only and one out of three members (including OEM) must be defined as leader, who will be considered as Bidder for the tender. The OEM of major equipment (at least roller brake tester, side slip tester, suspension tester, Speedometer tester and axle weight measuring equipment) shall be part of the consortium. The lead bidder of consortium should have office in India with valid GST number. The information about the Consortium needs to be furnished as per Form j).

- No bidder applying individually, or as a member of a Consortium, as the case may be, can be member of another consortia bidding for the project. A consortium partner shall only participate in one consortium bid unless the partner is an OEM and has been part of consortium only as OEM. If the OEM is the Lead Bidder, he cannot participate individually, or as a member of another Consortium.
- The tender form shall be submitted only in the name of the Lead bidder and not in the name of any consortium member. EMD shall be submitted only by the lead bidder and not by the consortium member.
- A copy of Memorandum of Understanding (MOU) executed by the Consortium members shall be submitted by the lead bidder along with the tender. The complete details of the members of the Consortium, their share and responsibility in the Consortium etc. particularly with reference to financial, technical and other obligations shall be furnished in the MOU.
- Once the tender is submitted, the MOU shall not be modified / altered / terminated during the validity of the tender. In case the tenderer fails to observe/comply with this stipulation, the full Earnest Money Deposit (EMD) shall be liable to be forfeited.
- After the contract has been awarded, alteration / change in the constitution of Consortium shall not be allowed during the current contract period.

- On issue of LoA (Letter of Award), an agreement among the members of the Consortium (to whom the work has been awarded) shall be executed and got registered before the Registrar of the Companies under Companies Act or before the Registrar/Sub-Registrar under the Registration Act, 1908. This Agreement shall be submitted by the Consortium to Transport Department, Government of Bihar before signing the contract agreement for the work. In case the tenderer fails to observe/comply with this stipulation, the full Earnest Money Deposit (EMD) shall be forfeited and other penal actions due shall be taken against the selected bidder.

This Joint Venture Agreement shall have, inter-alia, following Clauses:

- Joint and Several Liability - Members of the Consortium to which the contract is awarded, shall be jointly and severally liable to Transport Department, Government of Bihar for execution of the project in accordance with General and Special Conditions of Contract. The Consortium members shall also be liable jointly and severally for the loss, Damages caused to Transport Department, Government of Bihar during the course of execution of the contract or due to non-execution of the contract or part thereof.
- Duration of the Agreement - It shall be valid during the entire duration of the contract including the period of extension, if any and the maintenance period after the work is completed.
- Governing Laws- The Agreement shall in all respect be governed by and interpreted in accordance with Indian Laws – Jurisdiction in Patna only.
- Authorized Member - Consortium members shall authorize Lead bidder on behalf of the Consortium to deal with the tender, sign the agreement or enter into contract in respect of the said tender, to receive payment, to witness joint measurement of work done, to sign measurement books and similar such action in respect of the said tender/contract. All notices/correspondences with respect to the contract would be sent only to this authorized member of the Consortium.
- No member of the Consortium shall have the right to assign or transfer the interest right or liability in the contract without the written consent of the other members and that of Transport Department, Government of Bihar in respect of the said tender/contract.
- Members of the Consortium shall submit a declaration in MoU consisting of the following:
 1. Commit to the scope of work, rights, obligations and liabilities to be held by each member; specifically commit that the Lead bidder shall be answerable on behalf of other members for the performance of obligations under this Agreement.
 2. Undertake that each of the members of the Consortium, shall have a definite and clarity of scope of work which was allocated as per each member's field of expertise.

3. Provide a brief description of the roles and responsibilities of individual members; and clearly define the proposed administrative arrangements (organization chart) for the management and execution. The format for this shall be attached in the tender document.
 4. The sub section and the tender document should include a statement to the effect that all the members of the Consortium shall be jointly and severally liable for all obligations in relation to the Agreement/Contract until the completion of the project in accordance with the Agreement.
 5. The sub heading of Consortium may or may not have a detailed aspect in case of any change in the member of the consortium at any point of the agreement or execution phase or warranty phase of the AMC.
- 3. Supporting documents mentioned in below table shall be uploaded along with technical bid.**

Sr. No.	Parameters	Requirement	Supporting Documents
1	Legal Entity	Bidder (Lead Bidder in case of consortium) should be a company incorporated in India under the Companies Act, 1956/2013 OR LLP firm under LLP provisions 2008, both as amended from time to time and should have been established for the last three years in India (including name change / impact of mergers or acquisitions) and shall have a valid GST number. Other members in case of consortium, should be a company incorporated in India or anywhere in world under the Companies Act, 1956/2013 OR LLP firm under LLP provisions 2008, both as amended from time to time OR Incorporation of company as per law of country of origin.	For Bidder (Lead Bidder of consortium) Copy of Certificate of Incorporation Registration under Companies Act 1956/2013 OR Registered Limited Liability Partnership deed as applicable. Copy of Certificates of incorporation, Articles of Association (AOA) and / or Memorandum of Association (MOA) clearly specifying legal entity & type of business undertaking mentioning the relevant scope. The last three years Income Tax returns along with the copy of PAN Number. Copy of Registration Certificates with the GST Authorities Documentary proof such as purchase orders or certified true copy of balance sheet and PL statements for last 3 years for operation in India as on the date of publishing of RFP notice. For other members in case of consortium: Copy of Certificate of Incorporation Registration under Companies Act 1956/2013 OR Registered Limited Liability Partnership deed as applicable OR as per law of country of origin of company from all members. Copy of Certificates of incorporation, Articles of Association (AOA) and / or Memorandum of Association (MOA) clearly specifying legal entity & type of business undertaking mentioning the relevant scope. Tax returns for last three years along with the copy of Registration Certificate issued by Competent Authority. Documentary proof such as purchase orders or certified true copy of balance sheet and PL statements for last 3 years for operation in India or anywhere in world as on the date of publishing of RFP notice.

Sr. No.	Parameters	Requirement	Supporting Documents
2	Financial: Turnover	Bidder (All members jointly in case of Consortium) shall have average annual turnover in last three Financial Years 2022-23, 2023-24 & 2024-25 of at least INR 50 Crores. Out of the above, the bidder (Lead Bidder in case of Consortium) should have average annual turnover in India in last three Financial Years of at least INR 25 Crores. In case of Turnover submitted from other country, the same shall be calculated as per conversion rate as on date of publishing of this tender and the same shall be apostilled.	Certificate from the Statutory Auditor / Chartered Accountant. Copies of Audited Financial Statements of last 3 Financial Years. In case Chartered Accountant certificate is submitted the said certificate also need to be counter signed by Company Secretary / authorized signatory of the bidder. Standalone turnover of only the bidding entity will be considered. Turnover of any parent, subsidiary, associated or other related entity will not be considered. Above documents for Lead Bidder shall be from Indian Statutory Auditor, Chartered Accountant and Company Secretary.
3	Financial: Net Worth	Bidder (All members in case of consortium) should have positive net worth in last 3 years. In case of net worth submitted from other country, the same shall be calculated as per conversion rate as on date of publishing of this tender and the same shall be apostilled.	Certificate from the Statutory Auditor / CA clearly specifying the net worth of the firm. Audited and Certified Balance Sheet and Profit/Loss Account of last 3 Financial Years In case Chartered Accountant certificate is submitted the said certificate also need to be counter signed by Company Secretary / authorized signatory of the bidder. Above documents for Lead Bidder shall be from Indian Statutory Auditor, Chartered Accountant and Company Secretary.

Sr. No.	Parameters	Requirement	Supporting Documents
4	Bidder's Experience	The Bidder should also have satisfactorily completed the works as mentioned below during the last Ten (10) years ending previous day of last date of submission of tender. Bidder's (all members in case of consortium) experience as individually or collectively shall be as follows: Having manufactured and supplied: at least 20 test lanes in last ten years Test Lane equipment manufactured & supplied must comprise of at least 4 of the below mentioned equipment, out of which Roller Brake Tester is mandatory: 1. Emission Test Equipment 2. Roller Brake Tester 3. Brakes and parking brakes 4. Headlight Tester 5. Side Slip Tester 6. Suspension Tester 7. Speedometer Tester 8. Axle Play Detector 9. Speed Governor Tester Having cumulative experience of government authorized test lane operation of more than 20 lane years. Lane years shall be calculated by adding number of years of operation of each lane of type of vehicles being tested as per scope of this tender. (e.g. lane year = number of lanes L1 X number of years + number of lane L2 X number of years +).	The bidder shall submit a proof (notary certified copy of the of the original Work done completion certificates issued by the Government authority /Authorized Government Operator of the Testing Stations and counter signed by the Bidder) of such a business worldwide. This information shall be provided in "Form h) Bidder's Organization, Company Profile.". Bidder is requested to provide a full list of such projects in "Form h) References", under the chapter "Similar References", where Bidder shall have successfully manufactured & supplied Test Lane equipment for Inspection stations. Bidder shall submit a proof (notary certified copy of the original Work done completion certificates issued by the Government authority / Authorized Government Operator of the Testing Stations and counter signed by the Bidder) of having installed and operated Inspection Stations approved by a Government, meaning that the stations are used for Official Inspection of Vehicles. Bidder is requested to fill "Form h) References" chapter with a list of projects handled by him, meaning Operating Vehicle Inspection centers for testing the categories of vehicles mentioned in this document. The references given shall belong to different countries, where the Inspection regulation shall have been enforced. The references may be turn-key projects, where the Bidder had full responsibility to set-up the complete station and operating the same. The Bidder is requested to submit detailed information on those projects in "Form h) References", under the chapter "Government Approved References".
5	Blacklisting	The Bidder (all the members of Consortium) should not have been blacklisted / barred by any Central Government and Department State Government and Department / Central or state Public Sector Unit / Urban Local Bodies / Defense / Govt. Boards in India or any other country as on last date of submission of bid either in their individual capacity as members of the Consortium or the	Undertaking by the authorized signatory of bidder (All members in case of consortium).

Sr. No.	Parameters	Requirement	Supporting Documents
		Consortium in which they were/are members from participation in tenders /contract.	
6	Technology Transfer Agreement	If Applicable, Bidder should provide an undertaking for Technology Transfer Agreement (TTA) Validity & Scope (Indian Manufacturer claiming OEM status)	Copy of TTA (or redacted version + notarized confirmation if confidentiality) Plant/ manufacturing proof (factory license, lease deed/ownership proof, ISO/BIS where relevant)
	Notary certified copy of resolutions of the Directors of the Company, permitting the company to enter into an agreement, authorizing MD or one of the Directors or Managers of the Company to sign Agreement, such other documents required to be signed on behalf of the Company and enter into liability against the company and/or do any other act on behalf of the company. Power of Attorney (duly registered as per prevailing law) by the Company authorizing the person to do/act mentioned in the para above.		
	Bidder's Organization and Company Profile	Bidder is required to provide the information about him as per "Form J) – Bidder's Organization, Company Profile and consortium".	
	For documents executed and issued overseas, the document shall be legalized by the Indian Embassy and notarized in the jurisdiction where the Power of Attorney has been executed. However, the Power of Attorney provided by Applicants from countries that have signed the Hague Legislation Convention 1961 are not required to be legalized by the Indian Embassy if it carries a conforming Apostille certificate.		

8.4. Annexure IV : Equipment Details

1. Functional Requirements

The bidder shall have total responsibility for the process including all phases of design, manufacture, assembly and functional testing of the equipment prior to shipment, installation, system checking and functional testing after installation for all its capabilities.

The inspection equipment to be installed is meant to check the correct functioning of all the components of the vehicles involved in the safety of the occupants and the compliance with the emission regulations including meeting all requirements of periodical technical inspection for roadworthiness for in-use vehicles as per Central Motor Vehicles Rules (CMVR), Government of India and Bihar Motor Vehicles Rules (BMVR).

The test systems shall require flexibility to facilitate easy implementation of new test functionality, modifications for changes of the law and new vehicle functionality over the life of the test systems.

1.1. General Purpose of the inspection lane

The purpose of the testing lane is to perform all the tests needed in a standard vehicle inspection station including covering all CMVR requirements. All the equipment defined in this document shall be capable to test the types of vehicles mentioned below, especially listed in Annexure V.

The technical specifications include requirements for overall test performance, test lane layout, equipment interfacing, lane throughput and data networking.

1.2. Tests to be performed

The vehicles to be inspected in the facilities shall be divided into:

- Two-Wheeler
- Three wheelers
- Quadricycles
- Passenger Cars (PC) / Taxis
- Light Commercial Vehicles (LCV)
- Medium Commercial Vehicles (MCV)
- Heavy Commercial Vehicles (HCV)

The main tests to be performed are:

- Measurement of braking force in the wheels of each specific axle: To be performed on 3W, Quadricycles, PC, LCV, MCV & HCV on the Roller Brake Tester.
- Check of the behavior of the suspension system in each one of the vehicle's axles for vehicle upto 3.5 tons GVW excluding 3W: To be performed on the Suspension Tester.
- Measurement of convergence and divergence between the wheels of the same axle: To be performed on Quadricycles, PC, LCV, MCV & HCV on the Side Slip Tester.
- Inspection of the tolerance existing between the different devices linked with the wheels
- i.e. all steering joints & suspension joints connected to the wheels of vehicle should be inspected. Excessive wear & tear of ball joints & any kind of leakage of oil through these joints should be inspected: To be performed on Quadricycles, PC, LCV, MCV & HCV on the Joint Play Tester.
- Head lamp beam alignment check: To be performed on Two-Wheeler, Quadricycles, PC, LCV, MCV & HCV using the Semi-Automatic Head Light Tester.
- Measurement of exhaust gas opacity in diesel engines: To be performed on 3W, Quadricycles, PC, LCV, MCV & HCV using Smoke Meter (Opacimeter) as per CMVR 115 (2).
- Measurement of specific components generated in the exhaust gas in Gasoline/ CNG / LPG engine vehicles: To be performed on Two-Wheeler, 3W, Quadricycles, PC, LCV, MCV & HCV using the Exhaust Gas Analyzer per CMVR 115 (2).

- Vehicle Speedometer inspection: To be performed on Two-Wheeler, 3W, Quadricycles, PC, LCV, MCV & HCV using the Speedometer.
- Visual inspection as specified in the Table-D of Chapter XI of Central Motor Vehicle Rule for Recognition, Regulation and Control of Automated Testing Station: To be performed on Two-Wheeler, 3W, Quadricycles, PC, LCV, MCV & HCV. Visual inspection tests both as per CMVR as well as BMVR shall be carried out by the officials of the Transport Department, Government of Bihar and should be assisted by the operator as per requirement of the MVD.
- Stationary noise measurement to be performed on Two-Wheeler, 3W, Quadricycles, PC, LCV, MCV & HCV using Sound Level meter.
- Accessing live parts using IP XXB & IP XXD test fingers for Electric vehicles. Refer AIS-038 (Rev. 1 & Rev. 2): 2015 for detailed explanation on Test fingers.
- Checking of insulation resistance of Electric vehicles using Insulation Tester.

1.3. Test configuration

1.3.1. Inspection sequence LD

For e.g.

Administration Process

1. Document Verification
2. Booking of the appointment for Vehicle fitness test (on AFMS portal)
3. Collection of fees (on AFMS portal)
4. Issue of token

1.3.2. Station 1.

1. RFID Authentication of Operator
2. Emission Test
3. Horn Test
4. Exhaust Noise Test
5. Speedometer Test
6. Speed Governor Test

1.3.3. Station 2.

1. RFID Authentication of Operator
2. Side Slip Test
3. Suspension Test
4. Service Brake & Parking Brake Test
5. Protection against Electric Shock (For Electric & Hybrid Electric vehicles only)
6. Insulation Resistance Measurement Test (For Electric & Hybrid Electric vehicles only)
7. State of Charge (SOC) Indicator on Dashboard (For Electric vehicles only)

1.3.4. Station 3.

1. RFID Authentication of Operator
2. Under Body Visual Inspection using joint play tester
3. Steering Angle test
4. Head light test

1.3.5. Administration Process

1. Issue of Report and return of the Token

Bidder can suggest his own sequence of operation to be duly approved by Transport Department in writing. Inspection sequence HD

For e.g.

Administration Process

1. Document Verification
2. Booking of the appointment for Vehicle fitness test (on AFMS portal)
3. Collection of fees (on AFMS portal)
4. Issue of token.

1.3.6. Station 1.

1. RFID Authentication of Operator
2. Emission Test
3. Horn Test
4. Exhaust Noise Test
5. Speedometer Test
6. Speed Governor Test

1.3.7. Station 2.

1. RFID Authentication of Operator
2. Side Slip Test
3. Service Brake & Parking Brake Test
4. Protection against Electric Shock (For Electric & Hybrid Electric vehicles only)
5. Insulation Resistance Measurement Test (For Electric & Hybrid Electric vehicles only)
6. State of Charge (SOC) Indicator on Dashboard (For Electric vehicles only)

1.3.8. Station 3.

1. RFID Authentication of Operator
2. Under Body Visual Inspection using joint play tester
3. Steering Angle test
4. Head light test

1.3.9. Administration Process

1. Issue of Report and return of the Token.

Bidder can suggest his own sequence of operation to be duly approved by Transport Department in writing.

1.3.10. IT Platform

The equipment described in this document shall comply with the following requirements:

- Selection of vehicle category as defined above such as 3-W/ Multi-axle vehicles etc.
- Data Acquisition and results shall be performed directly by the equipment and its control computer and sent to a central storage PC for final evaluation without the intervention of the user.
- All results shall be traceable, with information on the operator involved in each test and step of the inspection process.
- The data and traceability shall be secured, and a record of the actions made, and the results obtained shall not be editable and should be tamperproof.
- The storage of all data and results shall be secured and shall not be physically accessible by the users/operators. The central server in the ATS should have access to all the data generated from the test lanes
- in a structured manner as may be decided by Transport Department, Government of Bihar from time to time.
- For data transfer between VAHAN & Vehicle Inspection Management Software (VIMS) /Lane Management Software, local server should be available at the ATS. After a testing of vehicle, data stored on local server need to be uploaded on VAHAN platform. The vehicle test report so generated shall be as per the format given in “Form 69 - FORM FOR VEHICLE TEST REPORT” of CMVR as amended from time to time.
- Necessary cyber security certifications shall be provided for the Information Technology Systems installed in centers (ATS's) and for safe access to the VAHAN database as applicable.

Minimum hardware requirements: PC per station, upgradability for additional lanes/test benches. LAN or higher communicating networks, server with sufficient and reliable storage capacity, Printer/s for test report printing & Sticker printer etc. to be expandable.

Each station must have capability of reading RFID/smart card/equivalent device. Operation of each test at every station must be remotely operated so as to minimize operator's physical movement.

Capability for fine tuning the test procedures shall be included. When access granted by the higher authority, calculations and procedures, limit values and all test parameters shall be customizable and storable.

For ease of operation, sequentially of tests shall be the key to lane design.

Various MIS reports need to be generated for Transport Department, Government of Bihar. Format of these reports would be finalized during design review.

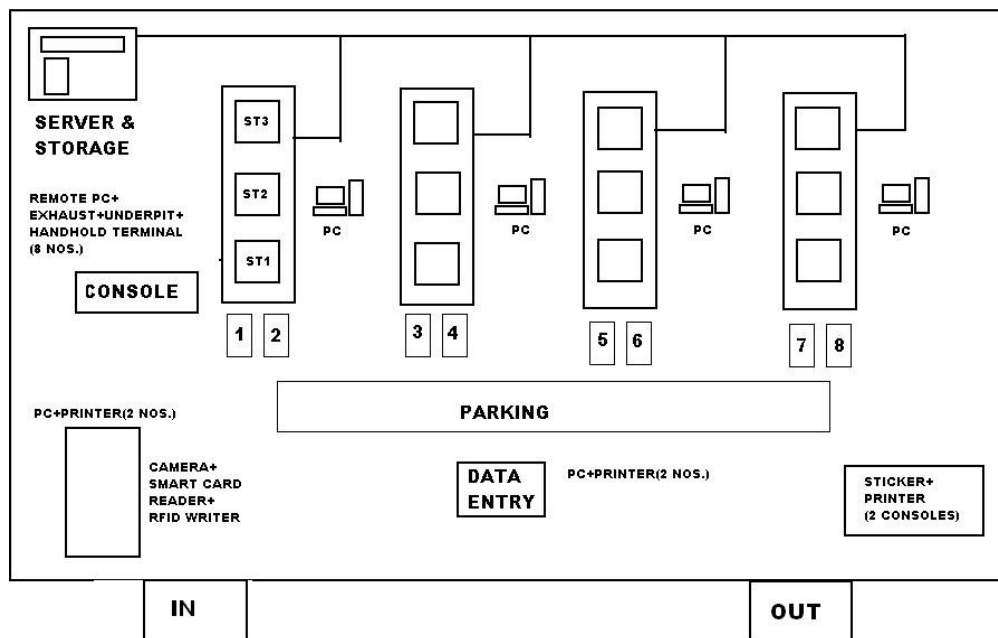
Advanced operations on the data management system shall be done from central server in a remote area. The system shall be based on the Windows Operating System. For report generation printer shall be provided, and the server room shall also have a printer.

The software shall have the calibration and maintenance plan for each equipment of the lane incorporated. The software shall display the same at the computer to inform the lane operator for the same in advance by display warning signals. All the test measurements should be done only when the calibration of equipment is valid. The calibration data shall be stored in the central computer. All measurements shall be in Metric System. Measured value of each test needs to be provided in the test report along with permissible range.

The bidder is required to submit the ATS layout diagram along with all the required equipment's like RFID/Smart card Reader, Individual PC at each test lane station, CCTV, Audio paging at ATS, Operator ID and vehicle ID (RFID/ IR) sensor at each station of lane, Digital Camera at test shed entry point, Under body inspection HHT need to be communicated to the main control PC, central server with sufficient storage system etc. to the Transport Department, Government of Bihar.

In the absence of dedicated cycle and procedures for loaded mode testing in Indian scenario, it has been decided to incorporate dynamometers for loaded mode emission test at later stage in the same ATS. Therefore, the bidder is required to cater the provision for installing the dynamometers for loaded mode emission test in future.

Bidder is required to consider all of above equipment as per layout. Bidder is also required to give technical and financial details in technical and financial bid respectively.



The specification of PC and server has been indicated at **Annexure-IVA**.

2. Technical Description

There shall be LD lanes capable of testing Light duty vehicles upto 3.5 tons GVW and Passenger Cars, HD lanes capable of testing MCV's and HCVs and Two-Wheeler Lane capable of testing Two-Wheelers in the ATS.

- Light duty vehicles (vehicles less than or equal to 3500 Kg GVW) - LCV lanes
- Heavy duty vehicles (vehicles above 3500 Kg GVW) – HCV lanes
- Two-Wheeler vehicles (Vehicles under 600 Kg GVW) – Two-Wheeler Lane

The station, devoted to the inspection of Two-Wheeler, 3W, Quadricycles, Passenger Cars, Light duty vehicles, Medium commercial vehicles and Heavy commercial vehicles, shall have at least the following equipment and shall fulfil the following requirements.

2.1. **Technical specifications**

The equipment used at ATS shall be capable of measuring maximum safe axle weight as notified under section 58 of the Motor Vehicle Act as amended from time to time.

The equipment shall be able to test all categories of vehicle under fitness regime.

The software of the equipment shall allow modification in the inspection system as required by the registering authority / Transport Department, Bihar.

All equipment shall be able to operate in the following environmental conditions, namely:

1. Temperature range 0°C to 55°C;
2. humidity up to 95%;
3. dust: Typical Indian testing condition.

All the supplied equipment shall be designed to meet the following good engineering criteria:

- shall be easy to use,
- shall allow improvements and upgradation and
- shall have a low maintenance cost.

Force application system shall be either Pneumatic or Hydraulic type. Metric units shall be used.

2.2. Common Equipment

The equipment described in this chapter is only used in some cases. Therefore, it will be shared by all the lines in the ATS.

2.2.1. Free Wheel Trolley

Device used to perform correctly Roller Brake Tests or Speedometer Tests on All Wheel Drive LCV vehicles. To accommodate large variations in vehicles wheel base, this is expected to be portable.

Description:

Portable device devoted to allow driven axels to turn without touching the floor. It shall be composed of a chassis with free turning wheels mounted onto it.

This portable device can be substituted by any other technically proved system to accomplish the purpose previously stated.

The device shall be designed to ensure safety of the people that could be nearby and the vehicle so a proper restraint system shall be proposed.

2.2.2. Bogie Roller Set

Device used to perform correctly Roller Brake Tests or Speedometer Tests on MCV & HCV with multi axle vehicles having more than one live axle.

One set of bogie roller means one bogie roller before brake tester & one bogie roller after brake tester. Brake testing of tandem axle vehicles through counter rotation of wheels using software is acceptable, provided the purpose of both brake & speedometer testing need to be served. The bogie rollers are to be suitably designed to accommodate varying distances between axles and are to be embedded suitably to test both brake and speedometer. Varying distance for Tandem axle is $1.4\text{m} \pm 0.4\text{m}$.

Description:

The device shall be designed to ensure safety of the people that could be nearby and the vehicle so a proper restraint system shall be proposed. A

proper restraint system means a device that retards people from coming close to the exposed part of rotating bogie roller may be proposed.

2.2.3. Toeing trolley or rail Trolley (for front wheel of 3-Wheeled vehicle)

- Toeing trolley should be capable of safe movement of front wheel of 3-wheelers by sliding over the inspection pit.
- Locking mechanism should be provided for loading & unloading of front wheel of 3-wheelers on the trolley.

2.2.4. Calibration Equipment Set

Calibration Equipment Set shall be available at the ATS. Two-point calibration system will be provided, as applicable. All the lanes may use the same calibrating devices. All the measuring equipment shall be calibrated. Bidder shall be responsible for calibration of all measuring equipment.

Bidder to suggest, justify and provide calibration equipment's and procedures for following:

- Emission measurement equipment for diesel/gasoline vehicles
- Roller brake tester
- Speedometer tester
- Semi-Automatic Head light tester
- Suspension tester
- Side slip tester
- Axle weight measurement system
- Electronic Steering gear play detector
- Sound level meter

In any case the bidder may suggest and justify any field calibration procedure for the above equipment. Since all calibration of the equipment will have to be done at the first instance during commissioning, above items would be required. For calibration of Axle weight measurement system, either calibration tool needs to be supplied or renting locally from local laboratories accredited by NABL is also accepted. Subsequently, if any of the calibrating equipment's are consumables in nature will have to be replenished by the bidder as a part of the operation through the entire contract period.

2.2.5. Automatic Tyre pressure filler and indicator:

- Technical specifications should be:
- Resolution: +/- 0.1 bar
- Accuracy: ± 0.5 % of Full Scale or better
- Full scale: at least 10.6 bar

2.3. Inspection Lane LD

▪ **Visual Inspection**

All visual inspection will be carried out as specified in the Table-D of Chapter XI of Central Motor Vehicle Rule for Recognition, Regulation and Control of Automated Testing Station. All Visual checks conducted on a vehicle in the ATS shall be photographed using a mobile device and the record of the same shall be preserved for at least six months for audit and assessment purposes.

▪ **Roller brake tester**

Device devoted to the measurement of braking force in the wheels of a specific axle taking into account the brake power applied on the brake pedal. Service, emergency and parking brakes shall be tested.

This equipment shall be used to test Light Duty Vehicles including Three-wheeled vehicles, Quadricycles and Passenger Cars, upto 3.5 tons GVW.

Technical Specifications:

- Rollers for Passenger Cars and Light Duty Vehicles:
- Maximum measurable brake load is at least of 6 kN
- Difference in left & right braking efficiency: To be mentioned –

Bidder to specify.

- Brake load resolution $\leq 100\text{N}$
- Suitable roller diameter, length and separation as per the Matrix given in Annexure-V: Characteristics of Vehicles to be Tested
- Provision for either lifting or braking of roller for easy exit of vehicle
- Approximate Testing speed: $5\text{ km/h} \pm 1\text{ km/h}$
- Roller surface:
- Minimum frictional coefficient - 0.6 (Supporting documents from Internationally certified agencies or NABL accredited labs in India for confirmation of minimum frictional coefficient of roller surface need to be provided)
- Service life – minimum 25000 hrs (Self-declaration from OEM specifying required useful life of rollers without any damage need to be provided)
- Measurement accuracy: within $\pm 100\text{ N}$.

▪ **Axle weight measurement system**

Weighing scale for measurement of each axle weight is required. The system should determine by adding together the axle weight, tare weight/Kerb weight of the vehicle.

Technical specifications:

- Measuring range: 0 – 3000 kg
- Resolution: 5 kg
- Accuracy: $\pm 1\%$ of reading

The specifications are provided for measuring Axle weight either separately or integrated within the equipment.

▪ **Suspension tester**

Equipment devoted to check the behavior of the suspension system in each one of the vehicle's axles (dampers, helper springs, tyres and auxiliary equipment) determining the damping of the oscillations amplitude exteriorly.

This equipment shall be used to test Quadricycles, Passenger Cars including other Light Duty Vehicles upto 3.5 tons GVW.

Technical specifications:

- Amplitude of excitation: 6.5 mm +/- 5 mm
- Measurement accuracy: $\pm 1\%$ of wheel load

▪ **Side slip tester**

Equipment devoted to the measurements of alignment of the wheels of same axle. This equipment shall be used to test Quadricycles, Passenger Cars and Light Duty vehicles upto 3.5 tons GVW.

Technical specifications:

- Suitable dimension of track plate: length, width and height
- Measuring range: ± 20 m/km
- Measuring resolution: 1 m/km
- Accuracy: ± 1.0 m/km

▪ **Joint Play tester**

Equipment devoted to the inspection of the play between different elements of the wheels, bars and tie rods, shock absorber systems, brakes, and linkages between two specific components and the chassis of the vehicle.

This equipment shall be used to test Quadricycles, Passenger Cars and Light Commercial vehicles upto 3.5 tons GVW.

Technical specifications:

- Maximum Force per plate: at least 6 kN
- Maximum movement on each side: 50 - 80 mm (Hydraulic)

▪ **Electronic Steering Gear Play Detector**

Equipment devoted to check the free play in steering gear as per Central Motor Vehicle Rule 98.

This equipment shall be used to test Light Duty Vehicles including Quadricycles, Passenger Cars, upto 3.5 tons GVW.

Technical specifications:

- Capable of measuring angular movement up to $\pm 30^\circ$
- Recording mechanism to measure wheel movement against steering movement
- Measurement accuracy: $\pm 2\%$ of full-scale deflection

▪ **Semi-Automatic Head light tester**

Equipment devoted to check the horizontal and vertical light flux orientation, low beam pattern of the Head Lamp. This device shall be capable of measuring the Head Lamp's light intensity and inclination. Preferable checking could be based on spotting the headlamp reference point. Positioning (Horizontal movement) & focusing (Vertical movement) of Semi-Automatic Head light tester in front of head lamps of vehicle shall be done manually. Measurement of low beam pattern and test data transfer from Semi-Automatic Head light tester shall be done automatically.

This equipment shall be used to test Light Duty Vehicles including Quadricycles, Passenger Cars, upto 3.5 tons GVW.

Technical specifications:

- Light Intensity range measure (min): 0-100,000 cd
- Illumination Intensity range measure: 0-200 lux
- Headlight tester must be capable of measuring headlamp with their Centers 500 mm to 1200 mm above ground level.
- Vertical and horizontal measuring range: ± 50 cm/10 m ($\pm 5\%$)
- Maximum deviation of intensity: $\pm 5\%$ of reading
- Maximum deviation of Inclination measurement (vertical orientation): $\pm 0.1\%$
- Headlamp tester to be placed on a perfectly level surface/ rails.

▪ **Smoke meter (Opacimeter)**

- Equipment is devoted to the measurement of exhaust gas opacity in diesel engines. This equipment shall be used to test diesel fueled vehicles as per CMVR/TAP 115/116 or AIS-137 (Part 8).

• Technical specifications:

- Equipment shall comply as per the requirements mentioned in the CMVR/TAP 115/116 or AIS-137 (Part 8). Bidder to provide valid type approval certificate at the time of installation and commissioning as per CMVR at Bidder's own cost.
- Specifications shall meet the requirement as given in TAP document or AIS-137 (Part 8) and approved by authorized test agency for use in India.
- The equipment must be certified to MoRTH/CMVR/TAP 115/116 or AIS-137 (Part 8).
- Copy of Type Approval & COP certificate needs to be attached.

▪ **Exhaust gas analyzer**

This equipment will be used for measurements of exhaust emissions of gasoline, CNG and LPG vehicles as per CMVR/TAP 115/116 or AIS-137 (Part 8).

Technical Specifications:

- Equipment shall comply as per the requirements mentioned in the CMVR/TAP 115/116 or AIS-137 (Part 8). Bidder to provide Type approval certificate at the time of installation and commissioning as per CMVR at Bidder's own cost.
- This equipment shall be capable measuring the CO, CO₂ and O₂ percentage concentration, the HC (ppm vol.), the lambda value (for various fuel types including CNG, LPG & gasoline) and shall be prepared for up-gradation to measure NO_x.
- The equipment shall transmit automatically all the data above specified to a PC and to a centralized storage system once the test is over.
- Specifications shall meet the requirement as given in CMVR/TAP 115/116 or AIS-137 (Part 8) and approved by authorized test agency for use in India.
- Must be certified as per MoRTH/CMVR/TAP 115/116 or AIS-137 (Part 8).
- Copy of Type Approval & COP certificate needs to be attached.

▪ **Speedometer Tester**

Device used to measure the functioning of the speedometer of the vehicle. It measures speed and distance covered by a vehicle.

It shall be able to test Quadricycles, Passenger Cars, 3-wheeled vehicles and vehicles upto 3.5 tons GVW.

Technical Specifications:

- Suitable dimension of track width, roller diameter and axle separation, as per the Matrix given in Annexure-V: Characteristics of Vehicles to be Tested
- Provision for lifting and braking of roller for easy exit of vehicle.
- Measuring range: 20 – 160 km/h
- Resolution: 1 km/h
- Accuracy: ± 1 % of indicated reading

▪ **Sound level meter**

The specifications:

- Recommended as per IEC 60651/ IEC 61672-1
- Measuring range: ≥ 30 dB to ≤ 120 dB
- Frequency: A & C
- Accuracy: ± 1.5 dB

- Tripod stand mounted
- Build (rechargeable) battery for power source of charging from outlet of 220V AC and USB
- Resolution: 0.1 dB
- the location of the Sound Level Meter to be clearly marked on the test station.

▪ **OBD scan tool**

Technical Specifications:

- Must be a hand-held scan tool which is compatible across all vehicle classes viz. passenger cars, commercial vehicles etc.
- Compliant to: OBDII/EOBD/HD-OBD/WWH-OBD Scan-Tool in accordance with SAE J1979, SAE J1939 and ISO 27145
- Must support the different OBD modes Viz. Mode 01 to Mode 0A
- Must support all the standard Parameter Identifications of the vehicle
- Diagnostics Communication Mediums Supported: KWP2000 (K-Line, CAN TP 2.0 and ISO-CAN), UDS (ISO-CAN)
- The tool must be capable of automatically selecting the protocol
- Must have an easy GUI and push buttons to navigate to different menus that are available
- The scan tool once connected to the vehicle should be able to capture and upload following list of parameters to a software interface located at a central server.
- MIL Status
- Mode 1 to Mode A data.
- DTC
- Faults identified by scan tool should be mentioned in the test report of vehicle.
- Test fingers
- Technical specifications:
- IP XXB & IP XXD test fingers

▪ **Insulation Tester**

Technical specifications:

- Rated measuring voltage: upto 1000V DC/AC (45 to 65 Hz)
- Measuring range: 10k Ω to 100M Ω or better
- Accuracy: upto 10M Ω $\pm$ 2% of reading & above 10M Ω $\pm$ 5% of reading
- Measurement categories: CAT III 600 V
- Display: Digital count display
- Protection grade: IP40
- Compliant to: EN61010
- Operating temperature: 10°C to 50°C
- Humidity range: greater than 90%
- Must be working on replaceable or rechargeable batteries

- Accessories: USB communication adaptor, Soft case, Line probe with remote switch, Earth probe set, Probe tip (hook type & extended type), Shoulder strap

2.4. Technical Specification for Two-Wheeler

1. Roller brake tester

Sl. No.	Parameter	Technical Specification
1	Maximum Load Charge per wheel	1 T
2	Maximum measurable brake load	3 kN
3	Minimum Roller Diameter	Suitable roller diameter to test all types of Mopeds, Scooters & Motorcycles
4	Minimum Roller separation	Suitable roller separation to test all types of Mopeds, Scooters & Motorcycles
5	Minimum Roller Length	Suitable roller length to test all types of mopeds, scooters & motorcycles
6	Roller Surface – Minimum frictional coefficient	0.6
7	Roller Surface Service life	Min. 50000 hrs.
8	Brake load resolution	$\leq 10\text{N}$
9	Brake load accuracy	$\pm 10\text{N}$ of measured value
10	Approximate testing speed	5 km/h

2. Semi-Automatic Headlight tester

Sl. No.	Parameter	Technical Specification
1	Light Intensity range measure (min)	0 - 100000 cd
2	Illumination Intensity range measure	0-200 lux
3	Headlight tester capable of measuring headlamp with their Centre above ground level	240 mm to 1500 mm
4	Vertical and horizontal measuring Range	$\pm 50\text{ cm}/10\text{ m}$ ($\pm 5\%$)
5	Maximum deviation of intensity	$\pm 5\%$ of reading
6	Headlamp tester to be placed on a perfectly level surface/ rails	

2.5. Inspection Lane HD

2.4.0. Visual Inspection

All visual inspection will be carried out as specified in the Table-D of Chapter XI of Central Motor Vehicle Rule for Recognition, Regulation and Control of Automated Testing Station. All Visual checks conducted on a vehicle in the ATS shall be photographed using a mobile device and the record of the same shall be preserved for at least six months for audit and assessment purposes.

2.4.1. Roller brake testerTechnical Specifications:

- Maximum measurable brake load: at least 40 kN.
- Difference in left & right braking efficiency: To be mentioned – Bidder to specify
- Suitable roller diameter, length and separation as per the Matrix given in Annexure-V: Characteristics of Vehicles to be Tested
- Provision for either lifting or braking of roller for easy exit of vehicle
- Roller surface: Abrasive material
- Minimum frictional coefficient: 0.6 (Supporting documents from Internationally certified agencies or NABL accredited labs in India for confirmation of minimum frictional coefficient of roller surface need to be provided)
- Service life: minimum 25000 hrs (Self-declaration from OEM specifying required useful life of rollers without any damage need to be provided)
- Brake load resolution: $\leq 100\text{N}$
- Testing speed: minimum 2.5 km/h
- Measurement accuracy: within $\pm 2\%$ of measured value.

2.4.2. Axle weight measurement system

Weighing scale for measurement of each axle weight is required. The system should determine by adding together axle weight, tare weight/Kerb weight of the vehicle

Technical specifications:

- Measuring range: 0 kg – 15000 kg
- Resolution: 5 kg
- Accuracy $\pm 1\%$ of reading

The Specifications are provided for measuring Axle weight either separately or integrated within the equipment.

2.4.3. Side slip tester

Equipment devoted to the measurements of alignment of the wheels of a same axle.

Technical specifications:

- Suitable dimension of track plate: length, width and height
- Measuring range: $\pm 20\text{ m/km}$
- Measuring resolution: 1 m/km
- Accuracy shall be $\pm 1.0\text{ m/km}$

2.4.4. Joint Play tester

Equipment devoted to the inspection of the play between different elements of the wheels, bars and tie rods, shock absorber systems, brakes, and linkages between two specific components and the chassis of the vehicle.

Technical specifications:

- Maximum Force per plate is at least of 30 kN
- Maximum movement on each side: 100 mm (Hydraulic)

2.4.5. Electronic Steering Gear Play Detector

Equipment devoted to check the free play in steering gear as per Central Motor Vehicle Rule 98.

Technical specifications:

- Capable of measuring angular movement up to $\pm 30^\circ$
- Recording mechanism to measure wheel movement against steering movement
- Measurement accuracy: $\pm 2\%$ of full-scale deflection

2.4.6. Semi-Automatic Head light tester

Equipment devoted to check the horizontal and vertical light flux orientation, low beam pattern of the Head Lamp. This device shall be capable of measuring the Head Lamp's light intensity and inclination. Preferable checking could be based on spotting the headlamp reference point. Positioning (Horizontal movement) & focusing (Vertical movement) of Semi-Automatic Head light tester in front of head lamps of vehicle shall be done manually. Measurement of low beam pattern and test data transfer from Semi-Automatic Head light tester shall be done automatically.

Technical specifications:

- Light Intensity range measure (min): 0-100,000 cd
- Illumination Intensity range measure: 0-200 lux
- Headlight tester must be capable of measuring headlamp with their Centers 500 mm to 1200 mm above ground level.
- Vertical and horizontal measuring range: ± 50 cm/10 m ($\pm 5\%$)
- Maximum deviation of intensity: $\pm 5\%$ of reading
- Maximum deviation of Inclination measurement (vertical orientation): $\pm 0.1\%$
- Headlamp tester to be placed on a perfectly level surface/ rails.

2.4.7. Smoke meter (Opacimeter)

Equipment is devoted to the measurement of exhaust gas opacity in diesel engines. This equipment shall be used to test diesel fueled vehicles as per CMVR/TAP 115/116 or AIS-137 (Part 8).

Technical specifications:

- Equipment shall comply as per the requirements mentioned in the CMVR/TAP 115/116 or AIS-137 (Part 8). Bidder to provide valid type approval certificate at the time of installation and commissioning as per CMVR at Bidder's own cost.
- Specifications shall meet the requirement as given in TAP document or AIS-137 (Part 8) and approved by authorized test agency for use in India.
- The equipment must be certified to MoRTH/CMVR/TAP 115/116 or AIS-137 (Part 8).
- Copy of Type Approval & COP certificate needs to be attached.

2.4.8. Exhaust gas analyzer

This equipment will be used for measurements of exhaust emissions of gasoline, CNG and LPG vehicles as per CMVR/TAP 115/116 or AIS-137 (Part 8).

Technical Specifications:

- Equipment shall comply as per the requirements mentioned in the CMVR/TAP 115/116 or AIS-137 (Part 8). Bidder to provide Type approval certificate at the time of installation and commissioning as per CMVR at Bidder's own cost.
- This equipment shall be capable measuring the CO, CO₂ and O₂ percentage concentration, the HC (ppm vol.), the lambda value (for various fuel types including CNG, LPG & gasoline) and shall be prepared for up-gradation to measure NO_x.
- The equipment shall transmit automatically all the data above specified to a PC and to a centralized storage system once the test is over.
- Specifications shall meet the requirement as given in CMVR/TAP 115/116 or AIS-137 (Part 8) and approved by authorized test agency for use in India
- Must be certified as per MoRTH/CMVR/TAP 115/116 or AIS-137 (Part 8).
- Copy of Type Approval & COP certificate needs to be attached.

2.4.9. Speedometer Tester

Device measure the functioning of the speedometer of the vehicle. It measures speed and distance covered by a vehicle.

Technical specifications:

- Suitable dimension of track width, roller diameter and axle separation, as per the Matrix given in Annexure-V: Characteristics of Vehicles to be Tested.

- Provision for lifting and braking of roller for easy exit of vehicle.
- Measuring range: 25 – 100 km/h
- Resolution: 1 km/h
- Accuracy: ± 1 % of indicated reading

2.4.10. Sound level meter

The specifications:

- Recommended as per IEC 60651/ IEC 61672-1
- Measuring level: ≥ 30 dB to ≤ 120 dB
- Frequency: A & C
- Accuracy: ± 1.5 dB
- Tripod stand mounted
- Build (rechargeable) battery for power source of charging from outlet of 220V AC & USB
- Resolution: 0.1 dB

The location of the Sound Level Meter to be clearly marked on the test station.

2.4.11. OBD scan tool

Technical Specifications:

- Must be a hand-held scan tool which is compatible across all vehicle classes viz. passenger cars, commercial vehicles etc.
- Compliant to: OBDII/EOBD/HD-OBD/WWH-OBD Scan-Tool in accordance with SAE J1979, SAE J1939 and ISO 27145
- Must support the different OBD modes Viz. Mode 01 to Mode 0A
- Must support all the standard Parameter Identifications of the vehicle
- Diagnostics Communication Mediums Supported: KWP2000 (K-Line, CAN TP2.0 and ISO-CAN), UDS (ISO-CAN)
- The tool must be capable of automatically selecting the protocol
- Must have an easy GUI and push buttons to navigate to different menus that are available
- The scan tool once connected to the vehicle should be able to capture and upload following list of parameters to a software interface located at a central server.
- MIL Status
- Mode 1 to Mode A data.
- DTC
- Faults identified by scan tool should be mentioned in the test report of vehicle.
- Test fingers
- Technical specifications:
- IP XXB & IP XXD test fingers

2.4.12. Insulation TesterTechnical specifications:

- Rated measuring voltage: upto 1000V DC/AC (45 to 65 Hz)
- Measuring range: 10k Ω to 100M Ω or better
- Accuracy: upto 10M Ω $\pm$ 2% of reading & above 10M Ω $\pm$ 5% of reading
- Measurement categories: CAT III 600 V
- Display: Digital count display
- Protection grade: IP40
- Compliant to: EN61010
- Operating temperature: 10°C to 50°C
- Humidity range: greater than 90%
- Must be working on replaceable or rechargeable batteries
- Accessories: USB communication adaptor, Soft case, Line probe with remote switch, Earth probe set, Probe tip (hook type & extended type), Shoulder strap

2.6. Software considerations

In order to guarantee the certainty of the obtained values and to save the information, it is required that all the equipment which measures a value is connected to the central unit. A device is considered automatically connected when the result of the test is automatically obtained, transmitted to the central unit and evaluated.

The database must be stored in SQL data management software platform to enable easy exchange and analysis of data with other platforms. The bidder should develop suitable software from time to time as required by Transport Department, Government of Bihar with an overall objective of meeting the test requirements, the operation of the ATS and meeting all the requirement of regulating authorities.

Each input, whether automatic or manual shall be identified with the inspector's reference and stored together with all the results of the tests performed on the vehicle which shall be transmitted automatically to the central unit. The inspection pass fail criteria of a test must be automatic and not editable by the inspector.

The following equipment shall be connected automatically to the central unit:

- Roller brake tester
- Suspension tester
- Side slip tester
- Smoke Meter (Opacimeter)
- Exhaust gas analyzer
- Speedometer tester

- Semi-Automatic Head light tester
- Sound level Meter
- Electronic Steering gear play detector

The software shall be able to receive the results from the following inspections that will be introduced manually in any computer in the lane or the central computer.

- Visual inspection
- Any inspection from the described above not connected automatically.

The software shall verify the status of all the equipment and sub-systems specified.

The software shall allow templates for easier preparation of the inspection. It shall also prepare the test file in XLS export file type or similar reports. The software shall allow to view and to obtain a printout of the results of each test separately. Measured value of each test to be provided in the report. The printout and the software operation shall be developed as required by Transport Department, Government of Bihar from time to time. For each test the information shall be recorded and it shall be available from all the computers in the ATS along with the access control.

The bidder shall provide one computer per station to be installed in the inspection zone. The bidder shall provide a central unit and the network that links all the computers in the ATS.

2.7. Safety Systems

2.6.1. Personal safety systems

All the equipment supplied shall be equipped with all the safety protections required for the normal usage of the equipment and for the security of the people who work in each machine. All the essential safety devices such as Safety protection in respect of single-phase failure, phase sequence change, surge protection, under & over voltage protection etc., has to be provided by the successful bidder at each console unit. Safety devices can be installed after LT panel, so that, phase change or single phasing should only affect working of 3-phase equipment & not all the equipment. Other safety items must be provided by bidder to safeguard their equipment against surge voltage including frequency corrector, Hi/Lo voltage corrector etc.

2.6.2. Power cut-off protection device

The safety procedure should take into account the fact of the power cut-off. In the case of occurring during a test measurement, the system shall be able to resume the test once electrical supply is back without any data loss.

8.5. Annexure IV-A : IT Equipment Specifications

The parameters given in technical specifications are minimum required & guidelines for selecting a product with better specifications for desired functionality.

Server Specifications:

- CPU: Processor (2.5 GHz 12-cores) or better
- Chipset: OEM supported chipset or better.
- RAM slot: 16 DIMM slot or better
- Memory: 64GB DDR4 Dual Rank, Register Memory, 2933 MHz or better
- Primary Storage: 7x1.8 TB SSD Hot swap or better
- SAS Controller: SAS Controller 12G, 2 GB Cache supporting RAID 0,1,5,6 & 10.
- Server Management: Remote Management Port
- I/O Ports: Integrated Server Ethernet dual port controller (10/100/1000Gbps) with full duplex
- PCI-E Slots: Min. 1 PCI slot
- Keyboard & Mouse: 104 keys OEM keyboard (USB) with bilingual support & Key Skin Cover and OEM two button with scroll optical mouse (USB)
- Operating System: 64 bit licensed Windows Server 2019 Standard Edition Pre-loaded
- Certification: Server should certify Linux/Windows/VMware
- Power supply: 800W Redundant power supply
- Integrated Graphic Controller
- USB ports
- Internal DVD writer
- System utilities with all required device driver software as per above configuration for OS installation
- System configuration & for server management
- Remote management of server over LAN
- Form Factor: 2U Rack Mount with necessary fitting accessories in rack
- Warranty: 5 years onsite comprehensive warranty
- Monitor: LED monitor: 20" Wide TFT monitor, Resolution: 1600 x 900 with DP & VGA ports, TCO certified, Warranty: 5 Years comprehensive onsite Warranty.

Backup System

The successful bidder shall confirm that a comprehensive and reliable backup and recovery solution will be implemented to ensure data protection in the event of primary server failure. Additionally, the bidder commits to conduct a backup drill exercises at a frequency of once every three (3) months.

Desktop Specifications:

Desktop PC SFF:

- Intel® 10th Generation Core™ i7 Processors
- 10th Generation Intel® Core™ i7 3.0 GHz or better

- Integrated Intel® UHD Graphics 630
- Intel® Q470 Chipset,
- 8 GB, DDR4, 2666 MHz or Better
- In-built Sound card and Internal Speakers,
- keyboard, Optical scroll mouse,
- M.2 1TB PCIe NVMe Class 35 Solid State Drive or Equivalent
- No Optical Disk Drive,
- Integrated 10/100/1000 Mbps Network Adapter,
- 4 USB 3.0/2.0, Ext. mic. port, Headphone port/Line out, RJ-45, 2 Display Port
- MS Win 10 Professional Edition 64-bit OS
- Security Management Software's.
- Small Form Factor (SFF), Power Supply, EPEAT, RoHS
- 5Years comprehensive onsite Warranty.

LED monitor:

- 20" Wide TFT monitor
- Resolution: 1600 x 900 with DP & VGA ports
- TCO certified.
- Monitor stand should be Height adjustable, Landscape/Portrait pivot, left/right swivel, Forward/backward tilt.
- Warranty: 5Years comprehensive onsite Warranty.

Printer Specifications

Report / Certificate Printer:

- LaserJet Printer (Black and Colour)
- 128 MB RAM
- Print Speed: 30 or better
- Duplex printing (Standard)
- Hi-Speed USB 2.0 port, 10/100 Ethernet networking
- Supported OS: Windows 10
- Page size supported: A4, B5, A5, Legal, Letter, Statement, Executive, Government Letter, Government Legal, Foolscap, Indian Legal Custom (Minimum 76.2 x 210 mm to Maximum 216 x 356 mm)
- Print resolution: 600 x 600 dpi or better

Sticker Printer:

- Printing Resolution: 1200 x 1200 dpi or better
- Color inkjet printing
- Print speed: 50 mm/s or better
- Media: Label roll media
- Sticker length: 80±2 mm to 100±2 mm
- Sticker width: 60±2 mm to 45±2 mm
- Interface: Hi-speed USB 2.0 port, 10/100 Ethernet networking, RS 232

Number Plate Reader (NPR) Camera Specifications:

Camera

- Image Sensor: 1/1.8" Progressive Scan CMOS
- Min. Illumination: Color: 0.002 Lux @ (F1.2, AGC ON), 0.0027 Lux @ (F1.4, AGC ON), 0 Lux with IR
- Shutter Speed: 1 s to 1/100,000 s, supports slow shutter
- Digital Noise Reduction: 3D DNR
- WDR: 120dB
- Frames per second: 50
- Day & Night: IR cut filter with auto switch
- Lens: 2.8 mm to 12 mm, F1.4, horizontal field of view: 92° to 32° 8 mm to 32 mm, F1.6, horizontal field of view: 42° to 13.5°
- Auto-Iris: DC drive

Image

- Image Enhancement: BLC /3D DNR/Defog/EIS
- Image Setting: Rotate mode, saturation, brightness, contrast, sharpness adjustable by client software or web browser
- Day/Night Switch: Auto/Schedule/Triggered by Alarm In (-S)
- Max. Resolution: 1920 × 1080 or higher

Network

- Network Storage: Support microSD/SDHC/SDXC card (128G), local storage and NAS (NFS, SMB/CIFS), ANR
- Protocols: TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, PPPoE, NTP, UPnP, SMTP, SNMP, IGMP, 802.1X, QoS, IPv6
- Alarm Trigger: motion detection, video tampering alarm, network disconnected, IP address conflict, illegal login, HDD full, HDD error
- Standard: ONVIF (profile S, profile G), ISAPI
- General Function: One-key reset, anti-flicker, three streams, heartbeat, password protection, privacy mask, watermark, IP address filter, mirror

Interface

- Communication Interface: 1 RJ45 10M/100M Ethernet port
- Video Output: 1Vp-p composite output (75 Ω/BNC)
- On-board Storage: Built-in microSD/SDHC/SDXC slot, up to 128 G
- SD Card to be provided by the bidder

Compression Standard

- H.264 Type: Baseline Profile/Main Profile/High Profile
- Video Bitrate: 32 Kbps to 16 Mbps

General

- Power Supply: 12 VDC ± 10%, terminal block PoE (802.3at, class 4)
- Operating Conditions: 10°C to 60 °C, Humidity 95% or less (non-condensing)
- Protection Level: IP67

- IR Range: 10m to 15m
- Certifications: CE, FCC, RoHS, UL, BIS ER-01 as per cyber security certified by the IOTSCS and meet essential requirements issued by MEITY.

Global Positioning System enabled Camera Specifications:

- Resolution: Minimum 20 megapixels
- Built-in Wi-Fi and GPS support that allows geo-tagging of images with GPS coordinates.

Speed Dome Camera Specifications:

Camera

- Image Sensor: 1/3" progressive scan CMOS
- Min. Illumination: color: 0.005Lux @ (F1.6, AGC ON); B/W: 0.001Lux @ (F1.6, AGC ON); 0 Lux with IR
- Shutter Speed: 1 s to 1/30,000 s
- Focus: semi-auto; manual; auto
- Day & Night: ICR
- Day/Night Switch: day, night, auto, scheduled switch
- BLC: yes
- WDR: 120 dB WDR
- HLC: yes
- 3D DNR: yes
- Defog: yes
- EIS: no
- Image Settings: saturation; brightness; contrast; sharpness
- White Balance: MWB; indoor; outdoor; fluorescent lamp; sodium lamp; ATW; auto; Locked WB
- Digital Zoom: min. 20x
- Optical Zoom: min. 20x
- SNR: >52dB

Lens

- Focal Length: 4.8 mm to 120 mm, min. 20x Optical or better
- Zoom Speed: approx. 3.6 s
- FOV: Horizontal field of view: 55° to 2.4° (wide-tele), Vertical field of view: 33° to 1.4° (wide-tele), Diagonal field of view: 61.5° to 2.8° (wide-tele)
- Aperture: F1.6

Illuminator

- IR Distance: 150 m

PTZ

- Movement Range (Pan): 360°

- Movement Range (Tilt): -15° to 90° (auto flip)
- Pan Speed: configurable from 0.1° to 160°/s; preset speed: 240°/s
- Tilt Speed: configurable from 0.1° to 120°/s, preset speed 200°/s
- Proportional Zoom: yes
- Presets: 300
- Patrol Scan: 8 patrols, up to 32 presets for each patrol
- Pattern Scan: 4 pattern scans
- Power-off Memory: yes
- Park Action: preset; patrol scan; pattern scan; auto scan; tilt scan; random scan; frame scan; panorama scan
- PTZ Status Display: yes
- Preset Freezing: yes
- Scheduled Task: preset; auto scan; random scan; frame scan; patrol scan; pattern scan; panorama scan; tilt scan; dome reboot; dome adjust; aux output

Video

- Max. Resolution: 2560 × 1440
- Stream Type: mainstream; sub-stream; third stream
- Mainstream:
 - 50 Hz: 25 fps (2560 × 1440, 1920 × 1080, 1280 × 960, 1280 × 720)
 - 60 Hz: 30 fps (2560 × 1440, 1920 × 1080, 1280 × 960, 1280 × 720)
- Sub-Stream:
 - 50 Hz: 25 fps (704 × 576, 640 × 480, 352 × 288)
 - 60 Hz: 30 fps (704 × 480, 640 × 480, 352 × 240)
- Third Stream
 - 50 Hz: 25 fps (1920 × 1080, 1280 × 960, 1280 × 720, 704 × 576, 640 × 480, 352 × 288)
 - 60 Hz: 30 fps (1920 × 1080, 1280 × 960, 1280 × 720, 704 × 480, 640 × 480, 352 × 240)
- Video Compression: H.265; H.264; MJPEG
- Video Bit Rate: 32 kbps to 16384 kbps
- ROI: fixed region; mainstream, sub-stream and third stream respectively support eight fixed areas

Audio

- Audio Compression: G.711alaw; G.711ulaw; G.722.1; G.726; MP2L2; PCM
- Audio Bit rate: MP2L2: 32 kbps, 40 kbps, 48 kbps, 56 kbps, 64 kbps, 80 kbps, 96 kbps,
- 112 kbps, 128 kbps, 144 kbps, 160 kbps, 192 kbps
- Audio Sampling Rate: MP2L2: 16 kHz, 32 kHz, 48 kHz; PCM: 8 kHz, 16 kHz, 32 kHz, 48 kHz
- Environment Noise Filtering: yes

Smart Features

- Basic Event: motion detection; alarm input; alarm output; video tampering alarm; exception

- Smart Event: intrusion detection; line crossing detection; region entrance detection; region exiting detection; unattended baggage detection; object removal detection; audio exception detection; face detection.
- Smart Tracking: manual tracking; event tracking; auto-tracking
- Smart Record: ANR; Dual-VCA
- Alarm Linkage: smart tracking; memory card video recording; alarm output; sending email; notify surveillance center; upload to FTP; NAS video recording.

Network

- Network Storage: NAS (NFS, SMB/ CIFS)
- Protocols: IPv4/IPv6; HTTP; HTTPS; 802.1x; Qos; FTP; UPnP; SNMP; DNS; DDNS; NTP; RTSP; TCP/IP; UDP; IGMP; ICMP; DHCP; PPPoE; Bonjour; SMTP; RTCP; RTP; ISUP
- API: ISAPI; Third-party management platform; Open-ended API; Open Network Video Interface; CGI
- Simultaneous Live View: 20
- User/Host: 32
- Security Measures: Authenticated username and password; MAC address binding; HTTPS encryption; 802.1X authenticated access; IP address filter
- Web Browser: IE10-11, Chrome 57+, Firefox 52+, Safari 12+

Interface

- Communication Interface: RJ45, self-adaptive 10M/100M Ethernet port
- On-board Storage: support microSD/microSDHC/microSDXC cards; up to 128 GB.
- SD Card to be provided by the bidder.
- Alarm Input: 2 alarm inputs
- Alarm Output: 1 alarm output
- Audio Input: 1 audio input, 2.0 to 2.4Vp-p, 1k Ohm±10%
- Audio Output: 1 audio output, line level, impedance: 600 Ω

General

- Power: 24 VAC; PoE (802.3at)
- Power Consumption and Current: Max. 24 W, including max. 1.6 W for heater and 12 W for IR
- Operating Conditions: 10°C to 60°C; humidity lower than 90%RH
- Certifications: CE, FCC, RoHS, UL, BIS ER 01 as per cyber security certified by the IOTSCS and meet essential requirements issued by MEITY.

Approval

- Protection: IP67 Standard, 6000V Lightning Protection, Surge Protection and Voltage Transient Protection; IK10 (excluding glass window)

CCTV Specifications:

4MP IR Bullet Camera:

Camera:

- Image Sensor: 1/3" Progressive Scan CMOS
- Min. Illumination: Color: 0.01 Lux @ (F1.2, AGC ON), 0.018 Lux @ (F1.6, AGC ON), 0 Lux with IR
- Shutter Speed: 1/3 s to 1/100,000 s
- Wide Dynamic Range: 120dB
- Day & Night: IR Cut Filter
- Angle Adjustment: Pan: 0° to 355°, tilt: 0° to 75°, rotate: 0° to 355°

Lens

- Focus: Fixed
- Lens Type: 2.8/4/6/8 mm
- FOV: 2.8 mm, horizontal FOV: 103°, vertical FOV: 58°, diagonal FOV: 123°, 4 mm, horizontal FOV: 83°, vertical FOV: 45°, diagonal FOV: 99°, 6 mm, horizontal FOV: 51°, vertical FOV: 29°, diagonal FOV: 58°, 8 mm, horizontal FOV: 39°, vertical FOV: 22°, diagonal FOV: 45°
- Aperture: F1.6
- Lens Mount: M12
- Aperture Type: Fixed

Illuminator

- IR Range: Up to 30 m
- Wavelength: 850nm

Video

- Max. Resolution: 2688 × 1520
- Mainstream:
- 50Hz: 25fps (2688 × 1520, 2560 × 1440, 2304 × 1296, 1920 × 1080, 1280 × 720)
- 60Hz: 30fps (2688 × 1520, 2560 × 1440, 2304 × 1296, 1920 × 1080, 1280 × 720)
- Sub Stream: 50Hz: 25fps (640 × 480, 640 × 360, 320 × 240), 60Hz: 30fps (640 × 480, 640 × 360, 320 × 240)
- Third Stream: 50Hz: 25fps (1280 × 720, 640 × 360, 352 × 288), 60Hz: 30fps (1280 × 720, 640 × 360, 352 × 240)
- Video Compression: Main stream: H.265/H.264, Sub-stream: H.265/H.264/MJPEG, Third stream: H.265/H.264
- Video Bit Rate: 32 Kbps to 16 Mbps
- Scalable Video Coding (SVC): H.264 and H.265 encoding

Audio

- Audio Sampling Rate: 8kHz/16 kHz/32 kHz/44.1 kHz/48 kHz
- Audio Compression: G.711/G.722.1/G.726/MP2L2/PCM

- Audio Bit Rate: 64Kbps(G.711)/16Kbps(G.722.1)/16Kbps(G.726)/32-192Kbps(MP2L2)

Network

- Simultaneous Live View: Up to 6 channels
- API: ONVIF (PROFILE S, PROFILE G, PROFILE T), ISAPI, SDK, Ehome
- Protocols: TCP/IP, UDP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, PPPoE, NTP, UPnP, SMTP, SNMP, IGMP, 802.1X, QoS,
- IPv6, UDP, Bonjour, SSL/TLS
- User/Host: Up to 32 users
- Security: Password protection, complicated password, HTTPS encryption, 802.1X authentication (EAP-TLS 1.2, EAP-LEAP, EAP-MD5), watermark, IP address filter, basic and digest authentication for HTTP/HTTPS, WSSE and digest authentication for ONVIF, TLS1.2
- Network Storage: Support Micro SD/SDHC/SDXC card (128G), local storage and NAS (NFS, SMB/CIFS), ANR
- Web Browser: Plug-in required live view: IE8+ Plug-in free live view: Chrome 57.0+, Firefox 52.0+, Safari 11+ Local Service: Chrome 41.0+, Firefox 30.0+
- Alarm Trigger: Motion detection, video tampering, network disconnected, IP address conflict, illegal login, HDD full, HDD error

Image

- Day/Night Switch: Day/Night/Auto/Schedule/Triggered by Alarm In (-S)
- DNR: 3D DNR
- Image Enhancement: BLC/3D DNR/HLC
- Image Settings: Rotate mode, saturation, brightness, contrast, sharpness, AGC, and white balance

Interface

- Audio: 1 input (line in/mic in), 1 output (line out), terminal block, mono sound
- Alarm: 1 input, 1 output (max. 12 VDC, 30 mA), terminal block
- Video Output: No
- On-board Storage: Built-in Micro SD/SDHC/SDXC slot, up to 128 GB
- SD Card to be provided by the bidder
- Hardware Reset: Yes
- Communication Interface: 1 RJ45 10M/100M self-adaptive Ethernet port

General

- Operating Conditions: 10°C to 60°C, Humidity 95% or less (non-condensing)
- Power Supply: 12 VDC $\pm$ 25%, Φ 5.5 mm coaxial power plug, PoE (802.3af, class 3)
- Protection: IK10, IP67
- Certifications: CE, FCC, RoHS, UL, BIS ER 01 as per cyber security certified by the IOTSCS and meet essential requirements issued by MEITY. Certificate to be provided at the time Bid submission for the quoted models.

Network Video Recorder (NVR) Specifications:**Video and Audio**

- IP Video Input: 64-ch, Up to 12 MP resolution
- Incoming Bandwidth: 320 Mbps
- Outgoing Bandwidth: 256 Mbps
- Incoming Bandwidth (RAID Mode): 200 Mbps
- Outgoing Bandwidth (RAID Mode): 200 Mbps
- HDMI 1 Output: 4K (3840 × 2160)/60Hz, 4K (3840 × 2160)/30Hz, 1920 × 1080/60Hz, 1600 × 1200/60Hz, 1280 × 1024/60Hz, 1280 × 720/60Hz, 1024 × 768/60Hz
- HDMI 2 Output: 1920 × 1080/60Hz, 1280 × 1024/60Hz, 1280 × 720/60Hz, 1024 × 768/60Hz
- VGA 1 Output: 1920 × 1080/60Hz, 1280 × 1024/60Hz, 1280 × 720/60Hz, 1024 × 768/60Hz
- VGA 2 Output: 1920 × 1080/60Hz, 1280 × 1024/60Hz, 1280 × 720/60Hz, 1024 × 768/60Hz
- Video Output Mode: HDMI 1 and VGA 1 provide simultaneous video output, and work as the main output; HDMI 2 and VGA 2 provide simultaneous video output, and work as the auxiliary output
- CVBS Output: 1-ch, BNC (1.0 Vp-p, 75 Ω), resolution: PAL: 704 × 576, NTSC: 704 × 480
- Audio Output: 2-ch, RCA (Linear, 1 KΩ)
- Two-Way Audio: 1-ch, RCA (2.0 Vp-p, 1 KΩ, using the audio input)
- Multiplex recording schedule options: manual, alarm, motion detection, timing
- Multiplex operation: live view, record, play back, backup and remotely control the system simultaneously

Decoding

- Decoding Format: H.265+/H.265/H.264+/H.264/MPEG4
- Recording Resolution: 12 MP/8 MP/6 MP/5 MP/4 MP/3 MP/1080p/UXGA/720p/VGA/4CIF/DCIF/2CIF/CIF/QCIF
- Synchronous Playback: 16-ch
- Decoding Capability: 1-ch@32 MP (30 fps)/2-ch@12 MP (20fps)/4-ch@8 MP (25fps)/8-ch@4 MP (30fps)/16-ch@1080p (30fps)
- Dual-Stream Recording: Support
- Stream Type: Video, Video & Audio
- Audio Compression: G.711ulaw / G.711alaw / G.722 / G.726 / AAC / MP2L2 / PCM

Network

- Remote Connection: 128
- Network Protocol: TCP/IP, DHCP, IPv4, IPv6, DNS, DDNS, NTP, RTSP, SADP, SMTP, SNMP, NFS, iSCSI, ISUP, UPnP™, HTTP, HTTPS
- Network Interface: 2, RJ-45 10/100/1000 Mbps self-adaptive Ethernet interface

RAID

- RAID Type: RAID0, RAID1, RAID5, RAID6, and RAID10
- Auxiliary Interface
- Serial Interface: 1 RS-485 (full-duplex), 1 RS-232, 1 keyboard
- SATA: 8 SATA interfaces supporting hot-plug
- ESATA: 1 eSATA interface
- Capacity: Up to 10TB capacity for each disk
- Alarm In/Out: 16/4
- USB Interface: Front panel: 2 × USB 2.0; Rear panel: 1 × USB 3.0

General

- Power Supply: 100 to 240 VAC, 50 to 60 Hz
- Consumption: ≤ 30 W
- Working Temperature: 10°C to 60°C
- Working Humidity: 10% to 90%
- Certification
- FCC, CE
- Surveillance Hard Drive:
- 8 TB - SATA 6Gb/s 3.5-Inch for above NVR – 3 Nos.

Smart TV with CCTV viewer Specifications:

- 40" LED Full FHD monitors / TV
- minimum brightness - 350 nits
- Contrast ratio – 5000:1
- Input ports - VGA, HDMI
- External Control - RS 232 / RJ 45, RoHS compliance
- Suitable for 24 x 7 operation

LED Displays:

- Display shall guide the operator for carrying out the test and no test results /pass or fail shall be displayed.
- The details can be discussed during design review.
- Display size to be such that the vehicle driver will be able to view the instruction comfortably. 32 inches LED screen is required.
- Video (CCTV) footage of vehicles being inspected and certified in ATS's shall be stored on central server on-premise or on cloud for a period of minimum one year.

8.6. Annexure V : Characteristics of Vehicles to be tested

Basic vehicle fleet characteristics have been determined and summarized here. Publicly available data has been used to estimate the minimum and maximum dimensions of vehicles to be inspected in the test lanes. **Please refer table below.**

The commercial vehicles which are required to be subjected for inspection in the vehicle inspection at the proposed test lanes at the ATS shall comprise mainly of

Diesel/Gasoline/CNG/LPG fueled & Electric powered – Trucks, Buses, and Taxis. In case of trailers, only prime mover unit shall be tested. The bidders are requested to take note of this and provide suitable equipment's to the lanes for testing these kinds of vehicles.

The general classifications of these vehicles, for purposes of this summary, can be broadly defined as such: Two-Wheeler, Three-Wheeler, Quadricycles, Passenger cars / Taxis – vehicles used for general transportation of occupants and having a GVW of less than 3500Kg. This general category can include light passenger trucks not intended for commercial use.

Trucks/ Buses – Heavy Duty Lane shall be capable to conduct the test on heavy commercial vehicle having 2/3/4 axles and more than GVW 3500 Kg.

Details	3-Wheeler		Quadricycles		4W (M1, N1)		4W LCV (M2, N2)		HCV (M3, N3)			
	Min	Max	Min	Max	Min	Max	Min	Max	Trucks (N3)		Bus (M3)	
Front Axle wt. (kg)	90	260	215	215	420	1285	1045	4150	1235	8951	360	6160
Rear Axle wt. kg	205	780	308	308	315	1395	810	7840	810	10224	1360	8900
Kerb wt. kg	203	800	474	474	730	2625	1210	5440	2045	19175	2660	15000
GVW kg	610	2150	823	823	935	3490	1960	11990	12990	47500	5000	22000
Wheelbase mm	1590	3070	1925	1925	2050	3264	2100	4500	2500	6750	2654	8350
Wheel Track mm Front	-	-	1143	1143	1300	1690	1310	2022	1410	2124	1630	2054
Wheel Track mm Rear	1150	1540	1143	1143	1315	1705	1343	1814	1406	1926	1486	1880
Length mm	2080	2510	2752	2752	1402	5226	3790	7965	4634	11994	5125	15000
Width mm	1100	1520	1312	1312	1495	2173	1500	2470	1870	2590	1910	2600
Height mm	1635	2070	1652	1652	1297	2750	1890	3410	2530	3940	2200	3730
Overhang Front mm	-	-	387	387	464	1297	760	2280	1050	1695	1000	2500
Overhang Rear mm	443	790	440	440	405	1375	710	2385	805	3484	1250	3560
Ground clearance mm	150	255	158	158	89	220	150	375	176	300	150	259
TCD m	-	-	6.96	6.96	8.33	12.6	8.5	19.7	12.3	23.99	11.17	23.4
TCCD m	-	-	7.32	7.32	7.95	13.5	9.8	21.2	14	25.5	12.84	27.2

Characteristic of vehicles to be tested.

8.7. Annexure VI : Evaluation Parameters

1. Eligibility Criteria

- **Earnest Money Deposit-** All the bids should be accompanied by requisite Earnest Money Deposit. EMD shall be submitted through the payment gateway at E – Proc portal (<https://eproc2.bihar.gov.in>) or through irrevocable Bank Guarantee (BG) or Demand Draft (DD) drawn in favour of "Transport Commissioner, Bihar State" issued by nationalized or scheduled banks having head office in India, payable at Patna as per the format given in Form c).

Time of submission for Physical EMD: The scanned copy of the EMD (BG / DD) has to be submitted along-with the technical bid documents on the e-tendering

application. Further, the original EMD document has to be submitted during the period between Online Submission End Date and Opening of Technical Bids.

- 2. Evaluation Criteria (Technical)** - The evaluation of the bids shall be done by a Committee constituted for the purpose. The evaluation shall be strictly based on the information and supporting documents provided by the applicants in the bid. It is the responsibility of the bidder to provide all supporting documents necessary to fulfill the mandatory eligibility criteria. In case, the required information is not provided by bidder, the Committee shall proceed with evaluation based on information provided and may not request the bidder for further information. Hence, responsibility for providing information as required in this form lies solely with bidder.

It is expressly made clear that mere submission of bid, eligible or not eligible, shall not confer any right whatsoever on any such bidder. Any bid submitted by the bidder, which fails to satisfy the eligibility requirements, shall not be considered and would stand summarily rejected. Transport Department, Government of Bihar will have the right to reject any or all bids, received in response to this tender and its decision in this regard shall be final and binding.

Bidder is required to furnish the technical details as specified in **Annexure IV**. Any deviation to this effect needs to be addressed in **Form f)**.

- 3. Financial bids of only those bidders meeting above eligibility requirements shall be considered for commercial evaluation.**

Examination of Financial Proposal and Correction of Arithmetical Errors

Financial bid of successful bidder will be evaluated as below:

Bidder must ensure that financial bid explicitly gives following information for 4 ATS's:

1. Total cost of complete construction of 4 ATS's mentioned in **Annexure –I: Scope of Work**.
2. Basic Cost of Test Lane Equipment listed as per Table 3, Clause 2.3: List of equipment's
3. mentioned in **Annexure –I: Scope of Work** including 2 years' warranty.
4. Basic Cost of Utilities listed as per Table 2, Clause 2.2: Utilities required for each Center / ATS mentioned in **Annexure –I: Scope of Work**.
5. Cost of exhaust gas handling system & fresh air ducting for underbody inspection pits.
6. Basic cost of Lane operation & management software for six user licenses.
7. Installation and commissioning of all the equipment and software.
8. ATS's operation & maintenance cost for One years inclusive of all running expenses which includes manpower, housekeeping, security, fixed cost as mentioned in running bill & consumption cost for water, electricity, telephone & internet and applicable taxes.

9. Cost of documentation. (Two set of operation & maintenance manuals in English, & Hindi).
10. On-site training charges for equipment operation & maintenance.
11. Applicable custom duty and taxes.
12. Packing and forwarding charges.
13. Freight, insurance and transport charges up to the destination.
14. Cost of comprehensive AMC for Test Lane equipment & Utilities for third, fourth & fifth years after two years of warranty.
15. Cost of consumables for One year's e.g. sampling probes, filters, oil, grease, calibration gases, bearings, bushes etc. (Consumables does not include spares. Spares are to be considered as part of warranty).
16. Bid to be quoted in Indian National Rupees only.

Transport Department, Government of Bihar will review the detailed contents of each financial bid to ensure that they are complete, whether the bidder has quoted all items of financial bid form and correct any arithmetical error.

Transport Department, Government of Bihar shall correct arithmetical errors on the following basis:

- (a) If there is a discrepancy between the sub component price/s and the total price that is obtained by multiplying the unit price and quantity/adding the sub component price/s, the sub component price/s shall prevail and the total price shall be corrected, unless in the opinion of the Employer that there is an obvious misplacement of the decimal point in the sub component price, in which case the total price as quoted shall govern and the sub component price/s shall be corrected.
- (b) if there is an error in a total, corresponding to the addition or subtraction of sub- totals, the subtotals shall prevail, and the total shall be corrected; and
- (c) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above. The amount stated in the Letter to Bid will be adjusted by the Employer in accordance with the above procedure for the correction of errors and, shall be considered as binding upon the bidder. If the bidder does not accept the corrected amount of bid, its bid will be rejected, and the bid security may be forfeited.

Criteria for deciding Successful Bidder (Lowest):

- (a) While deciding the lowest bidder, the total composite cost of acquisition and running the same for five years will be compared.
- (b) The sum total will comprise of costs as below:
 1. Cost quoted against Sr. no. 1 to 14 under Clause 2 above.

After selection, a Letter of Award (LOA) shall be issued, in duplicate, by the Authority to the selected bidder and the selected bidder shall, within 7 (seven) days of receipt of LOA, sign and return the duplicate copy of the LOA in acknowledgement thereof. At the same time, the selected bidder shall also pay

a **Performance Bank Guarantee of Rs. 1,00,00,000/- (Rupees One Crore Only)** in the form of Demand Draft (DD) or an irrevocable Bank Guarantee in favour of "Transport Commissioner, Bihar State" issued by nationalized or scheduled banks, having head office in India, payable at Patna only at the time of signing of contract, which will be before issuance of Work Order.

8.8. Annexure VII : Acceptance Criteria

Acceptance shall be done in two steps.

- Inspection on-arrival at site of bidder's choice in India, preferably in the state of Bihar for individual elements before shipment to ATS's sites or at respective sites of ATS's in Bihar
- Acceptance of the supplied elements on-site

1. On-arrival inspection

Once it has been proved through the proper documents including technical specifications and Calibration certificates that all the equipment appearing in the quotation fulfils all the technical requirements, the equipment can be supplied by the bidder & the same shall be inspected on arrival at site of bidder's choice in India preferably in the state of Bihar or at respective ATS's; by appointed authorized personnel from Transport Department, Government of Bihar.

- On-arrival inspection of Roller brake tester
- On-arrival inspection of Suspension tester
- On-arrival inspection of Side slip tester
- On-arrival inspection of Speedometer tester
- On-arrival inspection of Joint Play tester
- On-arrival inspection of Semi-Automatic Head light tester
- On-arrival inspection of Electronic Steering gear play detector
- On-arrival inspection of Smoke meter (Opacimeter)
- On-arrival inspection of Exhaust gas analyzer
- On-arrival inspection of Sound Level Meter
- On-arrival inspection of OBD scan tool

The On-arrival inspection visit will imply:

- Visual inspection of the actual equipment.
- Inspection of the testing equipment when running a real vehicle.
- Inspection of the calibration procedure.
- Verification of the equipment to certify that it fulfils the real needs of the ATS.

All cost towards on-arrival inspection either at respective sites of ATS's in Bihar or at any other location within India (irrespective of no. of visits - approx. 4 to 5 persons per visit) including preparations for inspection, demonstration, manpower, lodging and boarding, travelling, transportation, including that of Transport Department officials and any nominated agency etc. shall be sole responsibility of bidder.

All calibration certificates should be available to Transport Department, Government of Bihar by the time of inspection on-arrival.

For Exhaust Gas Analyzers and Smoke meter (Opacimeter), the Bidder at its own cost, will be required to provide certification as per CMVR/TAP 115/116 or AIS-137 (Part 8) by the time of final on-site acceptance. Remaining equipment shall be calibrated as per International Standards by an accredited certification agency. In case this is not available for some equipment, the Bidder is required to thoroughly explain the calibration procedure used, and to submit all required traceability information.

All the previous information is also required for the calibrating equipment itself.

The supplier should also deliver the procedure that will be used to qualify the equipment during the commissioning.

2. Commissioning

- Calibration certificate will be checked with the serial numbers of the equipment delivered on site.
- A full recalibration will be done on-site.
- Validation of the sensors (bridges, connectors, identification).
- Validation of the software.
- Connections and validation of power supply.
- Validation of system.
- Validation of calibration plan during warranty.
- Validation of the provided documentation.

Final acceptance

After complete commissioning, the following tests will be performed:

- Values obtained in the calibrations will be checked to be admissible.
- The correct running of the software and data dump will also be checked.
- Inspections will be undertaken with different type of vehicles to prove that operation and results of the equipment fulfils the requirements demanded in this tender document.

These tests might be used to validate the complete system. Bidder will ensure that there are proper vehicles and drivers required to perform the tests.

8.9. Annexure VIII: Terms of Payment

The stage wise Payments shall be made in Percentage of the Total Agreed Cost of works as agreed by the bidder. The Payment will be made after completion of particular stage in all respect as per the detail in “**Annexure-I: Scope of Work**” in compliance of all the conditions mentioned in the Tender Document.

It is mandatory that bidder shall submit stage wise bills along with the Test Reports of the materials (from NABL-accredited laboratories) used in the works and the photographs of the complete stage of construction as well as periodically photographs taken during execution. The photographs shall be taken from the Digital camera showing the GPS, date and time on the photograph, nothing extra shall be payable to the bidder on this account. The frequency of Test of materials will be as per the standard norms and conditions in tender document.

The main scope of work for each component shall be governed as detailed in “**Annexure-I: Scope of Work**” of the tender document and final payment shall be made accordingly to the bidder.

1. Payment for Construction of respective ATS:

Sr. No.	Description	Rate (%)
1.	Test Shed/Building Works	
	a) Excavation and laying of Lean Concrete	10%
	b) RCC Works for Foundation	10%
	c) Post-Shipment of Inspection of Prefabricated Components in good condition at Site	15%
	d) Erection of Test Shed	10%
	e) Construction of Admin Building, Utility room, Server Room and allied structures	10%
	f) Design, construction & civil work of Equipment Foundations including allied services like test shed trimix flooring, conduiting for cables including 3 phase & Single phase cables & drainage, compressor piping	10%
	g) Waterproofing Work	2%
	h) Road Works	3%
	i) Electrical Works including Compact Substation, L.T Panels, External Lighting, HT & LT Cables, Lightning Conductor and other allied works	10%
	j) Epoxy coating for the flooring	5%
2.	Water Supply and Sanitation Works	
	a) Sewage System and Sanitary Fixtures	3%
	b) Storm Water Drainage System	5%
	c) Water Supply System and Water Treatment Plant	5%
3.	Fire Fighting System Works	2%

2. Payment for Supply, Installation and Commissioning of Utilities at respective ATS:

Sr. No.	Description	Rate (%)
1.	Receipt of Utilities in good condition and correct quantity at site	40%
2.	Installation of Utilities in all respects including electrical installation	30%
3.	Commissioning of Utilities	30%

3. Payment for Supply, Installation and Commissioning of Test Lane Equipment at respective ATS:

Sr. No.	Description	Rate (%)
1.	Receipt of Test Lane Equipment in good condition and correct quantity at site	40%

2.	Installation of Test Lane Equipment in all respects including electrical installation	20%
3.	Supply and Installation of Lane Operation & Management software	10%
4.	Commissioning of the whole system	30%

4. Payment for Supply, Installation and Commissioning of Exhaust Gas Handling System at respective ATS:

Sr. No.	Description	Rate (%)
1.	Receipt of Exhaust Gas Handling System in good condition and correct quantity at site	40%
2.	Installation of Exhaust Gas Handling System	30%
3.	Commissioning of Exhaust Gas Handling System	30%

5. Payment for 1 (One) Years Operation & maintenance of ATS's:

The Successful Bidder shall submit the invoices for operation on monthly basis to the Transport Department, Government of Bihar. However, payment shall be made on quarterly basis by the Transport Department, Government of Bihar.

Final month payment shall be paid after the bidder has handed over all the equipment's in good working conditions and settled all the dues such as PF/ESI dues for operators, CAR policy etc. to be paid by vendor. CAR policy means Contractors All Risks policy. It is basically related to the civil work that will be carried out by bidder at sites. In case of any mishappening at sites during construction stage, bidder will be solely responsible.

5 (a) Payment of AMC:

The Successful Bidder shall submit the invoices for AMC on monthly basis to the Transport Department, Government of Bihar. However, payment shall be made on quarterly basis by the Transport Department, Government of Bihar.

5 (b) Invoice submission procedure (applicable for Operation and AMC payments)

- The Successful Bidder shall submit the invoice on quarterly basis to the Transport Department, Government of Bihar i.e. tendering authority along with all supporting documents such as
- Tax Invoice
- Relevant compliance documents
- Certificate of successful operations of the respective ATS for the period in question along with necessary details of tests conducted, passed, failed, maintenance and repair work, calibration works, attendance of manpower etc. Such certificate format shall be decided by Transport Department, Government of Bihar at later date and shall include whether the work completed satisfactorily or not and should be issued by the Head of the concerned office / nominated supervisor from respective Transport Office (RTO / Dy. RTO/DTO).
- Any other documents sought by Transport Department, Government of Bihar from time to time as per Transport Department, Government of Bihar prevailing practice.

- and collate and submit the approved invoice along with necessary attachments to the office of the Transport Department, Government of Bihar for further processing.
- The Transport Department, Government of Bihar shall verify the invoice of the Successful Bidder. The corresponding payment shall be calculated subject to liquidated damages, SLA, Warranty / AMC terms and other conditions of the Tender document.
- The Transport Department, Government of Bihar shall not pay anything over and above the quoted and agreed payment as per terms defined in the RFP document.
- The Transport Department, Government of Bihar shall not pay anything extra for the software applications, its maintenance of audit etc. The Agency may build the cost for the same in the ATS operation cost itself.
- In case of any disputes, part payment may be released, and the withheld payment may be released as per decision taken on the corresponding dispute.
- All the deduction will be calculated based on the SLA and will be deducted from the invoice amount and the remaining amount will be paid to the Successful Bidder.
- Transport Department, Government of Bihar shall reserve right to withheld / deduct any deductions applicable as per prevailing guidelines.

Taxes & Duties:

The Taxes and Duties shall be applicable as per the provisions of Clause 27 of “**Annexure IX - General Conditions of Contract**”.

- Deviations in Terms of Payment:

The Bidder's offer must be as per the Terms of Payment given above. Any deviation from the above Terms of Payment shall not be entertained. Any offer with deviation from the above Terms of Payment shall be liable to disqualification.

8.10. Annexure IX : General Conditions of Contract (GCC)

1. Definitions and Interpretations

1.1. Definitions

In these General Conditions of Contract (“Conditions”) the following words and expressions shall, unless repugnant to the context or meaning thereof, have the meaning hereinafter respectively ascribed to them:

“Acceptance Tests” means the tests described as such in the Testing Plans.

“Affected Party” means a Party whose performance of its obligations under the Contract is prevented, hindered or delayed in whole or in part by reason of Force Majeure.

“Applicable Clearances” means any clearance, permit, authorization, consent, license (including without limitation, any import or export licenses), lease, ruling, exemption, filing, agreements, or approval, required to be obtained and maintained by the Bidder from time to time, in order to complete the Works.

“Applicable Laws” means all laws in force and effect as of the date hereof and which may be promulgated or brought into force and effect hereinafter in India including any revisions, amendments or re-enactments including without limitation rules, regulations and notifications made there under and judgments, decrees, injunctions, writs, orders and notifications issued by any court of record or any appropriate authorities, as may be in force and effect during the subsistence of the Contract.

“Change” means any change to Conditions of Contract, which is instructed or approved as a Change under **Clause 23**.

“Change Order” **shall** have the meaning ascribed to it in **Clause 23.2.4**.

“Commencement Date” shall mean the date of execution of the Contract by the Parties.

“Commissioning Spare Parts” means those commissioning spare parts required during the commissioning of the Works.

“Completion Certificate” has the meaning ascribed to it in **Clause 21.3.2**.

“Completion of the Works” means the achievement of the criteria set out in **Clause 21.1** and “Complete” “Completed” “Completion” and “Completing” shall be construed accordingly and as certified by the Completion Certificate.

“Confidential Information” means the Contract and everything contained therein, all documentation, data, particulars of the Works and/or the Project Facility and/or the Project and technical or commercial information made by (or on behalf of) Transport Department, Government of Bihar or obtained directly or indirectly by the Bidder or which is generated by the Bidder or any subbidder or any information or data that the Bidder receives or has access to as a result of the Contract, other than information: which is generally available in the public domain other than by any unauthorized actions or fault of the Bidder; or which is in the possession of the Bidder with a right to disclose.

“Contract” means the Contract Agreement, these Conditions, Technical Conditions of Contract, and the further documents (if any) which are listed in the Contract Agreement and initialed by Transport Department, Government of Bihar and the Bidder and includes any amendment thereto made in accordance with the provisions hereof.

“Bidder” (Successful Bidder) includes (without limitation to) any person, company, firm, organization, consortium with whom Transport Department, Government of Bihar has entered into a Contract for execution of the Works and the permitted legal successors in title to the Bidder, but not any assignee of the Bidder.

“Contract Agreement” means the agreement entered into or to be entered into by the Parties and forming part of the Contract.

“Bidder's Documents” means in addition to the documents mentioned in **Clause 1.5.1**, those documents to be prepared by the Bidder under the

Contract including without limitation, such technical documents specified in Technical Conditions of Contract and such data, drawings, designs, design information, calculations, schedules, specifications, plans, inspection and test plans, manuals, programs, erection and test data and all other information and documents including all eye readable or computer or other machine readable data relating to the Execution of the Works or otherwise to performance of the Contract.

“Bidder’s Equipment” means all or any apparatus, machinery, equipment, vehicles, materials, plant, tools and all other things required for the Execution of the Works and the remedying of any defects to be provided by the Bidder, but Bidder’s Equipment excludes Equipment.

“Bidder’s Insurances” means the insurance policies to be purchased and maintained in full by the Bidder.

“Contract Price” means the Contract Sum subject to such additions thereto or deductions there from as made in accordance with the Contract.

“Contract Sum” means the sum mutually agreed between Transport Department, Government of Bihar or their authorized representative and Bidder as the sum payable to the Bidder for the Execution of the Works in accordance with the provisions of the Contract.

“Date of Completion of the Works” means the date certified as such in the Completion Certificate in accordance with **Clause 21.1**.

“Delay Event” means any event set out at **Clause 18.3**.

“Encumbrance” means any encumbrance such as mortgage, charge, pledge, lien, hypothecation, security interest, assignment, privilege or priority of any kind having the effect of security or other such obligations and shall include without limitation any designation of loss payees or beneficiaries or any similar arrangement under any insurance policy pertaining to the Project Facility and/or the Works, physical encumbrances and encroachments on the Project Site.

“Equipment” means any apparatus intended to be procured for the implementation of the Works which may either be manufactured indigenously or may be procured from abroad.

“Execution of the Works” means building & construction of ATS’s including design, procurement, supply, assembly, erection, installation, testing, commissioning, trial runs and completion of the Works and the correction of defects in the Works and all works and things required to be undertaken pursuant to the Contract and “Executed”, “Execute” and “Execution” shall be construed accordingly.

“Execution Period” means the period beginning from the Commencement Date and ending on the Date of Completion of the Works.

“Force Majeure Period” means, the period commencing from the date of occurrence of a Force Majeure and ending on the date on which the Affected Party, acting in accordance with the Good Industry Practice, resumes or should have resumed such of its obligations the performance of which was excused in accordance with the Contract.

“Good Industry Practice” means the exercise of the highest degree of skill, diligence, prudence, safety and foresight in compliance with the undertakings and obligations under the Contract which would be expected from a skilled and experienced person engaged in the planning, design, execution, testing, implementation, operation and maintenance or supervision or monitoring thereof or any of them of works of the type, nature and scope similar to that of the Works.

“Intellectual Property” means copyright, all rights conferred under statute, common law or equity in relation to inventions (including patents), registered and unregistered trademarks and service marks, registered and unregistered designs, circuit layouts, confidential information, proprietary information and all other rights resulting from intellectual activity in the industrial, scientific, literary or artistic fields.

“Liquidated Damages” means those damages described in Annexure IX under **Clause 20** to be paid or allowed by the Bidder to Transport Department, Government of Bihar or their authorized representative as compensation.

“Maintenance Spare Parts” means the maintenance spare parts for the Equipment and includes the critical, replacement and breakdown spare parts.

“Milestone Event” means the completion of a specific activity to be achieved, which reflects progress in the Execution of the Works or the occurrence of an event in each case as identified as such in the Timeline Clause and Payment Schedule Clause.

“Parties” means Transport Department, Government of Bihar or their authorized representative and the Bidder and

“Party” means any one of those Parties.

“Payment Schedule” means the payment schedule described as such and set out in Annexure no VIII.

“Performance Standards” means such performance standards for the operation and maintenance of the Project Facility as may be applicable pursuant to the Contract.

“Pre - Acceptance Test” means tests described as such in the Testing Plans.

“Project” means Construction and Setting Up of Automated Testing Stations (ATS's) for Testing & Inspection of Transport vehicles including Three-Wheelers, Quadricycles, Taxis, Buses and Trucks including Operation & Maintenance for 1 Years and Comprehensive Annual Maintenance Contract for 3 Years after initial 2 years' warranty period.

“Project Facility” shall mean the facilities as specified in the Tender document, being developed in accordance with the Project and includes all its buildings,

equipment, facilities, software and systems and includes without limitation, where the circumstances so require, any expansion thereof from time to time. “Project Facility Insurance” means the insurance policies to be purchased and maintained in force by Bidder.

“Project Sites” means that part of the sites as indicated in Annexure I under clause no. 2, on, under and over which the Works are to be Executed and any site to which any Bidder's Equipment and Equipment are to be delivered, and any other places as may be specified in the Contract as forming part of the Project Sites.

“Punch List Items” means items of works of a minor or snagging nature which do not affect the performance of the Equipment, where agreed with Transport Department, Government of Bihar, which remain incomplete at the Date of Completion of the Works.

“Quality Assurance Plan” means that plan referred to in **Clause 9.1**.

“Relevant Authority” includes the Department of Customs and Excise, the Ministry of Finance, the Ministry of Heavy Industries or any other subdivision or instrumentality thereof, any local authority, or any authority empowered by the Applicable Laws.

“Required Insurances” means collectively the Project Facilities Insurances and the Bidder Insurances.

“Required Manufacturers Warranties” means those warranties identified as such in Technical Conditions of Contract.

“Spare Parts” means the Commissioning Spare Parts and shall include such Maintenance Spare Parts as are instructed to be provided by Transport Department, Government of Bihar.

“Sub bidder” means a Sub bidder to whom a part of the Works has been subcontracted by Bidder or to whom the supply of any goods or materials or labour and services for the Works has been subcontracted as permitted under **Clause 7** and the permitted legal successors in title to such person, but not any assignee of such person.

“Tax” means all forms of taxation, duties, fees, imposts and levies including (but without limitation) income tax including withholding tax, GST, value added tax, sales tax, service tax, octroi, entry tax, corporation profits tax, advance corporation tax, capital gains tax, residential and property tax, customs and other import and export duties, excise duties, stamp duty, capital duty, social insurance, social welfare or other similar contributions and other amounts corresponding thereto and any interest, surcharge, penalty or fine in connection therewith which may be payable by the Bidder, its Sub bidders and any of their employees, and the words “Taxation” and “Taxes” shall be construed accordingly.

“Technical Conditions of Contract” means the document entitled Technical Conditions of Contract, as included in the Contract, and any additions and modifications to such document in accordance with the Contract. Such

document includes the design and /or other technical specifications for the Works.

“Termination Date” means the date specified in the notice of Termination given by either Party to the other Party, from which the Contract shall stand terminated.

“Testing Plans” means those plans referred to in **Clause** 16.1.2 which set out the tests and inspections required to be performed by the Bidder in accordance with the Technical Conditions of Contract and the means by which the Bidder intends to conduct and satisfy such tests and inspections.

“Time for Completion” means the time for Completion of the Works as stated in Annexure-I: Scope of Work or such time as may be varied from time to time in accordance with the Contract, calculated from the Commencement Date.

“Training Plan” shall have the meaning assigned to it in **Clause** 28.2.

“Warranty” means an assurance from the Bidder for uninterrupted performance of the Equipment after the acceptance of the Equipment, as per the performance parameters specified under the Contract and includes any alteration, repair or replacement of any defective or damaged part/ design or material used for the Equipment at the cost of the Bidder over the Warranty Period for ensuring such uninterrupted performance.

“Warranty Period” means the period starting from the date of acceptance of the Equipment up to duration as stated in Annexure I.

“Works” includes (without limitation to) building & construction of ATS's including designing, manufacturing, assembling and functional testing prior to shipment, delivery, installation, integration of systems and system checking, testing and commissioning of the Equipment and supply of special tools, requisite software, supply of Spare Parts, Operations and maintenance for 1 Years and Comprehensive Annual Maintenance Contract for 3 Years after initial 2 years' warranty period and training to the personnel, operators and mechanics of Transport Department, Government of Bihar including Project Facility operations personnel and Project Facility operation trainers and necessary after sales service and maintenance support, as agreed with Transport Department, Government of Bihar.

1.2. Interpretation

In the Contract, unless the context otherwise requires or as otherwise expressly stated:

- 1.1.1. the words importing singular shall include plural and vice versa, and words denoting natural persons shall include partnerships, firms, companies, corporations, joint ventures, trusts, associations, organizations or other entities (whether or not having a separate legal entity);
- 1.1.2. The Technical Conditions of Contract form an integral part of the Contract and will be in full force and effect as though they were

expressly set out in the body of these Conditions. Terms defined in this Annexure, and Technical Conditions of Contract shall have the same meaning throughout the Contract.

- 1.1.3. definitions within Clauses have the meaning ascribed hereto.
- 1.1.4. metric system of measurement shall be used exclusively in the Contract.
- 1.1.5. use of any gender includes the other genders.
- 1.1.6. a reference to any statute or statutory provision shall be construed as a reference to the same as it may have been, or may from time to time be, amended, modified or re-enacted.
- 1.1.7. any reference to a 'day' (including within the phrase 'business day') shall mean a period of 24 hours running from midnight to midnight.
- 1.1.8. references to times are to Indian Standard Time.
- 1.1.9. a reference to any other document referred to in the MSA (Master Service Agreement) is a reference to that other document as amended, varied, innovated or supplemented at any time; and all headings and titles are inserted for convenience only. They are to be ignored in the interpretation of the MSA.
- 1.1.10. Master System Integrator (MSI) has been used for the same entity i.e. bidder selected for the project.

1.3. Communications

Wherever these Conditions provide for any agreement, or the giving or issuing of any consent, approval, authorization, notice, certificate, request, determination, information or report ("communication") from or by any Party such communication shall be valid and effectual only if:

- 1. in writing under the hands of a duly authorized representative of such Party and delivered by hand (against receipt), sent by recognized courier, registered mail, or transmitted by facsimile transmission; and delivered, sent or transmitted to the address for the recipient's communications as stated by Transport Department, Government of Bihar.

1.4. Confidentiality

- 1.4.1. The Bidder shall disclose to Transport Department, Government of Bihar any Confidential Information and other information as Transport Department, Government of Bihar may reasonably require for verifying the Bidder's compliance with the Contract. Further, the Bidder shall not, without the previous written consent of Transport Department, Government of Bihar, use, copy, publish, disclose or otherwise deal with, nor cause nor permit its Sub bidders or any persons for whom it is contractually or otherwise responsible for, to use, copy, publish, disclose or otherwise deal with any Confidential Information, otherwise than for the performance of its obligations under the Contract.
- 1.4.2. The Bidder shall not without the prior written permission of the Transport Department, Government of Bihar Representative:

- (i) disclose the Contract or any provision thereof or any specification, plan, drawing, pattern, sample or information furnished by or on behalf of Transport Department, Government of Bihar in connection therewith, to any person other than a person employed by the Bidder in the performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purpose of such performance.
- (ii) make use of any document or Confidential Information enumerated in the Contract, except for the purpose of the Contract; and communicate or use in advertising, publicity, sales, releases or in any other medium, photographs or other reproduction of the Works under this Contract or description of the Project Site, dimensions, quantity, quality or other information, concerning the Works.

1.4.3. Any document, other than the Contract and enumerated in the Contract shall remain the property of Transport Department, Government of Bihar and shall be returned (in all copies) to Transport Department, Government of Bihar on completion of the Bidder's performance under the Contract, if so required by the Transport Department, Government of Bihar.

1.4.4. Each Party's Confidential Information will remain the property of that Party except as otherwise expressly provided in the MSA. Each of the Parties will use at least the same degree of care to safeguard and to prevent disclosing to third parties the Confidential Information of the other as it employs to avoid unauthorized disclosure or publication of its own information (or information of its customers) of a similar nature, and in any event, no less than reasonable care. Each Party may disclose relevant aspects of the other Party's Confidential Information to its employees, Affiliates, subcontractors and agents to the extent such disclosure is reasonably necessary for the performance of its obligations, or the enforcement of its rights, under the MSA; provided, however, that such Party will use reasonable efforts to ensure that such employees, Affiliates, subcontractors or agents comply with these confidentiality provisions. Each Party will be responsible for any improper disclosure of Confidential Information by such Party's employees, Affiliates, subcontractors or agents. A Party may reuse for its own purposes with third parties the terms and conditions of the MSA, provided that (i) such use in no way may be attributed to the other Party, the MSA or the relationship between MSI and Transport Department, Government of Bihar and (ii) such use is not used in negotiations with the other Party or any of the other Party's Affiliates for any other contractual arrangement.

1.4.5. This Clause will not apply to any particular information that either Party can demonstrate (i) was, at the time of disclosure to it, in the public domain; (ii) after disclosure to it, is published or otherwise becomes part of the public domain through no fault of the receiving Party; (iii)

was in the possession of the receiving Party at the time of disclosure to it and was not the subject of a pre-existing confidentiality obligation; (iv) was received after disclosure to it from a third party who had a lawful right to disclose such information (without corresponding confidentiality obligations) to it; or (v) was independently developed by the receiving Party without use of the Confidential Information of the disclosing Party.

1.4.6. In addition, a Party will not be considered to have breached its obligations under this Clause for disclosing Confidential Information of the other Party to the extent required to provide information under Right to Information, 2005, satisfy any legal requirement of a competent governmental or regulatory authority.

1.4.7. Each party shall notify the other Party promptly of any material unauthorized possession, use or knowledge, or attempt thereof, of the other Party's Confidential Information by any Person that may become known to such party and help & cooperate in investigating or preventing recurrence of such events. Each party shall also use reasonable efforts to cooperate with the other Party in any litigation and investigation against third parties deemed necessary by the other Party to protect its proprietary rights;

1.5. Bidder's Documents

1.5.1. The Bidder's Documents shall mean and include the following which shall be deemed to form a part of the Contract:

- (i) Tender Document including letter forwarding the tender documents, instructions to bidders and the conditions described in this Annexure.
- (ii) Specifications of the Equipment to be furnished under the Contract in the Technical Conditions of Contract.
- (iii) Bidder's bid proposal and the documents attached thereto including the letters of clarifications thereto between the Bidder and Transport Department, Government of Bihar prior to the award of the Contract except to the extent of repugnancy.
- (iv) all the materials, literature, data and information of any sort given by the Bidder along with its bid, subject to the approval of Transport Department, Government of Bihar.
- (v) Letter of award and any agreed variations of the conditions of the documents and special terms and conditions of the Contract, if any; and such additional documents within such times and in such numbers and format as Transport Department, Government of Bihar may reasonably require.

1.5.2. The Bidder shall prepare all Bidder's Documents and shall submit the Bidder's Documents to Transport Department, Government of Bihar as

may be required/ directed by Transport Department, Government of Bihar and /or as called for in the Contract and in numbers and format required by the Contract and/ or by Transport Department, Government of Bihar.

1.5A Conflict of Documents

1.5. A.1 In case of any inconsistency between any of the constituent documents of the Contract, the following shall be the supervening/prevaling order of priority for such documents:

- (i) Contract Agreement.
- (ii) Technical Conditions of Contract.
- (iii) Other Bidder's Documents.
- (iv) General Conditions of Contract.

It is specifically clarified that in case of conflict between any timelines set out in these Conditions with those in the Tender document.

1.5. A.2 In the event of any conflict between the above-mentioned documents, the decision of the Transport Department, Government of Bihar shall be final and binding upon the Parties.

1.6. Transport Department, Government of Bihar Instructions

1.6.1. All instructions given by Transport Department, Government of Bihar or by any person executing delegated functions will be issued in writing and in such form as will be advised to the Bidder after the Effective Date.

1.6.2. Where the Bidder fails to comply with an instruction, Transport Department, Government of Bihar may engage others to give effect to the instruction. All costs and charges incurred by Transport Department, Government of Bihar authorized representatives in engaging others shall be paid by the Bidder to Transport Department, Government of Bihar or may, without prejudice to any other method of recovery, be deducted by Transport Department, Government of Bihar from any monies due to the Bidder or may be recovered as a debt due and payable to Transport Department, Government of Bihar on demand.

2. THE TRANSPORT DEPARTMENT, GOVERNMENT OF BIHAR

2.1. The Transport Department, Government of Bihar duties and authorities

The Bidder shall be appointed by and shall be responsible to, Transport Department, Government of Bihar and shall carry out the duties specified in, or necessarily implied from the Contract and shall exercise the authority delegated to it by Transport Department, Government of Bihar. The Bidder shall take instructions, notices, communications, decisions and approvals only from Transport Department, Government of Bihar.

The Transport Department, Government of Bihar authorized Representatives shall have no authority unless given by Transport Department, Government of Bihar to amend the Contract, to release the Bidder of any of his duties, liabilities or obligations under the Contract, nor, create estoppel against it in respect thereof, nor except as expressly provided hereunder or elsewhere in the Contract, to order any Work involving delay or any extra payment by Transport Department, Government of Bihar or their authorized representative, nor to make any variation of or in the Works nor to waive any right of Transport Department, Government of Bihar authorized representatives under the Contract.

2.2. Transport Department, Government of Bihar protection

The Parties acknowledge and agree that provisions in the Contract to the effect that work to be done under the Contract shall be carried out with the consent, non-objection or to the satisfaction of or be certified, determined, accepted, confirmed or inspected by the Transport Department, Government of Bihar are inserted as protection to Transport Department, Government of Bihar and it is the sole responsibility of the Bidder to ensure that the Works are executed in all respects in accordance with the Bidder's obligations under the Contract. The Bidder further acknowledges and agrees that no payment by Transport Department, Government of Bihar or their authorized representative nor any expression or implication of satisfaction or acceptance nor any action, examination, comment, rejection, confirmation, certification, determination, consent, non-objection, approval or notice by the Transport Department, Government of Bihar or failure to do the same shall restrict, debar, exclude or waive any claims, rights or actions whatsoever by Transport Department, Government of Bihar for any breach of any such obligation by the Bidder.

3. COMMENCEMENT

3.1. Condition Precedent

The Contract shall become legally binding and in force only upon:

- 3.1.1. return of the duplicate signed copy of the Letter of Award (LOA) by selected bidder to the Transport Department, Government of Bihar within 7 (seven) days of receipt of LOA; and payment of Performance Bank Guarantee in the form of Demand Draft (DD) or an irrevocable Bank Guarantee in favour of "Transport Commissioner, Bihar State" issued by nationalized or scheduled banks, having head office in India, payable at Patna only

4. THE PROJECT SITES

4.1. Access to and possession of the Project Sites

- 4.1.1. Save in so far as the Contract may prescribe:

- (i) the extent of portions of the Project Sites of which the Bidder is to be given access from time to time; and order in which portions shall be made available to the Bidder.

Transport Department, Government of Bihar will, simultaneously from the Commencement Date, give to the Bidder uninterrupted access to and possession of only so much of the Project Sites as may be reasonably required by the Bidder to commence and proceed with the Execution of the Works. The Bidder represents that it shall not part with or create any Encumbrance on the whole or any part of the Project Site and shall not, without the prior written consent of Transport Department, Government of Bihar, use the Project Sites for any purpose other than for the purpose of the Execution of the Works and shall bear all costs and charges for any access required by it additional to those provided by Transport Department, Government of Bihar.

- 4.1.2. The Bidder shall not be entitled to uninterrupted access to or exclusive possession of any part of the Project Sites during Execution of the Works at the Project Sites and the Bidder's rights of access to and possession of any part of the Project Sites shall in addition be subject to:

- (i) any rights of public passage or access existing over any part of the Project Sites from time to time;
- (ii) the right of Transport Department, Government of Bihar and representatives of any statutory authority, to have access to:
 - (a) view the Works or any operations at the Project Sites on reasonable notice; and visit any site or workshop where goods, materials or equipment are being manufactured, prepared or stored, on reasonable notice and during normal working hours, for the purposes of general inspection and of attending any test or investigation being carried out in respect of the same; and visit and use, and their staff and visitors may visit and use, any facilities provided on the Project Sites for their use; and the Project Sites at any time in an emergency situation as any of them (acting reasonably) considers necessary in the circumstances; provided always that such persons shall comply with all relevant safety procedures.

4.2. Unauthorized persons

The Bidder shall be fully responsible for the presence on or around or for the entry to the Project Sites or for any other act, omission, default or interference affecting the Project Site or the Execution of the Works, by or caused by any person not authorized to be on the Project Sites and any such act, omission, default or interference shall not be a breach of the obligations of Transport Department, Government of Bihar to provide access to the Project Sites. Security of ATS shall be the responsibility of Successful bidder only. In case of any unforeseen incidence in the ATS, Transport Department, Government of Bihar will provide necessary assistance for getting security for operation of ATS.

5. CONDITION OF THE PROJECT SITES

5.1. Information from Transport Department, Government of Bihar or their authorized representative

The Bidder acknowledges and agrees that any information and data on climatic, hydrological, topographical, and general conditions relating to the Project Sites made available to it by Transport Department, Government of Bihar or their authorized representative has been done so for the convenience of the Bidder and that the Bidder enters into the Contract based upon its own investigations and determinations. The bidder is advised to conduct due diligence, including site visits if required, to assess ground conditions, accessibility, and infrastructure availability at the above-mentioned locations before submission of the proposal. Any assumptions made by the bidder regarding site conditions shall be deemed to have been factored into the bid.

5.2. Bidder to inspect

The Bidder warrants that it has, to its complete satisfaction, examined and inspected the Project Sites and its surroundings and where applicable, any existing structures or works on, over and under the Project Sites and is familiar with and has satisfied itself with the Project Sites conditions including the climate, topography, access to and from the Project Sites, safety, availability of labour, water and electricity. No claim by the Bidder regarding misunderstanding or misapprehension in respect of matters related to this Clause shall be maintainable.

6. THE BIDDER

6.1. The Bidder's general responsibilities

6.1.1. Subject to and in accordance with the terms and conditions of the Contract, the Bidder shall to the satisfaction of Transport Department, Government of Bihar, Execute the Works and carry out its other obligations under and/or in relation to the Contract and provide all personnel and labour, including the supervision thereof, materials, offices, workshops, tools, machinery, equipment and all other resources and things, whether of a temporary or permanent nature, required herein, and shall assume full responsibility for the same so as to meet the Time for Completion.

6.1.2. The Bidder shall at its own expense:

- (i) take full responsibility for the adequacy, stability and safety of the Works, labour, equipment and of all on-site and off-site operations and methods of manufacture, construction, and installation, commissioning, testing and reliability and acceptance procedures.
- (ii) do everything necessary (including the payment of all relevant fees) to acquire and maintain all Applicable Clearances.
- (iii) at all times ensure that it has sufficient, suitable and qualified personnel at the Project Sites and in sufficient number to undertake the responsibilities

imposed upon the Bidder under the Contract and to provide full attention to the Execution of the Works.

- 6.1.3. Addressing technology obsolescence by appropriate upgradation, replacement and / or replenishment of systems deployed.
- 6.1.4. Keep all system software i.e. OS, antivirus, office applications etc., for Servers, PCs etc. up to date by installing regular upgrades / patches to ensure adherence to SLAs.
- 6.1.5. Rectification of system software problems due to crashing or malfunctioning of the OS, database or User Interface within the time limits to meet the SLAs as defined in Tender document.
- 6.1.6. Generation of MIS & other reports as per the requirements of Transport Department, Government of Bihar.
- 6.1.7. Any other services which is required for the successful execution of the project.

6.2. The Bidder's representations and warranties

The Parties agree that the principal objective of the Contract is the timely completion of the Project Facilities of which the Works form an integral part and that time is the essence of the Contract. The Bidder warrants that it is fully experienced in the planning, programming, design (to the extent required by the Contract), building & construction, procurement and supply, erection, installation, testing, commissioning of equipment's for the scope, complexity, size and technical sophistication of the Works and that it possesses the level of skill and expertise commensurate with such experience, upon which skill and expertise Transport Department, Government of Bihar or their authorized representative is entirely reliant and the Bidder hereby represents and warrants to Transport Department, Government of Bihar:

Design (to the extent required by the Contract)

- 6.2.1. it has satisfied itself as to, and adopts and accepts full responsibility for any design of the Works contained in and reflected by Technical Conditions of Contract;
- 6.2.2. it shall exercise in the design and specifications for the Works all the skill, care and diligence to be expected of professionals experienced in and possessing all the expertise necessary for similar projects of the size, scope, complexity and technical sophistication of the Works;
- 6.2.3. the Works have been and will continue to be designed and specified utilizing state of the art systems, procedures and technology, high quality goods, materials and equipment and the high standards of workmanship and fabrication in compliance with Technical Conditions of Contract.

- 6.2.4. the Bidder further warrants that upon the Date of Completion of the Works, the Works will be in a condition which will enable Transport Department, Government of Bihar to meet those Performance Standards which relate to the Works.
- 6.2.5. that it recognizes that the process of producing, optimizing, developing and finalizing the design of the Works will require the closest consultation, co-operation and co-ordination between itself, Transport Department, Government of Bihar and any Relevant Authority and that it has taken account of the same in the Contract Sum.

Workmanship

- 6.2.6. it shall construct and install the Works in accordance with the approved specifications and drawings.
- 6.2.7. the Works will be Executed and defects, remedied in accordance with Good Industry Practice, using state of the art systems and technology and accepted professional standards, codes of practice and regulations, and shall meet the intents and objectives of the Contract and comply with all Applicable Laws and be in accordance with Technical Conditions of Contract and other requirements of the Contract.
- 6.2.8. the personnel to be employed by the Bidder shall be properly skilled, competent and experienced having regard to the nature and extent of the Works. Transport Department, Government of Bihar may also verify their skills as & when required.
- 6.2.9. the Works and every part thereof will be complete in all parts, will be free from defects in materials and workmanship and will be in conformity with Technical Conditions of Contract.

Equipment

- 6.2.10. it will ensure that the Works will comprise only Equipment which is of sound and merchantable quality and which is manufactured and prepared in accordance with the Applicable Laws and with Good Industry Practice applicable at the time of construction and/or installation;
- 6.2.11. the Equipment, notwithstanding any acceptance by Transport Department, Government of Bihar, shall where appropriate be manufactured specifically for the Contract and be new and unused, will be complete in all its parts, free from defects and will meet the requirements of the Contract and in particular, but without limiting the generality of the foregoing will be such that the Works as a whole and each and every part thereof shall meet Technical Conditions of Contract;

- 6.2.12. the information furnished in the tender documents and as updated on or before the date of the MSA is to the best of its knowledge and belief true and accurate in all material respects as at the date of the MSA;
- 6.2.13. there are no actions, suits, proceedings, or investigations pending or, to its knowledge, threatened against it at law or in equity before any court or before any other judicial, quasi-judicial or other authority, the outcome of which may result in the breach of the MSA or which individually or in the aggregate may result in any impairment of its ability to perform any of its obligations under the MSA;
- 6.2.14. it has no knowledge of any violation or default with respect to any order, writ, injunction or decree of any court or any legally binding order of any Government Instrumentality which may result in any Adverse Effect on its ability to perform its obligations under the MSA and no fact or circumstance exists which may give rise to such proceedings that shall adversely affect the performance of its obligations under the MSA;
- 6.2.15. The MSI fully indemnifies the Transport Department, Government of Bihar, from any damages arising out of breach of the aforesaid conditions.

6.3. Indemnity

- 6.3.1. The Bidder shall at all times save harmless and indemnify Transport Department, Government of Bihar from and against all claims, liabilities, expenses, costs, damages and losses suffered or incurred by Transport Department, Government of Bihar including consequential losses and damages which may arise out of or in connection with any defect, damage during transportation, inadequacy or unsuitability of the design, manufacture, workmanship or materials or failure to meet in any or all respects the requirements of the Contract or the remedying thereof either by the Bidder, or Transport Department, Government of Bihar.
- 6.3.2. Transport Department, Government of Bihar rights under this Clause
- 6.3.3. are without prejudice to any other right which it may have whether at law or otherwise.

If any deliverable or item provided by a Party hereunder is, or in such Party's reasonable judgment is likely to become, the subject of an Infringement Claim, the providing Party, at its expense and in addition to defending the claim and paying amounts as required by (a) or (b) above, will use reasonable efforts to procure for the other Party the right to use and continue using such deliverable or replace it with a non-infringing equivalent or modify it to make its use hereunder non-infringing, provided that such replacement or modification does not result in a degradation of the performance or quality of the deliverable. If such option is not available on commercially reasonable terms in the providing Party's good faith judgment, the providing Party will so notify the other Party, where upon (i)

the other Party will cease use of such deliverable or Service and return it to the providing Party and (ii) the Parties will equitably adjust the Service Charges to reflect the added expenses or discontinuation of Services. In such event, the Parties will seek to establish mutually acceptable alternative arrangements and to make any appropriate adjustments to their respective obligations under MSA.

- 6.3.4. MSI undertakes to indemnify Transport Department, Government of Bihar (the "Indemnified Party") from and against all Losses on account of bodily injury, death or damage to tangible personal property arising in favour of any person, corporation or other entity (including the Indemnified Party) attributable to the Indemnifying Party's negligence or willful default in performance or non-performance under MSA.

7. Sub bidders

7.1. Subcontracting

The Bidder shall not subcontract any part of the Works without the prior consent of the Transport Department, Government of Bihar. Any such consent shall not relieve the Bidder from any liability or obligation under the Contract and the Bidder shall be responsible for the acts, defaults, omissions and neglects of any Sub-Bidder, his agents, servants or workmen.

The Bidder may subcontract any part of the Works but not subcontract the whole of the Works under any circumstance.

7.2. Sub bidders Warranty and Assignment of Sub-Bidders Obligations

The Bidder shall procure the assignment of warranties by the Sub bidder in favour of Transport Department, Government of Bihar without any costs to the account of Transport Department, Government of Bihar.

In respect of the work executed, or Equipment supplied by a Sub bidder, any continuing obligation of a Sub bidder extending for a period exceeding that of the Warranty Period, shall be disclosed to Transport Department, Government of Bihar by the Bidder and be assignable to Transport Department, Government of Bihar or its nominee. The Bidder shall ensure that the Sub bidder shall at any time, assign to Transport Department, Government of Bihar and at their request, such continuing obligation of a Subcontract exceeding the Warranty Period and the benefit of such obligation for the un-expired duration thereof.

7.3. Responsibility

- 7.3.1. Subcontracting does not relieve the Bidder from any of its liabilities or obligations under the Contract.
- 7.3.1. The Bidder shall be fully responsible for the acts, defaults, omissions and neglects of any Sub bidder and their agents, employees, servants and

workmen, as fully as if they were the acts, defaults, omissions and neglects of the Bidder.

7.4. Subcontract Terms

The Bidder shall procure that:

- 7.4.1. every Subbidder has knowledge of the relevant terms of the Contract and provisions in the Contract relating to confidentiality and each Subcontract entered into by the Bidder shall be let on such terms and conditions as are reasonably necessary for the Bidder to ensure compliance with its obligations under the Contract.
- 7.4.2. the Subbidder provides like warranties and indemnities as given by the Bidder to Transport Department, Government of Bihar or their authorized representative.

8. Sufficiency of the Contract Sum

The Bidder shall be deemed to have satisfied himself before entering into the Contract as to the correctness and sufficiency of the Contract Sum and of the rates and prices. The Contract Sum is a lump sum fixed price and will not be adjusted save as expressly provided in the Contract.

9. Quality Assurance Plan

- 9.1. The Bidder shall within 30 days (thirty days) from the Commencement Date submit a Quality Assurance Plan. The Bidder shall also submit to the Transport Department, Government of Bihar all inspection / test reports and processes and quality standards which are adhered to while construction of Project facilities and for manufacturing of Equipment as per Quality Assurance Plan at least 15 (fifteen) days before the On-arrival inspection date. Transport Department, Government of Bihar or its nominee or any other person designated by Transport Department, Government of Bihar may inspect / witness the construction of Project facilities and equipment manufacturing processes and other information provided by the Bidder as mentioned in the Quality Assurance Plan. The Bidder agrees that neither the submission of Quality Assurance Plan nor the submission of quality / test certificate releases the Bidder from any of its responsibilities, obligations, or liabilities (including repair of civil work or replacement of any Equipment or part of the Works damaged during the carrying out of any Tests) under the Contract.
- 9.2. The Bidder shall at its own cost provide all access, assistance and facilities to enable Transport Department, Government of Bihar to verify the implementation of the Quality Assurance Plan.

10. Spare Parts

- 10.1. The Bidder shall be responsible, at its own cost, for the provision of the Spare Parts.
Such cost shall include all costs such as customs duty for imported Spare Parts, left behind items, replacement or breakdown spare parts as well as

costs for storage and insurance costs in relation to the maintenance of the Spare Parts in storage.

10.2. The Bidder shall ensure that:

- (i) as at the Completion of the Works, there is a full complement of Spare Parts safely stored and packed in accordance with the Contract.
- (ii) if a Maintenance Spare Part is used by the Bidder during the commissioning/ Acceptance Tests due to shortage of Commissioning Spare Parts, the Bidder shall immediately replace, at his own cost, the Maintenance Spare Parts to ensure a full complement of Maintenance Spare Parts at the end of commissioning/ Acceptance Tests.

10.3. The Bidder warrants the performance of all Maintenance Spare Parts for period that expires on the later of:

- (i) the manufacturer's warranty period for the applicable Maintenance Spare Parts.; and the Warranty Period.

The Bidder shall revise and update any list of Spare Parts in accordance with the instructions of the Transport Department, Government of Bihar, and a list of Spare Parts shall be submitted to the Transport Department, Government of Bihar before the Pre- commissioning of any part of the Works to which such Spare Parts relate.

10.4. Where the Bidder is to supply the Spare Parts in accordance with this Clause 10.4 without prejudice to the foregoing, the Spare Parts shall be delivered to Transport Department, Government of Bihar in accordance with the Contract and without prejudice to **Clause 13** the packing and storage of the Spare Parts shall be in accordance with the Contract.

11. ENVIRONMENTAL COMPLIANCE

The Bidder shall comply with all environmental requirements stipulated in the Contract and with all Applicable Laws and regulations having application to the Project Facilities, including but not limited to standards for noise and vibration levels and airborne and waterborne pollutants.

Bidder shall follow the guidelines mentioned in table below for Environmental Mitigation and Measures during construction stage at his own cost.

Sr. No.	Environmental Impact/Issue	Mitigation / Management Measures
1.	Removal of Trees	Trees shall be removed from the site before the commencement of construction with prior clearance from the Forest Department. For tree cutting purpose, Transport department, will provide necessary assistance as per applicable process for obtaining required permissions.

Sr. No.	Environmental Impact/Issue	Mitigation / Management Measures
2.	Generation of Debris	Debris generated due to the dismantling of the existing structure shall be suitably reused in the proposed construction, subject to the suitability of the material and the approval of the Transport Department, Government of Bihar or their authorized representatives. Un-utilizable debris material shall be suitably disposed off by the bidder; either for the filling up of borrow areas created for the project or at pre-designated dump locations.
3.	Construction Wastes & their disposal	Spoil from excavation of riverbed shall be managed and disposed off as directed by the Transport Department, Government of Bihar or their authorized representatives. No new disposal site shall be created as part of the project, which is not redeveloped. All waste material shall be completely disposed as desired and the site shall be fully cleaned before handing over.
4.	Flooding	In addition to the design requirements, the Contractor shall take all desired measures as directed by the Transport Department, Government of Bihar or their authorized representatives to prevent temporary or permanent flooding of the site or any adjacent area.
5.	Alteration of Drainage	In sections along water courses, and close to cross-drainage channels, earth, stone or any other construction materials or appendage shall be properly disposed off so as not to block the flow of water. All necessary measures shall be taken to prevent earthwork, stonework, materials and appendage as well as the method of operation from impending cross-drainage at rivers, streams, water canals and existing and existing irrigation and drainage systems.
6.	Contamination from Construction Wastes, fuel and Lubricants	At construction vehicle parking locations and at fuel/ lubricant storage sites, oil and grease traps shall be provided. Fuel storage shall be in proper bounded areas. The discharge standards promulgated under the Environmental Protection Act, 1986 shall be strictly adhered to.
7.	Sanitation and Waste disposal in construction camps	Construction labourer's camps shall be located at least 200m away from the nearest habitation and as approved by the Transport Department, Government of Bihar or their authorized representatives. The sewage system for a construction labourer's camp shall be designed, Build and as per the Factories Act, 1948 and the Building and other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996.
8.	Generation of Dust	All vehicles delivering materials to the site shall be covered to avoid spillage of materials. Cleaning shall be affected by manual sweeping and removal of debris, or, if so directed by the Transport Department, Government of Bihar or their authorized representatives, by mechanical sweeping and cleaning equipment, and all dust, mud and other debris shall be removed completely.

Sr. No.	Environmental Impact/Issue	Mitigation / Management Measures
9.	Emission and noise from Vehicles & Equipment	All vehicles, equipment and machinery used for construction shall conform to the relevant Bureau of Indian Standard (BIS) norms. All vehicles, equipment and machinery used for construction shall be regularly maintained to ensure that pollution emission levels comply with the relevant requirements of concerned pollution governing body.
10.	Risk from Construction operations	The bidder is required to comply with all the precautions as required for the safety of the work men as per the International Labour Organization (ILO) Convention No. 62 as far as those are applicable to this Contract. The bidder shall also comply with the National Building Code for this purpose.

12. Water & Electricity

12.1. Supply of water for construction purpose

12.1.1. Bidder shall make his own arrangement of water required for the work, at his own cost. However, the bidder will be permitted to drill bore well/s at sites and the bidder shall pay all charges to local bodies / authorities / royalty if any and obtain statutory approvals, geological survey, provide pump, pipeline, casing with all accessories required for functioning of the bore well. The water should be tested in an approved laboratory and should be permitted to use in work if found suitable for construction. However, bidder shall make alternate arrangements in case the water is not found fit for construction.

12.1.2. The bidder shall arrange to provide a minimum storage of 5000 Ltrs. (or two days requirement whichever is higher) of water at building location with all necessary pumps for storage of water shall be built by the Contractor at his own cost at location to be approved by the Transport Department, Government of Bihar or their authorized representatives. The water storage tanks should be leak proof and wastage and misuse of water is strictly prohibited, Contamination and pollution of water to be strictly avoided. Construction water should not be used for drinking or for domestic purpose. Bidder will make his own arrangement for water required for drinking purposes at sites of work at his own cost.

12.2. Supply of electricity for construction purpose

12.2.1. The bidder shall make his own arrangement for the same as required at his own cost. Required authorization letter will be issued by Transport Department, Government of Bihar.

12.3. Arrangements of water & electricity for ATS's operation purpose

12.3.1. The Bidder shall be responsible for making all its arrangements for paying all charges in connection with consumption of electricity, water and the disposal of sewage and other waste as may be necessary for operation & maintenance of ATS's for five years.

12.3.2. The Bidder shall apply to the concerned departments for Electricity & Water connection. Transport Department will assist the Successful bidder in the application process. All expenses regarding the same will be borne by the Successful bidder.

12.3.3. All cost for obtaining electricity connection shall be considered by the bidder in the total bidding price itself.

12.3.4. No bills shall be pending at the time of handover.

13. Delivery to the Project Sites

13.1. Delivery to the Project Sites

13.1.1. The Bidder supplying indigenously manufactured Equipment shall at its own risk and expense, be fully responsible for the proper packing, marking, loading, delivery up to Project Sites, insurance, freight costs, interface management, detailed design, detailing, coordination, value engineering, specialist system procurement, provision, erection and/or installation, testing, commissioning, documentation, training and defects rectification. In case of imported Equipment, the Bidder shall be responsible for shipment costs, transit insurance charges from FOB port of shipment or Airport upto the Project Sites, charges for custom clearances etc. All transit insurance charges for transit up to FOB Port of shipment or Airport as well as loading charges on to the ship/ airplane shall be responsibility of the Bidder supplying imported Equipment.

13.1.2. The equipment's should preferably be delivered to each site in single slot & in case of part delivery not more than three slots. This is in order to ensure one-time inspection of all equipment supplied.

13.1.3. When marking any Equipment, the Bidder shall be responsible for ensuring that such Equipment and any part thereof and their transportation containers are properly marked and consigned.

13.2. Packing List

A packing list itemizing the contents of each case shall be enclosed in each package. A copy of the packing list, together with dispatch details shall be provided forthwith by the Bidder upon dispatch to the Transport Department, Government of Bihar. The Bidder supplying indigenously manufactured Equipment shall provide all attendance, handling and transport up to and including off-loading into the appropriate Project Sites storage area.

13.3. Importation

The Bidder shall be responsible at its own cost for obtaining any Applicable Clearances necessary for the export of Equipment, from the country of origin.

13.4. Documents

Upon dispatch of each shipment of significant items of Equipment, the Bidder shall notify the Transport Department, Government of Bihar by facsimile or email of the description of the Equipment and the point and means of the dispatch and the estimated time and point of delivery and the Bidder shall furnish Motor

Vehicles Department, Government of Bihar with all relevant documentation in respect of such Equipment, including without limitation:

- 13.4.1.** packing lists;
- 13.4.2.** certificate of origin;
- 13.4.3.** factory inspection test certificate;
- 13.4.4.** customs declaration details.

14. Ownership of Equipment and other Provisions

14.1. Passing of property

14.1.1. Equipment supplied or to be supplied pursuant to and in compliance with the terms of the Contract shall become the property of Transport Department, Government of Bihar at whichever is the earliest of the following times:

- (i) when any sum is included in a Certificate of Payment in respect thereof; or for Equipment manufactured indigenously when such Equipment is delivered to the Project Sites pursuant to the Contract and for imported Equipment, when such Equipment is loaded on to the aircraft or when the Equipment passes over the ship's rail.

14.1.2. Equipment in which property has passed to Transport Department, Government of Bihar shall be in the care and possession of the Bidder solely for the purposes of the Works and shall not be within the ownership or disposition of the Bidder. Notwithstanding the ownership of the Equipment in accordance with Clause 14.1.1 the responsibility for care and custody together with the risk of loss or damage of such Equipment remains with the Bidder pursuant to **Clause 29.5.1.**

14.2. Marking of Equipment

Where the property in Equipment passes to Transport Department, Government of Bihar, the Bidder shall so far as be practicable and it has not done so previously, set the same aside and mark the same as the property of Transport Department, Government of Bihar. The Bidder shall procure that the Transport Department, Government of Bihar at any time upon reasonable notice may inspect any Equipment which have become the property of Transport Department, Government of Bihar and shall grant to the Transport Department, Government of Bihar authorized representatives or procure the grant of access to the Bidder's premises for such purposes or any other premises where such Equipment may be located.

14.3. Exclusion of Lien

Neither the Bidder or a Sub bidder nor any other person shall have a lien on or other property interest in any Equipment which have vested in Transport Department, Government of Bihar under this **Clause 14** for any sum due or accepted due to the Bidder, Sub bidder or other person and the Bidder shall take such steps as may be necessary to ensure that the title of Transport Department, Government of Bihar and the exclusion of such lien and other property interest are brought to the express notice of Sub bidders and other persons dealing with or transporting any such Equipment.

14.4. Delivery of Equipment upon Termination

Upon Termination or upon termination of the performance of the whole or any part of the Works before Completion of the whole of the Works, the Bidder shall deliver Equipment to Transport Department, Government of Bihar, the property in which has vested in Transport Department, Government of Bihar by virtue of this **Clause 14**. If it shall fail to do so Transport Department, Government of Bihar may enter any premises of the Bidder, any Sub bidder or other person or any off site place of manufacture or source of Equipment (and the Bidder hereby grants Transport Department, Government of Bihar the necessary license to do so and undertakes to procure the same right for Transport Department, Government of Bihar from all Sub bidders and other persons as the case may be) and seize such Equipment and recover the expense involved in so doing from the Bidder.

14.5. Manufacturer's warranties

Without prejudice to the Bidder's obligations and liabilities under the Contract, the Bidder must obtain for Transport Department, Government of Bihar, from the respective manufacturers, legally enforceable warranties for the Equipment which shall ensure to the benefit of Transport Department, Government of Bihar for the entire term of the warranties.

14.6. Bidder's Equipment

14.6.1. All Bidder's Equipment provided by the Bidder or its Sub bidders shall, when brought on to the Project Sites, be deemed to become the property of Transport Department, Government of Bihar in the event of Termination of Works on account of default of the Bidder and to be exclusively intended for the Execution of the Works and the Bidder shall not remove the same or any part thereof, except for the purpose of moving it from one part of the Project Site to another, without the consent of the Transport Department, Government of Bihar. Provided that such consent shall not be required for vehicles engaged in transporting any staff, labour, Bidder's Equipment to or from the Project Sites.

14.6.2. The Bidder shall upon written request by the Transport Department, Government of Bihar produce to the Transport Department, Government of Bihar all documents evidencing title to or the contractual basis of the Bidder's right to use any item of Bidder's Equipment. In the event of failure to comply with such a request within 7 (seven) days, without prejudice to any other rights or remedies available to Transport Department, Government of Bihar, Transport Department, Government of Bihar may withhold any payments otherwise due to the Bidder in accordance with the Contract.

14.6.3. In case of import of any Bidder's Equipment necessary for the Execution of the Works, the Bidder shall be solely responsible for (without limitation to) its transportation, importation, customs clearances and re-exports.

14.7. Transport Department, Government of Bihar not liable for Any damage

Transport Department, Government of Bihar shall not at any time be liable for the loss of or damage to any of the Bidder's Equipment.

14.8. Conditions of hire of Bidder's Equipment

14.8.1. With a view to securing, in the event of Termination, the continued availability, for the purpose of Executing the Works, of any hired Bidder's Equipment, the Bidder shall not bring on to the Project Sites any hired Bidder's Equipment unless there is an agreement for the hire thereof (which agreement shall be deemed not to include an agreement for hire purchase) which contains a provision that the owner will, on request in writing made by Transport Department, Government of Bihar within [7 (seven)] days after the Termination Date and on Transport Department, Government of Bihar undertaking to pay all hire charges in respect thereof from such date, hire such Bidder's Equipment to Transport Department, Government of Bihar on the same terms in all respects as the same was hired to the Bidder, save that Transport Department, Government of Bihar shall be entitled to permit the use thereof by any other bidder employed by it on occasion of the Bidder's termination.

14.8.2. The Bidder shall upon request made by the Transport Department, Government of Bihar at any time in relation to any item of hired Bidder's Equipment immediately notify to the Transport Department, Government of Bihar Representative in writing the name and address of the owner thereof and shall certify that the contract for the hire thereof contains a provision in accordance with the requirements of **Clause** 14.8.1. The Bidder shall also upon request as aforesaid give a like notification (but without certification) in regard to any Bidder's Equipment held under a contract of hire purchase thereof.

14.8.3. In the event of Transport Department, Government of Bihar entering into any agreement for the hire of Bidder's Equipment pursuant to **Clause** 14.8.1 all sums properly paid by Transport Department, Government of Bihar under the provisions of any such agreement and all costs incurred

by it (including stamp duties) in entering into such agreement shall be deemed to be part of the costs of Executing the Works.

14.9. Re-export of Bidder's Equipment

In respect of any Bidder's Equipment which the Bidder imports for the purpose of the Execution of the Works, the Transport Department, Government of Bihar may use its reasonable endeavors to assist the Bidder if so requested and to the extent it is able to do so in procuring any Applicable Clearances for the re-export of such Bidder's Equipment by the Bidder upon the removal thereof as aforesaid.

14.10. Approval not implied

The operation of **Clause 14** shall not be deemed to imply any approval by the Transport Department, Government of Bihar of the Bidder's Equipment or any part thereof, or other matters referred to therein nor shall it prevent the Transport Department, Government of Bihar right to order the removal of any such Bidder's Equipment or part thereof, at any time.

14.11. Incorporation of Clause into Subcontracts

The Bidder shall, where entering into any key or major subcontract for the Execution of any part of the Works, incorporate in such subcontract (by reference or otherwise) the provisions of this **Clause 14** in relation to plant, equipment and tools and temporary works brought on to the Project Sites by the Sub bidder.

14.12. Re-vesting and removal of Bidder's Equipment

Upon removal of any Bidder's Equipment which have been deemed to become the property of Transport Department, Government of Bihar under **Clause 14.6** with the Transport Department, Government of Bihar consent, as aforesaid, the property therein shall be deemed to re-vest in the Bidder and upon Completion of the Works the property in the remainder of such Bidder's Equipment as aforesaid shall, subject to the termination provisions of the Contract, re-vest in the Bidder who shall remove the same. If the Bidder shall fail to remove any Bidder's Equipment as aforesaid within such reasonable time after Completion of the Works as may be allowed by the Transport Department, Government of Bihar or should fail to comply with its obligations under **Clause 32.3**, Transport Department, Government of Bihar may:

- 14.12.1.** sell any such Bidder's Equipment; or return any hired Bidder's Equipment at the Bidder's expense to the person, firm or company from whom such

Bidder's Equipment was hired by the Bidder and after deducting from any proceeds of sale the cost, charges and expenses of and in connection with such sale and in connection with such return as aforesaid, Transport Department, Government of Bihar shall, subject to any right of set-off, pay the balance (if any) to the Bidder but to the extent that the proceeds of any sale or return are insufficient to meet all such costs, charges and expenses the excess shall be a debt due from the Bidder to Transport Department, Government of Bihar and shall be deductible or recoverable by Transport Department, Government of Bihar accordingly as aforesaid.

15. Labour and Bidder's Personnel

15.1. Labour Compliances

15.1.1. In the employment of labour for the Execution of the Works, the Bidder shall comply and shall require its Subbidders to comply without limitation, with all requirements of any Applicable Law relating to the employment of workmen or any subsequent modification or re-enactment thereof including but not limited to, matters relating to timely payment of wages and allowances, payment of minimum wages, payment of overtime, grant of leave, payment of workmen's compensation, working hours, safety, maternity benefits, holidays, framing of standing orders, disciplinary action against employees, payment of provident fund contributions, payment of gratuities and payment of bonuses, drinking water, food etc.

15.1.2. Medical Facilities at Project Sites:

The Bidder shall, at its own cost, provide first aid and medical facilities, at the Project Sites as may be prescribed by the Transport Department, Government of Bihar, on advice of medical authority in relation to the strength of the Bidder's staff and workmen employed on the Works, directly or through petty bidders or Sub-Bidders.

15.2. Bidder to indemnify

The Bidder shall indemnify Transport Department, Government of Bihar against any claim for legal action arising out of the Applicable Laws due to the failure of non-compliance of the provisions of the Applicable Laws which arise out of or in connection with the employment of any labour for the Execution of the Works and penalty or any other amount levied by the authorities from Transport Department, Government of Bihar, shall be recoverable from the payments due to the Bidders or from the security deposit or both, as debt due and payable on demand.

15.3. Engagement of Labour

The Bidder shall make its own arrangements for the engagement of all labour, local and otherwise, skilled, semi-skilled and unskilled, as may be required for the proper and timely Execution of the Works and shall use all

diligence in arranging for a sufficient and suitable supply of such labour but all such arrangements in India shall be in accordance with the general local usage and subject to the Applicable Laws.

15.4. Project Sites records and returns

The Bidder shall maintain and keep at the Project Sites, wage books and time sheets showing the wages paid to and time worked by all labour employed by the Bidder and its Sub-bidders in and about the Execution of the Works or any part thereof and all records, forms, declarations, registers, notices, and copies of filings made with labour authorities as are required to be maintained by the Bidder pursuant to the Applicable Laws and the Bidder shall produce such wages books, time sheets and records for inspection by Transport Department, Government of Bihar.

15.5. Bidder's Personnel

15.5.1. General

The Bidder shall at all times ensure that it has sufficient, suitable and qualified personnel at the Project Sites and in sufficient number to undertake the responsibilities imposed upon the Bidder under the Contract and to provide full attention to the Execution of the Works.

15.5.2. The Bidder's Project Organization Chart: The Bidder's Project Organization Chart to be submitted by the Bidder to the Transport Department, Government of Bihar Representative shall show the proposed organization to be established by the Bidder for carrying out the Works and shall be consistent with the Bidder's project organization chart submitted with the Tender submission. The chart shall evidence that the Bidder has the requisite organization in place and that it has designated and proposed suitable persons as Key Personnel, whose identities and bio- data it shall include with the Bidder's Project Organization Chart, to supervise the Execution of the Works and to deal with Transport Department, Government of Bihar as appropriate.

15.5.2.1. The Bidder shall promptly notify the Transport Department, Government of Bihar Representative of any proposed revision or alteration of the Bidder's Project Organization Chart.

15.5.3. Key Personnel

15.5.3.1. The Transport Department, Government of Bihar shall be entitled to interview any or all of the persons designated and proposed as Key Personnel before deciding whether or not to consent to their appointment. If Transport Department, Government of Bihar interviews any of the proposed Key Personnel, Transport Department, Government of Bihar shall be deemed to consent to such Key Personnel if it makes no objection within [3 (three)] days of the interview of the last proposed person to be interviewed. If Transport Department,

Government of Bihar objects to any of the proposed Key Personnel within such 3 (three) day period, then the Bidder must nominate a replacement or replacements, as applicable within [7 (seven)] days and this Clause 15.5.3.1 applies to such nomination.

- 15.5.3.2. The Key Personnel are to be engaged throughout the period of the Contract and shall include suitably qualified and experienced personnel for one or more of the positions as set out in the Annexure I under clause no. 2.

15.5.4. Technical Assistants

The Bidder and, where appropriate any Sub bidder shall provide and employ in connection with the Execution of the Works only such engineers and technical assistants as are skilled and experienced in their respective callings and such engineers, managers, sub-representatives, foremen and leading hands as are competent to give proper supervision to the work they are required to supervise.

15.5.5. Removal of Bidder's employees

The Transport Department, Government of Bihar may object to and require the Bidder to immediately remove from the Works at the Bidder's expense any person employed by the Bidder or its Subbidders in relation to the Works and such person shall not be employed again upon the Works without the written permission of the Transport Department, Government of Bihar. Any person so removed from the Works shall, unless the Transport Department, Government of Bihar specifies otherwise, be replaced, at the Bidder's expense as soon as possible by a competent substitute approved by the Transport Department, Government of Bihar.

- 15.6. MSI shall meet or exceed the minimum wages as per Minimum Wages Act and comply with labour laws of Govt. of Bihar. The MSI shall also be responsible for ensuring compliance to the provisions of other applicable labour laws, EPF laws and other relevant laws.
- 15.7. In case of any eventualities (including disability, death etc.) anytime during the contract period including any incidents, accidents with the personnel deployed by the MSI for the project, MSI shall ensure appropriate measure to control the damage, if any and to do good to the personnel or its family as applicable. MSI shall hold Transport Department, Government of Bihar indemnified for any claim may be arising out of the same.
- 15.8. The salary of such manpower shall be credited directly through online banking mechanisms like ECS / NEFT / RTGS etc. for all manpower. A record of the payments made in this regard should be maintained by the MSI.

- 15.9. The MSI is required to comply with labour law for weekly off and other benefits.
- 15.10. MSI shall submit escalation chart for the entire duration of the contract with details like contact details, designation, role for the project etc. of all the concerned persons.
- 15.11. The personnel assigned by MSI to perform the Services shall be employees of MSI as per requirements defined in the tender document, and under no circumstances shall such personnel be considered employees of Transport Department, Government of Bihar or any other Government authorities.
- 15.12. MSI must provide clear definition of the role and responsibility of each individual personnel. MSI shall have a defined hierarchy and reporting structure for various teams that shall be part of the project.
- 15.13. A table should be provided with the indicative list of resource categories and the minimum resource requirements estimated for the project. However, MSI shall independently estimate the teams size required to meet the requirements of Service levels as specified as part of this tender document, MSI shall propose qualified personnel with adequate skills levels to manage the system
- 15.14. Replacement of Resources:
- Provide replacement resource of equal or better qualification and experience. If Transport Department, Government of Bihar objects to the appointment, MSI's shall not assign the individual to that position and shall seek an alternative candidate.
- The document under the sub heading of warranty should have a calculation matrix/Manpower requirement/Man-hour/ rate of any kind to determine the labor cost associated to any kind of breakdown during this warranty period.

16. Testing

16.1. General

- 16.1.1.** All materials and workmanship shall be of the respective kinds and standards described in the Contract and in accordance with Transport Department, Government of Bihar or authorized representative's instructions and shall be subjected from time to time to such tests as provided for in the Contract. The Bidder shall provide such assistance, instruments, machines, consumables and artificial loads and labour and materials as are normally required for examining, measuring and testing any work and the quality, weight or quantity of any material used and shall supply samples of materials before incorporation in the Works for testing as set out in the Testing Plans.

- 16.1.2.** The Testing Plans shall be submitted to Transport Department, Government of Bihar in the manner stated in the Contract or as otherwise directed by Transport Department, Government of Bihar.
- 16.1.3.** Transport Department, Government of Bihar or their authorized representatives or its nominee and any other person designated by Transport Department, Government of Bihar may attend and witness the Equipment at any manufacturing stage. Bidder shall bear all the expenses of the team inspecting the equipment.
- 16.1.4.** The Bidder agrees that neither the execution of any test nor the issue of any test certificate releases the Bidder from any of its responsibilities, obligations, or liabilities (including repair or replacement of any Equipment or part of the Works damaged during the carrying out of any Tests) under the Contract.

16.2. Testing Costs

The cost of making any test or inspection under the Contract shall be borne by the Bidder if such test or inspection is intended by or provided for in the Contract or should have reasonably been anticipated by the Bidder as likely to be required including any costs relating to accommodation and travel incurred by the Transport Department, Government of Bihar personnel for such test/ inspection. There will be no additional visit to equipment manufacturing plants to witness the equipment manufacturing. Bidder should arrange the visit to site of his choice in India, preferably in Bihar at the time of Inspection on-arrival of equipment or at the respective Centers (ATS's).

Save, as aforesaid, where any test is ordered by the Transport Department, Government of Bihar which is neither intended nor provided for by the Contract nor could reasonably have been anticipated by the Bidder, then the cost of such test shall be borne by the Bidder if the test shows any workmanship or Equipment not to be in accordance with the Contract or the Transport Department, Government of Bihar instructions, or if the test was required as a result of any failure of the Bidder to comply with its obligations under the Contract.

16.3. Pre-Acceptance Tests and Project Site Tests

16.3.1. The Bidder must:

- (i) procure the carrying out of the Inspection on-arrival Tests and the Project Site Tests; and not allow an item of Equipment to be transported to the Project Sites unless it has successfully completed the Pre-Acceptance Tests.

16.3.2. Within [7 (seven)] days of completion of any Pre-Acceptance Tests or the Project Site Tests, the Bidder must give the Transport Department, Government of Bihar a report of the test results in a form approved by the Transport Department, Government of Bihar.

16.3.3. The Transport Department, Government of Bihar may, within [7 (seven)] days of receipt of a report produced in accordance with **Clause 16.3.2**, give the Bidder a notice that it considers:

- (i) such report is deficient in any way, and that it directs the Bidder to correct and re-submit the report and the Bidder must re-submit the report.
- (ii) in its reasonable opinion, that the Bidder has failed the test; or that the relevant test has been successfully performed.

16.3.4. If, in the reasonable opinion of the Transport Department, Government of Bihar the Equipment/ Works fail any Inspection on-arrival Test or Project Site Test (as applicable), the Bidder must:

- (i) give the Transport Department, Government of Bihar notice of the cause of the failure and the remedial action to be taken.
- (ii) remedy the cause of the failure; and reschedule, re-perform and report on results of the test in accordance with this **Clause 16.3**.

16.4. Inspection on-arrival Tests

The Bidder shall carry out the Inspection on-arrival Tests of each Equipment in the presence of a team of 4 – 5 persons for each site as decided by Motor Vehicles

Department, Government of Bihar as per the agreed plan prior to the delivery of Equipment at the project site or at respective sites of ATS's in Bihar.

16.5. Acceptance Tests

The Bidder shall carry out the Acceptance test of each Equipment in presence of Transport Department, Government of Bihar as per the agreed plan with the Transport Department, Government of Bihar or their authorized representative after the completion of commissioning of the Equipment, at the Project Sites.

17. Time for Completion

The Bidder shall complete the Works within the Time for Completion, or such other time as may be determined in accordance with **Clause 18**.

18. Extension of Time for Completion

18.1. Bidder's notice of event likely to cause delay

The Bidder shall closely monitor the progress of the Works and shall give written notice to Transport Department, Government of Bihar

18.1.1. as soon as it can foresee any incident, circumstance and/or event of any nature affecting or likely to affect the progress of the Works such that the Completion of the Works will be or is likely to be delayed; or should it have been unable to foresee such an incident, circumstance and/or event, then as soon as it becomes aware of the commencement of the incident,

circumstance and/or event which has affected or is likely to affect the progress of the Works such that Completion of the Works will be or is likely to be delayed.

18.2. Reasons for delay and extension of time

It shall be a condition precedent to any extension of time by Transport Department, Government of Bihar under any provision of the Contract, that in respect of each and every incident, circumstance or event identified in the notice given in accordance with **Clause** 18.1, the Bidder shall, as soon as possible after such notice but in any event not later than [30 (thirty)] days after such notice or such longer period as Transport Department, Government of Bihar may in its absolute discretion determine, notify Transport Department, Government of Bihar in writing of any factors and the relevant Contract provision which it considers may entitle it to claim an extension of time together with a statement, providing details, reasons, explanation and any further substantiation for the delay.

18.3. Delay Events

Subject to the other provisions of this **Clause** 18, the Bidder will only be entitled to an extension of the Time for Completion where a delay to the achievement of completion is caused by:

- 18.3.1.** the Bidder not being given access to the Project Sites or any part thereof; or a Change instructed other than where such Change is instructed as a consequence of any default or breach of the Contract by the Bidder; or any act, omission, default or breach by Transport Department, Government of Bihar; or a Force Majeure Event.

18.4. Transport Department, Government of Bihar to determine extension

Subject always to proper compliance by the Bidder with the provisions of this **Clause** 18, Transport Department, Government of Bihar or their authorized representative shall determine any extension of the time for completion and shall notify the bidder accordingly.

18.5. Compliance

- 18.5.1.** (i) the Bidder shall constantly use its reasonable endeavors to prevent and/or minimize delay in the progress of the Works, howsoever caused, and to prevent Completion of the Works being delayed or further delayed beyond the Time for Completion and the Bidder shall not be entitled to an extension of time in respect of any cause of delay nor for any period of delay which by the exercise of reasonable endeavors could be avoided or reduced (to the extent that such could have been reduced). The onus of proving that the Bidder has exercised all reasonable endeavors, and that

despite such endeavors, the delay could not be avoided or reduced, shall in all cases rest with the Bidder;

(ii) the Bidder shall not under any circumstances be entitled to an extension of time where the delay or likely delay is, or would be, attributable to the default, breach, negligence, improper conduct or lack of endeavor of the Bidder or any persons for whom it is contractually or otherwise responsible.

(iii) the Bidder shall have kept and maintained such records (including those referred to in the notices under this **Clause 18 [Extension of Time for Completion]** as may be reasonably necessary to support any claim for an extension of time it may subsequently wish to make;

18.5.2. The Transport Department, Government of Bihar shall not be obliged to take into account any circumstances which are not notified to it in accordance with the periods referred to in this **Clause 18** but may upon the written request of the Bidder extend the said periods if it considers the request for such extension reasonable.

19. Procedure for Claims

19.1. Notice of claims

If the Bidder considers that it may have grounds to claim any additional payment or any extension of time pursuant to any Clause of the Conditions or otherwise, it shall in addition to compliance with any other procedure or obligation in relation thereto, give notice to the Transport Department, Government of Bihar, with a copy to Transport Department, Government of Bihar, within fourteen [14 (fourteen)] days after the event giving rise to the claim has first arisen. The notification shall include details of the clause under which the claim is made, the circumstances in which the claim arises and details of the records that the Bidder will maintain to substantiate the amount of its claim.

19.2. Substantiation of claims

Within [28 (twenty-eight)] days, or such lesser time as may be reasonably required by the Transport Department, Government of Bihar, of giving notice under **Clause 19.1**, the Bidder shall send to the Transport Department, Government of Bihar an account giving detailed particulars of the amount claimed and the grounds upon which the claim is based. Where the event giving rise to the claim has a continuing effect, such account shall be considered to be an interim account and the Bidder shall, at such intervals as the Transport Department, Government of Bihar may reasonably require, send further interim accounts detailing the aggregate amount of the claim and any further grounds upon which it is based. In cases where interim accounts are sent to the Transport Department, Government of Bihar, the Bidder shall send a final account within [28 (twenty-eight)] days of the end of the effects resulting from the event. The Bidder shall, if required by the Transport Department, Government of Bihar

so to do, copy of all accounts sent to the Transport Department, Government of Bihar pursuant to this **Clause 19.2.**

20. Liquidated Damages

20.1. Liquidated Damages

20.1.1. If the Bidder fails to Complete the Works in accordance with the Contract so that the Date of Completion of the Works has not occurred within the Time for Completion or in the event the Bidder defaults or is in breach of any of its obligations under the Contract or the Bidder is non-compliant with or negligent in relation to any condition specified under the Contract or causing damages to Transport Department, Government of Bihar property at respective site, then the Bidder shall pay or allow to Transport Department, Government of Bihar Liquidated Damages for such default/ breach/ delay/ non-compliance/damage which is a genuine pre-estimation of and reasonable compensation for the loss and damage that will be suffered by Transport Department, Government of Bihar, for every day which shall elapse between the Time for Completion and the date stated in the Completion Certificate as being the Date of Completion of the Works or for every day for which such breach or default (if capable of remedy as determined by the Transport Department, Government of Bihar) continues till the date of remedy. Liquidated damages in the event of delayed delivery during the implementation stage beyond agreed schedule will be levied at 0.5 percentage per week limited to maximum 5 percentage of the contract value. Additionally, penalty will be applicable for all the incidences mentioned above. The extent of penalty for such incidences will be decided by Transport Department, Government of Bihar, if, bidder is failed to meet agreed timelines indicated in Clause 5 of Annexure-I: Scope of Work.

20.1.2. The payment of Liquidated Damages does not in any way relieve the Bidder from any of its obligations to complete the Works or from any other obligations and liabilities of the Bidder under the Contract.

20.1.3. For the avoidance of doubt and without prejudice to any continuing obligations of the Bidder under the Contract or otherwise, the issue of any Completion Certificate does not relieve the Bidder in respect of Liquidated Damages which have accrued up to the date of such Completion Certificate, but which have not yet been paid by the Bidder.

20.1.4. In the event of Liquidated Damages exceeding this cap, the Transport Department, Government of Bihar has a right to invoke "Termination Clause"

20.1.5. The Transport Department, Government of Bihar reserves the right to recover the liquidated damages by adjusting the same from the payments due to MSI or by invoking the Performance Bank Guarantee which shall immediately be replenished upon invocation

20.2. Genuine Pre-estimate of Damages

The Parties recognize the expense and inconvenience likely to be incurred from any need to prove the loss and damage that will be suffered by Transport Department, Government of Bihar in the event of a failure by the Bidder to achieve Completion of the Works by the relevant Time for Completion or for breach or omission or non-performance of any obligation/ condition by the Bidder under the Contract. The Parties acknowledge that the Liquidated Damages is a genuine pre-estimation of and reasonable compensation for the loss and damage that will be suffered by Transport Department, Government of Bihar in the event of any such failure on the part of the Bidder.

21. Completion of Works

21.1. The Date of Completion of the Works shall be the date upon which the following criteria have been satisfied or waived in writing by Transport Department, Government of Bihar at its sole discretion:

- (i) the Execution of the Works, other than the performance of obligations to be performed during the Warranty Period, has been completed in accordance with the Contract, save in respect of the Punch List Items;
- (ii) all outstanding work which Transport Department, Government of Bihar requires to be completed before issue of the Completion Certificate, has been satisfactorily completed.
- (iii) the Bidder has been issued the acceptance certificate post the completion of the Acceptance Tests; and all the training obligations of the Bidder to be performed during the Execution Period have been satisfactorily completed in accordance with the Contract; the Bidder has provided to the Transport Department, Government of Bihar any amendment or update of any information and documentation, which is required by the Transport Department, Government of Bihar;
- (iv) any Spare Parts and other items which the Bidder is required to supply and deliver to Transport Department, Government of Bihar in accordance with the Contract and which were used or consumed during the any of the tests mentioned in the Contract have been replaced by the Bidder at its own cost.

21.2. The Bidder acknowledges that until the Works are Complete, Transport Department, Government of Bihar shall not be able to commence the Project Facility operations.

21.3. Application for and issue of the Completion Certificate

21.3.1. The Bidder shall make a written application to Transport Department, Government of Bihar for a Completion Certificate not later than [2 (two)]

days of from the conclusion of the Acceptance Tests. Such application shall be accompanied by an undertaking to finish any outstanding work in accordance with **Clause 21.3.2**.

21.3.2. Transport Department, Government of Bihar shall, within **[7 (seven)]** days after receiving the Bidder's application in accordance with **Clause 21.3.1** issue the Completion Certificate to the Bidder with a copy to their authorized representatives stating the date upon which the Works achieved Completion and specifying any outstanding work, if any, which the Bidder is required to complete and the period or periods within which such work is required to be completed, such work to include:

- (a) the Punch List Items; or any other outstanding work notified to the Bidder by Transport Department, Government of Bihar.

21.4. Completing Punch List Items and any other outstanding works

- (i) During the Acceptance Tests, the Bidder shall provide in writing to Transport Department, Government of Bihar reasonable notice of its reasonable requirements with respect of access to and use of the Works for the carrying out of: the outstanding Works including any Punch List Items specified in the Completion Certificate; any rectification, repair or replacement of any items in accordance Clause 22.1.

21.4.1. Transport Department, Government of Bihar shall use reasonable endeavors to secure such access for the Bidder. When carrying out such work the Bidder shall comply with all reasonable instructions of Transport Department, Government of Bihar with regard to the safety of the Works and the ongoing performance by Transport Department, Government of Bihar of its obligations and shall complete the work in such manner that, so far as reasonably practicable, does not prevent, hinder or otherwise interfere with the performance of Transport Department, Government of Bihar of its obligations and the exercise of its rights during the Project Facility operations period.

21.4.2. The Bidder shall complete any Punch List Items specified in the Completion Certificate within the time instructed reasonably by Transport Department, Government of Bihar.

22. Warranty Period

22.1. The Transport Department, Government of Bihar shall have the right, but not the obligation, to instruct the Bidder in writing to Execute all such work of repair, amendment, replacement of any parts of the Equipment, rectification of defects, imperfections or other faults in the Works and any part thereof, as the case may be, at any time during the Warranty Period.

- 22.2. All such work instructed under **Clause 22.1** shall be carried out by the Bidder at its own expense.
- 22.3. At all times during the Warranty Period Transport Department, Government of Bihar shall be fully entitled to Execute all work of repair, amendment, replacement of any parts of the Equipment, rectification of defects, imperfections or other faults in the Works and any part thereof, as the case may be, by its own workmen or by other bidders and if the necessity thereof shall in the opinion of the Transport Department, Government of Bihar be due to the use of materials or workmanship not in accordance with the Contract or the neglect or failure on the part of the Bidder, Transport Department, Government of Bihar shall be entitled to recover from the Bidder the cost thereof or may deduct the same from any monies due or that become due to the Bidder.

22.4. Continuing Obligations

- 22.4.1. Notwithstanding the expiry of the Warranty Period, the Bidder shall remain liable for the fulfilment of any obligation incurred under the provisions of the Contract prior to the expiry of the Warranty Period which remains unperformed upon the expiry of the Warranty Period and, for the purposes of determining the nature and extent of any such obligation, the Contract shall be deemed to remain in force between the Parties.
- 22.4.2. Notwithstanding the expiry of the Warranty Period and / or maintenance contract if any, the Bidder shall provide necessary Spare Parts, sales, services and support for the performance of the Equipment on payment basis to be mutually agreed to between the Bidder and Transport Department, Government of Bihar.

22.5. Maintenance Obligations

- 22.5.1. The Bidder shall take full responsibility for the maintenance and upholding of the permanent structures at the Project Sites and the site offices (if any) used by the Bidder during the Warranty Period.
- 22.5.2. The Bidder shall ensure that its maintenance obligations are performed in such a manner as will permit the proper performance by Transport Department, Government of Bihar in its operation of the Project Facility and so as not to affect the activities of the Project Facility users.

23. Changes

23.1. General

- 23.1.1. The Bidder shall not carry out any Change except as directed by Transport Department, Government of Bihar. The Transport Department, Government of Bihar shall have the power to, from time to time, for the Execution of the Works, to instruct the Bidder, by notice in writing to carry out Changes without prejudice to the Contract.
- 23.1.2. The Bidder acknowledges and accepts that no Change shall in any way vitiate or invalidate the Contract.

23.1.3. Subject to the terms of this **Clause 23**, the Bidder will be required to perform any Change howsoever initiated and be bound by the same conditions as far as applicable, as though the said Changes occurred in the Contract.

23.1.4. Transport Department, Government of Bihar reserves the right to increase or decrease the quantities of items under the Contract but without any change in the unit price for such item. Such a Change in the quantity shall not be subjected to any limitations for the individual items but the total Change for all such items shall be limited to the estimate (if any) provided.

23.2. Procedure for Changes

23.2.1. Transport Department, Government of Bihar has the right to initiate a Change at any time by either: instructing in writing a Change Order in which case the Bidder shall comply with **Clause 23.2**; or issuing a written notice proposing a Change (a "Change Notice"). Within [14 (fourteen)] days of receipt of a Change Notice, the Bidder shall provide to Transport Department, Government of Bihar a written statement setting out detailed particulars of any effect the proposed Change would have on the Works and/or on any other provisions of this Contract if the proposed Change is effected (a "Change Notice Response").

23.2.2. Following receipt of a Change Order, the Bidder must immediately implement the Change subject to the following terms:

- (i) the Contract Sum will, be amended in accordance with the principles to be mutually agreed between Transport Department, Government of Bihar and the Bidder.
- (ii) any extension of time will be determined and Transport Department, Government of Bihar is entitled to take account of the Bidder's estimate (if any) when determining such extension of time.
- (iii) these Conditions (as amended from time to time) will apply to the Change as though it formed part of the Works.

23.2.3. Following receipt of a Bidder's Change Notice Response, Transport Department, Government of Bihar may either:

- (i) issue a written Change Order to the Bidder, on such terms and conditions as Transport Department, Government of Bihar may deem appropriate; or withdraw the Change Notice.

23.2.4. The Bidder shall not be entitled to any costs or extension of time as a result of preparing a Change Notice Response.

- (i) If: the Bidder fails to comply with its obligation under **Clause 23.2**; or if the Transport Department, Government of Bihar rejects the information provided by the Bidder pursuant to **Clause 23.2**; Transport Department, Government of Bihar shall be entitled, following notification to the Bidder, to engage a third party to perform the Change, in which case the Bidder shall cooperate fully with any such third party.

23.3. Bidder's Changes

23.3.1. The Bidder may, from time to time during its performance of the Contract, propose to Transport Department, Government of Bihar any Change which the Bidder considers:

- (i) necessary for the proper Execution of the Works; or which adopted will: substantially reduce the cost of Executing, maintaining and operating the Works or the Project; or improve the efficiency or value to Transport Department, Government of Bihar of the Completed Works (including a reduction in the life cycle costs associated with the Project); or otherwise be of benefit financial or otherwise, to Transport Department, Government of Bihar and such proposal must be in writing and shall be in the form of and contain such information as required of a Change Notice Response referred to in **Clause 23.2.2**. Where **Clause 23.3.1(i)** applies Motor Vehicles Department, Government of Bihar may either: issue a written Change Order to the Bidder and the Bidder shall implement the Change in accordance with **Clause 23.2.2**; or reject the Change proposed by the Bidder.

The Bidder shall not be entitled to any costs or extension of time as a result of preparing a proposal in accordance with **Clause 24.3.1**.

- 2.3.2. Transport Department, Government of Bihar may, at its sole discretion, accept or reject the Bidder's proposed Change and failure by Transport Department, Government of Bihar to respond within **[14 (fourteen)]** days shall be deemed to be a rejection.
- 2.3.3. If in the opinion of the Bidder, any Change proposed by Transport Department, Government of Bihar prevents or is likely to prevent the Bidder from fulfilling his obligations under the Contract, the Bidder shall notify the Transport Department, Government of Bihar thereof in writing and the Transport Department, Government of Bihar shall decide forthwith whether or not the same shall be carried out by the Bidder. In case the Transport Department, Government of Bihar confirms that the Change shall be carried out, the Bidder's obligations under the Contract shall be modified to an extent as may be mutually agreed to between the Parties.

23.4. Omissions

- 23.4.1.** The Bidder acknowledges that a Change may involve the omission of any part or parts of the Works up to 10% (ten percent) of the total Contract Price and the Bidder acknowledges and agrees that Transport Department, Government of Bihar may engage others to carry out that part or parts so omitted.
- 23.4.2.** On the omitted Works, the Bidder shall be entitled to payment, 10% (ten percent) of the value of omission which shall include Bidder's profits and overheads.

23.5. Valuation of Changes

- 23.5.1.** The valuation of a Change to be paid by Transport Department, Government of Bihar to the Bidder, or by the Bidder to Transport

Department, Government of Bihar, as the case may be, shall be calculated as follows:

- (i) the Parties will endeavour to agree to the valuation; and failing agreement under **Clause** 23.5.1(i) within a reasonable time (but no more than [28 (twenty-eight)] days after the Transport Department, Government of Bihar direction in accordance with **Clause** 23.2.4 (i), Transport Department, Government of Bihar will determine the valuation, subject to the following:
 - (a) in the event that the Change involves additional works, the increase to the Contract Price will be no more than the estimate (if any) provided; and in the event that the Change involves the omission of part of the Works or results in a saving to the Bidder, the reduction in the Contract Price will be no less than the estimate (if any); the following valuation principles shall apply:
 - 1. where the varied work is similar in character to and executed under similar conditions to work priced as per the Payment Schedule, such work shall be valued at the applicable rates and prices in the Contract.
 - 2. where the varied work is not of a similar character to or not Executed under similar conditions to work priced in the price breakdown then the Transport Department, Government of Bihar shall establish a new rate for such work based upon the rates or prices contained in the Contract insofar as may be reasonable making such allowances thereto by way of additional or deductions as may be necessary to take account of any dissimilarity in the character of the work or the conditions under which the work was Executed;
 - 3. where work is omitted, the rates and prices in the Contract shall be used to value the work omitted provided that if part only of an item of work is omitted their Transport Department, Government of Bihar shall establish a new rate or price by which to value the omitted work which shall be fair and reasonable.
 - 4. where the varied work cannot be properly valued in accordance with the provisions of **Clauses** 23.5.1(ii) (1), (2) or 3 above, the Transport Department, Government of Bihar shall establish a new rate or price for such work which shall be fair and reasonable.
- 23.6. Without prejudice to **Clause** 23.2, the Transport Department, Government of Bihar may, in its absolute discretion, instruct a Change Order in circumstances where, in its absolute discretion, the Bidder will fail to meet any of its obligations under the Contract or where it is necessary on account of some default or breach of the Contract by the Bidder or those for whom it is responsible for, in which case the Bidder shall not be entitled to any extension of time or any increase in the Contract Sum, and any adjustment to the Time for Completion.

24. Intellectual Property

24.1. Intellectual Property

- 24.1.1.** All Intellectual Property which is proprietary to Transport Department, Government of Bihar or the Bidder, shall be the exclusive property of

Transport Department, Government of Bihar or the Bidder respectively, as the case maybe.

24.1.2. All Intellectual Property jointly developed by Transport Department, Government of Bihar and the Bidder or developed by the Bidder for the purposes of the performance, execution and implementation of the Works shall be the exclusive property of Transport Department, Government of Bihar. The Bidder shall however be entitled to use such Intellectual Property for a period of 5 (five) years without payment of any charges to Transport Department, Government of Bihar provided that such Intellectual Property is used by the Bidder itself for development of facilities owned by the Bidder. The use of any Intellectual Property for any facility other than facility owned by the Bidder shall be permitted subject to the execution of a non-exclusive and revocable license agreement with Transport Department, Government of Bihar on such terms and conditions as maybe agreed to between Transport Department, Government of Bihar and the Bidder.

24.2. Infringing Matter

24.2.1. The Bidder warrants and represents that:

- (i) it has all rights and licenses necessary to grant, assign and transfer to Transport Department, Government of Bihar licenses and assignments in accordance with this **Clause 24.1.2**; and
- (ii) there is and will be no infringement of any Intellectual Property, in respect of the rights licensed and transferred to Transport Department, Government of Bihar pursuant to **Clause 24.1.2** or assigned otherwise used in connection with the Works.

24.2.2. The Bidder shall indemnify and hold harmless Transport Department, Government of Bihar against all issues, claims, damages, liabilities, costs and expenses (including legal costs) incurred by it in respect of any breach of the warranty in **Clause 24.2.1**.

24.2.3. If either Transport Department, Government of Bihar or the Bidder is prevented from operating or using the Works or any Intellectual Property or any part thereof ("Infringing Matter"), the Bidder must at its own expense, in addition to its other obligations under the Contract, take all steps necessary to procure for Transport Department, Government of Bihar the right to operate or use the Infringing Matter for its intended purpose.

24.3. Patent Rights and Royalties

24.3.1. Royalties and fees for patents covering equipment's, materials, articles, apparatus, devices or processes used in the Works shall be deemed to have been included in the Contract Sum. The Bidder shall satisfy all demands that may be made at any time for such royalties or fees and the Bidder shall be liable for any damages or claims for patent infringements and shall keep Transport Department, Government of Bihar indemnified in

this regard. The Bidder shall, at his own cost and expense, defend all suits or proceedings that may be instituted for alleged infringement of any patents involved in the Works and in case of any award of damages, shall pay for such damages. In the event any apparatus or equipment or any part thereof furnished by the Bidder, is in a suit or proceeding is held to constitute infringement and its use is enjoined, the Bidder shall at his option and his own expense, either procure for Transport Department, Government of Bihar, the right to continue the use of such apparatus, equipment or part thereof, replace it with non-infringing apparatus or equipment or modify it so it becomes non-infringing.

25. Insurances

Bidder shall at his own expense effect and maintain all risk insurance policy (Bidder's All Risk Policy) in the joint names of the Transport Department, Government of Bihar and the Bidder, the name of the former being placed first in the policy covering the following and shall be in full force up to completion of Maintenance Period. In case of Joint Venture, name of all JV members shall be included in the Insurance Policy. The insurance shall be against all losses or damages from whatever causes, other than excepted risks, for which the bidder is responsible under the contract. The insurance cover shall be for the period of contract and also for the Period of Maintenance, for loss or damage arising from a cause prior to commencement of the Period of Maintenance, and for any loss or damage, occasioned by the bidder in the course of any operations carried out for the purpose of complying with his obligations during Operation and Maintenance Period.

Such insurance shall be effected with an insurer and in terms approved by the Transport Department, Government of Bihar. The bidder shall submit the Evidence of Insurance Cover with the receipts of payment of the current premiums.

25.1. Third Party Insurance

Before commencing the execution of the Works, the bidder shall insure against his liability for any material or physical damage, loss or injury which may occur to any property or life including that of the Transport Department, Government of Bihar or to any person, including any employee of the Transport Department, Government of Bihar, by or arising out of the execution of the Works or in the carrying out of the Contract. The sum insured shall be equal to Work Order Value.

25.1.1. Workmen's Insurance:

The Transport Department, Government of Bihar shall not be liable for any payment in respect of any damages or compensation payable according to law in respect or in consequence of any accident or injury or loss of life to any workman or other person in the employment of the Contractor or

any sub-agencies. The bidder shall insure against such liability with an insurer approved by the Transport Department, Government of Bihar for sum of the established norms during the entire period till completion of Period of Maintenance. The bidder shall also indemnify the Transport Department, Government of Bihar against all claims which may be made upon the Transport Department, Government of Bihar, whether under the Workmen's Compensation Act or any other statute in force, during the currency of this contract or at common law in respect of any employee of the bidder or of sub-agencies and shall be at its own expense effect and maintain until the term of the Contract, with an Insurance Company, approved by the Transport Department, Government of Bihar, a policy of Insurance against such risks and deposit such policy or policies with the Transport Department, Government of Bihar from time to time.

25.1.2. Without prejudice to the other rights of the Transport Department, Government of Bihar against the bidder in respect of such default, the Transport Department, Government of Bihar may so insure and shall be entitled to deduct the premiums paid along with his service charges from bidder for non-compliance from any sums payable to the bidder.

25.1.3. The bidder shall be responsible for any liability which may not be covered by the insurance Policies referred to above and also for all other damages to any person, animal or defective workmanship in carrying out of this Contract, whatever, may be the reasons due to which the damage shall have been caused.

25.1.4. The bidder shall also indemnify and keep indemnified the Transport Department, Government of Bihar against all and any costs charges or expenses arising out of any claim or proceedings relating to the Works and also in respect of any award of damage or compensation arising there from.

25.1.5. The bidder, in case of re-building or reinstatement after fire, shall be entitled to such extension of time for completion as may deem fit by Transport Department, Government of Bihar, but shall, however not be entitled to reimbursement by the Transport Department, Government of Bihar or any shortfall or deficiency in the amount finally paid by the Insurer in settlement of any claim arising as set out herein.

25.1.6. Insurance by Sub-bidders:

Without prejudice to his liability under this Clause 25.1.6, the bidder shall also cause all nominated Sub-bidders to effect, for their respective portions of the works, similar policies of insurance in accordance with the provisions of this Clause and shall deposit or cause to deposit with the Transport Department, Government of Bihar such policies. The bidder shall not permit Sub-bidder to commence work at the sites unless the said insurance Policies are submitted. In the event of failure of the Sub-bidder to take out such a policy of Insurance before commencing the works at the sites, the bidder shall be responsible for any claim or damage attributable to the said Sub-bidder.

25.1.7. Period of Policies: All the insurance covers for full amount as detailed in bid document shall be kept in full force (alive) during the entire period of the contract (till end of AMC).

25.1.8. Remedy on bidder's Failure to Insure:

If the bidder fails to effect and keep in force the insurances referred to above, or any other insurance which he may be required to effect under the terms of the Contract, then and in any such case the Transport Department, Government of Bihar may effect and keep in force any such insurance and pay such premium or premiums as may be necessary for that purpose and from time to time deduct the amount so paid by the Transport Department, Government of Bihar as aforesaid from any monies due or which may become due to the bidder, or recover the same as debt due from the bidder.

26. Payment

26.1. Payment Schedule

The Payment Schedule shall be as per the **Annexure: VIII - Terms of payment**.

26.2. Terms of Payment

The Terms of Payment shall be as provided in the **Annexure: VIII - Terms of payment**.

26.3. Currency of Payment

The Contract Price and all payments to be made to the Bidder in respect thereof shall be Indian Rupees.

26.4. Transport Department, Government of Bihar right to set off

Transport Department, Government of Bihar shall, notwithstanding any provision to the contrary included in the Contract, be entitled to deduct from and set off against any amount due to the Bidder under the Contract, any amount or amounts which the Bidder is liable to pay to Transport Department, Government of Bihar under the Contract.

26A Payment Certificates

- (i) The bidder shall submit to the Transport Department, Government of Bihar statements of the value of the work completed.
- (ii) The Transport Department, Government of Bihar shall check the bidder's statement within 14 days and certify the amount to be paid to the bidder as per contract payment schedule after taking into account any credit or debit for the month.

- (iii) The value of work executed shall be determined by the Transport Department, Government of Bihar.
- (iv) The value of work executed shall comprise the value of the milestone achieved, and work program attached to the contract.
- (v) The value of work executed shall include the valuation of Change in Scope (Variation), if any.
- (vi) The Transport Department, Government of Bihar may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

27. Taxes and Duties

27.1. Bidder to pay Taxes

Unless specifically stated elsewhere in the Contract, the Bidder is solely liable for payment of, and warrants that it will pay, or ensure the payment of: all Taxes (all applicable taxes including GST imposed by central and state government such as custom duty, excise, VAT, octroi etc.);

- 27.1.1.** all contributions payable by any Applicable Law, award and pursuant to any contract with all industrial or trade union or other association of employees or otherwise with respect to or ascertained by reference to the wages, salaries or other compensation paid to employees of the Bidder or its Sub bidders in respect of the Works, including Taxes or contributions for workers' compensation, unemployment or sickness benefit, old age benefit, welfare funds, pensions and disability insurance;
- 27.1.2.** the cost of all import or export licenses if required in respect of the bidder's Equipment's and Spare Parts;
- 27.1.3.** the cost of any port dues including (but not by way of limitation) warfage dues, storage charges, quay rent, craneage, shipping dues, pilotage fees, anchorage, berthage and mooring fees, quarantine dues, loading, portorage and overtime fees for any goods, materials and Bidder's Equipment's and Spare Parts to be used in connection with the Execution of the Works.
- 27.1.4.** all charges and other expenses in connection with the landing and shipment of all goods and equipment and any part thereof, materials and other things of whatsoever nature brought into or dispatched from India for the purposes of the Contract; and the bidder indemnifies and keeps indemnified Transport Department, Government of Bihar against all liability for payment of all of the above Taxes, assessments and contributions, duties, costs and fees and all liability arising in respect of any non-payment;
- 27.1.5.** any addition of tax till completion of operation period of project.

27.2. Withholding Tax/Income Tax deducted at source

- 27.2.1.** The Bidder shall be responsible for payment of all Taxes on the income, surcharge on income tax and corporate tax in respect of the Contract, irrespective of the mode of contracting. Transport Department,

Government of Bihar shall not in any way be liable for payment of such taxes. Transport Department, Government of Bihar shall be entitled to deduct in accordance with Applicable Law, Income Tax or withholding tax or other deductions (as the case may be), from any payments made to the Bidder, and the amount so deducted shall be deemed to be a payment made to the Bidder. Transport Department, Government of Bihar shall provide a certificate certifying the deduction so made.

27.3. Operation Cost

The Bidder on its own cost will appoint operational manpower as per guideline of Indian labour Law. The safety of the operational staff will also be taken into consideration.

27.4. General

27.4.1. The Bidder must provide sufficient information regarding the nature and cost of the Works to enable all the relevant statutory obligations of Transport Department, Government of Bihar that are dependent upon that information to be satisfied.

27.4.2. The Bidder shall fully indemnify, save harmless and defend Motor Vehicles Department, Government of Bihar including its officers, servants, agents and subsidiaries as well as the Transport Department, Government of Bihar from and against any and all loss and damages arising out of or with respect to failure of the Bidder (a) to comply with Applicable Laws and Applicable Clearances and/or (b) to make payments of Taxes relating to the Bidder's Sub bidders and representatives income or other Taxes required to be paid by the Bidder without reimbursement hereunder and/or (c) to pay amounts due as a result of materials or services furnished to the Bidder or any of its Sub bidders which are payable by the Bidder or any of its Sub bidders or any other person employed or engaged by the Bidder in connection with the Works.

28. Operations and Maintenance Manuals and Training

28.1. Operation & Maintenance Manual

28.1.1. The bidder shall prepare and submit Operation and Maintenance Manuals to Transport Department, Government of Bihar considering all information in respect of the design, installation, erection, supply, extension, repair, operation and maintenance of the Works, any parts thereof and any special directions or recommendations from the relevant manufacturers of any Equipment and must itself provide written instructions where such are not available from such manufacturers.

28.1.2. The Operation & Maintenance Manual must be prepared:

- (i) based on all relevant instruction manuals and special directions or recommendations from the relevant manufacturers of any Equipment or parts thereof obtained in accordance with **Clause 28.1.1.**

- (ii) so as to provide Transport Department, Government of Bihar with such detail and information as may be necessary for use by Transport Department, Government of Bihar in order to operate, maintain, dismantle, reassemble, adjust, upkeep and uphold all parts of the Works and the Works as a whole; based on a maintenance plan for each part of the Works that is consistent with and intended to ensure that, each part achieves any design life specified in respect thereof in the Contract; based on Good Industry Practice; in full consideration of the experience, level and technical background of Transport Department, Government of Bihar personnel and the Bidder's training-related obligations under the Contract.

28.1.3. During the period of the Acceptance Tests, the Bidder must update and revise the Operation & Maintenance Manual as necessary and as may be required by Transport Department, Government of Bihar, to reflect the completion of all of the Bidder's obligations under the Contract including all defects and warranty obligations.

28.1.4. The Bidder warrants that adherence to the Operation & Maintenance Manual will facilitate and ensure the operation and maintenance of the Project Facility at the levels of capacity, safety, efficiency, reliability and maintainability required by the Contract.

28.1.5. Within 1 (one) month prior to the Warranty Period, the Bidder shall update and revise the Operation & Maintenance Manual as necessary and as may be required by Transport Department, Government of Bihar.

28.2. Training

The Bidder shall submit Training Plan to the Employer and shall include any suggestion or inputs of the Transport Department, Government of Bihar.

28.2.1. The Bidder shall provide comprehensive training in the operation and maintenance of the Works to Project Facility operation trainers and Project Facility operations personnel in accordance with the Training Plan mutually formalized or to be formalized between the Bidder and the Transport Department, Government of Bihar ("Training Plan") in order to procure Transport Department, Government of Bihar objective of the timely, efficient, economic and safe operation and maintenance of the Works and Project Facilities.

28.2.2. Without limiting its obligations under the Contract, the Bidder shall adhere to the principles and procedures contained in the approved Training Plan, and any approved amendments or supplements thereto. The Bidder shall revise the Training Plan from time to time as directed by Transport Department, Government of Bihar and as and when further Project Facility operation trainers and Project Facility operations personnel are required by Transport Department, Government of Bihar to be trained, which

training shall be undertaken by the Bidder without the right to any additional payment or an extension of time.

28.2.3. During such period as they may be being so trained or retrained by, or otherwise under the control of the Bidder pursuant to the provisions of the Contract, the Project Facility operation trainers and Project Facility operation personnel shall for the purposes of control and responsibility (but for the avoidance of doubt without any obligation to provide remuneration to such personnel or any responsibility in respect of Taxation and insurance of such personnel) to the extent permitted by the Applicable Laws, be deemed to be the servants of the Bidder.

28.2.4. For the purposes of providing the training pursuant to this Clause 28.2 and so as to enable the Project Facility operation trainers and Project Facility operations personnel to familiarize themselves with the Works, the Bidder shall allow and procure access as necessary to the Project Site, places off the Project Site where Equipment is being manufactured and tested and the Works.

- (i) The Bidder represents and warrants that: the numbers, qualifications and levels of experience specified by the Bidder in its Training Plan shall be such as is required to provide Transport Department, Government of Bihar with Project Facility operation trainers and Project Facility operations personnel in sufficient numbers and of sufficient qualifications and experience properly to operate and maintain the Project Facility in accordance with the Contract and the Operation & Maintenance Manual; and the training of adequate numbers of suitably qualified Project Facility operation trainers and Project Facility operations personnel has been or will be fully and properly undertaken under the provisions and in accordance with the terms and conditions of the Contract in order to secure the availability of a sufficient number of skilled and experienced personnel properly to undertake at all times during the Project Facility operations period in a timely, efficient, economic and safe manner, under the supervision of Transport Department, Government of Bihar or otherwise, the day to day operations of the Project Facility and the performance of routine and preventative maintenance thereof. The cost and expense of providing the accommodation and travelling of the Project Facility operation trainers and Project Facility operations personnel incurred in training pursuant to this **Clause** 28.2 shall be borne by Bidder.

28.3. Manufacturer's Warranties

28.3.1. Without prejudice to the Bidder's warranties in the Contract, the Bidder shall obtain for Transport Department, Government of Bihar, the Required Manufacturers Warranties for the Equipment in accordance with Technical Conditions of Contract and must obligate the respective manufacturers at their sole expense to rebuild, remove and replace Equipment which has defects and deficiencies in substantially the same manner and on terms and conditions to those contained in the Contract and, where required by Transport Department, Government of Bihar, must travel to and from and perform such activities at the Project Sites.

28.3.2. At the request of Transport Department, Government of Bihar, the Bidder must seek to obtain from the manufacturers of the Equipment referred to in Clause 28.3.1 extended warranty coverage.

28.3.3. The warranty period for any Equipment or any part must be extended for a period equal to the period that such item cannot be operated as a result of a defect and deficiency or as a result of any deficiency or damage caused by another item of Equipment, and in respect of extended warranties, the Bidder must use its best endeavors when requested by Transport Department, Government of Bihar to assist in enforcing such warranties and guarantees.

28.3.4. The installation of any and all Equipment in the Works must be in strict accordance with the manufacturers' requirements and the Contract, and without prejudice to the Bidder's warranties contained in the Contract, in the event that Transport Department, Government of Bihar seeks to enforce a claim based upon a manufacturer's warranty, and if such manufacturer fails to honour its warranty based in whole or in part, on a claim of defective installation, Transport Department, Government of Bihar is entitled to enforce the manufacturer's warranty against the Bidder in accordance with the terms of the warranty, or, at Transport Department, Government of Bihar option, the Bidder must defend and indemnify Transport Department, Government of Bihar from and against any liability in respect of such defect and deficiency, provided however, that a claim of defective installation is not a defence to any warranty claim by Transport Department, Government of Bihar.

29. Transport Department, Government of Bihar

29.1. Transport Department, Government of Bihar obligations

Notwithstanding anything contained in the Contract and in addition to and not in derogation or substitution of any of its other obligations under the Contract, Transport Department, Government of Bihar shall:

- (i) use reasonable endeavors to assist the Bidder to obtain from Statutory Authorities all Applicable Clearances other than those which are Transport Department, Government of Bihar responsibility.
- (ii) use reasonable endeavors to assist the Bidder in the procurement of the peaceful use of the Project Sites by the Bidder under and in accordance with the provisions of the Contract and without any let or hindrance from any Relevant Authority or persons claiming through or under it/them; and upon written request from the Bidder, use reasonable endeavors to assist the Bidder with procuring assistance in obtaining access to all necessary infrastructure facilities and utilities, including water, electricity and telecommunication facilities at rates and on terms no less favorable to the Bidder than those generally available to commercial customers receiving substantially equivalent facilities/utilities.
- (iii) Monitoring of overall timelines, SLAs and calculation of penalties, Liquidated Damages accordingly.

- (iv) Issuing the Final Acceptance Certificate on successful deployment of the software application, hardware deployed and for other components of the Scope of Work (wherever required).
- (v) Provide sign off on the deliverables of the project including design documents etc.

30. Bidder's Covenants

30.1. Urgent repairs

If, by reason of any accident or failure or an emergency or other event occurring to, in or in connection with the Works or any part thereof during the period of the Contract, any repair shall, in the opinion of Transport Department, Government of Bihar, be urgently necessary and the Bidder is unable or unwilling or not available at once to do such repair, Transport Department, Government of Bihar may by its own or other workmen do such repair as Transport Department, Government of Bihar may consider necessary. If the repair so done by Transport Department, Government of Bihar is work which, in the opinion of the Transport Department, Government of Bihar, the Bidder was liable to do at its own expense under the Contract, all costs and charges properly incurred by Transport Department, Government of Bihar in so doing shall within [14 (fourteen)] days from the date of receipt of the claim be paid by the Bidder to Transport Department, Government of Bihar or their authorized representative or may without prejudice to any other method of recovery, be deducted by Transport Department, Government of Bihar from any monies due or which may become due to the Bidder or may be recovered as a debt.

30.2. Improper Equipment

The Transport Department, Government of Bihar, without prejudice to the generality of its powers, shall have the authority to issue instructions (which shall be effected by the Bidder with all reasonable speed and at its sole expense without any right to an extension of time) from time to time for: the removal from the Project Sites, within such time or times as may be specified in the instruction, of any Equipment or any other part of the Works which, in the opinion of the Transport Department, Government of Bihar, are not in accordance with the Contract; the substitution of proper and suitable Equipment or any other part of the Works;

30.2.1. the removal and proper re-Execution, notwithstanding any previous test thereof or interim payment therefor, of any work which, in respect of any workmanship by the Bidder is not, in the reasonable opinion of the Transport Department, Government of Bihar, in accordance with the Contract; and such testing, as it may consider necessary or desirable following any instruction issued pursuant to this Clause.

30.2.2. In case of the replacement or substitution of the equipment, there should be a proper timeline, clearly mentioning the maximum time by which the equipment is replaced or restored (in working condition). The document should also mention that the cost of the restoration or replacement shall be the burden of the bidder.

30.3. Illegal gratification

30.3.1. Bribe, commission, gift or advantage: Any bribe, commission, gift or advantage given or offered by the Bidder directly or through its partner, agent, officer or Transport Department, Government of Bihar authorized representatives, or to any person / institution connected with Transport Department, Government of Bihar, in relation to obtaining or the execution of this or any other Contract with the Transport Department, Government of Bihar shall in addition to any criminal liability which the Bidder may incur, subject the Bidder to termination of the Contract and all other Contracts with Transport Department, Government of Bihar, and liability for payment of any loss or damage to Transport Department, Government of Bihar, resulting from such termination. Transport Department, Government of Bihar shall be entitled to deduct the amounts so payable from any money / moneys due to the Bidder alone, or jointly under the Contract or any other contract with Transport Department, Government of Bihar. The Bidder shall not be due, nor shall be paid any compensation whatsoever for any loss, alleged or actual, suffered by the Bidder when the Contract is so terminated.

30.3.2. Monetary dealing of Bidder with employee of Transport Department, Government of Bihar: The Bidder shall not lend or borrow money from, or enter into any monetary dealings or transactions directly or indirectly, with any employee of Transport Department, Government of Bihar, and if the Bidder does so, Transport Department, Government of Bihar or their authorized representative shall be entitled forth-with to terminate the Contract and all other Contracts with Transport Department, Government of Bihar. The Bidder shall be liable to pay compensation for any loss or damage to Transport Department, Government of Bihar resulting from such termination and Transport Department, Government of Bihar shall be entitled to deduct the amounts so payable from the money(s) due to the Bidder.

30.3.3. Settlement of dispute as to commission of such offence: If any question or dispute as to the commission of any such offence arises under Sub-clauses (bribe, commission, gift or advantage) and (monetary dealer of Bidder with employee of Transport Department, Government of Bihar), the same shall be settled by Transport Department, Government of Bihar, in such manner as the Transport Department, Government of Bihar shall consider fit and proper, and such decision shall be final and binding.

Terminology related to Corrupt or Fraudulent Practices

- (a) "fraudulent practice" means a misrepresentation or omission of facts or disclosure of incomplete facts, in order to influence a procurement / selection process or an execution of a contract to the detriment of the Transport Department, Government of Bihar, and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the

Transport Department, Government of Bihar of the benefits of the free and open competition.

- (b) "Coercive practice" means impairing or harming or threatening to impair or harm, directly or indirectly, any persons or property to influence any person, participation or action in the Selection Process;
- (c) "Undesirable practice" means (i) establishing contact with any person connected with or employed or engaged by Transport Department, Government of Bihar with the objective of canvassing, lobbying or in any manner influencing or attempting to influence the Selection Process; or (ii) having a Conflict of Interest; and "Restrictive practice" means forming a cartel or arriving at any understanding or arrangement among Bidders with the objective of restricting or manipulating a full and fair competition in the Selection Process.

30.3.4. Without prejudice to the rights of the Transport Department, Government of Bihar under Clause above and the rights and remedies which the Transport Department, Government of Bihar may have under the LOI or the Agreement, if an Bidder or Implementation Agency (MSI), as the case may be, is found by the Transport Department, Government of Bihar to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice during the Selection Process, or after the issue of the LOI or the execution of the Agreement or implementation of the project, such Bidder or Successful Bidder (MSI) may not be eligible to participate in any tender issued by the Transport Department, Government of Bihar during a period of 02 (two) years from the date such Bidder or Successful Bidder (MSI), as the case may be, is found by the Transport Department, Government of Bihar to have directly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice, as the case may be.

30.4. Avoidance of Damage to Roads and Bridges

30.4.1. Bidder to prevent damage to roads and bridges

30.4.1.1. The Bidder shall use every reasonable means to prevent any of the highways, railway or bridges communicating with or on the routes to the Project Sites (including access and link roads) from being damaged or injured by any traffic of the Bidder or any of its Subbidders. In particular, the Bidder shall select routes, choose and use vehicles and restrict and distribute loads so that any such extraordinary traffic as will inevitably arise from the moving of plant and materials to and from the Project Sites shall be limited as far as reasonably possible and so that no unnecessary damage or injury may be occasioned to such highways, railways and bridges. In case of any damage or injury to the same, the Bidder's warrants indemnifying and holding harmless Transport Department, Government of Bihar from and against claims, proceedings, damages, costs, charges or expenses in respect of the said damage.

30.4.1.2. Should it be found necessary for the Bidder to move one or more loads of Bidder's Equipment, machinery or pre-constructed units or part of units of works over part of a highway, railway or bridge, the moving whereof is likely to damage any highway, railway or bridge unless special protection or strengthening is carried out, then the Bidder shall before moving the load on to such highway, railway or bridge give notice to the appropriate authority of the load to be moved and obtain the required approval of the said authorities for its proposals for protecting or strengthening the said highway, railway or bridge. The Bidder shall be responsible for the cost and expenses of any necessary work for the protection or strengthening the said highway, railway or bridge.

30.4.2. Access routes

The Bidder shall be deemed to have been satisfied as to the safety, suitability and availability of access routes up to the Project Sites. Without prejudice to the generality of the foregoing:

- 30.4.2.1. Transport Department, Government of Bihar shall not be responsible for any claims which may arise from the use or otherwise of any access route to, from and over the Project Sites;
- 30.4.2.2. Transport Department, Government of Bihar does not guarantee the suitability or availability of particular access routes and all costs due to non-suitability or non-availability, for the use required by the Bidder, of access routes shall (as between the Parties) be borne by the Bidder;
- 30.4.2.3. the Bidder shall provide such signs or directions along access routes to, from and over the Project Sites as required by the Contract and shall obtain any permission which may be required for the provision of such signs and directions.

30.4.3. Bidder not to interfere

All operations necessary for the Execution of the Works or any part thereof shall, so far as compliance with the requirements of the Contract permits, be carried on so as not to interfere unnecessarily or improperly with any or with the convenience of the public, or the access to, use and occupation of public or private roads or footpaths or any properties (adjoining the Project Sites or otherwise) whether in the possession of Transport Department, Government of Bihar or of any other person.

30.4.4. Waterborne traffic

Where the nature of the Works is such as to require the use by the Bidder of waterborne transport the foregoing provisions of this Clause 30.4 shall be construed as though "road" included a lock, dock, sea wall or other structure related to a waterway and "vehicle" included craft, and shall have effect accordingly.

30.5. Care of the Works, Liability for Accidents and Damage

30.5.1. Bidder to take full responsibility for care of the Works

30.5.1.1. The Bidder shall bear full risk in and take full responsibility for the care of the Works and Equipment (and, without limitation for the care of any works carried out on the Project Sites by other bidders) from the Commencement Date until [14 (fourteen)] days after the date of issue of the Completion Certificate, when such responsibility for the care of the Works and Equipment shall pass to Transport Department, Government of Bihar as instructed to the Bidder by the Transport Department, Government of Bihar.

Provided that the Bidder shall take full responsibility for (i) the care of any outstanding Works and Equipment for incorporation therein which it undertakes to finish during the Warranty Period until such outstanding Works have been completed pursuant to the Contract and for (ii) the care of the Works or any part thereof which may require repair or remedy during the Warranty Period and for any part of the Works affected thereby, for the period that such Works are under repair or remedy by the Bidder.

30.5.1.2. Responsibility to rectify loss or damage If any loss or damage happens or occurs to the Works or any part thereof, or to any Equipment during the period for which the Bidder is responsible for their care the Bidder shall rectify the loss or damage at the Bidder's risk and cost, so that the Works and Equipment conform in every respect with the provisions of the Contract and are to the satisfaction of the Transport Department, Government of Bihar.

30.5.2. Damage to persons and property

The Bidder indemnifies and keeps indemnified Transport Department, Government of Bihar against all losses and claims for death, injuries or damage to any person or any property whatsoever which may arise out of or in consequence of the Execution of the Works and the remedying of any defects therein and against all claims demands, proceedings, damages, costs, charges and expenses whatsoever in respect thereof or in relation thereto.

30.6. Clearance of the Project Sites

On Completion of the Works, the Bidder shall clear away and remove from the Project Sites all equipment's, surplus materials, rubbish and temporary works of every kind and leave the whole of the Project Sites and the Works clean and in a workmanship condition, tidy and in an aesthetically pleasing appearance to the satisfaction of Transport Department, Government of Bihar. The Bidder shall, unless otherwise instructed in writing by Transport Department, Government of Bihar, remove all signs of temporary construction facilities such as haul roads, work areas, structures, foundations of temporary works, stockpiles of excess or waste materials and other vestiges of construction prior to the issue of the Completion Certificate.

30.7. Penalty for Delayed Services / Late Delivery

In the event the bidder fails to supply, install, and commission the instruments within the implementation timelines specified in the tender, or if the instruments do not operate successfully during the Operation & Maintenance (O&M) phase, or in case of non-support during the Annual Maintenance Contract (AMC) and Warranty period beyond the stipulated due date, the bidder shall be liable to pay liquidated damages at the rate of 0.5% of the total order value per week of delay, subject to a maximum of 5% of the total order value, for delays beyond the due date. Such money will be deducted from security deposit or from amount due to the bidder after due notification to the bidder. The Transport Department, Government of Bihar reserves the right to cancel the order in case of excessive delay.

30.8. Suspension of Works

Transport Department, Government of Bihar reserves the right to suspend and re-instate the Execution of the whole or any part of the Works or the delivery of any Equipment, without invalidating the provisions of the Contract. The order for suspension or re-instatement shall be issued by the Transport Department, Government of Bihar to the Bidder in writing vide a suspension order and the same shall be binding on the Bidder. The Bidder shall during any suspension, properly protect and secure the Works and the goods and Equipment's and shall not remove any goods or Equipment's from the Project Sites without the prior consent of the Transport Department, Government of Bihar and the Bidder shall take all reasonable measures to minimize the costs and losses of the suspension to Transport Department, Government of Bihar. The Bidder shall undertake any necessary action instructed by the Transport Department, Government of Bihar to remedy the circumstances that led to the suspension and the Bidder shall notify the Transport Department, Government of Bihar immediately upon completing such action. Upon resumption of the Works, the Bidder shall immediately undertake an examination of the affected parts of the Works and shall make good any deterioration or defect in or loss of the Works, the Equipment or any part thereof that may have occurred during the suspension. The Time for Completion of the Works shall not be extended if the issue such a suspension order was due in any way to the act, default, omission or breach by the Bidder.

31. Force Majeure**31.1. Force Majeure - Obligations of the Parties**

31.1.1. "Force Majeure" shall mean any event beyond the control of Transport Department, Government of Bihar or of the Bidder, as the case may be, and which is unavoidable notwithstanding the reasonable care of the party affected, and which could not have been prevented by exercise of reasonable skill and care and good industry practices and shall include, without limitation, the following:

- (i) War, hostilities, invasion, act of foreign enemy and civil war; Rebellion, revolution, insurrection, mutiny, conspiracy, riot, civil commotion and

terrorist acts; Strike, sabotage, unlawful lockout, epidemics, quarantine and plague; Earthquake, fire, flood or cyclone, or other natural disaster.

As soon as reasonably practicable but no more than 48 (forty-eight) hours following the date of commencement of any event of Force Majeure, an Affected Party shall notify the other Party of the event of Force Majeure setting out the date, nature, extent, proof and the damage cause by the Force Majeure event.

31.1.2. Political Events

- (a) Change in Law, other than any Change in Law for which relief is provided under the MSA;
- (b) expropriation or compulsory acquisition by the Transport Department, Government of Bihar any material assets or rights of the MSI;
- (c) unlawful or unauthorized revocation of, or refusal by Transport Department, Government of Bihar or any of its agencies to renew or grant any clearance or Consents required by the MSI to perform its obligations without valid cause, provided that such delay, modification, denial, refusal or revocation did not result from the MSI's inability or failure to comply with any condition relating to grant, maintenance or renewal of such Required Consents applied on a non-discriminatory basis;
- (d) any judgment or order of any court of competent jurisdiction or statutory authority in India made against the MSI in any proceedings for reasons other than failure of the MSI to comply with Applicable Laws or Required Consents or on account of breach thereof, or of any contract, or enforcement of the MSA or exercise of any of its rights under the MSA;
- (e) expropriation or compulsory acquisition by the Transport Department, Government of Bihar or any of their nominated agencies of any material assets or rights of the MSI;
- (f) unlawful or unauthorized revocation of, or refusal by any authority other than the Transport Department, Government of Bihar to renew or grant any Required Consents required by the MSI to perform its obligations without valid cause, provided that such delay, modification, denial, refusal or revocation did not result from the MSI's inability or failure to comply with any condition relating to grant, maintenance or renewal of such Required Consents applied on a non-discriminatory basis;
- (g) any requisition of the Project by any other authority; or any requisition of the Project by the Transport Department, Government of Bihar;
- (h) For the avoidance of doubt, suspension of the Project in accordance with the provisions of the MSA shall not be considered a requisition for the purposes of Force Majeure event.
- (i) For the avoidance of doubt, it is expressly clarified that the failure on the part of the MSI under the MSA or the SLA to implement any disaster contingency planning and back-up and other data safeguards in accordance with the terms of the MSA or the SLA against natural disaster, fire, sabotage or other similar occurrence shall not be deemed to be a Force Majeure event. For the avoidance of doubt, it is further clarified that

any negligence in performance of Services which directly causes any breach of security like hacking aren't the forces of nature and hence wouldn't be qualified under the definition of "Force Majeure". In so far as applicable to the performance of Services, the MSI shall be solely responsible to complete the risk assessment and ensure implementation of adequate security hygiene, best practices, processes and technology to prevent any breach of security and any resulting liability therefrom (wherever applicable).

31.2. Meetings with Transport Department, Government of Bihar

As soon as reasonably practicable and in any case within [5 (five)] days of notification by the Affected Party in accordance with the preceding **Clause 31.1**, the Parties shall along with Transport Department, Government of Bihar and others, meet and hold discussions and where necessary conduct physical inspection and/or survey of the Works to assess the impact and formulate mitigation measures for the Force Majeure Event.

31.3. Performance obligations

31.3.1. If the Affected Party is rendered wholly or partially unable to perform any of its obligations under the Contract because of an event of Force Majeure, it shall be excused from performance of such obligations to the extent it is unable to perform provided that in case the Affected Party is the Bidder, the Bidder shall be entitled to an extension of time.

31.3.2. When the Affected Party is able to resume performance of its obligations under the Contract, it shall give to the other Party written notice to that effect forthwith and shall promptly resume performance of its obligations hereunder.

31.3.3. The Affected Party shall continue to perform such of its obligations which are not affected by the event of Force Majeure, and which are capable of being performed in accordance with the Contract.

31.4. Liability for other losses, damages etc.

Save and except as expressly provided in this **Clause 31** neither Party hereto shall be liable in any manner whatsoever to the other Party in respect of any loss, damage, cost, expense, claims, demands and proceedings relating to or arising out of occurrence or existence of any event of Force Majeure.

31.5. Exceptions to Force Majeure

None of the following events shall be construed to relieve any Party of its obligations hereunder by reason of **Clause 31**:

- (i) any changes in market conditions including without limitation changes that affect the supply prices of the Goods; commercial impracticability or hardship; a Party's lack of funds.

32. Dispute Resolution Procedure**32.1. Amicable Resolution and Mediation**

32.1.1. Save where expressly stated to the contrary in the Contract, any dispute, difference or controversy of whatever nature between the Parties, howsoever arising under, out of or in relation to the Contract including disputes, if any, with regard to any acts, decision or opinion of Transport Department, Government of Bihar and so notified in writing by either Party to the other (the "Dispute") shall in the first instance be attempted to be resolved amicably in accordance with the procedure set out in Clause 32.1.2 below.

32.1.2. Either Party may require such Dispute to be referred to a person nominated by each Party, for amicable settlement. Upon such reference, the two shall meet at the earliest mutual convenience and in any event within [15 (fifteen)] days of such reference to discuss and attempt to amicably resolve the Dispute.

32.1.3. In the event that the Dispute in question is not resolved amicably within 15 (fifteen) days of such meeting between the Parties in accordance with Clause 32.1.2 either Party may refer the Dispute to arbitration in accordance with Clause 32.2.

32.2. Arbitration Procedure

Save where expressly stated to the contrary in the Contract, any Dispute shall be finally settled by binding arbitration under the Arbitration and Conciliation Act 1996 Act and in accordance with the UNICTRAL rules (the "Arbitration Rules") by three arbitrators appointed in accordance with the Arbitration Rules.

32.3. Place of Arbitration

The place of arbitration shall be Patna only.

32.4. English Language

The request for arbitration, the answer to the request, the terms of reference, any written submissions, any orders and awards shall be in English and, if oral hearings take place, English shall be the language to be used in the hearings.

32.5. Enforcement of Award

The Parties agree that the decision or award resulting from arbitration shall be final and binding upon the Parties and shall be enforceable in accordance with the provisions of the Arbitration and Conciliation Act.

32.6. Performance during Arbitration

Pending the submission of and/or decision on a Dispute and until the arbitral award is published, the Parties shall continue to perform their

respective obligations under the Contract without prejudice to a final adjustment in accordance with such award.

33. Representations and Warranties, Disclaimer

33.1. Representations and Warranties of the Bidder

The Bidder represents and warrants to Transport Department, Government of Bihar that: it is duly organized, validly existing and in good standing under the laws of incorporation of companies in India or in the country of its incorporation.

- 33.1.1.** it has full power and authority to execute, deliver and perform its obligations under the Contract and to carry out the transactions contemplated hereby;
- 33.1.2.** it has taken all necessary corporate and other action under Applicable Laws and its constitutional documents to authorize the Execution, delivery and performance of the Contract;
- 33.1.3.** it has the financial standing and capacity to Execute the Works;
- 33.1.4.** the Contract constitutes its legal, valid and binding obligation enforceable against it in accordance with the terms hereof;
- 33.1.5.** it is subject to the Applicable Laws with respect to the Contract and it hereby expressly and irrevocably waives any immunity in any jurisdiction in respect thereof;
- 33.1.6.** it has complied with all Applicable Laws and has not been subject to any fines, penalties, injunctive relief or any other civil or criminal liabilities which in the aggregate have or may have Material Adverse Effect upon the Works; no representation or warranty by the Bidder contained herein or in any other document furnished by it to Transport Department, Government of Bihar in relation to Applicable Clearances contains or will contain any untrue statement of material fact or omits or will omit to state a material fact necessary to make such representation or warranty not misleading; and no bribe or illegal gratification has been paid or will be paid in cash or kind by or on behalf of the Bidder to any person to procure the Contract or any other benefit under the Contract to procure other Contracts in relation to which the Bidder may be a party in relation to the Project.
- 33.1.7.** without prejudice to any express provision contained in the Contract, the Bidder acknowledges that prior to the execution of the Contract, the Bidder has after a complete and careful examination made an independent evaluation of the Project Site, the Technical Conditions of Contract and any information provided by or on behalf of Transport Department, Government of Bihar and has made an inspection of the Project Sites and has determined to its satisfaction the nature and extent of risks and hazards as are likely to arise or may be faced by the Bidder in the course of performance of its obligations hereunder.

34. Termination

34.1. Termination

34.1.1. Subject to the other provisions of the Contract, Transport Department, Government of Bihar shall have the right to serve a notice of termination of the Contract on the Bidder and forthwith terminate the Contract without prejudice to any of its other rights and remedies against the Bidder and without being liable to pay any loss or compensation if:

- (i) if any distress or execution is levied upon any of the assets of the Bidder;
- (ii) at any time during the currency of the Contract there is a change in the effective control of the Bidder as at the date of the Contract;
- (iii) the Bidder fails to complete, test and commission the Bidder's Works/ Project Facility within the Time for Completion or commits any other violation/breach of the terms and conditions of the Contract which is not rectified within [14 (fourteen)] days of the date of receipt of notice from Transport Department, Government of Bihar in this regard.
- (iv) any of the following events occurs:
 - a. the passing of a resolution by the shareholders of the Bidder for the winding up of the Bidder;
 - b. the appointment of a liquidator in a proceeding for the winding up of the Bidder or the Bidder entering into a compromise with its creditors; or the making by the court of an order winding up the Bidder,
 - c. The Bidder either: Appoints a sub bidder without the prior approval of Transport Department, Government of Bihar, or terminates any of the Sub bidder; or having terminated any of the Subcontracts with the consent of Transport Department, Government of Bihar, appoints a replacement Sub-Bidder without the prior approval of Transport Department, Government of Bihar.
 - d. the Bidder without the consent of Transport Department, Government of Bihar assigns or transfers all or any of its rights or obligations under the Contract.
 - e. the Bidder repudiates the Contract or otherwise evidences an intention not to be bound by the Contract; or the expropriation, confiscation, compulsory acquisition of the Project Facility;
 - f. if the Bidder or any of its servants or agents commit or suffer to be committed or omit or suffer to be omitted any act, deed, matter or thing which in the opinion of Transport Department, Government of Bihar whose decision (without an obligation to give reasons therefor) in this regard will be final, is prejudicial to the interests or reputation of Transport Department, Government of Bihar.
 - g. the Bidder offers, gives or promises any payment directly or indirectly to any government, political party, or official thereof, or any candidate for political office, or to Transport Department, Government of Bihar in order to influence any substantive decision of, or induce any party or person to use its influence to offset any substantive decision of any Relevant Authority or Statutory Authority or Transport Department, Government of Bihar in regard to any aspect of the Contract;
 - h. the Bidder makes any warranty or representation in or in accordance with the Contract which was materially incorrect when made so as to materially affect Transport Department, Government of Bihar interests; or in the event that the Bidder's liability for Liquidated Damages

reaches the cap on such damages as set out in this Annexure and the Completion Certificate for the whole of the Works has not been issued; or fails to provide, maintain or renew and/or comply with its obligations in relation to the Performance Bank Guarantee; or the Bidder has, without valid reason and Motor Vehicles Department,

Government of Bihar consent, failed to commence the Works promptly, or fails to progress the Works regularly and/or diligently or the Bidder has failed to adhere to the Technical Conditions of Contract and in the reasonable estimation of the Transport Department, Government of Bihar, such failure is likely to mean that Completion of the Works is likely to be delayed beyond the relevant Time for Completion; or the Bidder's personnel is/are incompetent, have acted in a manner prejudicial to Transport Department, Government of Bihar best interest or have failed to comply with Transport Department, Government of Bihar health, safety, environment or other rules or regulations and procedures; or the Bidder has failed to achieve two Timelines Activities (as defined in Clause 5 – "Timelines"), consecutively.

34.2. Termination Procedure

34.2.1. A notice of termination given pursuant to this Clause 34 (each a "Preliminary Termination Notice") shall specify in reasonable detail the circumstances giving rise to the Preliminary Termination Notice. If, within [21 (twenty one)] days following the service by Transport Department, Government of Bihar of a Preliminary

Termination Notice, the Bidder pays all sums which are due and payable to Transport Department, Government of Bihar or remedies the breach to the satisfaction of Transport Department, Government of Bihar existing as at the date of the Preliminary Termination Notice then such Preliminary Termination Notice shall be revoked and all existing rights of termination in favour of Transport Department, Government of Bihar under the Contract shall terminate and the Bidder shall continue to perform its obligations under the Contract in a diligent and proper manner.

34.2.2. Within the period of [21 (twenty one)] days following the receipt of the Preliminary Termination Notice by the Bidder and unless the Parties shall have otherwise agreed or the circumstances giving rise to the Preliminary Termination Notice shall have ceased to exist or shall have not been remedied, Transport Department, Government of Bihar may terminate the Contract by giving written notice (a "Termination Notice") to the Bidder and the Contract shall terminate on the date mentioned in the Termination Notice ("Termination Date").

34.2.3. The termination of the Contract by Transport Department, Government of Bihar for reasons other than breach can be made by a written notice to the Bidder and nothing herein will obligate Transport Department, Government of Bihar to terminate the Contract or be liable for any exercising its right of termination and Transport Department, Government of Bihar may pursue all remedies available in law instead of termination.

34.3. Upon Termination

Upon Termination for any reason whatsoever, the Bidder shall to the extent instructed by the Transport Department, Government of Bihar: cease all further work as instructed by the Transport Department, Government of Bihar in the Termination Notice and the Bidder shall carry out works for the sole purpose of securing, preserving and protecting that part of the Works already Executed and any work required to leave the Project Sites and the Works in a clean and safe condition; repatriate the Bidder's and Sub bidder's personnel from any part of the Project Site and the Works; deliver to Transport Department, Government of Bihar the Works Executed by the Bidder as at the Termination Date; ensure that it and those it is contractually or otherwise responsible for, vacate the Project Site; promptly and in an orderly manner deliver to Transport Department, Government of Bihar all documents relating to the Works which are for the time being under the control of the Bidder;

34.3.1. Without prejudice to Clause 34.3.1 upon Termination:

- (i) Transport Department, Government of Bihar may enter the Project Sites and the Works thereof and expel the Bidder therefrom and Transport Department, Government of Bihar may complete the Works itself or by employing any third party;
- (ii) Transport Department, Government of Bihar may, to the exclusion of any right of the Bidder over the same, take over and have free use, without payment to the Bidder, of any Bidder's Equipment and temporary works of which have been delivered to the Project Sites for such period as the Transport Department, Government of Bihar considers necessary for the Execution of the Works, without being responsible to the Bidder for fair wear and tear thereof and to the exclusion of any right of the Bidder over the same.
- (iii) Transport Department, Government of Bihar may at any time sell any of the said Bidder's Equipment, temporary works and any unused materials and apply the proceeds of sale in or towards for satisfaction of any sums due or which may become due to it from the Bidder under the Contract; and Transport Department, Government of Bihar shall have the power and authority to prohibit the Bidder and any person claiming through or under the Bidder from entering the Project Sites.

34.3.2. Depending on the event of default, Performance Guarantee furnished by bidder may be forfeited and any payment due to the bidder may be withheld for deduction of any applicable penalties and / or calculated liquidated damages to the Transport Department, Bihar due to default on the part of the bidder.**34.3.3. In the event that Transport Department, Bihar terminates the contract which is not due to default on the part of the bidder, the compensation shall be decided by Transport Department, Bihar and mutually agreed as below:**

- (i) If the contract is terminated at the Implementation Phase (on or before Go-Live / commissioning), bidder shall be asked to remove any temporary works and tools etc. which are not part of the project deliverable and Transport Department shall not pay anything additional to what has been paid already / due to be paid for the completed works, subject to adjustment of any liquidated damages, penalty charges as per SLA or charges for non-compliances or any kind of loss to Transport Department, Bihar. Any payment already made by the Transport Department, Bihar for which the services / products are not provided / delivered / returned, the sum shall be recovered from the Performance Bank Guarantee and / or Transport Department, Bihar shall ask the bidder to refund any such payment promptly, no later than **[21 (twenty-one)]** days following the receipt of the notice from the Transport Department, Bihar in this regard.
- (ii) If the contract is terminated post Commissioning of the project (in O & M Phase), the Transport Department, Government of Bihar shall ask the bidder to leave all the hardware, equipment and software applications etc. as per terms defined in this Tender document. Bidder shall be required to adhere to the same. The bidder shall be paid on pro-rate basis for the respective period for which payment is due, subject to adjustment of any liquidated damages, penalty charges as per SLA or charges for non-compliances or any kind of loss to Transport Department, Bihar.

34.3.4. Transport Department, Bihar, on receipt of a written application for reimbursement, on approval if deemed appropriate, agrees to pay bidder for

- (i) All charges for Services bidder provides during Exit Management at actuals and any Deliverables and/or system (or part thereof) bidder delivers during Exit Management, and Reimbursable expenses bidder incurs during Exit Management at actuals. If Transport Department, Bihar terminates without cause, Transport Department, Bihar also agrees to pay any applicable adjustment expenses bidder incurs as a result of such termination (which bidder shall take reasonable steps to mitigate). The reimbursement shall be made for only those expenses for which original bill is produced, and only for the expense incurred by bidder and shall be paid at actuals. Transport Department, Bihar shall not pay any kind of interest.

34.3.5. Transport Department, Bihar shall not be liable to pay any compensation in case of cancellation of Contract.

34.3.6. Upon the expiration or termination of the contract for any reason, the provisions of the agreement clauses like CONFIDENTIALITY, LIABILITY AND INDEMNITY, and GOVERNING LAW AND JURISDICTION, DISPUTE RESOLUTION PROCEDURE will survive indefinitely.

34.4. Termination of the MSA due to bankruptcy of MSI:

In addition to all other rights or remedies provided for in MSA or by law, Transport Department, Government of Bihar may terminate the MSA in whole, but not in part, in the event that:

- (a) The other Party makes a composition with or assignment for the benefit of creditors;
- (b) The other Party becomes or is unable to pay debts as they fall due;
- (c) A trustee, liquidator, administrator or receiver (including an administrative receiver) or similar official is appointed with respect to the other Party or any substantial part of such Party's assets; Any action is taken by or against the other Party under any bankruptcy or insolvency laws or laws relating to the relief of debtors; or The other Party is the subject of a winding-up petition which is not dismissed within five business days, or a resolution is passed for its winding-up.

35. Miscellaneous

35.1. Assignment and Charges

35.1.1. Subject to Clauses 35.1, neither Party shall assign the Contract or the rights, benefits and obligations hereunder save and except with prior consent of the other Party.

35.1.2. The Bidder shall not create nor permit to subsist any Encumbrance over or otherwise transfer or dispose of all or any of its rights and benefits under the Contract except with prior consent in writing of Transport Department, Government of Bihar, which consent shall not be unreasonably withheld.

35.2. Interest

Any sum which becomes payable under any of the provisions of the Contract by one Party to the other Party shall, if the same be not paid within the time allowed for payment thereof, shall be deemed to be a debt owed by the Party responsible for payment thereof to the Party entitled to receive the same. Such sum shall until payment thereof carry the Default Interest Rate from the due date for payment thereof until the same is paid to or otherwise realized by the Party entitled to the same.

35.3. Governing Law and Jurisdiction

The Contract shall be governed by the laws of India. In respect of all matters arising out of or relating to the Contract, the Courts at Patna, India shall have the jurisdiction to decide the matter.

35.4. Waiver

35.4.1. Waiver by either Party of any default by the other Party in the observance and performance of any provision of or obligations under the Contract: shall not operate or be construed as a waiver of any other or subsequent default hereof or of other provisions or obligations under the Contract. shall not be effective unless it is in writing and executed by a duly authorized representative of such Party; and shall not affect the validity or enforceability of the Contract in any manner.

35.4.2. Neither the failure by either Party to insist on any occasion upon the performance of the terms, conditions and provisions of the Contract or any

obligation hereunder nor time or other indulgence granted by a Party to the other Party shall be treated or deemed as waiver/breach of any terms, conditions or provisions of the Contract.

35.5. Survival

Termination or expiry of the Contract (i) shall not relieve the Bidder of any obligations already incurred hereunder which expressly or by implication survives termination hereof, and (ii) except as otherwise provided in any provision of the Contract expressly limiting the liability of either Party, shall not relieve either Party of any obligations or liabilities for loss or damage to the other Party arising out of or caused by acts or omissions of such Party prior to the effectiveness of such termination or arising out of such termination.

35.6. Amendments

The Contract constitutes a complete and exclusive understanding of the terms of the Contract between the Parties on the subject hereof and no amendment or modification hereto shall be valid and effective unless agreed to by all the Parties hereto and evidenced in writing.

35.7. Severability

If for any reason whatsoever any provision of the Contract is or becomes invalid, illegal or unenforceable or is declared by any court of competent jurisdiction or any other instrumentality to be invalid, illegal or unenforceable, the validity, legality or enforceability of the remaining provisions shall not be affected in any manner, and the Parties shall negotiate in good faith with a view to agreeing upon one or more provisions which may be substituted for such invalid, unenforceable or illegal provisions, as nearly as is practicable. Provided failure to agree upon any such provisions shall not be subject to dispute resolution under this Contract or otherwise.

No failure to exercise or enforce and no delay in exercising or enforcing on the part of either Party to the MSA of any right, remedy or provision of the MSA shall operate as a waiver of such right, remedy or provision in any future application nor shall any single or partial exercise or enforcement of any right, remedy or provision preclude any other or further exercise or enforcement of such right, remedy or provision or the exercise or enforcement of any other right, remedy or provision.

35.8. No Partnership

Nothing contained in the Contract shall be construed or interpreted as constituting a partnership between the Parties. Neither Party shall have any authority to bind the other in any manner whatsoever. The Contract shall be construed to have been entered on a principal-to-principal basis.

35.9. Entire Agreement

The Contract constitutes the entire agreement between the Parties and supersedes all prior negotiations, commitments, representations, communications and agreements relating to the Contract either oral or in writing except to the extent they are expressly incorporated herein. The Bidder confirms that it has not relied upon any representation inducing it to enter into the Contract (whether or not such representation has been incorporated as a term of the Contract) and agrees to waive any right which it might otherwise have to bring any action in respect of such representation. The Bidder further confirms that there is not in existence at the date of the Contract any collateral contract or warranty of which the Bidder is the beneficiary which might impose upon Transport Department, Government of Bihar obligations which are in addition to or vary the obligations expressly contained in the Contract and which relate in any way to the subject matter of the Contract. The Bidder's only rights arising out of, or in connection with, any act, matter or thing said, written or done, or omitted to be said, written or done, by or on behalf of Transport Department, Government of Bihar (or any agent, employee or sub bidder of Transport Department, Government of Bihar in negotiations leading up to the Contract or in the performance or purported performance of the Contract or otherwise in relation to the Contract are the rights to enforce the express obligations of Transport Department, Government of Bihar contained in the Contract and to bring an action for breach thereof. Nothing in this **Clause 35.9** is intended to exclude liability of the Bidder for fraud or fraudulent misrepresentation.

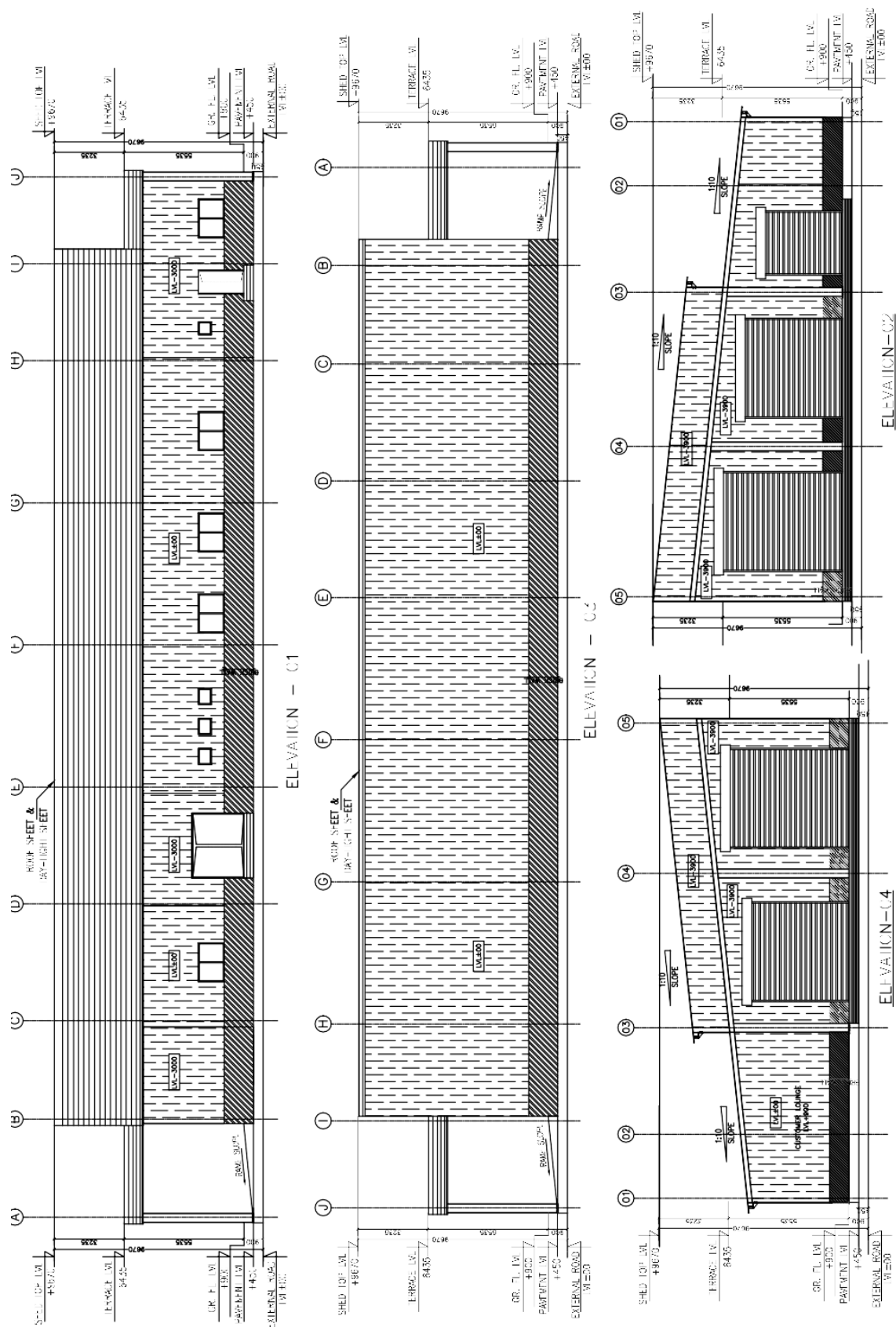
35.10. Liability and Indemnity

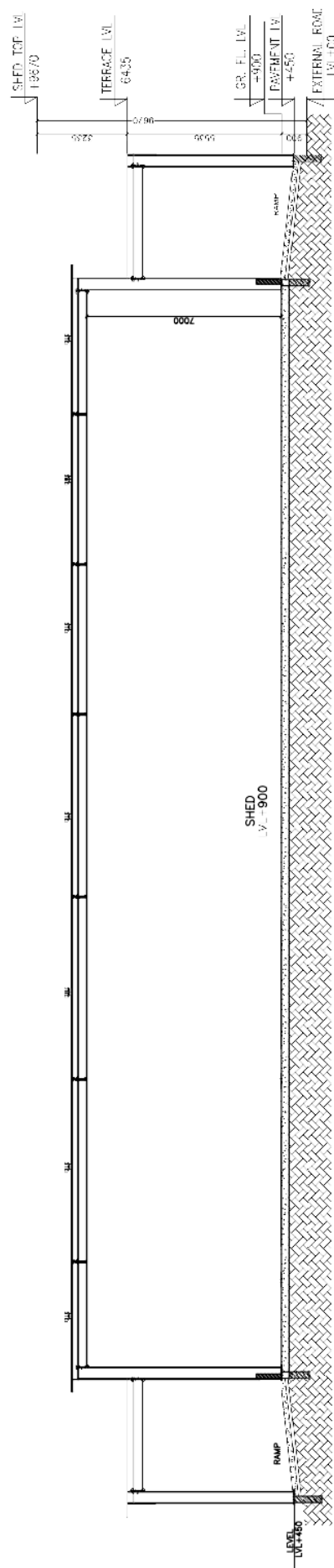
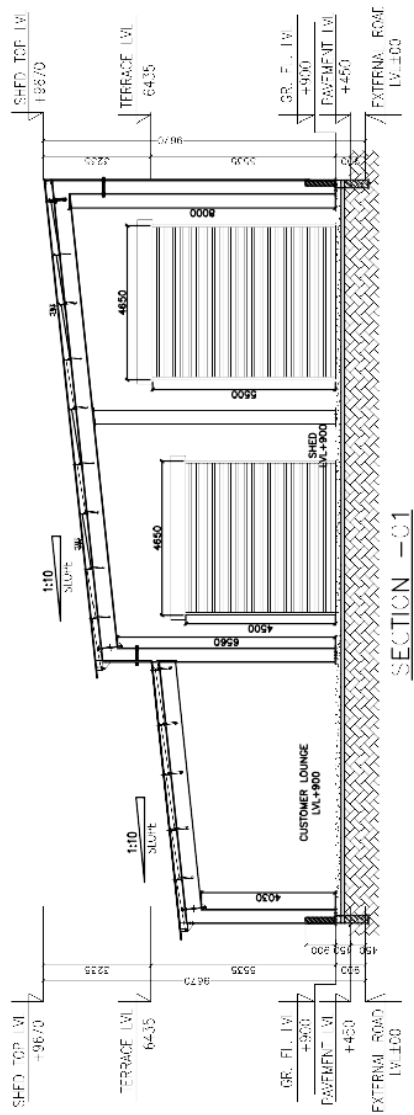
- 35.10.1.** The Bidder shall indemnify, defend and hold Transport Department, Government of Bihar harmless against any and all proceedings, actions and third party claims arising out of a breach or omission or non-performance by the Bidder of any of its obligations under the Contract except to the extent that any such claim has arisen due to breach by Transport Department, Government of Bihar of any of its obligations under the Contract.
- 35.10.2.** In the event that either Party receives a claim from a third party in respect of which it is entitled to the benefit of an indemnity under the Contract (the "Indemnified Party") it shall notify the other Party ("Indemnifying Party") within [7 (seven)] days of receipt of the claim and shall not settle or pay the claim without the prior approval of the Indemnifying Party, provided that, such approval shall not be unreasonably withheld or delayed. In the event that the Indemnifying Party wishes to contest or dispute the claim it may conduct the proceedings in the name of the Indemnified Party subject to the Indemnified Party being secured against any costs involved to its reasonable satisfaction.
- 35.10.3.** The Indemnified Party shall have the right, but not the obligation, to contest, defend and litigate any claim, action, suit or proceeding by any

third party alleged or asserted against such party in respect of, resulting from, related to or arising out of any matter for which it is entitled to be indemnified hereunder and their reasonable costs and expenses shall be indemnified by the Indemnifying Party. If the Indemnifying Party acknowledges in writing its obligation to indemnify the person indemnified in respect of loss to the full extent provided by this Clause 35.10, the Indemnifying Party shall be entitled, at its option, to assume and control the defiance of such claim, action, suit or other proceedings, liabilities, payments and obligations at its expense and through counsel of its choice provided it gives prompt notice of its intention to do so to the Indemnified Party and reimburses the Indemnified Party for the reasonable cost and expenses incurred by the Indemnified Party prior to the assumption by the Indemnifying Party of such defiance. The Indemnifying Party shall not be entitled to settle or compromise any claim, action, suit or proceeding without the prior written consent of the Indemnified Party unless the Indemnifying Party provides such security to the Indemnified Party as shall be reasonably required by the Indemnified Party to secure, the loss to be indemnified hereunder to the extent so compromised or settled.

The limitation described above will not apply to

- (i) MSI's obligations under Confidentiality or Infringement Indemnity
- (ii) Transport Department, Government of Bihar's obligations under Confidentiality or Infringement Indemnity or
- (iii) Transport Department, Government of Bihar's non-performance of its payment obligations for Services provided or for termination or related charges pursuant to MSA.





9. Forms

The Forms to this document are as listed below –

- Form A : Letter for Submission of Technical Proposal
- Form B : Letter of Undertaking
- Form C : Earnest Money Deposit as Bank Guarantee Format
- Form D : Power of Attorney Format
- Form E : Performance Bank Guarantee and form of Demand Draft
- Form F : Deviations Suggested
- Form G : Detailed Technical Specifications
- Form H : References
- Form I : Service Support
- Form J : Bidder's Organization, Company Profile
- Form K : Description of Approach, Methodology, Work and Training Plan
- Form L : Financial Proposal
- Form M : Contact Details
- Form N : Compliance Sheet – cum – Index Page

9.1. Form A : Letter for Submission of Technical Proposal

[To be executed on the Letter Head of the Bidder]

(To be scanned and uploaded)

[Location, Date]

To: Transport Department, Government of Bihar,

.....

.....

Dear Sir,

We, the undersigned, offer our bid in response to your Tender No. dated.....We are hereby uploading our Bid, which includes this Technical Bid and a Financial Bid. Our Bid is valid for a period of 120 days from the last date of Submission of Bids, extendable for additional 60 days, on request by Transport Department, Government of Bihar, without any additional cost.

We hereby declare that all the information and statements made in this Bid is true and complete in all respects and is as per the guidelines laid down in the tender document. We further understand that any information which is found false or is not as per the guidelines and terms & conditions of the tender document may lead to our disqualification.

We hereby declare that our Technical Bid contains Earnest Money Deposit of Indian Rupees 2,00,000/- Only (Rs. Two Lakhs Only).

We undertake that if our Bid is accepted, we will be committed to execute & complete the scope of work as per the agreed terms and conditions.

If negotiations are held during the period of validity of the Bid, we undertake that our Bid will be binding upon us and will be subject to the modifications resulting from Contract negotiations. However, the Bid validity continues to be 120 days & is extendable for additional 60 days, on request by Transport Department, Government of Bihar, without any additional cost.

We understand that Transport Department, Government of Bihar are not bound to accept any Proposal that it receives from us.

Yours sincerely,

Authorized Signature [*In full*]:

Authorized Signature [*In initials*]:

Name and Title of Signatory: ____

Name of Firm: _

Address:_____.

[Note 1: Authorized person signing shall attach to this document a proof of authorization for signing on behalf of the Bidder Company

Note 2: To be signed in blue ink]

9.2. Form B (A) : Letter of Undertaking

[On the letterhead of the Bidder]

(To be scanned and uploaded)

LETTER OF UNDERTAKING**Date:** _____**To:**Transport Department, Government of Bihar
.....
.....**Re:** **Tender No.**

We acknowledge that the documents for Tender No. issued to us are confidential and we hereby undertake and agree as follows:

1. **“Confidential Information”** means the Tender documents and everything contained therein, all documentation, data, particulars of the works and technical or commercial information made by (or on behalf of) Transport Department, Government of Bihar or obtained directly or indirectly from Transport Department, Government of Bihar or its representatives by us or which is generated by us or any information or data that we receive or have access to, as a result of the Tender, as being confidential information of Transport Department, Government of Bihar, provided that such term does not include information that (a) was publicly known or otherwise known to us prior to the time of such disclosure, (b) subsequently becomes publicly known through no act or omission by us or any person acting on our behalf.

2. We shall maintain the confidentiality of Confidential Information in accordance with procedures adopted by us in good faith to protect confidential information of third parties delivered to us, provided that we may deliver or disclose Confidential Information to our authorized representatives who agree to hold confidential the Confidential Information substantially in accordance with the terms of this Undertaking.

3. We shall not at any time whatsoever:

i Disclose, in whole or in part, any Confidential Information received directly or indirectly from the Transport Department, Government of Bihar to any third party. Reproduce, publish, transmit, translate, modify, compile or otherwise transfer the Confidential Information. In case our bid is not accepted and immediately upon the acceptance of the bid of any of the other Bidder, we shall: Return all Confidential Information including without limitation, all originals, copies, reproductions and summaries of Confidential Information; and Destroy all copies of Confidential Information in our possession, power or control, which are present on magnetic media, optical disk or other storage device, in a manner that ensures that the Confidential Information is rendered unrecoverable.

4. We shall certify to Transport Department, Government of Bihar that we have returned or destroyed such Confidential Information to Transport Department, Government of Bihar within two (2) days of such a request being made by Transport Department, Government of Bihar.

Name of Bidder**Signature of Authorized Representative**

9.3. Form B (B) : Undertaking - Technology Transfer Agreement**Technology Transfer Agreement (TTA) Validity & Scope (Indian Manufacturer claiming OEM status)***[To be Certified by Notary]**[To be scanned and uploaded]*

Tender No.: _____

Date: _____

We, _____ (Indian Manufacturer / Class-I Local Supplier), hereby confirm that we have executed a valid Technology Transfer Agreement (TTA) with _____ (Principal OEM) dated _____, which is effective from _____ to _____.

We undertake that:

- 1) The TTA covers the manufacturing/assembly/testing/quality requirements for the major equipment as defined in Annexure-III, Clause 1.2 of this RFP.
- 2) The TTA remains valid for the entire project period, including extensions, as applicable, and shall remain in force to support warranty/AMC/obligations under this RFP.
- 3) The major equipment under this bid will be manufactured in India at:

Plant Address: _____

We agree to provide a copy of the executed TTA (or relevant extracts, if confidentiality applies) to the Employer for verification, as per tender conditions.

Place: _____

Date: _____

Signature of Authorized Signatory and Seal of the bidder

Name: _____

Designation: _____

9.4. Form B (C) : Undertaking - Change Control (Local Content / Supplier Class / TTA)

Undertaking - Change Control (Local Content / Supplier Class / TTA Validity)

Purpose: Protects you if local content drops later or TTA expires.

Undertaking – Intimation of Changes

[To be Certified by Notary]

[To be scanned and uploaded]

Tender No.: _____

Date: _____

We, _____ (Bidder), undertake that we will immediately notify the Department in writing if any of the following changes occur during bidding or contract period:

- 1) Change in supplier classification (Class-I/Class-II/Non-local),
- 2) Change in local content percentage for supplied items,
- 3) Expiry/termination/modification of Technology Transfer Agreement(s),
- 4) Change in manufacturing location(s) for major equipment.

We understand that such changes may impact eligibility and/or preference, and the Employer may take actions as per tender conditions.

Place: _____

Date: _____

Signature of Authorized Signatory and Seal of the bidder

Name: _____

Designation: _____

9.5. Form C : Earnest Money Deposit as Bank Guarantee Format

(To be stamped in accordance with the Stamp Act)

Tender. No.:

Date:

Bank Guarantee No.:

To,

Transport Commissioner Office,
2nd Floor, Visveswaraya Bhawan
J L N Marg Patna 800015.

For bidding for the tender bearing number _____ dated _____ for the project **“Setting Up of Automated Testing Stations (ATS’s) at 4 identified places in Bihar State including Maintenance of ATS’s for 1 Years”** (hereinafter referred as ‘RFP’) for,

_____ a company registered under Indian Companies Act, 1956 / 2013 (hereinafter called the “Bidder” (Lead Bidder in case of Consortium)), we at the request of the Bidder, certify that, we, _____ Bank having one of the branches at _____ (hereinafter called the “Bank”) are holding in trust in favour of Transport Department, Bihar State, the amount of Rs. _____ (write the sum here in words) to indemnify and keep indemnified the Transport Department, Government of Bihar against any loss or damage that may be caused to or suffered by the Transport Department, Government of Bihar by reason of any breach by the Bidder of any of the terms and conditions of the RFP and the bidding process as described in the RFP.

We agree that the decision of Transport Department, whether any breach of any of the terms and conditions of the RFP and/or in the performance thereof has been committed by the Bidder and the amount of loss or damage that has been caused or suffered by Transport Department, Government of Bihar shall be final and binding on us and the amount of the said loss or damage shall be paid by us forthwith on demand and without demur to Transport Department, Government of Bihar.

We _____ Bank, further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for satisfactory performance and fulfilment in all respects of the RFP and bidding process by the Bidder i.e. till _____ (write a date which is at least **120 days** from the Last date (deadline) for uploading of bids on the e-Tendering website in response to RFP notice- hereinafter called the **said date**) and that if any claim accrues or arises against us _____ Bank, by virtue of this guarantee before the said date, the same shall be enforceable against us

_____ Bank, notwithstanding the fact that the notice of any such claim is given to us

_____ Bank, by Transport Department, Government of Bihar before the **said date**.

Payment under this letter of guarantee shall be made promptly, within two weeks of our receipt of notice to that effect from Transport Department, Government of Bihar.

It is fully understood that this guarantee is effective from the last date (deadline) for uploading of bids in response to RFP notice and that we _Bank, undertake not to revoke this guarantee during its currency without the consent in writing of Transport Department, Government of Bihar.

We undertake to pay to Transport Department, Government of Bihar any money so demanded notwithstanding any dispute or disputes raised by the Bidder in any suit or proceeding pending before any court or Tribunal relating thereto our liability under this present guarantee being absolute and unequivocal without any demur, reservation, recourse, contest or protest and without any reference to the Bidder or any other person.

The payment so made by us under this guarantee shall be a valid discharge of our liability for payment there under.

We _____Bank, further agree that Transport Department, Government of Bihar shall have the fullest liberty, without affecting in any manner.

our obligations hereunder to vary any of the terms and conditions of the said RFP or to extend time of performance by the Bidder from time to time or to postpone for any time or from time to time any of the powers exercisable by Transport Department, Government of Bihar against the said Bidder and to forbear or enforce any of the terms and conditions relating to the said RFP and we, _____Bank, shall not be released from liability of Transport Department, Government of Bihar under this guarantee by reason of any such variation or extension being granted to the said Bidder or for any forbearance by Transport Department, Government of Bihar to the said Bidder or for any forbearance and or omission on the part of Transport Department, Government of Bihar or any other matter or thing whatsoever, which under the law relating to sureties, would, but for this provision have the effect of so releasing us from our liability under this guarantee.

This guarantee will not be discharged due to the change in the constitution of the Bank or the Bidder or any absorption, merger or amalgamation of the Bank or the Bidder with any other person.

Our liability under this Bank Guarantee shall not exceed and is restricted to Rs. _____ (Rupees only).

The Bank declares that it has power to issue this Guarantee and discharge the obligations contemplated herein, the undersigned is duly authorized and has full power to execute this Guarantee for and on behalf of the Bank.

Signature of Authorized Signatory (with official seal) Date :

Place :

Name :

Designation :

Address :

Telephone & Fax :

E-mail address :

Signature of Witness 1

Signature of Witness 2

Name: _____

Name: _____

(Bank's common seal)

Bank details of Transport Department:

- a) Name of Account Holder: Transport Department, Bihar Patna
- b) Bank Name: State bank of India
- c) Branch Name: Bailey Road, Visveswaraya Bhawan (6379)
- d) Account No.: 38955906711
- e) IFSC:- SBIN0006379

9.6. Form D : Power of Attorney Format**Form D (A) : Format for Power of Attorney to appoint and authorized Attorney**

(To be submitted on a Stamp Paper of relevant value)

Power of Attorney

Know all men by these presents, we _____ (name and address of the registered office) do hereby constitute, appoint and authorize Mr. / Ms. _____ (name and residential address) who is presently employed with us and holding the position of _____ as our attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to our bid for the Project envisaging **“Setting Up of Automated Testing Stations (ATS's) at 4 identified places in Bihar State including Maintenance of ATS's**

for 1 Years”, (the “Project”) including signing and submission of all documents and providing information / Responses to Transport Department, Bihar State representing us in all matters before Transport Department, Government of Bihar, and generally dealing with Transport Department, Government of Bihar in all matters in connection with our bid for the said Project.

We hereby agree to ratify all acts, deeds and things lawfully done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us.

For _____

(Signature) (Name, Title and Address)

Accepted

(Signature)

(Name, Title and Address of the Attorney)

Note:

- 1 The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.
- 2 In case the Application is signed by a Partner / authorized Director of the Applicant, a certified copy of the appropriate resolution / document conveying such authority may be enclosed in lieu of the Power of Attorney.

Form D (B): Format for Power of Attorney to authorized Lead Member of Consortium

(To be submitted on a Stamp Paper of relevant value)

Power of Attorney

Whereas the Transport Department, Bihar State has invited applications from eligible bidders for “**Setting Up of Automated Testing Stations (ATS’s) at 4 identified places in Bihar State including maintenance of ATS’s for 1 Years**”, (the “Project”)

Whereas, _____ and _____ (collectively the “Consortium”) being Members of the Consortium are interested in bidding for the Project in accordance with the terms and conditions of the Request for Proposal (RFP) and other connected documents in respect of the Project,

AND

Whereas, it is necessary for the Members of the Consortium to designate one of them as the Lead Member with all necessary power and authority to do for and on behalf of the Consortium, all acts, deeds and things as may be necessary in connection with the Consortium’s bid for the Project and its execution.

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS

We, M/s. _____ having our registered office at _____,

And M/s. _____ having our registered office at _____,

(Hereinafter collectively referred to as the “Principals”) do hereby irrevocably designate, nominate, constitute, appoint and authorize M/s. _____ having its registered office at _____,

being one of the Members of the Consortium, as the **Lead Bidder** and true and lawful attorney of the Consortium (hereinafter referred to as the “Attorney”).

We hereby irrevocably authorize the Attorney (with power to sub-delegate) to conduct all business for and on behalf of the Consortium and any one of us during the bidding process and, in the event the Consortium is awarded the contract, during the execution of the Project and in this regard, to do on our behalf and on behalf of the Consortium, all or any of such acts, deeds or things as are necessary or required or incidental to the pre-qualification of the Consortium and submission of its bid for the Project, including but not limited to signing and submission of all applications, bids and other documents and writings, participate in bidders and other conferences, respond to queries, submit information / documents, sign and execute contracts and undertakings consequent to acceptance of the bid of the Consortium and generally to represent the Consortium in all its dealings with the Transport Department, Government of Bihar, and / or any other Government Agency or any person, in all matters in connection with or relating to or arising out of the Consortium’s bid for the Project and / or upon award thereof till the Master Service Agreement is entered into with the Transport Department, Government of Bihar.

AND

hereby agree to ratify and confirm and do hereby ratify and confirm all acts, deeds and things done or caused to be done by our said Attorney pursuant to and in exercise of the powers conferred by this Power of Attorney and that all acts, deeds and things done by our said Attorney in exercise of the powers hereby conferred shall and shall always be deemed to have been done by us / Consortium.

IN WITNESS WHEREOF WE THE PRINCIPALS ABOVE NAMED HAVE EXECUTED THIS POWER OF ATTORNEY ON THIS _____ DAY OF _____, 20_____.

For _____ (Signature)

Name & Title _____

For _____ (Signature)

Name & Title _____

Witnesses:

1.

2.

(Executants)

(To be executed by all the Members of the Consortium)

Notes:

1. The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, lay down by the applicable law and the charter documents of the executants(s) and when it is so required, the same should be under common seal affixed in accordance with the required procedure.
2. Also, wherever required, the Bidder should submit for verification the extract of the charter documents and documents such as a board or shareholders' resolution/ power of attorney in favour of the person executing this Power of Attorney for the delegation of power hereunder on behalf of the Bidder.

9.7. Form E : Performance Bank Guarantee and form of Demand

Proforma for Performance Bank Guarantee

(To be scanned and uploaded)

(To be executed on non-Judicial stamped paper of an appropriate value)

WHEREAS Transport Department, Government of Bihar having its office at (address) - (hereinafter referred to as "**The Owner**" which expression shall unless repugnant to the context includes their legal representatives, successors and assigns), has executed a contract on [*Please insert date of execution of Contract*] ("**Contract**") with [*insert name of the Successful Bidder*] (hereinafter referred to as the "**Contractor**" which expression shall unless repugnant to the context include its legal representatives, successors and permitted assigns) for the performance, execution and implementation of the Works ("**Works**" shall have the meaning ascribed to it in the Contract] based on the terms & conditions set out in the Tender Documents number [*insert reference number of the Tender Documents*] dated [*insert date of issue of Tender Documents*] and various other documents forming part thereof.

AND WHEREAS one of the conditions of the Contract is that the Contractor shall furnish to the Owner a Bank Guarantee from a Nationalized bank in India having a branch at Patna for an amount equal to **Rs. 1,00,00,000/- (Rs. One Crore Only)** of the total Contract Sum (the amount guaranteed under this bank guarantee shall hereinafter be referred to as the "**Guaranteed Amount**") against due and faithful performance of the Contract from the post-commissioning stage of the Works under the Contract, including the performance bank guarantee obligation and other obligations of the Contractor for the supplies made and the Works being performed and executed by under the Contract. This bank guarantee shall be valid upto

_____ [*insert a date which is 6 years and 6 months from the date of signing of contract*] from the date hereof up to the expiry of the Warranty Period and AMC period and six months thereafter.

AND WHEREAS the Contractor has approached [*insert the name of the scheduled bank*] (hereinafter referred to as the "**Bank**") having its registered office at [*insert the address*] and at the request of the Contractor and in consideration of the promises made by the Contractor, the Bank has agreed to give such guarantee as hereunder: -

- (i) The Bank hereby undertakes to pay under this guarantee, the Guaranteed Amount claimed by the Owner without any further proof or conditions and without demur, reservation, contest, recourse or protest and without any enquiry or notification to the Contractor merely on a demand in the form set out in Appendix I ("**Demand**") from the Owner stating that the amount claimed is due to the Owner under the Contract. Any such demand made on the Bank by the Owner shall be conclusive as regards the amount due and payable by the Bank under this bank guarantee and the Bank shall pay without any deductions or set-offs or counterclaims whatsoever, the total sum claimed by the Owner in such Demand. The Owner shall have the right to make an unlimited number of Demands under this bank guarantee provided that the aggregate of all sums paid to the Owner by the Bank under this bank guarantee shall not exceed the Guaranteed Amount.
- (ii) However, the Bank's liability under this bank guarantee shall be restricted to an amount not Exceeding [*figure of Guaranteed Amount to be inserted here*]only).
- (iii) The Owner will have the full liberty without reference to the Bank and without affecting the bank guarantee to postpone for any time or from time to time the exercise of any powers and rights conferred on the Owner under the Contract and to enforce or to forbear endorsing any powers or rights or by reasons of time being given to the Contractor which under law relating the Surety would but for the provisions have the effect of releasing the surety.
- (iv) The rights of the Owner to recover the Guaranteed Amount from the Bank in the manner aforesaid

will not be affected or suspended by reasons of the fact that any dispute or disputes have been raised by the Contractor and / or that any dispute(s) are pending before any office, tribunal or court in respect of such Guaranteed Amount and/ or the Contract.

- (v) The guarantee herein contained shall not be affected by the liquidation or winding up, dissolution, change of constitution or insolvency of the Contractor but shall in all respects and for all purposes be binding and operative until payment of all money due to the Owner in respect of such liability or liabilities is effected.
- (vi) This bank guarantee shall be governed by and construed in accordance with the laws of the Republic of India and the parties to this bank guarantee hereby submit to the jurisdiction of the Courts of Patna for the purposes of settling any disputes or differences which may arise out of or in connection with this bank guarantee and for the purposes of enforcement under this bank guarantee.
- (vii) All capitalized words used but not defined herein shall have the meanings assigned to them under the Contract.

NOTWITHSTANDING anything stated above, the liability of the Bank under this bank guarantee is restricted to the Guaranteed Amount and this bank guarantee shall expire on the expiry of the Warranty Period under the Contract. Unless a Demand under this bank guarantee is filed against the Bank within six (6) months from the date of expiry of this bank guarantee all the rights of the Owner under this bank guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities hereunder. However, if the Contractor's obligations against which this bank guarantee is given, are not completed or fully performed by the Contractor within the period prescribed under the Contract, the Bank hereby agrees to further extend the bank guarantee for further periods of six months each till the Contractor fulfills its obligations under the Contract.

We have the power to issue this bank guarantee in your favor under Memorandum and Article of Association and the Undersigned has full power to do so under the Power of Attorney dated [*date of power of attorney to be inserted*] granted to him by the Bank.

Date:

Bank

Corporate Seal of the Bank

By its constituted Attorney Signature of a person duly authorized to sign on behalf of the Bank.

APPENDIX 1

Form of Demand Draft

[To the issuing Bank] Dear Sir/s,

The Contract between Transport Department, Government of Bihar and [*Please insert the name of the Successful Bidder*] Bank Guarantee No. ***** ("the Bank Guarantee").

We refer to the above Contract and Bank Guarantee. Terms defined in the Bank Guarantee shall have the same meaning when used herein.

In accordance with the terms of the Bank Guarantee, we require payment by you of the sum of Rs. [*****]
(*** Rupees) to the following account:

Account Number: [] with [] Bank, [] Branch, Sort Code [].

Yours sincerely,

[Signed by
[]
for and on behalf of
Transport Department, Government of Bihar

9.8. Form F: Deviations Suggested

(To be scanned and uploaded)

[The Bidder must present and justify here any modification or improvement to the Conditions of Contract proposed to in the interest of Transport Department, Government of Bihar. Such suggestions should be concise and to the point. In case, the Bidder does not want to suggest any deviation, this section must contain a statement indicating “No Deviation Suggested”]

[The Bidder shall use the following template in order to explain the deviations, and fill and include in the current document as many templates as deviations appear in his offer. The Bidder shall be required to furnish a separate sheet as per the following template for each deviation suggested.]

Subject	Minimum Requirement Equipment Details	appearing on the
	<i>[Please copy the requirement on the Equipment Details]</i>	
Proposed Specification		
<i>[Explain in detail what alternative solution are you proposing]</i>		
Reasons for the proposed solution to be superior than initial requirement		
<i>[Give clear reasons why you think the proposed solution is better than the Requirement expressed in TCC and Checklist]</i>		

9.9. Form G: Detailed Technical Specifications

(To be scanned and uploaded)

[The Bidder is requested to fill each chapter of the following form with the detailed description of the proposed equipment. If required, Bidder may also provide drawings/graphical representations along with this form. The structure of this document is according to the TCC, and the Bidder shall maintain the same structure].

Automated Testing Stations (ATS's)

1. Functional Requirements

1.1. General Purpose of the inspection lane

[Please fill, giving details about how the Bidder is responding to all requirements]

Tests to be Performed

[To be filled by the bidder]

1.2. Test configuration

1.3. Inspection sequence

[To be filled by the bidder]

1.4. IT Platform

[To be filled by the bidder]

2. Technical Description

2.1. Technical specifications

[To be filled by the bidder]

2.2. Common Equipment

[To be filled by the bidder]

2.3. Bogie Roller Set

[To be filled by the bidder]

2.4. Free Wheel Trolley

[To be filled by the bidder]

2.5. Toeing trolley or rail Trolley (For front wheel of 3-Wheeled vehicle)

[To be filled by the bidder]

2.6. Calibration Equipment

[To be filled by the bidder]

2.7. Automatic Tyre pressure filler and indicator

[To be filled by the bidder]

SL No	Specifications	Minimum Requirements	Bidders Specifications
1	Resolution	+/- 0.1 bar	
2	Accuracy	± 0.5 % of Full Scale or better	
3	Full scale	at least 10.6 bar	

2.8. Number Plate Reader Camera (Digital Camera with on line connectivity to the PC)

[To be filled by the bidder]

2.9. Inspection Lanes LD

[To be filled by the bidder]

2.10. Roller brake tester

[To be filled by the bidder]

Sr. No.	Specifications	Minimum Requirements	Bidders Specifications
1	Maximum load per axle	Bidder to specify	
2	Maximum measurable brake load	at least of 6kN	
3	Difference in left & right braking efficiency	Bidder to specify	
4	Brake load resolution	<= 100N	
5	Testing speed	5 km/h ± 1 km/h	
6	Minimum Tracking width	Bidder to specify	
7	Maximum Tracking width	Bidder to specify	
8	Roller diameter	Bidder to specify	
9	Roller axle separation	Bidder to specify	
10	Roller surface - Minimum frictional coefficient	0.6 (Supporting documents from Internationally certified agencies or NABL accredited labs in India for confirmation of minimum frictional coefficient of roller surface need to be provided)	
11	Roller surface - Service life	minimum 25000 hrs (Self-declaration from OEM specifying required useful life of rollers without any damage need to be provided)	
12	Measurement accuracy	within ± 100 N	
13	Provision for either lifting or braking of roller for easy exit of vehicle	To be provided	

2.11. Axle Weight Measurement system

[To be filled by the bidder]

Sr. No.	Specifications	Minimum Requirements	Bidders Specifications
1	Measuring range	0 –3000 kg	
2	Resolution	5 kg	
3	Accuracy	± 1% of reading	

2.12. Suspension tester

[To be filled by the bidder]

Sr. No.	Specifications	Minimum Requirements	Bidders Specifications
1	Maximum load per axle	Bidder to specify	
2	Amplitude of excitation	6.5 mm +/- 5 mm	
3	Minimum Tracking width	Bidder to specify	
4	Maximum Tracking width	Bidder to specify	
5	Measurement accuracy	± 1% of wheel load	

2.13. Side slip tester

[To be filled by the bidder]

Sr. No.	Specifications	Minimum Requirements	Bidders Specifications
1	Maximum load per axle	Bidder to specify	
2	Length of the Track Plate	Bidder to specify	
3	Width of the Track Plate	Bidder to specify	
4	Height of the Track Plate	Bidder to specify	
5	Measuring range	± 20 m/km	
6	Measuring resolution	1 m/km	
7	Accuracy	±1.0 m/km	

2.14. Joint Play tester

[To be filled by the bidder]

Sr. No.	Specifications	Minimum Requirements	Bidders Specifications
1	Maximum load capacity per axle	Bidder to specify	
2	Maximum Force per plate	at least 6 kN	
3	Maximum movement on each side	50 – 80 mm (Hydraulic)	
4	Length of the Test Plate	Bidder to specify	
5	Width of the Test Plate	Bidder to specify	

2.15. Electronic Steering gear play detector

[To be filled by the bidder]

Sr. No.	Specifications	Minimum Requirements	Bidders Specifications
1	Capable of measuring angular movement up to	± 30°	
2	Recording mechanism to measure wheel movement against steering movement	Bidder to comply	
3	Measurement accuracy	± 2% of full-scale deflection	

2.16. Semi-Automatic Head light tester

[To be filled by the bidder]

Sr. No.	Specifications	Minimum Requirements	Bidders Specifications
1	Light Intensity range measure (min)	0-100,000 cd	
2	Illumination Intensity range measure	0-200 lux	
3	Headlight tester must have ability to autofocus and should be capable of measuring headlamp with their Centres above ground level	500 mm to 1200 mm	
4	Vertical and horizontal measuring range	±50 cm/10 m (±5 %)	
5	Maximum deviation of intensity	±5% of reading	
6	Maximum deviation of Inclination measurement (vertical orientation)	± 0.1%	
7	Type of Head light tester	Semi-automatic	
8	Measurement (low beam pattern) and data transfer	without human intervention	
9	Focusing (Vertical movement) & Positioning (Horizontal movement) of head light tester	manually	

2.17. Smoke meter (Opacimeter)

*[To be filled by the bidder]**Copy of Type Approval & COP Certificate needs to be attached.*

2.18. Exhaust gas analyzer

*[To be filled by the bidder]**Copy of Type Approval & COP Certificate needs to be attached.*

2.19. Speedometer Tester

[To be filled by the bidder]

Sr. No.	Specifications	Minimum Requirements	Bidders Specifications
1	Maximum load capacity per axle	Bidder to specify	
2	Minimum Track width	Bidder to specify	
3	Maximum Track width	Bidder to specify	
4	Minimum Roller diameter	Bidder to specify	
5	Minimum Roller axle separation	Bidder to specify	
6	Measuring range	20 – 160 km/h	
7	Resolution	1 km/h	
8	Accuracy	± 1 % of indicated reading	
9	Provision for lifting and braking of roller for easy exit of vehicle	To be provided	

2.20. Sound level meter

[To be filled by the bidder]

Sr. No.	Specifications	Minimum Requirements	Bidders Specifications
1	Recommended as per	IEC 60651/ IEC 61672-1	
2	Measuring range	≥30dB to ≤120dB	
3	Frequency	A & C	
4	Accuracy	± 1.5 dB	
5	Mounting	Tripod stand mounted	
6	Power	Build (rechargeable) battery for power source of charging from outlet of 220V AC & USB	
7	Resolution	0.1 dB	

2.21. OBD scan tool

[To be filled by the bidder]

Sr. No.	Specifications	Bidders Specifications
1	Must be a hand held scan tool which is compatible across all vehicle classes viz. passenger cars, commercial vehicles etc.	
2	Compliant to: OBDII/EOBD/HD-OBD/WWH-OBD Scan-Tool in accordance with SAE J1979, SAE J1939 and ISO 27145	
3	Must support different OBD modes Viz. Mode 01 to Mode 0A	
4	Must support all the standard Parameter Identifications of the vehicle	
5	Diagnostics Communication mediums Supported KWP2000 (K-Line, CAN TP2.0 and ISO-CAN), UDS (ISO-CAN)	
6	The tool must be capable of automatically selecting the protocol	
7	Must have an easy GUI and push buttons to navigate to different menus that are available	
8	The scan tool once connected to the vehicle should be able to capture and upload following list of parameters to a software interface located at a central server. MIL Status Mode 1 to Mode A data. DTC.	

2.22. Test fingers

[To be filled by the bidder]

Sr. No.	Specifications	Bidders Specifications
1	IP XXB & IP XXD test fingers	

2.23. Insulation Tester

[To be filled by the bidder]

Sr. No.	Specifications	Minimum Requirements	Bidders Specifications
1	Rated measuring voltage	upto 1000V DC/AC (45 to 65 Hz)	
2	Measuring range	10k Ω to 100M Ω or better	
3	Accuracy	upto 10M Ω ±2% of reading & above 10M Ω ±5% of reading	
4	Measurement categories	CAT III 600 V	
5	Display	Digital count display	
6	Protection grade	IP40	
7	Compliant to	EN61010	

Sr. No.	Specifications	Minimum Requirements	Bidders Specifications
8	Operating temperature	10°C to 50°C	
9	Humidity range	greater than 90%	
10	Must be working on	replaceable or rechargeable batteries	
	Accessories	USB communication adaptor, Soft case, Line probe with remote switch, Earth probe set, Probe tip (hook type & extended type), Shoulder strap	

3. Inspection Lane HD

3.1. Roller brake tester

[To be filled by the bidder]

Sr. No.	Specifications	Minimum Requirements	Bidders Specifications
1	Maximum load charge per axle	Bidder to specify	
2	Maximum measurable brake load	at least 40 kN	
3	Difference in left & right braking efficiency	Bidder to specify	
4	Roller Diameter	Bidder to specify	
5	Roller Separation	Bidder to specify	
6	Roller Length	Bidder to specify	
7	Roller Surface - Minimum frictional coefficient	0.6 (Supporting documents from Internationally certified agencies or NABL accredited labs in India for confirmation of minimum frictional coefficient of roller surface need to be provided)	
8	Roller Surface - Service life	minimum 25000 hrs (Self-declaration from OEM specifying required useful life of rollers without any damage need to be provided)	
9	Brake load resolution	≤ 100N	
10	Testing speed	minimum 2.5 km/h	
11	Measurement accuracy	within ± 2% of measured value	
12	Provision for either lifting or braking of roller for easy exit of vehicle	To be provided	

3.2. Axle Weight Measurement System

[To be filled by the bidder]

Sr. No.	Specifications	Minimum Requirements	Bidders Specifications
1	Measuring range	0 kg –15000 kg	
2	Resolution	5 kg	
3	Accuracy	± 1% of reading	

3.3. Side slip tester

[To be filled by the bidder]

Sr. No.	Specifications	Minimum Requirements	Bidders Specifications
1	Maximum load per axle	Bidder to specify	
2	Measuring range	± 20 m/km	
3	Measuring resolution	1 m/km	
4	Accuracy	± 1.0 m/km	
5	Track Plate Length	Bidder to specify	
6	Track Plate Width	Bidder to specify	
7	Track Plate Height	Bidder to specify	

3.4. Joint Play tester

[To be filled by the bidder]

Sr. No.	Specifications	Minimum Requirements	Bidders Specifications
1	Maximum load capacity per axle	Bidder to specify	
2	Maximum Force per plate	at least 30 kN	
3	Maximum movement on each side	100 mm (Hydraulic)	
4	Length of the Test Plate	Bidder to specify	
5	Width of the Test Plate	Bidder to specify	

3.5. Electronic Steering gear play detector

[To be filled by the bidder]

Sr. No.	Specifications	Minimum Requirements	Bidders Specifications
1	Capable of measuring angular movement up to	$\pm 30^\circ$	
2	Recording mechanism to measure wheel movement against steering movement	Bidder to comply	
3	Measurement accuracy	$\pm 2\%$ of full-scale deflection	

3.6. Semi-Automatic Head light tester

[To be filled by the bidder]

Sr.No.	Specifications	Minimum Requirements	Bidders Specifications
1	Light Intensity range measure (min)	0-100,000 cd	
2	Illumination Intensity range measure	0-200 lux	
3	Headlight tester must have ability to autofocus and should be capable of measuring headlamp with their Centres above ground level	500 mm to 1200 mm	
4	Vertical and horizontal measuring range	± 50 cm/10 m ($\pm 5\%$)	
5	Maximum deviation of intensity	$\pm 5\%$ of reading	
6	Maximum deviation of Inclination measurement (vertical orientation)	$\pm 0.1\%$	

Sr.No.	Specifications	Minimum Requirements	Bidders Specifications
7	Type of Head light tester	Semi-automatic	
8	Measurement (low beam pattern) and data transfer	without human intervention	
9	Focusing (Vertical movement) & Positioning (Horizontal movement) of head light tester	manually	

3.7. Smoke meter (Opacimeter)

*[To be filled by the bidder]**Copy of Type Approval & COP Certificate needs to be attached.*

3.8. 2.3.8. Exhaust gas analyzer

*[To be filled by the bidder]**Copy of Type Approval & COP Certificate needs to be attached.*

3.9. Speedometer Tester

[To be filled by the bidder]

Sr. No.	Specifications	Minimum Requirements	Bidders Specifications
1	Maximum load capacity per axle	Bidder to specify	
2	Measuring range	25 – 100 km/h	
3	Resolution	1 km/h	
4	Accuracy	± 1 % of indicated reading	
5	Roller Diameter	Bidder to specify	
6	Roller axle separation	Bidder to specify	
7	Minimum Track width	Bidder to specify	
8	Maximum Track width	Bidder to specify	
9	Provision for lifting and braking of roller for easy exit of vehicle	To be provided	

3.10. Sound level meter

[To be filled by the bidder]

Sr.No.	Specifications	Minimum Requirements	Bidders Specifications
1	Recommended as per	IEC 60651/ IEC 61672-1	
2	Measuring range	≤ 30dB to ≥120dB	
3	Frequency	A & C	
4	Accuracy	± 1.5 dB	
5	Mounting	Tripod stand mounted	
6	Power	Build (rechargeable) battery for power source of charging from outlet of 220V AC & USB	
7	Resolution	0.1 dB	

3.11. OBD scan tool

[To be filled by the bidder]

Sr. No.	Specifications	Bidders Specifications
1	Must be a hand held scan tool which is compatible across all vehicle classes viz. passenger cars, commercial vehicles etc.	
2	Compliant to: OBDII/EOBD/HD-OBDD/WWH-OBDD Scan-Tool in accordance with SAE J1979, SAE J1939 and ISO 27145	
3	Must support different OBD modes Viz. Mode 01 to Mode 0A	
4	Must support all the standard Parameter Identifications of the vehicle	
5	Diagnostics Communication mediums Supported KWP2000 (K-Line, CAN TP2.0 and ISO-CAN), UDS (ISO-CAN)	
6	The tool must be capable of automatically selecting the protocol	
7	Must have an easy GUI and push buttons to navigate to different menus that are available	
8	The scan tool once connected to the vehicle should be able to capture and upload following list of parameters to a software interface located at a central server. MIL Status Mode 1 to Mode A data. DTC.	

3.12. Test fingers

[To be filled by the bidder]

Sr. No.	Specifications	Bidders Specifications
1	IP XXB & IP XXD test fingers	

3.13. Insulation Tester

[To be filled by the bidder]

Sr. No.	Specifications	Minimum Requirements	Bidders Specifications
1	Rated measuring voltage	upto 1000V DC/AC (45 to 65 Hz)	
2	Measuring range	10k Ω to 100M Ω or better	
3	Accuracy	upto 10M Ω $\pm$ 2% of reading & above 10M Ω $\pm$ 5% of reading	
4	Measurement categories	CAT III 600 V	
5	Display	Digital count display	
6	Protection grade	IP40	
7	Compliant to	EN61010	
8	Operating temperature	10°C to 50°C	
9	Humidity range	greater than 90%	
10	Must be working on	replaceable or rechargeable batteries	

Sr. No.	Specifications	Minimum Requirements	Bidders Specifications
11	Accessories	USB communication adaptor, Soft case, Line probe with remote switch, Earth probe set, Probe tip (hook type & extended type), Shoulder strap	

4. Software considerations

[To be filled by the bidder]

5. Safety Systems

5.1. Personal safety systems

[To be filled by the bidder]

5.2. Power cut-off protection device

[To be filled by the bidder]

6. Technical Specifications of Utilities

6.1. DG set:

Sr. No.	Description	Minimum Requirements	Bidder specifications
1	DG set		
1.1	DG Set Rating	100 KVA	
1.2	DG Set Model	Bidder to specify	
1.3	Length x width x height in mm of complete DG Set	Bidder to specify	
1.4	Average Load factor of DG set	Minimum 80% of rated capacity	
1.5	Life of DG Set	Minimum 15 years	
2	Environmental Conditions		
2.1	Ambient temperature	Ranges from 5°C to 50°C	
2.2	Relative humidity	Up to 95% condensing	
3	General requirement		
3.1	Mean time between failure (MTBF)	Bidder to specify	
3.2	Mean Time to Repair (MTTR)	Bidder to specify	
3.3	Painting details of DG Sets	Bidder to specify	
4	Diesel Engine		
4.1	Manufacturer Name	Bidder to specify	
4.2	Country of origin	Bidder to specify	
4.3	Applicable standard	Bidder to specify	
4.4	Make of engine	Bidder to specify	
4.5	Model of engine	Bidder to specify	
4.6	Rating of engine in kw/hp @ 1500 RPM	Bidder to specify	
4.7	Direction or rotation	Bidder to specify	
4.8	No. of cylinder	Bidder to specify	
4.9	Cylinder bore & stroke in mm	Bidder to specify	
4.10	Droop in frequency / speed when engine response to 100% load injection	Bidder to specify	
4.11	Displacement in liters	Bidder to specify	
4.12	Mechanical & thermal efficiency in percentage	Bidder to specify	

Sr. No.	Description	Minimum Requirements	Bidder specifications
4.13	Safety protection		
4.13.1	Low lube oil pressure	To be provided	
4.13.2	High water temperature	To be provided	
4.13.3	Over speed	To be provided	
4.14	Physical dimensions		
4.14.1	Length x width x height in mm	Bidder to specify	
4.14.2	Weight in Kg / ton	Bidder to specify	
4.14.3	Type of starter	Battery start	
4.14.4	Battery make / Voltage. Ampere hour	Bidder to specify	
4.14.5	Spaces of starter	Bidder to specify	
4.14.6	Vibration with stand	4.30 G @24-1000 HZ	
4.14.7	Noise level	As per CPCB IV norms	
4.14.8	Smoke level	Bidder to specify	
4.14.9	Characteristic curves of fuel consumption Vs load	To be provided	
4.14.10	Painting details of engine	Bidder to specify	
4.15	Engine Governor	Electronic governor	
4.15.1	Applicable standard	As per latest IS	
4.15.2	Manufacturer name	Bidder to specify	
4.15.3	Droop range in %	Bidder to specify	
4.16	Turbocharger		
4.16.1	Applicable standard	IS or Equivalent	
4.16.2	Manufacturer name	Bidder to specify	
4.17	Radiator		
4.17.1	Applicable standard	IS or Equivalent	
4.17.2	Manufacturer name	Bidder to specify	
4.17.3	Manufacturer model no	Bidder to specify	
4.17.4	Air flow of each fan	Bidder to specify	
4.17.5	No. of fans provided	Bidder to specify	
4.17.6	Fluid flow rate-jacket water side	Bidder to specify in LPM	
4.17.7	Fluid flow rate-after cooler water side	Bidder to specify in LPM	
4.17.8	Ambient capability	Bidder to specify	
4.17.9	Radiator capacity of Jacket water and after cooler both	Bidder to specify	
4.18	Lubricating oil system		
4.18.1	Applicable standard	IS or Equivalent	
4.18.2	Oil pressure	Bidder to specify	
4.18.3	Oil temperature	Bidder to specify	
4.18.4	Grade of oil	Bidder to specify	
4.18.5	Sump capacity	Bidder to specify	
4.18.6	Guaranteed lube oil consumption in grams per BHP-hour	Bidder to specify	
4.18.7	Recommended oil change	Bidder to specify	
4.19	Engine alarms		
4.19.1	Applicable standard	IS or Equivalent	
4.19.2	Low oil pressure setting	Bidder to specify	
4.19.3	Low water level setting as % of total cooling water capacity	Bidder to specify	

Sr. No.	Description	Minimum Requirements	Bidder specifications
4.19.4	Over speed setting	Bidder to specify	
4.19.5	High water temperature setting	Bidder to specify	
4.19.6	High oil pressure setting	Bidder to specify	
4.20	Exhaust System		
4.20.1	Applicable standard	IS or Equivalent	
4.20.2	Silencer manufacturer's name	Bidder to specify	
4.20.3	Type of silencer	As per CPCB IV norms	
4.21	Fuel System		
4.21.1	Pump manufacturer's name	Bidder to specify	
4.21.2	Fuel injector manufacturer's name	Bidder to specify	
4.21.3	Pump pressure Bar	Bidder to specify	
4.21.4	Fuel consumption at Non-Thermal Plasma (NTP) in ltrs. per hour	Bidder to specify	
4.21.4.1	100% loading	Bidder to specify	
4.21.4.2	75% loading	Bidder to specify	
4.21.4.3	50% loading	Bidder to specify	
4.21.5	No of units per liter of high speed diesel (HSD) engine	Bidder to specify	
4.22	Fuel day tank		
4.22.1	Material	Bidder to specify	
4.22.2	Capacity Litre	Bidder to specify	
4.22.3	Fitted with level gauge & accessories	To be provided	
4.23	Emission Standard		
4.23.1	HC (Hydro Carbon)	Bidder to specify	
4.24	DG Control panel	Microprocessor based, Compatible with modbus RS 485 for BMS Connectivity	
4.25	Alternator (160 KVA)		
4.25.1	Manufacture's name	Bidder to specify	
4.25.2	Applicable standards	IS or equivalent	
4.25.3	Country of Origin	Bidder to specify	
4.25.4	Connection	Bidder to specify	
4.25.5	Make	Bidder to specify	
4.25.6	Type of frame	Bidder to specify	
4.25.7	Rated KVA	160 KVA	
4.25.8	Power factor	0.8	
4.25.9	Type of enclosure	IP 23	
4.25.10	Speed in RPM	1500	
4.25.11	Frequency in Hz	50 Hz $\pm$ 3%	
4.25.12	Rated voltage	415 Volts $\pm$ 6%	
4.25.13	Rated current	Bidder to specify	
4.25.14	Number of phases	Three phase four wires	
4.25.15	Over load capacity	Bidder to specify	
4.25.16	Class of insulation rotor and stator	H	
4.25.17	Voltage regulation	$\pm$ 1%	
4.25.18	Direction of rotation	Bidder to specify	
4.25.19	Type and model of excitation unit	Bidder to specify	
4.25.20	Excitation at rated PF, 0.8 (voltage / current)	Bidder to specify	

Sr. No.	Description	Minimum Requirements	Bidder specifications
4.25.21	Type of bearing DE and NDE	Bidder to specify	
4.25.22	Length x Breadth x Height in mm	Bidder to specify	
4.25.23	Weight in Kg/Ton	Bidder to specify	
4.25.24	Painting details of alternator	Bidder to specify	
4.26	Reactance		
4.26.1	On short circuit when running at normal speed and voltage	Bidder to specify in %	
4.26.2	Sub-transient reactance	Bidder to specify in %	
4.26.3	Transient reactance	Bidder to specify in %	
4.26.4	Unsaturated synchronous reactance	Bidder to specify in %	
4.26.5	Short circuit ratio	Bidder to specify	
4.26.6	Stator DC resistance per phase at 75°C	Bidder to specify IN OHMS	
4.26.7	Method of protection against shaft currents	Bidder to specify	
4.26.8	Rotor inertia	Bidder to specify in Kg m	
4.26.9	Weight of rotor	In Kg.	
4.26.10	Rotor winding resistance at 75°C	Ohms	
4.26.11	Generator response for 100% load change at a low Power factor	Bidder to specify in % voltage and % current	
4.26.12	1. Instantaneous values when at :-		
4.26.12.1	i. Minimum excitation	Bidder to specify	
4.26.12.2	ii. Maximum excitation	Bidder to specify	
4.26.13	2. After 10 Hz when initially at :-		
4.26.13.1	i. Minimum excitation	Bidder to specify	
4.26.13.2	ii. Maximum excitation	Bidder to specify	
4.26.14	State whether thermostatically controlled anti-condensation heaters are fitted in the generator	Bidder to specify	
4.26.15	Wattage of the heaters	Bidder to specify in watts	
4.27	Generator Exciter		
4.27.1	Applicable standards	IS or Equivalent	
4.27.2	Type of Excitation	PMG	
4.25.24	Painting details of alternator	Bidder to specify	
4.26	Reactance		
4.26.1	On short circuit when running at normal speed and voltage	Bidder to specify in %	
4.26.2	Sub-transient reactance	Bidder to specify in %	
4.26.3	Transient reactance	Bidder to specify in %	
4.26.4	Unsaturated synchronous reactance	Bidder to specify in %	
4.26.5	Short circuit ratio	Bidder to specify	
4.26.6	Stator DC resistance per phase at 75°C	Bidder to specify IN OHMS	
4.26.7	Method of protection against shaft currents	Bidder to specify	
4.26.8	Rotor inertia	Bidder to specify in Kg m	
4.26.9	Weight of rotor	In Kg.	
4.26.10	Rotor winding resistance at 75°C	Ohms	
4.26.11	Generator response for 100% load change at a low Power factor	Bidder to specify in % voltage and % current	
4.26.12	1. Instantaneous values when at :-		

Sr. No.	Description	Minimum Requirements	Bidder specifications
4.26.12.1	i. Minimum excitation	Bidder to specify	
4.26.12.2	ii. Maximum excitation	Bidder to specify	
4.26.13	2. After 10 Hz when initially at :-		
4.26.13.1	i. Minimum excitation	Bidder to specify	
4.26.13.2	ii. Maximum excitation	Bidder to specify	
4.26.14	State whether thermostatically controlled anti-condensation heaters are fitted in the generator	Bidder to specify	
4.26.15	Wattage of the heaters	Bidder to specify in watts	
4.27	Generator Exciter		
4.27.1	Applicable standards	IS or Equivalent	
4.27.2	Type of Excitation	PMG	
4.27.3	Manufacturer's name	Bidder to specify	
4.27.4	Field winding insulation	Class H	
4.27.5	Field winding resistance at 75°C	Bidder to specify	
4.27.6	Exciter winding insulation class	Class H	
4.27.7	Exciter winding resistance per phase at 75°C	Bidder to specify in ohms	
4.28	Generator Automatic Voltage Regulator		
4.28.1	Applicable standard	IS or equivalent	
4.28.2	Manufacturer's name	Bidder to specify	
4.28.3	Type	Bidder to specify	
4.28.4	Range of manual voltage control	Bidder to specify in volts	
4.29	Circuit Breaker – 4 Pole with LSIG Protection	Bidder to specify	
4.29.1	Applicable standard	IS or equivalent	
4.29.2	Manufacturer's name	Bidder to specify	
4.29.3	Type	Bidder to specify	
4.29.4	Country of origin	Bidder to specify	
4.29.5	Rated current	Bidder to specify	
4.29.6	Rated voltage	Bidder to specify	
4.29.7	Braking capacity	Bidder to specify	
4.29.8	Inherent protections provided		
	a) Short circuit	Bidder to specify	
	b) Over current	Bidder to specify	
	c) Range of adjustment of over current	Bidder to specify	
4.30	Isolation panel		
4.30.1	Manufacturer name	Bidder to specify	
	i. Applicable standards	Bidder to specify	
	ii. Country of origin	Bidder to specify	
	iii. Details of operation	Bidder to specify	
4.30.2	Capacity	Bidder to specify	
4.30.3	Fault level	Bidder to specify	
4.30.4	MS Sheet enclosure thickness and size	Bidder to specify	
4.30.5	Details of Bus bars (s)		
4.30.5.1	Material	Copper	
4.30.5.2	Rating of three phase + neutral bus bar to be used for DG set for	1.2 times of the full load rated current of DG Set	

Sr. No.	Description	Minimum Requirements	Bidder specifications
	termination of 300 sq.mm aluminum cables		
4.30.5.3	Rating of Bus bar connecting the common bus in DG panel	1.2 times of the full load rated current of each DG Set	
4.30.6	Make range of size of A.C. ammeters	Bidder to specify	
4.30.7	Make range of size of A.C. voltmeter	Bidder to specify	
4.30.8	Make range of size of KW Meter	Bidder to specify	
4.30.9	Make range of size of KVAR Meters	Bidder to specify	
4.30.10	Make range of size of frequency meters	Bidder to specify	
4.30.11	Make range of size of KWH Meters	Bidder to specify	
4.30.12	Make range of size of D.C. Ammeters for battery charger	Bidder to specify	
4.30.13	Make range of size of D.C. Voltmeters for battery charger	Bidder to specify	
4.30.14	ELR make and rating	Bidder to specify	
4.30.15	Battery charger rating	Bidder to specify	
4.30.16	Indication, protection and safety provision	Bidder to specify	
4.30.17	Audio alarm hooter make and rating	Bidder to specify	
4.30.18	Make and rating of EFR and ELCB/Over current relay/Reverse Power Relay	Bidder to specify	
4.30.19	Painting	Bidder to specify	
4.31	Battery		
4.31.1	Manufacturer's Name	Bidder to specify	
4.31.2	Type	Bidder to specify	
4.31.3	Electrolyte	Bidder to specify	
4.31.4	Voltage	Bidder to specify	
4.31.5	Capacity at 10 hour rate Ah	Bidder to specify	
4.31.6	Number of cells	Bidder to specify	
4.31.7	Voltage per cell	Bidder to specify	
4.31.8	Normal charging rate	Bidder to specify	
4.31.9	Maximum charging rate	Bidder to specify	
4.31.10	Ampere hour efficiency at 10 Hour rate	Bidder to specify	
4.31.11	Ampere hour efficiency at 1 hour rate	Bidder to specify	
4.31.12	Dimensions of cells	Bidder to specify	
4.31.13	Dimensions of battery complete	Bidder to specify	
4.31.14	Weight of cell complete with electrolyte	Bidder to specify	
4.31.15	Total weight of battery complete	Bidder to specify	
4.31.16	Internal resistance cell when fully charged	Bidder to specify	
4.31.17	Battery voltage at end of the duty cycle	Bidder to specify	
4.32	Battery Charger		
4.32.1	Manufacturer's Name	Bidder to specify	
4.32.2	Type	Bidder to specify	
4.32.3	AC input to charger	Bidder to specify	
4.32.4	DC output of charger	Bidder to specify	

Sr. No.	Description	Minimum Requirements	Bidder specifications
4.32.5	Type of D.C. Voltage control	Bidder to specify	
4.32.6	Range of D.C. Voltage control	Bidder to specify	
4.32.7	Regulation	Bidder to specify	
4.32.8	Overall dimensions	Bidder to specify	
4.32.9	Total weight	Bidder to specify	
4.33	Power cable		
4.33.1	Name of manufacturer	Bidder to specify	
4.33.2	Applicable standard	IS or equivalent	
4.33.3	Number of Cores	Bidder to specify	
4.33.4	Type of cable and voltage for which suitable	Bidder to specify	
4.33.5	Continuous current rating (for ground & air)	Bidder to specify	
4.33.6	Type & normal sheathed thickness	Bidder to specify	
4.33.7	Max. outer diameter	Bidder to specify	
4.33.8	Type & nominal thickness of insulation	Bidder to specify	
4.33.9	Insulation resistance	Bidder to specify	
4.33.10	Conductor material (Al / Cu)	Copper (Cu)	
4.33.11	Maximum DC resistance at 20°C	Bidder to specify	
4.33.12	AC resistance at 90°C	Bidder to specify	
4.33.13	Short circuit duty (duration of short circuit and short circuit current limits)	Bidder to specify	
4.34	Acoustic enclosure design as per latest CPCB IV Norms	dB Levels – Bidder to specify	

6.2. Air Compressor:

Sr. No.	Technical Description	Minimum Requirements	Bidder specifications
AIR COMPRESSOR- Oil Injected Type			
1	Capacity	Min 30 CFM	
2	Operating pressure	10 Bar	
3	Sound level	Max 75 dB @ 1m periphery	
4	Motor efficiency	full load min 93%	
5	Motor protection	IP 55	
6	Electrical connection	415V / 3 phase / 50Hz	
8	Type of air compressor	Rotary Screw type	
9	Sizes of Air compressor L x B x H	Bidder to specify	
10	Weight of Air compressor	Bidder to specify	
11	Design of Enclosure	The enclosure is to be designed to manage the environment of the internal components and the cooling ventilation system, at the same time as significantly to reduce the sound level emitted from the machine into the installation environment	
12	Inlet Air filter filtration	shall be accomplished by a large min. 99% efficient at 3 micron and above	
13	MOC of rotors	AISI-1045 steel or EN 10083-2 C45+N steel	
14	Capacity of coolant filter	5 micron replaceable element	
15	Capacity of oil separator	The carryover after the separator element should be less than 3 ppm	

16	Max Pressure drop across oil separator	0.2 bar	
17	Vibration pad	Complete drive train shall be mounted on vibration mountings	
18	MOC of Air cooler	Aluminum finned tube construction and shall be designed to operate continuously, fully loaded in ambient air up to 45°C)	
19	Validation tests	Compressor shall undergo factory validation tests according to ISO1217:1996, Annex C	
REFRIGERATED AIR DRYER			
1	Capacity	Suitable for above air compressor	
2	Operating pressure	Suitable for above air compressor	
3	Sound level	Max 65 dB @ 1m periphery	
4	Refrigerant	Environmentally friendly Refrigerant (134 A/ 407 A/ 410A)	
5	Maximum ambient Temperature	45°C	
6	Safety feature	Anti-freezing/energy savings mode shuts dryer off mode	
VERTICAL AIR RECEIVER			
1	Capacity	Min 1 m ³ at min 12 Bar pressure	
2	Testing	Test certificate of Receiver tank and safety relief valve	
3	Material of Construction	Shell & Dish End, IS:2062 Gr. B	
4	Corrosion Allowance	1.5 mm	
5	Radiography / Heat Treatment	Nil	
6	Code of Construction	IS:2825	
7	Paint	Manufacturer Standard	
8	Standard Fittings to be Included	Pressure Safety Valve (Spring loaded, Open Bonnet, Pop Type) with test certificate Pressure Gauge with Isolation Valve (4" Dial) Manual Drain Valve with additional Auto drain valve	
FILTER STAGE:			
1	Requirement	Bidder has to provide filter stage to get Class-1-4-1 Air output (Oil, moisture, dust) for user as per ISO 8573-1	

6.3. UPS 6 kVA:

Sr. No.	Description	Minimum Requirements	Bidders Specifications
1	MANUFACTURER'S DETAILS		
1.1	Brand & Country of Manufacture	Bidder to specify	
1.2	Model No.	Bidder to specify	
1.3	Capacity	6 kVA	
1.4	Rating	Bidder to specify as per 6 KVA	
2	INPUT		
2.1	Input Voltage	415 V, 3phase	
2.2	Input Voltage Range	-20%, +20% form nominal at 100% load and -30%, +20% for 50% load without depleting battery	
2.3	Operating Frequency	50 Hz	
2.4	Input frequency range	45 Hz to 65 Hz	
2.5	Input Power Factor	0.99	
2.6	Input current distortion	<5%	
3	RECTIFIER		
3.1	Rectifier Topology	IGBT based rectifier	
3.2	Power Modules	Bidder to specify	
3.3	Power Rating	Bidder to specify	
4	OUTPUT		
4.1	Nominal Output Voltage	230 V, 1 Phase	
4.2	Output Voltage Regulation	+/- 1% (static)	
4.3	Output Power Factor	UNITY (1) i.e. KW-Meeting KW requirement is mandatory.	
4.4	Paralleling Capacity	Up to 6 Units MIN without communication wiring.	
4.5	Over load capacity	15% for 5 secs	
		125% for 1 minute	
		1000% for 20 msec (bypass)	
4.6	Output Voltage Regulation (Dynamic)	+/- 5% for 10% to 90% load change	
4.7	Recovery Time	< 1 ms response time	
5	BATTERIES		
5.1	Battery Back up	30 min on full load	
5.2	Battery AH Capacity	Bidder to specify	
5.3	No. of 12 V batteries	Bidder to specify	
5.4	Type	SMF VRLA	
5.5	Make	Rocket/ Exide/ Quanta	
5.6	Battery Rack	To be provided	
5.7	Battery Rack TOP Covers	To be provided	
5.8	Battery with battery Rack Size	Bidder to specify	
5.9	Battery Life	Bidder to specify	
5.10	Replacement Guaranty	Bidder to specify	
5.11	Make / Model	Bidder to specify	
5.12	Miscellaneous	Recharge time : In the order of 6 hr or less for 90% capacity.	
		The battery charger O/P voltage shall be automatically adjusted in proportion to the ambient temp. of the battery as per the battery suppliers recommendation to avoid over-charging	
		The end of discharge voltage of the batteries must be load dependent in order to prevent deep	

Sr. No.	Description	Minimum Requirements	Bidders Specifications
		discharging of the batteries whilst utilizing max. available capacity.	
		The rectifier /charger output current and voltage shall be limited to battery supplier's recommendation	
		Constant Current charging under floating voltage then constant voltage, support with intelligent battery management system. After recharging batteries to full capacity, the charger will enter the rest mode to increase the battery lifetime. Hence continuous float charging of the battery shall not be allowed.	
6	ELECTRONICS / DIGITAL PROTECTION		
6.1	Mains	Over / Under Voltage, Phase Failure	
6.2	DC Voltage	DC Over / Under Voltage, Inverter Over / Under Voltage	
6.3	Fault conditions	Inverter Overload, Overheat, Overload trip with manual reset, low battery trip with audible warning 3 mins. advance, Battery over charge, Battery over current, reverse polarity fault conditions, battery line fuse	
6.4	Emergency	Emergency Power off, MCB –Built in soft start.	
6.5	EMI & Surge Protection	EMI & Surge Protection, for safety purpose the UPS shall be equipped with a back feed protection contractor in the bypass circuit. This Back feed protection shall be installed standards inside the UPS cabinet.	
7	INDICATION /LCD Display	Front Panel display consisting of graphical LCD display with back light: Mains voltage - frequency –current input	
		Output voltage – Frequency -current	
		Battery and DC bus voltage: Runtime on mains failure	
		Total run time (or Digital meters for above items)	
		Main ON, Inverter ON, Battery ON Charge, mains Over/ Under Voltage, Inverter Overload, Overload, Overheat, Load On Inverter, Bypass On, Manual Bypass On	
7.1	Name Plate with Minimum Data	Name of Manufacturer, Model no., Batch – Serial No., Date of manufacturing, Rating shall be provided on outside under clear visible place.	
8	Audible Alarm with Indication / Display & Reset	Mains failure, On Battery, Low Battery, On Bypass, Overheat, replacement of battery.	
9	Data Storage	Sufficient to store history from minimum one week or 200 events	
10	MECHANICAL DESIGN		
10.1	Enclosure	Free standing, Dust & Vermin proof, Double front with Levelling Feet	
10.2	Ventilation	Forced Air Cooling. Air Inlet from Front & Outlet from Top	
10.3	Side Clearance	No Back and Side Clearance required	
10.4	Cable Entry	Both Top and Bottom side	
10.5	Accessibility	Only from Front Side	

Sr. No.	Description	Minimum Requirements	Bidders Specifications
10.6	Service Area Required	< 900 mm only at Front side	
10.7	Mounting	On Castor wheels with standard levelling feet	
11	GENERAL		
11.1	Overall Efficiency		
11.2	At 100% Load	94% min	
11.3	At 75% Load	92.9% min	
11.4	At 50% Load	92% min	
11.5	At 25% Load	89.5% min	
11.6	Operating Temperature	0°C to 40°C	
11.7	Storage Temperature	- 15°C to +40°C	
11.8	Noise Level	53 dB (A)	
11.9	Charging Technique.	Three stage charging is required. Batteries should go through a rest cycle to enhance life once they are fully charged thus reducing	
		The battery corrosion resulting batter life.	
11.10	Static bypass switch	Required	
12	STANDARDS		
12.1	Safety	EN 62040-1-1 EN 60950-1-1	
12.2	Performance & Technology	EN 62040-3 (VFI-SS-111)	
12.3	EMC Standard	IEC-62040-2, EN- 50091-1	
12.4	Product Certification	CE	
12.5	Surge Capacity	IEC 1000-4-5	
12.6	Harmonics Standard	IEC 61000-3-2/4	
12.7	Performance & Topology	IEC-62040-3, EN- 50091-3	
12.8	BIS Certificate	As per industry	
13	GENERAL REQUIREMENTS		
13.1	Display	Alphanumeric LCD display blue backlight	
13.2	Communication	RS-232/485 Serial Port	
13.3	Display	Alphanumeric LCD display	
13.4	LED	4 LED's for notice alarm	
13.5	Software interface	LCD screen, PC interface with software SNMP as an option with necessary accessories / interfacing connectors / adapters, for monitoring, controlling and shut down of the UPS system, from remote & local compatible with Windows, 2k, NT, Linux platform.	
14	WARRANTEE		
14.1	Dimension of UPS module (W x D x H)	Bidder to specify – Should be most compact because of the space constraint at site.	
14.2	Weight of UPS Module	Bidder to specify	
14.3	Dimensions of Battery Racks	Bidder to specify	
14.4	Weight for Battery racks	Bidder to specify	

6.4. UPS 20 kVA:

Sr. No.	Description	Minimum Requirements	Bidders Specifications
1	MANUFACTURER'S DETAILS		
1.1	Brand & Country of Manufacture	Bidder to specify	
1.2	Model No.	Bidder to specify	
1.3	Capacity	20 kVA	
1.4	Rating	Bidder to specify as per 20 KVA	

Sr. No.	Description	Minimum Requirements	Bidders Specifications
2	INPUT		
2.1	Input Voltage	415 V, 3 Phase	
2.2	Input Voltage Range	-20%, +20% form nominal at 100% load and -30%, +20% for 50% load without depleting battery	
2.3	Operating Frequency	50 Hz	
2.4	Input frequency range	45 Hz to 65 Hz	
2.5	Input Power Factor	0.99	
2.6	Input current distortion	<5%	
3	RECTIFIER		
3.1	Rectifier Topology	IGBT based rectifier	
3.2	Power Modules	Bidder to specify	
3.3	Power Rating	Bidder to specify	
4	OUTPUT		
4.1	Nominal Output Voltage	415 V, 3 Phase	
4.2	Output Voltage Regulation	+/- 1% (static)	
4.3	Output Power Factor	UNITY (1) i.e. KW-Meeting KW requirement is mandatory.	
4.4	Paralleling Capacity	Up to 6 Units MIN without communication wiring.	
4.5	Over load capacity	15% for 5 secs 125% for 1 minute 1000% for 20 msec (bypass)	
4.6	Output Voltage Regulation (Dynamic)	+/- 5% for 10% to 90% load change	
4.7	Recovery Time	< 1 ms response time	
5	BATTERIES		
5.1	Battery Back up	30 min on full load	
5.2	Battery AH Capacity	Bidder to specify	
5.3	No. of 12 V batteries	Bidder to specify	
5.4	Type	SMF VRLA	
5.5	Make	Rocket/ Exide/ Quanta	
5.6	Battery Rack	To be provided	
5.7	Battery Rack TOP Covers	To be provided	
5.8	Battery with battery Rack Size	Bidder to specify	
5.9	Battery Life	Bidder to specify	
5.10	Replacement Guaranty	Bidder to specify	
5.11	Make / Model	Bidder to specify	
5.12	Miscellaneous	Recharge time : In the order of 6 hr or less for 90% capacity.	
		The battery charger O/P voltage shall be automatically adjusted in proportion to the ambient temp. of the battery as per the battery suppliers recommendation to avoid over-charging.	
		The end of discharge voltage of the batteries must be load dependent in order to prevent deep discharging of the batteries whilst utilizing max. available capacity.	
		The rectifier /charger output current and voltage shall be limited to battery supplier's recommendation	
		Constant Current charging under floating voltage then constant voltage, support with intelligent battery management system. After recharging batteries to full capacity, the charger will enter the rest mode to increase the battery lifetime. Hence	

Sr. No.	Description	Minimum Requirements	Bidders Specifications
		continuous float charging of the battery shall not be allowed.	
6	ELECTRONICS / DIGITAL PROTECTION		
6.1	Mains	Over / Under Voltage, Phase Failure	
6.2	DC Voltage	DC Over / Under Voltage, Inverter Over / Under Voltage	
6.3	Fault conditions	Inverter Overload, Overheat, Overload trip with manual reset, low battery trip with audible warning 3 mins. advance,	
		Battery over charge, Battery over current, reverse polarity fault conditions, battery line fuse	
6.4	Emergency	Emergency Power off, MCB –Built in soft start.	
6.5	EMI & Surge Protection	EMI & Surge Protection, for safety purpose the UPS shall be equipped with a back feed protection contractor in the bypass circuit. This Back feed protection shall be installed standards inside the UPS cabinet.	
7	INDICATION /LCD Display	Front Panel display consisting of graphical LCD display with back light: Mains voltage - frequency –current input	
		Output voltage – Frequency -current	
		Battery and DC bus voltage: Runtime on mains failure	
		Total run time (or Digital meters for above items)	
		Main ON, Inverter ON, Battery ON Charge, mains Over/ Under Voltage, Inverter Overload, Overload, Overheat, Load On Inverter, Bypass On, Manual Bypass On	
7.1	Name Plate with Minimum Data	Name of Manufacturer, Model no., Batch – Serial No., Date of manufacturing, Rating shall be provided on outside under clear visible place.	
8	AUDIBLE ALARM WITH INDICATION / DISPLAY & RESET	Mains failure, On Battery, Low Battery, On Bypass, Overheat, replacement of battery.	
9	DATA STORAGE	Sufficient to store history from minimum one week or 200 events	
10	MECHANICAL DESIGN		
10.1	Enclosure	Free standing, Dust & Vermin proof, Double front with Levelling Feet	
10.2	Ventilation	Forced Air Cooling. Air Inlet from Front & Outlet from Top	
10.3	Side Clearance	No Back and Side Clearance required	
10.4	Cable Entry	Both Top and Bottom side	
10.5	Accessibility	Only from Front Side	
10.6	Service Area Required	< 900 mm only at Front side	
10.7	Mounting	On Castor wheels with standard levelling feet	
11	GENERAL		
11.1	Overall Efficiency		
11.2	At 100% Load	94% min	
11.3	At 75% Load	92.9% min	
11.4	At 50% Load	92% min	

Sr. No.	Description	Minimum Requirements	Bidders Specifications
11.5	At 25% Load	89.5% min	
11.6	Operating Temperature	0°C to 40°C	
11.7	Storage Temperature	- 15°C to +40°C	
11.8	Noise Level	53 dB (A)	
11.9	Charging Technique.	Three stage charging is required. Batteries should go through a rest cycle to enhance life once they are fully charged thus reducing the battery corrosion resulting batter life.	
11.10	Static bypass switch	Required	
12	STANDARDS		
12.1	Safety	EN 62040-1-1 EN 60950-1-1	
12.2	Performance & Technology	EN 62040-3 (VFI-SS-111)	
12.3	EMC Standard	IEC-62040-2, EN- 50091-1	
12.4	Product Certification	CE	
12.5	Surge Capacity	IEC 1000-4-5	
12.6	Harmonics Standard	IEC 61000-3-2/4	
12.7	Performance & Topology	IEC-62040-3, EN- 50091-3	
12.8	BIS Certificate	As per industry	
13	GENERAL REQUIREMENTS		
13.1	Display	Alphanumeric LCD display blue backlight	
13.2	Communication	RS-232/485 Serial Port	
13.3	Display	Alphanumeric LCD display	
13.4	LED	4 LED's for notice alarm	
13.5	Software interface	LCD screen, PC interface with software SNMP as an option with necessary accessories / interfacing connectors / adapters, for monitoring, controlling and shut down of the UPS system, from remote & local compatible with Windows, 2k, NT, Linux platform.	
14	WARRANTEE		Minimum 1 year for the complete installation including all parts and system of UPS and Battery
14.1	Dimension of UPS module (W x D x H)	Bidder to specify - Should be most compact because of the space constraint at site.	
14.2	Weight of UPS Module	Bidder to specify	
14.3	Dimensions of Battery Racks	Bidder to specify	
14.4	Weight for Battery racks	Bidder to specify	

6.5. Transformer with Automatic on Load Tap Changer (OLTC) and Remote Tap Change Control (R.T.C.C.) panel:

320 KVA 11kV/0.433 kV Oil filled Outdoor type transformer with OLTC and RTCC Panel confirming to latest applicable IS 1180 part 2

Sr. No.	Description	Minimum Requirement	Bidder Specifications
1	Name of Manufacturer & Type of Transformer	Bidder to specify	
2	Installation	Outdoor	
3	KVA Rating	320	
4	No of phases	3	
5	Voltage ratio	11/0.433 kV	
6	Rated frequency	50 Hz	
7	Rated Voltage	11/0.433 kV	

8	Fault level	up to 65 kA for 1 sec		
9	Rated Insulation level	125 kV as per IS 1180		
10	Insulation Class	Bidder to specify as per IS 1180		
11	Winding			
a)	HV Copper winding KV	11 kV		
b)	LV Copper winding KV	0.433 kV		
12	Type of winding connection (Vector group) Symbol & Ambient conditions (as per IS 1180):	Dyn11, HV Side -Delta & LT Side -Star connection		
13	Type of Cooling	ONAN		
14	Tapping :	On LOAD Tap Changer		
	Range	5% to - 15% in step of 2.5%		
	Tapping provided on	HV Side		
15	% Impedance	6.25% as per IS 1180		
16	Maximum losses @	Energy Efficiency level 3		
a)	50% Load	required as per IS 1180 Part 2		
b)	75% Load			
c)	100% Load			
17	Terminal Arrangement			
a)	HV Side	cable box		
b)	LV Side	cable box		
18	RTCC Panel	Required. Bidder to specify & as per latest applicable IS Standard		
19	Make of OLTC (As per IS 8468)	Bidder to specify		
20	Maximum temperature rise in oil °C	Bidder to specify Value The permissible temperature-rise shall not exceed the limits of 45°C when measured by resistance method for transformer winding and 40°C measured by thermometer for top oil when tested in accordance with IS 2026 (Part 2).		
21	Maximum temperature rise in winding °C			
22	Efficiency at 75°C		Unity p. f.	0.8 lag p. f.
a)	At full load			
b)	At 75% load	Bidder to specify the value for unity p. f. and for 0.8 lagging pf and must confirm to IS 1180-part 2		
c)	At 50% load			
23	Maximum efficiency@ X % load			
24	Regulation at full load and at 75°C			
a)	At unity PF	Bidder to specify the value and must confirm to IS 1180 part 2		
b)	At 0.8 PF lagging			
25	Maximum current density at rated power			
a)	HV winding	Bidder to specify the value and must confirm to IS 1180 part 2		
b)	LV winding	Bidder to specify the value and must confirm to IS 1180 part 2		
26	Winding Type			
a)	HV winding	Bidder to specify		
b)	LV winding	Bidder to specify		
27	Insulation material (as per IS 1271)			
a)	HV winding	Bidder to specify		
b)	LV winding	Bidder to specify		
28	Details of core			
a)	Core lamination material	Bidder to specify		
b)	Thickness of lamination (mm)	Bidder to specify		
c)	Insulation of lamination Type	Bidder to specify		
29	Details of Main Tank			
a)	Material			
b)	Thickness of side minimum (mm)			
c)	Thickness of bottom minimum (mm)	As per IS 1180 part 2		
d)	Thickness of cover minimum (mm)			
e)	Thickness of tube minimum (mm)			

f)	No. of limbs (core type)		
30	Details of conservator		
a)	Volume of conservator (Liters)		
b)	Volume of oil between the highest and the lowest levels (Liters)	As per IS 1180 Part 2	
31	Radiator		
a)	No. of radiator tanks		
b)	Details of Radiator size		
c)	Thickness of the radiator plate (mm)	As per IS 1180 part 2	
d)	Weight of each radiator		
e)	Cooling surface area (mm ²)		
32	Details of oil	As pe IS 335/ IS 12463	
a)	Total oil required	Bidder to specify	
b)	Whether first filling of oil with 10% excess in non-returnable drums furnished	Bidder to specify	
c)	Oil conforms to standard	IS 335	
33	Accessories		
a)		Rating and Diagram Plate as per IS 1180 part 2	
b)		Air Release device	
c)		Explosion vent with double diaphragm with oil sight glass and equalizer pipe	
d)		Silica gel breather – 1 No.	
e)		Detachable type radiators	
		[1 mm CRCA Sheet]	
f)		Earthing Terminals – 2 Nos.	
g)		Dial type oil temperature indicator with alarm and trip contact	
h)		Buchholz relay with alarm and trip contact	
i)		Marshalling box – 1 No.	
j)		Lifting Lugs for whole transformer as well as for core and winding assembly.	
k)		Inspection cover – 1 No.	
l)		conservator with oil filling hole & drain plug	
m)		Plain oil level gauge– 1 No.	
n)		Thermometer pocket – 2 Nos.	
o)		Bottom Drain cum filter valve [Single sided flange] – 1 No.	
p)		First fill of oil	
q)		Dial type winding temperature indicator with alarm and trip contact	
r)		Shut off valve for Buchholz relay [Single sided flange] – 1 No.	
s)		On load tap changer	
t)		Remote Control Cubicle Panel [RTCC]	
u)		Automatic Voltage Regulator [AVR]	
v)		Oil surge relay with trip contact.	
w)		Shut off valve for oil surge relay – [Double sided flange] – 1 No	
x)		One filter valve on the upper side of the tank	
y)		Unidirectional flat rollers	

34	Mounting Arrangement with Foundation details and GA Drawing	To be submitted by bidder along with Bid.	
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6.6. 11 kV Metering Kiosk:

Sr. No.	Description	Minimum Requirements	Bidders Specifications
1	Constructional Features of the Cabinet		
	Metal enclosed compartments	Current transformer (C.T.) / Potential transformer (P.T.) Compartment: 1 No. Cable termination compartment: 2 Nos. Meter compartment: 1 No.	
	C.T. / P.T. Compartment	3 nos. of C.T.s & 3 nos. of P.T.s shall be mounted in this compartment. Resin cast boards shall be provided on the two sides leading to two cable compartments. The inside terminals of the resin cast bushings, the primary terminals of CTs and primary terminals of PTs shall be connected by 25 mm X 6mm size links of electrolytic grade tinned copper. The secondary wiring of CTs & PTs shall be carried out by 1100 V grade multi-stranded single core copper cable. Size of copper cable shall be 4 sq. mm. for CTs & 2.5 sq. mm. for PTs. The CTs & PTs shall be firmly mounted on bottom plate of this compartment. The CT/PT Compartment shall be provided with detachable top cover having 5 to 10 degree slope from the front to rear side with the canopy on front side. The detachable top cover shall be provided with suitable interlock so that the	
		same cannot be opened without opening the door of the meter compartment. vii. As the CT/PTs incorporated in the cubicles are of resin cast type, ventilation for sufficient air circulation will have to be provided.	
	Cable Compartments	shall be provided on both sides	
	Meter Compartment	Meter compartment with front door shall be provided on front side of the CT/PT compartment. The rubber gaskets shall be provided on stationary part of the compartment so that edges of door shall rest on it. The door shall be provided with non-resettable mechanical impulse counter to monitor the number of times the door has been opened. Toughened glass window of size 150 X 100 X 5 mm for easily viewing the energy meter should be provided. The glass should be provided with suitable weather proof seal to prevent ingress of rain water and any screws, bolts and nuts for fixing the glass should not be accessible from outside.	
2	General Features	The metering kiosk shall comprise of rigid welded structural frame enclosed completely by M.S sheets of not less than 2 mm thickness. Structural frame and supporting angles	
		should be of M.S angle of size 50x50x6 mm minimum. All doors and removable covers shall be gasketed all around with neoprene gaskets and the metering cubicle shall meet the requirements of IP – 55 protection as per IS-12063, if the air vents are closed.	

Sr. No.	Description	Minimum Requirements	Bidders Specifications
		The metering kiosk shall be mounted on concrete plinth of feet height so as to bring the meter window at normal eye level. Lifting hooks of suitable size shall be provided at the top for lifting the kiosk. The metering cubicle shall be painted by powder coating after proper cleaning. The colour shall be 'Light Gray'.	
3	Earthing	Nine independent G.I. earthing bolts of at least M 10 size should be provided on sides so that the inside and outside earthing can be done. It should be firmly welded to the sides. An earthing bus of copper strip of size 25 x 3 mm shall be provided and extended throughout the length of the metering kiosk. It shall be bolted /brazed to the framework at two points. PT primarily earthing may be made at 2 locations by 25 x 3 mm copper strips. All non-current carrying metal work of the switchboard shall be efficiently bonded to the earth bus.	
		iv. Hinged doors shall be earthed through flexible earthing braid.	
4	Cable Glands	The sizes of 11kV power cable for incoming and/or outgoing supply shall be 95 sq. mm to 300 sq.mm XLPE CABLES. Connecting leads of adequate size with terminal clamps for connecting cable terminals to bus bars shall be provided. Necessary number of heavy duty PVC cable glands for terminating 11kV power cables shall be included.	
5	Instrument Transformers	The CTs & PTs shall be of cast resin type (Insulation Class 'E') and shall be able to withstand the thermal and mechanical stresses resulting from the maximum short circuit & momentary current ratings specified. These shall be completely encapsulated. The resin used for manufacturing of CT/PT and Bushing Board shall be of reputed make and resin casting shall be carried out under vacuum by hot setting process only. Cold setting epoxy resin of reputed make should be used for casting over complete inside wiring, connecting strips on HV side. CTs /PTs shall have polarity marks indelibly marked on each transformer and at the associated terminal block. CTs/PTs shall be of the single phase type.	
		Core lamination shall be of high grade steel or other equivalent alloy. Name plate showing particulars and connection diagram shall be provided. They shall be made of non-corrosive material, shall be indelibly punched /painted and shall be firmly fixed on the body of instrument transformer. The CTs & PTs shall be suitable for floor mounting in the kiosk.	

9.10. Form H : References**(To be scanned and uploaded)****1. Automotive References**

[In response to requirement appearing in point 1.3 of “Annexure III Pre-Qualification Criteria”, Bidder shall provide the details of all projects handled by it during last ten years, where the Bidder has met specifications and accuracies similar to the requirements appearing in “Annexure IV Equipment Details”, as per the table below.]

S. No.	Description of Equipment	Year of Installation	Country	Role- Supplier	Name and Contact Details of the Client
1					
2.....					
S. No.	Description of Equipment	Year of Installation	Country	Role-Operation	Name and Contact Details of the Client
1					
2.....					

2. Similar References

[In response to requirement appearing in point 1.3 of “Annexure III - Pre-Qualification Criteria” Bidder shall provide detailed description of at least one project similar to the current Scope of Work, meaning full fix inspection lanes, where Bidder had full responsibility on the design, manufacture, supply, installation, operation of the facility. The Bidder is requested to fill and include in this chapter one proforma (see below) per each given reference.]

3. Government Approved References

[In response to requirement appearing in point 1.3 of “Annexure III - Pre-Qualification Criteria” Bidder may provide detailed description of at least two projects where the installed equipment (turn-key inspection station) is used for Government approved tests and have been used for at least five years for official Inspection of Vehicles. The Bidder is requested to fill and include in this chapter one proforma (see below) per each given reference.]

4. Specific References

[The Bidder is requested to fill and include in the current chapter all Specific References requested in “Annexure III Pre-Qualification Criteria”. Please use as many proformas for References (see below) as necessary. In the case one reference given by the Bidder covers more than one required Specific Reference, Bidder can merge the Specific References requirements]

Proforma for References

(To be scanned and uploaded)

Reference number:	<i>[For "Similar References" please name each reference as "Similar Reference #..." with consecutive numbers.</i> <i>For "Specific References" please name each reference as "Specific Reference #..." with number referring to the corresponding table in "Annexure III Pre-Qualification Criteria"</i> <i>For "Sub-contractor Experience", please name each reference as "Sub-contractor Reference #..." with consecutive numbers.]</i>		
Project and Location	Client Point of Contact		
	<i>[Contact Person and Contact Details including address, telephone number, mobile number, fax number, e-mail address, etc.]</i>		
Participation: ☐ Prime ☐ JV/Consortium Partner ☐ Subcontractor			
Description of scope of work			
<i>[(i) Information on the role of the Bidder and its scope of work in the Project.</i> <i>(ii) Brief description of the equipment capabilities and accuracies.]</i>			
Project Duration	Reasons for delay (if any)		
Start Date			Completion Date
Other Information			
<i>[Any other information regarding accomplishments, project complexities, etc. that Bidder desires to provide]</i>			

9.11. Form I : Service Support

(To be scanned and uploaded)

The Bidder is requested to include in each chapter of the current document, the following information in order to demonstrate the compliance with requirements appearing in Annexure-I: Scope of Work.

1. Service Support Organization

[The Bidder shall provide the details of service support establishments in India with the strength of service personnel at each of the service center. The location and capacity (role and workforce) of the Service Support in India shall be clearly specified, and resumes for the key service personnel shall be provided in the current chapter, using "Proforma for Curriculum Vitae". The details of all service personnel in India shall be provided as per table below.]

Name	Location	Role	Years of Experience

[The supplier shall also describe the Structure of the Service Support which will be put at the ATS disposal for smooth Operation and Technical Support, describing how the local Service Support will interface with the employees for operation of the ATS, in terms of work force and spare parts. Further, the Bidder shall provide the details of location and mechanism of service support from parent company if situated outside India. The Bidder shall provide the resumes of key personnel from its world-wide service support organization who will be responsible for providing the service support to State governments.]

Extent of breakdowns which would be solved, the process required to solve them and the associated duration and down times shall be described.

Further, the extent of breakdowns which would require Worldwide Support, the process required to solve them and the associated duration and down times shall also be described.]

2. Warranty Conditions

[The Bidder is requested to include in this chapter his acceptance of the exact same conditions required in "Annexure-I: Scope of Work" about Warranty. The full Conditions and Coverage of the Warranty can also be attached to this document, provided they do not contradict the above conditions. Exclusions from Warranty need to be specified explicitly. In case there is no exclusion from the warranty, the Bidder shall be required to specifically state so. Warranty is however included as a part of the Operation Cost. In case of breakdown of any machinery or non-operation of any equipment, the Bidder is required to replace the same at its own cost as soon as possible so as to reduce the down time.]

3. Comprehensive Annual Maintenance Contract

[The Bidder is requested to include in this chapter his acceptance of the exact same conditions required in "Annexure-I: Scope of Work" about Comprehensive AMC. The complete Annual Maintenance Contract can also be attached to this document, provided they do not contradict the above conditions. The price for Comprehensive AMC shall be provided in the Financial Bid. No information on the price shall be provided under this chapter]

4. Spare Parts List

[The Bidder is required to include in this chapter the full list of Spare Parts which will be required to ensure the needs for the five years of operation of the equipment's. Complete replacement of the Spare parts for operation of the ATS is the responsibility of the Bidder.]

9.12. Form J : Bidder's Organization, Company Profile

(To be scanned and uploaded)

The Bidder is requested to provide the information required in the current document in order to demonstrate its structure that it has enough capacity for successfully achieving this Project, as requested in "Annexure-III: Bidder's Company Requirements". In case of consortium, the bidder is required to furnish details of his partner/partners (maximum three including lead bidder). The document should clearly indicate name of the lead partner of the consortium.

1. Company Information

[Bidder is requested to fill the following information as "General Company Information"]

Bidder Identification	
a) Name of Company	
b) Registered address (in full)	
c) Details of registration (in full)	
d) Principal place of business	
e) Telephone number	
f) Facsimile number	
g) Website	
h) Person to contact in connection with this Bid (Name, Designation, Contact No)	
i) Name and Address of Bankers	
Business Organization	
a) Date incorporated	
b) Where incorporated	
c) Parent/Leader company (if any) and its involvement in the project	
d) Subsidiary of	
e) Major subsidiaries and locations of other offices	
f) Brief description of company's principal activities with emphasis on scope of work (Use separate sheets as required)	
g) Has your company ever been blacklisted or terminated for default by any Indian government entity	<i>[If yes, provide detail in an attachment to this form]</i>

2. Company Description & Capability Statement

[Provide here a brief (a maximum of three pages) description of the organization and an explicit statement of capability of the organization.

In response to requirement 1.3 in document "Annexure III Pre-Qualification Criteria", Bidder is requested to fill the following table indicating the type, number and financial amount of facilities installed in the last 10 financial years. Each S. No. shall correspond to one kind of projects, for example Light vehicle test lanes and heavy vehicle test lanes.]

S. No.	Description of Equipment / Projects	Place of Installation		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
1			No.											
			Amount											

3. Organization Structure

[Please provide in the current chapter, the Organization Chart showing company structure, including positions of directors and managers and location of all other offices in the world.

Please provide in the current chapter, a statement about the total number of employees of the Bidder, their skill sets with specific information on the employees based in India.

4. Financial Information

[Bidder is requested to fill the following for "Financial Company Information"]

Year	2020-21	2021-22	2022-23	2023-24	2024-25
Annual Turnover					
Annual Turnover pertaining to the equipment (in tender) range*					
Annual Turnover in India*					
Total R&D expenses (% of Annual Turnover) *					
Net Profit (% of Annual Turnover)					

* Self certification indicating required information will be accepted if it is not included in balance sheet.

5. Consortium Information

In case of application under 'Consortium' additional documents:

Sr. No.	Description of Document	No. of Pages	Remarks, if any
1	MOU between consortium members		
2	Company Profile with details of address for communication, contact person & his contact details, website etc. of members other than those submitted above		
3	Financial results for last three years, of members other than those submitted above		

9.13. Form K: Description of Approach, Methodology, Work and Training Plan

1. Work and Training Plan

(To be scanned and uploaded)

The Bidder is requested to provide in each chapter of the current document, the following information.

1.1. Work Plan and Implementation Schedule

[In this document the Bidder shall explain the proposed approach to the assignment, methodology for carrying out the activities and obtaining the expected output. The Bidder shall propose the main activities of the assignment, their content and duration, phasing and interrelations, milestones (including interim approvals by Transport Department, Government of Bihar), and delivery dates, taking into account Transport Department, Government of Bihar requirements, by means of a detailed implementation schedule. The implementation schedule should at least include –

Mobilization of Team and Equipment's

Survey and Investigations

The dates for commencement of design & drawings

Dates of submission of design & drawings for approval

Work Plan of Civil Work with activity wise break up for milestones for Inspection Shed, Utility building and allied works.

Dates of Completion of Civil, Electrical and Plumbing works

The dates for shipment

The dates for pre-acceptance testing

The dates for starting installation

The dates for acceptance testing

The dates for training of staff

The dates for commissioning

Commencement of Operation

1.2. Proposed Implementation Layouts

[In this chapter the Bidder shall provide the Implementation layout, based on the layout of the facilities included in the current tender. The Bidder shall incorporate his implementation proposal in the given layout and submit as part of this Form along with his bid.]

1.3. Project Implementation Team

[In this chapter the Bidder should propose the structure and composition of the team which shall work on implementation of this project. The Bidder shall designate a Project leader who shall be overall responsible for execution of the project and shall act as a single point of contact for Transport Department, Government of Bihar. The Project leader shall be a person with adequate experience in installation of equipment, operation of the ATS and Design & construction work. The resume of the Project Leader as well as the Site Leaders, members of the project implementation team and members of the operational team shall be

provided under this chapter along with details of their experience, skill set, training received, etc., as per the Proforma for Curriculum

Vitae (see below). The Bidder shall also provide information on the proposed roles of each of the team members, including the Site Leader and when the Bidder proposes to deploy them during the assignment.]

1.4. Training Plan

[In this chapter the Bidder shall give a detailed explanation on the Training Plan with respect to (i) Pre-acceptance Training, (ii) Induction Training, and (iii) Refresher Training, included in the Offer, specifying what specific skills the representatives of the Bidder in India will develop, duration of each part of the training and program. This program shall be according to the requirements appearing in "Annexure-I: Scope of Work". Nominated officials by Transport Department, Government of Bihar for ATS's shall also be trained by the Bidder as and when required in all aspect of operating the equipment, trouble shooting and total operation of the ATS.]

1.5. Operation Details

[In this chapter the Bidder shall give a detailed explanation on the operation with respect to the details of the persons involved for managing the Automated Testing Stations (ATS's) and testing the vehicles, reporting, data integration, monitoring, and fees collection, etc. The time required for each test and how the entire operation shall be managed]

1.6. Annual Maintenance Plan

[In this chapter, the Bidder shall provide the complete Annual Maintenance Plan to be applied during AMC duration. The bidder shall specify each activity to be carried out and shall mention the time required for rectifying any defect or repair.]

2. PROFORMA FOR CURRICULUM VITAE

(To be scanned and uploaded)

Name of Staff *[Insert full name]*: ____

Date of Birth: ____ Nationality: ____

Education *[Indicate college/university and other specialized education of staff member, giving names of institutions, degrees obtained, and dates of obtainment]*: .

Training *[Indicate significant training obtained]*: ____

Countries of Work Experience: *[List countries where staff has worked in the last ten years]*: ____

Languages *[For each language indicate proficiency: good, fair, or poor in speaking, reading, and writing]*: ____

Details of Tasks Assigned for this Assignment *[List all tasks to be performed under this assignment]*

Work Undertaken that Best Illustrates Capability to Handle the Tasks Assigned

[Among the assignments in which the staff has been involved, indicate the assignments that best illustrate staff capability to handle the tasks listed under point 8.]

Employment Record *[Starting with present position, list in reverse order every employment held by staff member since graduation, giving for each employment: dates of employment, name of employing organization, positions held.]*:

9.14. Form L : Financial Proposal

(To be scanned and uploaded)

(Excel document included separately)

CAPEX**SECTION – A:** Quantity of items to be supplied.**SECTION – B:** Major Elements of the Package (With Ex-Factory prices)

Here the Bidder shall quote their rate for the Major Elements of the Package & documentation in INR only.

In case of imported scope of supply, Bidder shall quote their lump sum price for the Major Elements of the Package in INR.

SECTION – C: Delivery Charges (Custom duty, Packing and Forwarding, Freight, insurance, Transportation upto sites, etc.)

Here the Bidder shall quote their lump sum price in INR for the charges mentioned above for the Major Elements, complete with all necessary documents etc., considering all the deliverables and the terms & conditions of this tender up to the sites.

SECTION – D: Goods & Service Tax (GST to be applied as on the date of quoting the prices & no changes would be allowed subsequently.)**SECTION – E:** Net rate for each item including GST.**SECTION – F:** Total price (A × E) in INR.

The Bidder shall not change any content of the items as given below.				SECTION B	SECTION C	SECTION D	SECTION E	SECTION F
Sl. No.	Ref.	Description of item	Qty (SEC A)	Major Elements of the Package	Delivery Charges	GST	Net Rate per Unit	Total Cost
				(INR)	(INR)	(INR)	(INR)	(INR)
Common Equipment								
1	Annex-I	Bogie Roller Set	4					
2	Annex-I	Free wheel Trolley	4					
3	Annex-I	Toeing trolley or rail trolley	8					
4	Annex-I	Calibration Equipment set	8					
5	Annex-1	Automatic Tyre pressure filler and indicator	8					
6	Annex-1	Lane Software (for 4 ATS's)	12					
7	Annex-1	Number Plate Reader Camera (Digital Camera with online connectivity to the PC)	12					
8	Annex-1	Global Positioning System enabled Camera	12					
9	Annex-1	Desktops	52					
10	Annex-1	Speed dome camera	12					
11	Annex-1	CCTV	64					
12	Annex-1	Report / Certificate Printer	12					
13	Annex-1	Sticker Printer	8					
14	Annex-1	Token printer	8					
15	Annex-1	Server	8					
16	Annex-1	Audiopaging	4					
17	Annex-1	Smart TV with CCTV viewer	4					
18	Annex-1	LED displays	36					
19	Annex-1	LAN Network (for 4 ATS's). Necessary LAN network hardware with cables shall be provided	4					
20	Annex-1	IR Illuminator	12					
21	Annex-1	Installation Cost (Equipment) etc.	1					
22	Annex-1	Integration with Vahan, Sarathi, NIC, SMS Gateway etc.	1					
23	Annex-1	Software for (NPR & ATS)	1					
24	Annex-1	PTZ Camera	12					
25	Annex-1	8 Port L2 (Industrial PoE) Switch	16					

26	Annex-1	L3 Switch 24 Port (Industrial PoE)	4					
27	Annex-1	64 Channel NVR	4					
Sub Total (in Figures)								
Light Duty Lanes								
1	Annex-1	Roller brake tester	4					
2	Annex-1	Suspension tester	4					
3	Annex-1	Side slip tester	4					
4	Annex-1	Joint Play tester	4					
5	Annex-1	Electronic Steering gear play detector	4					
6	Annex-1	Semi-Automatic Head light tester	4					
7	Annex-1	Smoke Meter (Opacimeter)	4					
8	Annex-1	Exhaust gas analyzer	4					
9	Annex-1	Speedometer Tester	4					
10	Annex-1	Sound level Meter	4					
11	Annex-1	OBD scan tool	4					
12	Annex-1	Test fringes	4					
13	Annex-1	Insulation Tester	4					
Sub Total (in Figures)								
Heavy Duty Lanes								
1	Annex-1	Roller brake tester	4					
2	Annex-1	Joint Play tester	4					
3	Annex-1	Electronic Steering gear play detector	4					
4	Annex-1	Side slip tester	4					
5	Annex-1	Semi-Automatic Head light tester	4					
6	Annex-1	Smoke Meter (Opacimeter)	4					
7	Annex-1	Exhaust gas analyzer	4					
8	Annex-1	Speedometer Tester	4					
9	Annex-1	Sound Level Meter	4					
10	Annex-1	OBD scan tool	4					
11	Annex-1	Test fringes	4					
12	Annex-1	Insulation Tester	4					
Sub Total (in Figures)								
Two-Wheeler Lanes								
1	Annex-1	Roller brake tester	4					
2	Annex-1	Axle weight measurement device	4					
3	Annex-1	Semi- Automatic Head light tester	4					
4	Annex-1	Exhaust gas analyzer	4					
5	Annex-1	OBD scan tool	4					
6	Annex-1	Test fingers	4					
7	Annex-1	Insulation tester	4					
Sub Total (in Figures)								
Utilities								
1	Annex-1	DG set – 100 KVA	4					
2	Annex-1	Air Compressor – 10 bar	4					
3	Annex-1	Air Compressor (for Tyre filler) – 3 HP motor	4					
4	Annex-1	UPS – 20 KVA	4					
5	Annex-1	UPS – 6 KVA	4					
6	Annex-1	Internet – 1 connection	4					
7	Annex-1	IP Phone, EPBX 1×10 connections	4					
8	Annex-1	Air Conditioners – 1.5T	8					

9	Annex-1	Transformer – 320 KVA	4					
10	Annex-1	Metering Kiosk – Suitable to transformer	4					
11	Annex-1	Furniture – For office use & customer waiting area as per requirement of Centre	4					
12	Annex-1	Water cooler with RO – 20 Ltr.	8					
13	Annex-1	9u Rack or better	8					
14	Annex-1	42u Rack or better	4					
Sub Total (in Figures)								

Exhaust Gas Handling System & Fresh Air Ducting for Underbody Inspection Pits and Consumables

1	Annex-1	Exhaust gas handling system & fresh air ducting for underbody inspection pits in Light Duty lanes	4					
2	Annex-1	Exhaust gas handling system & fresh air ducting for underbody inspection pits in Heavy Duty lanes	4					
Sub Total (in Figures)								
Total of Section F (in INR) (in Figure)								
Total of Section F (in INR) (in Words)								

SECTION – G: Prices for Construction of 4 nos. Automated Testing Stations (ATS's)

(comprising of Test Sheds, admin buildings & associated structures) in Bihar State including **Civil, Mechanical, Plumbing, Electrical, Fire extinguishers Works and Site development** including **Roads, Parking, Security Room & Landscaping, Plumbing, Equipment Foundations** including allied services like **test shed trench flooring, epoxy coating for the flooring, conduiting for cables including 3 phase & Single phase cables, Compressor piping, Drainage, Water Supply, Sewage, Internal and External Electrification and Furniture Planning & Procurement** including the **statutory and local bodies approvals / clearances**.

Here the Bidder shall quote their **lump sum price in INR (only) & applicable GST** for Construction of Automated Testing Stations (ATS's).

The applicable **Tax Deduct at Source (TDS)** will be deducted for work order.

The Bidder shall not change any content of the items as given below.				UNDER SECTION – G Lump sum price in INR (in Figures)		
Sl. No.	Ref.	Description of item	Basic Cost (INR)	GST (INR)	Total (INR)	
1	Annex-1	Construction cost of Automated Testing Station (ATS) – Aurangabad				
2	Annex-1	Construction cost of Automated Testing Station (ATS) – Jehanabad				
3	Annex-1	Construction cost of Automated Testing Station (ATS) – Nawada				
4	Annex-1	Construction cost of Automated Testing Station (ATS) – Saharsa				
Total of Section G (in INR) (in Figure)						
Total of Section G (in INR) (in Words)						

SECTION – H: Prices for Installation & Commissioning of all elements in Automated Testing Stations (ATS's)

Here the Bidder shall quote their lump sum price in INR (only) for Installation & Commissioning of all elements covered under SECTION B.

The applicable Tax Deduct at Source (TDS) will be deducted for work order.

The Bidder shall not change any content of the items as given below.				UNDER SECTION – H Lump sum price in INR (in Figures)		
Sl. No.	Ref.	Description of item	Basic Cost (INR)	GST (INR)	Total (INR)	
1	Annex-1	Installation & Commissioning of all elements at Automated Testing Station (ATS) – Aurangabad				
2	Annex-1	Installation & Commissioning of all elements at				

		Automated Testing Station (ATS) – Jehanabad			
3	Annex-1	Installation & Commissioning of all elements at Automated Testing Station (ATS) – Nawada			
4	Annex-1	Installation & Commissioning of all elements at Automated Testing Station (ATS) – Saharsa			
Total of Section H (in INR) (in Figure)					
Total of Section H (in INR) (in Words)					

OPEX**SECTION – I: Prices for Trainings and Operation**

Here the Bidder shall quote their lump sum price in INR (only) for the Trainings and Operation for the equipment's covered under **SECTION – B** including manpower, housekeeping and security, fixed & consumption cost for water, electricity, telephone & internet etc. and consumables for One year operation period.

The Bidder shall not change any content of the items as given below			UNDER SECTION – I Lump sum price in INR (In Figures)				
			Two-Wheeler Lanes	Light Duty Lanes	Heavy Duty Lanes	GST	Total
Sl. No.	Ref.	Description of Item	(INR)	(INR)	(INR)	(INR)	(INR)
1	Annex-1	Total Charges for Training as specified in Scope of Work (Annexure-I) including Operation and Training at sites (for 4 ATS's)					
2	Annex-1	Total Charges for One year operation of Automated Testing Station (ATS) – Aurangabad on single shift basis					
3	Annex-1	Total Charges for One year operation of Automated Testing Station (ATS) – Jehanabad on single shift basis					
4	Annex-1	Total Charges for One year operation of Automated Testing Station (ATS) – Nawada on single shift basis					
5	Annex-1	Total Charges for One year operation of Automated Testing Station (ATS) – Saharsa on single shift basis					
6	Annex-1	Total Cost of consumables for 1 year operation period (for 4 ATS's)					
Total of Section I - (in INR) (in Figure)							
Total of Section I - (in INR) (in Words)							

SECTION – J: Prices for Comprehensive Annual Maintenance Contract (AMC)

Here the Bidder shall quote their lump sum price in INR (only) for the Comprehensive Annual Maintenance Contract (AMC) of Test Lane equipment & Utilities installed at Automated Testing Stations (ATS's).

The Bidder shall not change any content of the items as given below			UNDER SECTION – J Lump sum price in INR (In Figures)				
			Two-Wheeler Lanes	Light Duty Lanes	Heavy Duty Lanes	GST	Total
Sl. No.	(INR)	Description of Item	(INR)	(INR)	(INR)	(INR)	(INR)
1	Annex-1	Total Cost of Comprehensive AMC for Test Lane equipment & Utilities installed at Automated Testing Station (ATS) – Aurangabad for 3 years after initial two years of warranty					
2	Annex-1	Total Cost of Comprehensive AMC for Test Lane equipment & Utilities installed at Automated Testing Station (ATS) – Jehanabad for 3 years after initial two years of warranty					
3	Annex-1	Total Cost of Comprehensive AMC for Test Lane equipment & Utilities installed at Automated Testing Station (ATS) – Nawada for 3 years after initial two years of warranty					
4	Annex-1	Total Cost of Comprehensive AMC for Test Lane equipment & Utilities installed at Automated Testing Station (ATS) – Saharsa for 3 years after initial two years of warranty					
Total of Section J - (in INR) (in Figure)							
Total of Section J - (in INR) (in Words)							

SECTION – K: Total price for the Package

Here the Bidder shall quote their Total lump sum price in INR (only) for the entire package, which shall be the total of prices at SECTION F, G, H, I & J.

This amount shall be considered as the contract sum for this package, considering all the deliverables and terms & conditions of this tender.

Arithmetical errors, if any, committed by the Bidder in this Financial Proposal (Form I) shall be governed as per Annexure-VI: Evaluation Parameters.

The Bidder shall not change any content of the items as given below.			UNDER SECTION – K
Sl. No.	Description of Item	Currency	In INR
1	TOTAL PRICE FOR THE PACKAGE [SECTION F + G + H + I + J]	INR (in Figures)	
		INR (in Words)	

9.15. Form M : Contact Details

(To be scanned and uploaded)

[PLEASE EDIT THIS PAGE AND SUBMIT]**Tender No.**

Name of Tender: Setting Up of Automated Testing Stations (ATS's) at 4 Identified Places In Bihar State Including Maintenance of ATS' for 1 Year

General Details

1. **Name of the Parent Company** _____
2. **Communication Address** _____
3. **Phone No.** _____
4. **Fax No.** _____
5. **E-Mail Id.** _____

Particular Details

6. **Name of the Contact Person** _____
7. **Designation** _____
8. **Phone No. (Direct)** _____
9. **Mobile No.** _____
10. **E-Mail Id** _____
11. **Name of the Alternate Contact Person** _____
12. **E-Mail Id** _____
13. **Address And Contact Details: of the Indian Agent If Any** _____

Signature of the Authorized Signatory

NOTE: You are requested to check the above given e-mail IDs regularly for the incoming mails from Transport Department, Government of Bihar, stcbihar@bihar.gov.in

9.16. Form N : Compliance Sheet – cum – Index Page

Sl. No.	Document Type	Document Name	Lead Bidder / Consortium	File Name	Page No.
1	Tender Fee	Tender Fee payment receipt	Lead Bidder		
2		Earnest Money Deposit fees	Lead Bidder		
3	Technical Forms	Form A: Letter for Submission of Technical Proposal	Lead Bidder		
		Form B: Letter of Undertaking	Both		
4		Undertaking - Technology Transfer Agreement	OEM		
		Undertaking - Change Control (Local Content / Supplier Class / TTA Validity)	OEM		
5		Form C: Earnest Money Deposit as Bank Guarantee Format	Lead Bidder		
6		Form D (A): Format for Power of Attorney to appoint and authorized Attorney	Both		
7		Form D (B): Format for Power of Attorney to authorized Lead Member of Consortium	Lead Bidder		
8		Form E: Performance Bank Guarantee and form of Demand Draft	Lead Bidder		
9		Form F: Deviations Suggested	Lead Bidder		
10		Form G: Detailed Technical Specifications	Lead Bidder		
11		Form H: References	Both		
12		Form I: Service Support	Lead Bidder		
13		Form J: Bidder's Organization, Company Profile	Both		
14		Form K: Description of Approach, Methodology, Work and Training Plan	Lead Bidder		
15		Form L: Financial Proposal	Lead Bidder		
16		Form M: Contact Details	Both		
17		Undertaking as per Chapter XI of CMVR "They are not a vehicle manufacturer or service station or automobile dealer or any person related to repair of vehicle or manufacturing or sale of vehicle or automobile spares or scrapping of vehicles."	Both		
18	Legal Entity Documents	Certificate of Incorporation / Registered LLP Deed	Both		
19		MOA &/or AOA	Both		
20		GST Registration Certificate	Both		
21		PAN Card	Both		
22		Income Tax Returns (last 3 years) along with PAN copy	Both		
23		Copy of registration certificate with GST authorities	Both		
24		Board Resolution & Authorized Signatory Proof	Both		
25		Established for last 03 year in India: Documentary proof such as purchase orders or certified true copy of balance sheet and PL statements for last 3 years for operation in India	Lead Bidder		
26		Blacklisting / Non-debarment Undertaking	Both		
27	Financial Capacity Document	Audited Balance Sheet & P&L (last 3 FYs)	Both		
28		CA / Statutory Auditor Certificate – Turnover	Both		

Sl. No.	Document Type	Document Name	Lead Bidder / Consortium	File Name	Page No.
29		CA / Statutory Auditor Certificate – Net Worth	Both		
30	Work Experience	Work Completion Certificates (Notary certified)	Either one		
31		Proof of manufacture & supply of ≥20 inspection lanes	Either one		
32		Proof of ≥20 lane-years operation	Either one		
33		List of Similar Government Projects	Either one		
34		Declaration about country of origin for the Quoted Equipment	Both		
35		STQC Undertaking	Either one		
36		Undertaking for compliance with Public Procurement (Local Content %)	Both		

Signature of Authorized Signatory and Seal of the bidder

Name: _____

Designation: _____

Date: _____

_____ End of Document _____