Indian Highway Management Company Limited (IHMCL)

Limited RFP for Selection of System Integrator for implementation of ETC System at Toll Plaza on National Highways

Tender No. IHMCL/LTE-RFP/HYBRID ETC/2021/05

Date - 31 August 2021

Indian Highways Management Company Limited (IHMCL)

Regd Office: G-5&6, 1st Floor, NHAI HQ, Sector-10, Dwarka, New Delhi-110075

(CIN- U74140DL2012PLC246662)

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Contents

DISCLAIMER

The information contained in this Request for Proposal document (the "RFP") or subsequently provided to prospective Bidder(s), whether verbally or in documentary or any other form by or on behalf of IHMCL or any of its employees or advisors, is provided to Bidder(s) on the terms and conditions set out in this RFP and such other terms and conditions subject to which such information is provided.

This RFP does not constitute an Agreement between IHMCL or prospective Bidders or any other Party and is neither an offer nor invitationby IHMCL to the prospective Bidders or any other person. The purpose of this RFP is to provide interested parties with information that may be useful to them in preparation of Technical and Financial qualification and making their financial offers (the "Bids") pursuant to this RFP. This RFP includes statements, which reflect various assumptions and assessments arrived at by IHMCL in relation to the project

The assumptions, assessments, statements and information contained in the RFP, may not be complete, accurate, adequate or correct. Each Bidder should, therefore, conduct its own investigations and analysis and should check the accuracy, adequacy, correctness, reliability and completeness of the assumptions, assessments, statements and information contained in this RFP and obtain independent advice from appropriate sources.

Information provided in this RFP to the Bidder(s) is on a wide range of matters, some of which may depend upon interpretation of law. The information given is not intended to be an exhaustive account of statutory requirements and should not be regarded as a complete or authoritative statement of law. IHMCL accepts no responsibility for the accuracy or otherwise for any interpretation or opinion on law expressed herein.

IHMCL, its employees and advisors make no representation or warranty and shall have no liability to any person, including any Bidder under any law whether written or otherwise , statute, rules or regulations or tort, principles of restitution or unjust enrichmentor otherwise for any loss, damages, cost or expense which may arise from or be incurred or suffered on account of anything contained in this RFP or otherwise, including the accuracy, adequacy, correctness, completeness or reliability of the RFP and any assessment, assumption, statement or information contained therein or deemed to form part of this RFP or arising in any way for participation in this Bid.

IHMCL also accepts no liability of any nature whether resulting from negligence or otherwise howsoever caused arising from reliance of any Bidder upon the statements contained in this RFP.

IHMCL may in its absolute discretion, but without being under any obligation to do so, update, amend or supplement the information, assessment or assumptions contained in this RFP.

The issue of this RFP does not imply that IHMCL is bound to select a Bidder or to award the project to the Successful Bidder.

PART-I: NOTICE INVITING TENDER

1.1 Bids are invited in continuation to RFQ with Tender no. IHMCL/HETC/2020/01 released on 08-Jan-2020 by Indian Highways Management Company Limited (IHMCL) for eligible Bidders who have been **empaneled by IHMCL via Tender no. IHMCL/HETC/2020/01,dated** 08-Jan-2020 .The bid details are as follows: -

Name of the Work	Agreement period	Closing date and time for Online bid Submssion
Selection of System Integrator(s) for implementation of ETC System at 02 Toll Plazas(**Annexure-B**) on National Highways. Plaza Details as follows: 	Name	**Plaza 1 -** Near Sarai Sundarpur Village at Design Km 9.840 **Plaza 2 -** Near Hitouta Village at Design Km 69.700
PIU	**Bareilly**
RO	**Lucknow – West**		3 Years from date of signing of Contract Agreement, extendable by additional 1 year at the sole discretion of IHMCL.	See Key Dates

1.2 All Terms and Condtions or any other information unless specifically mentioned in this Limited RFP ref: - IHMCL/LTE-RFP/HYBRID ETC/2021/05 published on 31-08-2021 shall be considered as in the previous RFQ Ref IHMCL/HETC/2020/01 published dated 08-01-2020.

1.3 The complete Bidding documents can be viewed / downloaded from e-tender portal i.e. https://etenders.gov.in. The Bids shall be liable for summarily rejection unless accompanied by the requisite documents as specified in this RFP. No Bids submitted after the closing date/time shall be considered.

1.4 All clarifications/corrigendum, if any, shall be published only on the e-procurement portal https://etenders.gov.in and IHMCL website www.ihmcl.co.in

1.5 IHMCL reserves the right to accept or reject any or all bids received before signing of Contract Agreement without thereby incurring any financial or other liability to the affected Bidders.

1.6 Address for communication:

Indian Highways Management Co. Ltd. (IHMCL)
    G-5&6, 1st Floor, NHAI HQ,
    Sector-10, Dwarka
    New Delhi 110 075
    Phone: +91-11- 28042710;
    Email: tenders@ihmcl.com; Website: www.ihmcl.co.in

PART II: DEFINITIONS

In this document, the following terms shall have respective meanings as indicated:

"Applicable Law" means the laws, rules or regulations and any other instruments, having the force of law in Republic of India, as in force from time to time.

"Authorized Representative" means any person/agency authorized by IHMCL.

"Bidder" means, a company which participates in the Bid process and submits its proposal pursuant to this RFP.

"Commencement date" means the date upon which the Service Provider receives the notice to commence the work issued by IHMCL.

"Contract" shall mean & include RFQ, RFP, Notice for Inviting Tender (NIT), the tender documents, Letter of award and Letter of acceptance thereof and the formal agreement, to be executed between IHMCL and the Service Provider together with the complete documents referred to therein including the conditions with appendices and any special conditions, the specifications, designs, drawings, bill of quantities with rates and amounts. All these documents taken together shall be deemed to form one Contract and shall be complementary to each other

" IHMCL" means Indian Highways Management Company Ltd.

"Law" or "Legislation" - shall mean any Act, notification, bye law, rules and regulations, directive, ordinance, order or instruction having the force of law enacted or issued by the Government of India or State Government or regulatory authority.

"Letter of Award (LOA)" means the issue of a signed letter by IHMCL to Sucsessful Bidder conveying its intention to accept the offer of Successful Bidder and awarding the work mentioning the total Contract Value.

"Local Currency" means the Indian Rupees

"MoRTH" means Ministry of Road Transport and Highways

"NHAI" means National Highways Authority of India ..

"Party" shall mean IHMCL or Bidder individually and "Parties" shall mean IHMCL and Bidder collectively.

"Personnel" means persons hired by the Service Provider as employees and assigned to the performance of the Services or any part thereof.

"RFP" shall mean this Request for Proposal dated 31-08-2021, including the written clarifications & Corrigendum/Addendum issued by IHMCL in respect of the RFP from time to time.

"Services" means requirements defined in this RFP including all additional services associated thereto to be delivered by the Successful Bidder.

"**Successful Bidder"** means the Bidder, who, after the complete evaluation process, has been issued the Letter of Award by IHMCL

"**Service Provider"** means the Successful Bidder who has executed the contract with IHMCL and has complied with other requirements as specified in this RFP to the satisfaction of IHMCL

Any other term(s), not defined herein above but defined elsewhere in this RFP shall have the meaning(s) ascribed to such term(s) therein and shall be deemed to have been included in this Section.

PART-III : SCHEDULE OF THE TENDER (KEY DATES)

Sl. No.	Event Description	Date
3.1	Invitation of RFP	31-08-2021
3.2	Bid Due Date (Online Submission)	06-09-2021 (Upto 12:00 Hrs IST)
3.3	Opening of documents (like Bid form, PoA, Undertaking & Bid decalaration form) and financial Bids	07-09-2021 (Upto 15:00 Hrs IST)
3.4	Letter of Award (LoA)	Within working 05 days of Financial Opening
3.5	Submission of original documents like PoA and Undertaking	With in 03 working days of LoA issuance
3.6	Submission of Performance Security	Within 07 working days of LoA issuance
3.7	Validity of Bid	180 days from Bid Due Date
3.8	Signing of Contract Agreement	Within 10 calendar days of LoA Issuance
3.9	Completion of Supply, Installation, Commissioning and Go Live at site	Within 45 Calender days from Issuance of LoA or intimation of site readiness given by IHMCL/concerned PIU whichever is later

PART-IV : INSTRUCTIONS TO BIDDERS

4.1 Eligibility to Bid

Only the bidders who have been empanelled via Tender no. IHMCL/HETC/2020/01 released on 08-Jan-2020 **are eligible to participate in the Bid.** Bidders are required to submit Letter of Empanelment as proof with the application (Letter issued from IHMCL of empanelment, dated 18 February, 2020) . Empanelled Bidders are as mentioned below: -

S.No.	Company Name
1	M/s PATH India Ltd.
2	M/s Vara Infrovate Pvt Ltd and M/s Essae Digitronics Pvt Ltd
3	M/s Vaaan Infra Pvt. Ltd.
4	M/s D.P. Jain & Co. Infrastructure Pvt. Ltd
5	M/s BISOTECH India Pvt. Ltd. & M/s Radiant X-Ways Logistics Pvt Ltd
6	M/s Rajdeep Info Techno Pvt. Ltd. & M/s Rajdeep Buildcon Pvt. Ltd.
7	M/s Metro Infrasys Pvt Ltd
8	M/s Arya Omnitalk wireless solution Pvt. Ltd.
9	M/s Comvision India Pvt Ltd & M/s CBM Industrie Pvt Ltd
10	M/s Bhari Infra & M/s V.R Techniche Consultants Pvt Ltd

4.2 Content Of RFP

a) The RFP should be read in conjunction with any addenda or clarifications issued subsequent to publication of RFP.

b) Bidders are advised to study the RFP carefully. Submission of the Bid will be deemed to have been done after careful study and examination of all instructions, eligibility norms, terms and requirement specifications in the RFP with full understanding of its implications. Bids not complying with all the stipulations and requirements as set forth in this RFP are liable to be rejected at the sole discretion of IHMCL. Failure to furnish all information required in the RFP or submission of a bid not substantially responsive to the RFP in all respects will be at the Bidder's risk and may result in the rejection of the bid.

4.3   Cost Of Bidding:

The Bidder shall bear all costs associated with the preparation and submission of the Bid and IHMCL will in no case, be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

4.4   Amendment Of RFP

At any time prior to the closure of time for submission of bids, IHMCL , for any reason, whether at its own initiative or in response to the clarifications requested by prospective Bidders may modify the RFP by issuing amendment(s) or Corrigendum.

Any Corrigendum /Addendum issued as aforesaid shall be part of the RFP and shall be displayed /communicated on e-tender portal. No separate information will be passed to any Bidder in this regard.

4.5   Language Of Bid

The Bid prepared by the Bidder, as well as all correspondence and documents relating to the Bid exchanged by the Bidder and IHMCL shall be written in English language only.

4.6   Bid Validity

a) Bids shall remain valid for a period of 180 days from the last date of Bid due date. Any Bid valid for a shorter period shall be rejected as non-responsive. IHMCL has sole discretion to extend the period beyond 180 days.

b) In exceptional circumstances, IHMCL may solicit Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing; however, no modification to such bid shall be permitted.

4.7   Bid Security

The Bidder, as part of bid, shall submit Bid Security Declaration Form as per format provided in Clause 7.5.

4.8   Alternative Proposals By Bidders

Bidder shall submit only one bid/offer for this RFP that fully complies with the requirement of the RFP including conditions of Contract. Conditional offer or alternate offer will not be considered further in the process of tender evaluation.

4.9   Deadline For Submission Of Bid

a) Complete Bid documents as specified in the RFP must be received as specified on or before the date and time specifed under "Key Dates". In the event of the specified date for the submission of Bids being declared a Non-working day for IHMCL, the Bids will be received up to the specified time on the next working day.

b) IHMCL may, at its discretion, extend the deadline for submission of Bids by issuing an amendment in which case all rights and obligations of IHMCL and the Bidders previously subject to the original deadline will thereafter be subject to the deadline extended.

c) Offer by fax / e-mail will not be accepted and shall be treated as void ab-initio.

4.10   Late Submission

Bids received after the deadline shall not be considered and shall be rejected and returned to the Bidder unopened. No representation or communication would be entertained in this regard from any Bidder.

4.11   Modification And Withdrawal Of Bids

a) Bidders may modify or withdraw their Bid before the deadline.

b) The Bidder may modify, substitute or withdraw its e- Bid after submission prior to the Bid Due Date. No Bid can be modified, substituted or withdrawn by the Bidder on or after the Bid Due Date & Time.

c) For modification of e-Bid, Bidder has to detach its old Bid from e-Tender portal and upload / resubmit digitally signed modified Bid. For withdrawal of Bid, a Bidder has to click on withdrawal icon at e-Tender portal and can withdraw its e-Bid. Before withdrawal of a Bid, it may specifically be noted that after withdrawal of a Bid for any reason, Bidder cannot re-submit e-Bid again.

4.12   Opening and Evaluation of Bids

a) Opening of Bids

i.   The documents submitted on e-tender portal such as Bid Form, PoA (in case of re-submission) & Undertaking (in case of re-submission), Bid Security Decalaration form and Financial Bids will be opened at G 5 & 6, Ground Floor , NHAI HQ Building, Sector -10,Dwarka,New Delhi-110075 as per schedule defined under "Key Dates".

ii.   Bidder's authorized representative may attend the opening, and those who are present shall sign the Attendance Sheet evidencing their attendance.

iii.   The Bidder's names, Bid modifications or withdrawals and such other details as IHMCL at its discretion, may consider appropriate, will be announced at the time of opening.

b) Evaluation of Bids (Single Stage):-

Phase-1:- Test of responsiveness

Submission status of following documents shall be checked before consideration of financial bids:

i. Bid Security Decalaration form

ii. Bid form

iii. PoA (To be submitted in case of any change in the one submitted during empanelment)

iv. Undertaking (To be submitted in case of any change in the one submitted during empanelment)

As part of Bid evaluation process, IHMCL shall first determine whether each Bid is responsive to the requirements of this RFP. A bid shall be considered responsive only if:

i. Requisite Documents and the Financial Bid are received as per the format provided under this RFP;

ii. Bid is accompanied by Bid Security Decalaration Form as specified in this RFP;

iii. Bid is accompanied by Power of Attorney and Undertaking as specified under this RFP;

iv. Bid contains all the information as required (complete in all respects);

v. Bid does not contain any condition or qualification;

vi. The total amount indicated in the Financial Proposal shall be without any condition attached or subject to any assumption, and shall be final and binding.

vii. If equipment name is mentioned but quantity is not mentioned, bidder has to provide cost for the equipments.

viii. it is not non-responsive in terms hereof

IHMCL reserves the right to reject any bid which is non-responsive and no request for alteration, modification, substitution or withdrawal shall be entertained by IHMCL in respect thereof. Any non-responsive bid shall not be considered for financial evaluation.

If during evaluation, any of such documents are not submitted or not submitted in prescribed format, then the Financial bids shall be summarily rejected at sole discretion of IHMCL.

Phase-2:- Financial Bids evaluation

The Financial Bids of ONLY the Bidders who are declared as qualified in Phase 1 will be evaluated. The Financial Bid Evaluation will be based on the "Total Price" quoted by the bidder which would be the total payouts inclusive of all levies and taxes like Excise Duty, Custom Duty, packing, forwarding, freight and insurance, Octroi/Entry Tax, etc. or as applicable taxec, but exclusive of GST.

If there is a discrepancy between the unit price & the total price, the unit price shall prevail and IHMCL shall correct the total price. If there is a discrepancy between words & figures, the amount in words shall prevail. If the bidder does not accept the correction of errors, its Bid shall be rejected and action shall be initiated as mentioned in Bid Security Decalarion form .

The Evaluation Committee shall determine if the financial bid is complete and without computational errors. The Bid with the lowest price will be selected.

4.13   Imbalanced Bid

If the Bid of the Successful Bidder is seriously imbalanced in relation to IHMCL's estimate of the cost of work to be performed under the Contract, IHMCL may require the Bidder to produce detailed price analysis for any or all items of the Bill of Quantities, to demonstrate the internal consistency of the proposed System. After evaluation of the price analyses and depending on the nature of the unusually low or high bid, IHMCL may solicit, at its discretion, seek an additional amount as performance security to a level sufficient to protect IHMCL against financial loss in the event of default of the Successful Bidder under the Contract.IHMCL may require that the amount of the Performance Security set forth in the RFP be increased and an additional Performance Security may be obtained at the expense of the Successful Bidder to a level sufficient to protect IHMCL against financial loss in the event of default of the Successful Bidder under the Contract. The amount of the additional increased Performance Security shall be equal to the seriously imbalanced amount, which shall be final, binding and conclusive on the Bidder.

4.14   Process To Be Confidential

Information relating to the examination, clarification, evaluation, and comparison of Bids and recommendations for the award of a Contract shall not be disclosed to Bidders or any other persons not officially concerned with such process until the award to the Successful Bidder has been announced. Any attempt by a Bidder to influence IHMCL's processing of Bids or award decisions may result in the rejection of his Bid.

4.15   Award Criteria

a) IHMCL will award the Contract to the Bidder whose Bid has been determined to be responsive in terms of this RFP and the Bid price has been found to be lowest exclusive of taxes, duties, cess or other statutory levies.

b) IHMCL reserves the right to order for increased or decreased quantity, as per requirement without any change in unit price.

4.16   IHMCL's Right To Reject Any Or All Bids

Nothwithstanding anything contained herein, IHMCL reserves the right to reject any Bid, and to annul the bidding process and reject all Bids at any time before signing of Contract Agreement, without thereby incurring any liability to the affected Bidder(s) or any obligation to inform the affected Bidder(s) of the grounds for such decision.

4.17 Notification of Award of Contract

a) Prior to the expiration of the Bid validity, IHMCL will notify the Successful Bidder that his Bid has been accepted. IHMCL will mention the contract value in the LOA. IHMCL will issue notice to commence the work with issuance of LOA.

b) The Contract will incorporate all agreements between IHMCL and the Successful Bidder. It will be signed by IHMCL and the Successful Bidder after the performance security is furnished by the Sucsessful Bidder.

c) Upon furnishing of the Performance Security by the Successful Bidder, IHMCL will promptly notify the other Bidders that their Bids have been unsuccessful.

4.18 Confidentiality

a) The Bidder shall keep confidential any information related to this tender with the same degree of care as it would treat its own confidential information. The Bidders shall note that the confidential information will be used only for the purposes of this tender and shall not be disclosed to any third party for any reason whatsoever.

b) Information relating to the examination, clarification, evaluation and recommendation for the Bidders shall not be disclosed to any person who is not officially concerned with the process or is not a retained professional advisor advising IHMCL in relation to, or matters arising out of, or concerning the bidding process. IHMCL will treat all information, submitted as part of the Bid, in confidence and will require all those who have access to such material to treat the same in confidence. IHMCL may not divulge any such information unless it is directed to do so by any statutory entity that has the power under law to require its disclosure or as may be required by law or in connection with any legal process or such information which would be available in public domain.

c) At all times during the performance of the Services, the Bidder shall abide by all applicable IHMCL ,NHAI/ MoRTH's security rules, policies, standards, guidelines and procedures. The Bidder should note that before any of its employees or assignees is given access to the Confidential Information, each such employee and assignees shall agree to be bound by the term of this tender.

d) The Successful Bidder should not disclose to any other party and keep confidential the terms

and conditions of this Contract, any amendment hereof, and any Attachment or Annexure hereof.

e) The obligations of confidentiality under this section shall survive termination of the Contract.

f) Bidders shall not be under a declaration of ineligibility or blacklisting for corrupt and fraudulent practices by the Central Government, the State Government or any public undertaking, autonomous body, authority by whatever name called under the Central or the State Government.

4.19 Signing of Contract

IHMCL shall ask the Successful Bidder to furnish the Performance Security and also to execute the Contract Agreement as per timelines mentioned in "Key Dates".

4.20 Performance Security

a) Within 07 (Seven) working days of the receipt of the Letter of Award, the Successful Bidder shall submit a Performance Security amount in form of Demand Draft or an irrevocable and unconditional Bank guarantee issued in the name of IHMCL for an amount equal to **3% of the Total Bid Price** (value of awarded work), issued by a Bank described under this RFP which shall be verified at any branch located in the National Capital territory of Delhi and through SFMS mode as performance security for the due performance of its obligations under the Contract.

b) The aforesaid Bank Guarantee shall be as per the format given in format provided in this RFP and will be valid for a period of 180 days after the expiry of Contract period and shall also have a minimum claim period of 1 year.

4.21 Bank Guarantee (BG)

a) The Bank Guarantee in the name of IHMCL issued by the following banks would only be accepted:-

  i. Any Nationalized Bank

  ii. Any Scheduled Commercial Bank approved by RBI having a net worth of not less than Rs. 500 crore as per the latest Audited Balance Sheet of the Bank. In the case of a Foreign Bank (issued by a branch in India), the net worth in respect of the Indian operations shall only be taken into account

  iii. A Foreign Bank (issued by a branch outside India) with a counter guarantee from any Indian Nationalized Bank.

    iv. Export Import Bank of India

b) The acceptance of the Bank Guarantees shall also be subject to the following conditions:-

    i. The capital adequacy of the Bank shall not be less than the norms prescribed by RBI

    ii. The bank guarantee issued by a Cooperative Bank shall not be accepted.

4.22   Corrupt Or Fraudulent Practices

IHMCL will reject a proposal for award and appropriate the Performance Security, as the case may be, if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question.

IHMCL will declare the Bidder ineligible, either indefinitely or for a stated period of time, to be awarded a contract by IHMCL if it at any time determines that the Bidder has engaged in corrupt or fraudulent practices in competing for the contract, or during execution.

"Corrupt practice" means the offering, giving, receiving, or soliciting of anything of value to influence the action of a public official or employee of IHMCL in the procurement process or in Contract execution.

"Fraudulent Practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of IHMCL and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid process at artificial non-competitive levels and to deprive IHMCL of the benefits of free and open competition.

4.23   Miscellaneous

a) The Bidding Process shall be governed by, and construed in accordance with, the laws of India and the Courts at New Delhi shall have exclusive jurisdiction over all disputes arising under, pursuant to and/ or in connection with the Bidding Process.

b) IHMCL, in its sole discretion and without incurring any obligation or liability, reserves the right, at any time, to;

    i. suspend and/ or cancel the Bidding Process and/ or amend and/ or supplement the Bidding Process or modify the dates or other terms and conditions relating thereto;

    ii. consult with any Bidder in order to receive clarification or further information;

    iii. retain any information and/ or evidence submitted to IHMCL by, on behalf of, and/ or in relation to any Bidder; and/ or

    iv. independently verify, disqualify, reject and/ or accept any or all submissions or other

information and/ or evidence submitted by or on behalf of any Bidder.

c) It shall be deemed that by submitting the Bid, the Bidder agrees and releases IHMCL, its employees, agents and advisers, irrevocably, unconditionally, fully and finally from any and all liability for claims, losses, damages, costs, expenses or liabilities in any way related to or arising from the exercise of any rights and/ or performance of any obligations hereunder, pursuant hereto and/ or in connection with the Bidding Process and waives, to the fullest extent permitted by applicable laws, any and all rights and/ or claims it may have in this respect, whether actual or contingent, whether present or in future.

d) If the Bidder has committed a transgression under this RFP such as to put its reliability or credibility into question, IHMCL shall be entitled to blacklist and debar such Bidder for any future tenders/contract award process in its sole and absolute discretion.

PART–V: PREPARATION AND SUBMISSION OF APPLICATION

5.1 Bid must be submitted online only at https://etenders.gov.in during the validity of registration with the e-Tender Portal being managed by National Informatics Centre (NIC), i.e. https://etenders.gov.in. To participate in e-tender, the intending participants shall register themselves in the website of URL.

5.2 Bidders/Applicants are advised to go through the FAQs, guidelines, instructions, manuals, policies, system setting procedures etc. as provided in the e-Procurement portal.

5.3 Tender form and relevant documents will not be sold /issued manually from offices.

5.4 Bidders are required to upload scanned copies of Bid Security Decalaration form, Bid Form, Power of Attorney and other relevant document on the e-Tender portal.

5.5 The date and time for online submission as mentioned in the section RFP document shall be strictly followed in all cases. The bidder/Applicants should ensure that their tender is submitted online before the expiry of the scheduled date and time. No delay on account of any cause will be entertained. Tender(s) not submitted online will not be entertained.

5.6 If for any reason, any interested bidder fails to complete any online stages during the complete tender cycle, IHMCL shall not be responsible for that and any grievance regarding that shall not be entertained.

PART VI- CONDITIONS OF CONTRACT

6.1 CONDITIONS OF CONTRACT

These Conditions shall supplement or amend the other parts of the Bidding Documents and whenever there is a conflict; provision herein shall prevail over those in the other parts of the Bidding Documents.

6.2 GOVERNING LANGUAGE

All correspondence and other documents to be exchanged by the parties shall be written in the English language. The version written in English language shall govern its interpretation.

6.3 APPLICABLE LAW

Appropriate laws as in force in Republic of India shall apply.

6.4 INTERPRETATION

In interpreting these Conditions of Contract, singular also means plural, male also means female or neuter, and the other way around. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined.

The Bidders are expected to examine all terms and instructions included in the RFP Document. During preparation of the technical proposal, the bidders shall make their own assessment of staff to undertake the assignment.

6.5 RIGHT TO VARY QUANTITY

a) At the time of award of contract or during the Contract Period, the quantity of goods, works, scope or services originally specified in the bidding documents may be changed by IHMCL by a written order to the Succesful Bidder.It shall be without any change in the unit prices or other terms and conditions of the Bid and the bidding documents.

b) If IHMCL does not procure any line item(s) as specified in the Bill of Materials for procurement or procures less than the quantity specified in the RFP Document due to change in circumstances, the Succesful Bidder shall not be entitled for any claim or compensation except otherwise provided in the bidding document.

c) Repeat orders for extra items or additional quantities may be placed on the rates and conditions given in the contract.

d) IHMCL may choose to procure additional material for any of the line item specified in Bill of Materials of the quantities per line item during the Contract Period.The Succesful Bidder shall hold the same prices quoted herewith.

6.6 RIGHT TO AMEND PROJECT SCOPE

IHMCL retains the right to amend the Project Scope without assigning any reason at any time during the Contract Period. IHMCL makes no commitments, express or implied, that the full scope of work as described in this RFP will be commissioned.

In case of descoping of toll plaza before expiry of Contract Agreement, IHMCL shall release the pending Capex amount of the toll plaza. However, O&M payment shall be made as per actual till descoping date.

6.7 PAYMENT TERMS

a) Payments will be made in Indian Rupees only
b) The payment to be made to the System Integrator FOR System Design, Engineering, Supply, installation, System Integration, Testing & Commissioning and O&M shall be made to the as per the following:

Payment Milestones		
Sr. No.	**Milestone Description**	**Payment Amount**
Capex Payment		
Milestone 1	Upon delivery of equipment at site location (Refer point (e) below)	50% of Total Capex Price for the Toll Plaza
Milestone 2	After successful installation and commissioning of complete ETC system and integration with Central Clearing House (CCH) including Go Live. (Refer point (f) below)	30% of Total Capex Price for the Toll Plaza
Milestone 3	On successful acceptance of Site Acceptance Test (SAT) (Refer point (g) below)	20% of Total Capex Price for the Toll Plaza

Payment Milestones		
Sr. No.	**Milestone Description**	**Payment Amount**
O&M Payment		
Milestone 4	Quarterly Payments during O&M period (Refer point (h) below)	O&M Payment shall be paid for the toll plaza in equal quarterly installment of Total O&M Price from date of date of Go-Live of the plaza.

c) Payment may be claimed for any particular site, on achievement of above said milestones.

d) IHMCL shall issue the instruction for the supply & installation of main component as per BOQ for each toll plaza, basis which service provider shall be responsible to deliver and install the equipments and accordingly payment shall be released.

e) **In Milestone -1: -**

  i. List of BOQ items supplied should be certified by IHMCL/ PIU before submission of invoices to IHMCL. Material Verification report shall be submitted with IHMCL on delivery of BOQ items.

  ii. Service provider shall also submit Technical System Specification Delivery Complaince Report as per format mentioned in Annexure-C along with equipment specification sheet from OEM.

  iii. No payment shall be released on the basis of partial delivery of equipment as specified in Annexure-A except for special case at IHMCL discretion.

f) **In Milestone 2:-**

  i. Go-Live confirmation from NPCI/bank

  ii. Request received for conducting Site Acceptance Test by Service Provider.

g) **In Milestone 3: -**

  Site Accpetance Test has to be conducted and certified by concerned IHMCL upon completion of all Punch Points before submission of invoices to IHMCL.

h) **Operation & Maintenance (O&M) Period: -**

  i. Defect Liability Period (DLP) shall be for a period of two years (24 month) start from date of Go Live with CCH server.

  ii. The O&M period shall commence from completion of Milestone 2 for the Toll Plaza. IHMCL shall release the equal quarterly payment to the Successful Bidder from Go Live date but after conducting SAT.

iii. Service Provider shall submit the following reports with IHMCL to claim for O&M payment
- Monthly Preventive Maintenance report
- Equipment Status Report(Daily)
- Equipment repair/replacement report for the claimed quarter(Daily)
- Monthly Lane Wise Equipment Downtime Report(System Generated)
- Monthly Lane Wise AVC Accuracy Report (System Genegarted)
- Monthly Lane Wise ETC and Non-FASTag traffic and Revenue report(System Genegarted)

Invoice submission to IHMCL without above mentioned reports shall not considered.

i) The quantities of some items may increase or decrease depending upon individual plaza conditions. Payments would be made for actual quantities of items used at unit price indicated in the Financial Bid.

j) All payments shall be made subject to adjustment of applicable penalties.

k) All Payments will be processed within 60 days of submission of undisputed invoice.

6.8 PRICES

a) GST as applicable, which will be levied on the goods and services invoiced by the Service Provider to IHMCL, will be reimbursed on actual basis.

b) IHMCL reserves the right to ask the Service Provider to submit proof of payment against any of the taxes, duties, levies indicated.

c) All payments shall be made subject to adjustment of applicable damages.

d) No amount or cost shall be payable for holding discussion, as considered necessary by IHMCL, for any purpose with IHMCL's Officials at IHMCL's Head Office or elsewhere, prior, during or after the conduct of an assignment.

Prices quoted by the bidder shall be excluding GST and fixed for the entire Contract period.

6.9 ASSIGNMENT MILESTONE & TIMELINES

The following table captures the key events and their associated timelines

Sl. No.	Milestone Description	Timelines
1.	Submission of detailed report based on site assessment survey	Within 10 days from the date of Issuance of Letter of Award (LoA), or date of issuance of instruction for commencement notice issued by IHMCL, whichever earlier.

2.	Submit schedule for work execution plan for each toll plaza	Within 5 days of submission of Site Survey Report
3.	Supply, install and commission all the items including Go-Live with CCH	• **In case Site is FIT for Implementation:-** Within 45 days* (inclusive of Sl. no. 1 & 2) from the of date of Issuance of Letter of Award (LoA) or date of issuance of instruction for commencement notice issued by IHMCL, whichever is earlier. SI shall have to carry out site survey and report site-readiness status to IHMCL. • **In case Site is not FIT for Implementation:-** Within 45 days* (inclusive of Sl. no. 1 & 2) from date of intimation for site readiness by IHMCL/concerned PIU

*Non-fulfillment of this requirement or delay in Assignment Timelines would attract penalties.

6.10 DAMAGES

a) Failure of the service provider to adhere the timelines specified in the RFP shall attract liquidated damages @ 0.1 % of the Total Price of the toll plaza (as per financial proposal submitted by the bidder) for each day of delay in implementation. The total levied penalty, however, shall not exceed 10% of the assignment cost.

b) In case IHMCL is of the view that the delay is due to reasons beyond the control of the Service Provider , suitable extension of time may be granted to the Service Provider with or without imposing any Damages on such Service Provider in the absolute discretion of IHMCL.

c) Damages shall be payable by the Service Provider within 5 days of imposition thereof by IHMCL, failing which the same shall be deducted from the payments to be made to the Service Provider or from the Performance Security as deemed appropriate by IHMCL.

d) The Damages payable, as set forth in this Contract, are mutually agreed genuine pre-estimated loss and damage likely to be suffered and incurred by the Party entitled to receive the same and are not by way of penalty (the "Damages").

6.11 Scope of Work

The scope of work as specified in PART V of RFQ Tender No. IHMCL/HETC/2020/01, dated 08.01.2020 shall remain same. However, following additional activites are added under the scope of Service Provider: -

a) Service Provider shall ensure to keep a proper inventory of the ETC infrastructure installed at fee plazas throughout the Contract period.

b) The Service Provider shall provide 03 Site Engineers (03 shifts) at each fee plazas to ensure 24*7 onsite support. The site engineer shall be at least Graduate or Diploma in Engineering, preferably in Electrical/Electronic/IT/Computer Science or equivalent.

c) The Service Provider shall adhere to the maintenance of ETC & TMS Equipment, Periodic Preventive Maintenance of equipment, Timely Corrective Maintenance, Software Maintenance, Remote Software support for the ETC & Toll System.

d) The Service Provider shall take prior approval from respective PIU/IHMCL before updating any version of Lane / Plaza application, for which, a software modification request shall be submitted to PIU/ IHMCL for seeking approval.

e) The Service Provider shall take adequate measures to protect ETC system from any Malware/Ransomware attack at fee plazas.

f) The Service Provider shall provide license-based software/application like Operating System, database, Antivirus etc. The cost of the same shall be included in the equipment cost.

g) The Service Provider shall ensure to provide hardware firewall device to protect against Malware entering the network.

h) Service Provider shall provide full support in plaza handover to new Service Provider engaged by IHMCL at the allocated toll plazas during the O&M period. The Servive Provider shall be involved in transition process till toll plaza take over by new Service Provider.

i) Service Provider shall ensure to supply additional Capex equipment or any equipment as replacement of exisiting equipment of specification as mentioned in RFQ Tender No. IHMCL/HETC/2020/01, dated 08.01.2020 and in this tender.

j) The Service Provider shall ensure to make all allocated toll plazas live with ICD 2.5 specification which includes provision of all certificates like SSL, firewall, domain etc.

k) In addition to the internet with static IP (02 Qty), service provider shall ensure to provide internet connectivity through dongle device as a backup solution and cost of the same shall be the part of quarterly O&M charges.

l) Service Provider shall be responsible for repair/ replacement of equipment as per SLA for the equipment which get faulty due to reasons like Short Circuit, Thudering/Lightening and Voltage Fluctuation. Service Provider shall take all preventive measures to upkeep the equipment.

m) Service Provider shall be responsible for providing Pest Control services at the toll plaza to prevent equipment for getting faulty. Service Provider shall be responsible for repair/ replacement of equipment within the defined SLA which have got faulty due to cable/equipment damaged by Rodent. The cost of the same is the part of Total O&M Price.

n) In case of descoping of plaza/termination of Contract/Expiry of Contract Agreement, Service Provide shall handover the all equipment and data(entire contract duration) with concerned PIU. Full and final shall not done unless handing over and taking over process is not completed.

o) Any equipment which gets accidentally faulty/damaged during the Contract Period shall be repaired/replaced by Service Provider in order to comply with the SLA. Any accidental damage not attributable to Service Provider as per RFP shall be repaired/replaced upon verification and duly recommendation by repective PIU. After recommendation by respective PIU, Service Provider shall ensure to repair/replace such equipment in order to comply with the SLA. The payment for recommendation from repective PIU shall be made as follows: -

   i. Replacement cost shall be as per unit rates mentioned in the RFP

   ii. Repairing cost shall be made as per actual on case to case basis

6.12   SERVICE LEVEL AGREEMENTS(SLA)

a) The SLA as specified in Clause 5.7 of RFQ Tender No. IHMCL/HETC/2020/01, dated 08.01.2020 shall remain same. However, following SLA parameters are also added in scope of Service Provider: -

   i.   Manpower

   The successful bidder shall ensure availability of manpower at the toll plazas 24*7. In case of unavailability of manpower or shortfall in attendance (in shift) at site is brought to the notice of IHMCL, penalty shall be imposed as under:

   Absence of shortfall in attendance - Rs 1000/- per shift per fee plaza

   (**Day shall have 3 shifts of 8 hours each**)

   ii.   Double deduction/Overcharging in FASTag

The successful bidder shall ensure for efficient functionality of RFID readers in lanes, a single FASTag should not have two successful transactions within time difference (as latest specified by IHMCL/NHAI). There should not be any case of double/multiple deduction of FASTag account owing to multiple processing of transaction through RFID reader/ ETC application to Acquirer Bank.

In case of any deviance, penalty shall be imposed as below –

- Up to 100 cases of double deduction/over-charging reported in a calendar month **– Rs 500 per case**
- More than 100 cases of double deduction/over-charging reported in a calendar month – **Rs 1000 per case**

In addition to above, Service Provider shall also be liable to pay for all the losses incurred by the concessionaire/toll plaza operators.

iii.   Non-reading FASTag – Free Passage

Gazette GSR 427(E), dated 7 may 2018 provisions –

"*Provided also that if a vehicle user with a valid, functional FASTag or any such device with sufficient balance in the linked account crossing a fee plaza installed with Electronic Toll Collection infrastructure, is not able to pay user fee through FASTag or any such device owing to malfunctioning of Electronic Toll Collection infrastructure, the vehicle user shall be permitted to pass the fee plaza without payment of any user fee. An appropriate zero transaction receipt shall be issued mandatorily for all such transactions*".

The successful bidder shall ensure for proper functionality and alignment of Fixed RFID readers in lanes, no case shall be found where a valid FASTag is not read by fixed RFID reader.

In case of any deviance, penalty shall be imposed as below –

In cases where vehicle user have been permitted to pass the fee plazas without payment of any user fee, the Service Provider shall be liable to pay for all the losses incurred by the concessionaire/toll plaza operators on account of free passage of vehicle without payment of any user fee.

6.13   Hardware Specification

The Toll Plaza equipment and Software Specification as specified in Annexure-A of RFQ Tender No. IHMCL/HETC/2020/01, dated 08.01.2020 shall remain same except some below changes for following equipment/for new equipment: -

a) Lane Controller with Industrial PC

i. Functional Requirements

- The Toll Lane Controller (TLC) is situated in the tunnel only underneath the toll lane or in case there is no tunnel then TLC is situated in the booth itself and has the principal task of controlling the toll collection function and all the peripheral equipment, transmitting information and data on all lane activities to a local ETC Server and receiving other control information and data from the ETC server. It also has the function of controlling all the peripherals connected to it.

- All hardware, software, TLC interface to peripherals and local ETC Server shall be supplied by the equipment supplier.

- The TLC software shall be developed to operate as ETC toll lanes as is defined under earlier section of this document.

- All lane operating data shall be stored in the local Solid State drive in the lane. Adequate RAM shall be provided to prevent "Thrashing" of the Solid State drive. The Solid State Drive shall have enough memory to load and maintain all necessary program tables (like ETC black list, white list, discount list etc.) and data in memory, to optimize the toll collection functionality. Each transaction data collected from the lane peripherals shall be stored in the Solid State Drive of the TLC in a separate encrypted file placed in a folder automatically created with the month's name at the start of each month, before being transmitted to the master database in the local ETC server. This data shall remain in the Solid State Drive irrespective of transmission to the local ETC server until a period of 1 month. At the start of the 7th month, the 1stweek's data shall be deleted from the Solid State Drive on the basis of FIFO logic.

- Further, there should be a mechanism for auditing the real time data transmission (including incidents) over a predetermined time period (say 30 minutes) and automatic data retrieval from the lane in case of data mismatch.

- The TLC must be capable of storing the following minimum information:

  ➢ 1 month of Transaction data including image associated with incidents

  ➢ Tag Whitelist as mentioned

  ➢ Tag Blacklist as mentioned

  ➢ Tariff Table as applicable (active and pending)

A transaction record shall contain all the necessary information to enable complete control and auditing of the system.

- The minimum required fields are as follows: -
  ➢ Unique Transaction Sequence Number

  ➢ Date

  ➢ Time

  ➢ Plaza

  ➢ Lane

  ➢ Shift

  ➢ Tag Vehicle Class (TVC)/Manual Vehicle Class (MVC)

  ➢ Automatic Vehicle Class (AVC)

  ➢ Image ID (in case of a violation transaction)

  ➢ Tag Id

  ➢ VRN no.

  ➢ Transaction Amount as TVC/MVC and AVC

The transaction time shall be the time when a Tag is detected at transaction area.

- The TLC shall be capable of interfacing with at least the following peripheral equipment:
  ➢ RFID Transceiver

  ➢ Toll Collector Display

  ➢ User Fare Display

  ➢ Vehicle guidance signals (Traffic Lights)

  ➢ Overhead Lane Sign

  ➢ Automatic Exit Barrier

  ➢ Exit Loop

  ➢ AVC system including AVC loop

  ➢ Electronic Toll Collection Equipment

  ➢ Incident Recording (CCTV) System

> ➢ License Plate Image Capture Camera

> ➢ Thermal Receipt Printer

- The TLC shall be capable of communicating with the local ETC server. The Communication shall consist of data necessary to build a complete database in the local ETC server, from which the required financial and operating reports and statistics can be generated. The local ETC server shall also receive and log any reportable incidents occurring in the lane, which shall be transmitted real-time to the Incidents Computer (IC) for action by the toll supervision staff. In terms of incidents, real-time shall mean the time from the occurrence of the incident to the storage of the incident and the subsequent display of the incident on the IC; shall not be greater than 2 seconds.

- As described above, all data entries shall be sequentially numbered and referenced to other related entities. The incidents that occur during a transaction shall refer to that transaction. Transactions and incidents shall refer to the applicable financial entity in which they occur.

- An automatic / manual data validation process is required to check for data continuity and missing/duplicate data. An audit trail of manual corrections is required. The data validation process shall be linked to a "data not complete" message that will be indicated on reports if data is missing / pending validation / consolidation.

- Further, the TLC (via the AVC) shall monitor the lane at all times for any traffic violation or incident; and for failure of any of the toll equipment. Any failure of equipment shall generate alarm / event at Lane application and it shall also be displayed at LSDU and EVENT/ALARM history module. The level of incident reported to plaza via the peripherals in the toll lane, or reported to the LOCAL ETC SERVER shall be configurable through a parameter setting in the software application available at a definable user level.

- The TLC shall also be capable of receiving messages from the local ETC Server. These messages will contain data on the Tariff tables, classification table, whitelist, tag blacklists, ETC account balance, etc. Should the link between the TLC and the LOCAL ETC SERVER fail, a system to download such information locally into either end (TLC &LOCAL ETC SERVER) is to be made available.

- The CCH maintains a vehicle class description that is generic to all toll plazas. However, as the vehicle class description at each toll plaza for the same vehicle may be different, the TLC shall maintain a mapping of the CCH Vehicle class to the Plaza Vehicle class. The TLC generated transaction shall always refer to the Plaza vehicle class.

- Extended operation of the TLC in the Local Mode must be possible. The system shall manage its data storage capacity to ensure adequate free space for the operating system, application and data. The system shall provide warnings regarding free-space when the storage capacity reduces to predefined critical limits. If the data storage on the TLC reaches this critical limit, it shall immediately instruct the plaza to stop processing of transactions any further and inform the supervisory staff to initiate a data extraction procedure. The data extraction shall be carried out via a thumb drive or portable computer and restored in the LOCAL ETC SERVER.

- Door monitoring: The cabinet door shall be monitored utilizing proximity / limit switch. Door open /close events shall be recorded as event / alarm incidents identified by time and Lane identification. The incidents are to be displayed on the LSDU at plaza level.

- TLC Panel Temperature Monitoring: The cabinet temperature shall be monitored utilizing thermostat Switch. Higher Temperature events shall be recorded as event / alarm incidents identified by time and Lane identification. The incidents are to be displayed on the LSDU at plaza level.

- The Equipment Supplier shall provide the details on the TLC data management strategy.

- Time throughout the entire toll collection system shall be synchronized with reference to the LOCAL ETC SERVER.

- The TLC shall receive UPS power from the UPS distribution panel. Any special electrical protection / interface unit shall be provided by the Contractor, if required, based on the needs of the device. The power distribution to the lane peripherals from the TLC shall be adequately protected with the help of surge arresters, lightning protection, circuit breaker, fuses, Over-voltage, under-voltage, over-current, and short circuit protection to provide maximum safety for all system components etc.

ii. **TLC PC Specification:**

Descriptions	Remarks
TYPE	Industrial Grade Computer (IPC)
Processor Board	ATX / Micro ATX / Mini -ITX Industrial Mother Board
Power Supply	ATX 450 or as per need of Industrial grade computer
Mains Input	AC input from 200~240V, 50 Hz
Cables	Power Cable, UTP cable
Color	Manufacturer's Original Color

Access for maintenance, modularity of construction	Minimal maintenance, Commercially off-the-shelf product
Environmental Considerations	-20°C to 60°C Operating Temperature, 95% @ 40° C (non-condensing)
IPC Design Criteria	Processor : Intel Core i7- 6500 Processor (Quad Core, 6 MB Cache, upto 3.20 Ghz w/Turbo Boost) or better
	RAM : 16 GB (2 X 8 GB) DDR4 Synchronous Dynamic RAM
	Supports Dual channel (Non-ECC) DDR4 1866/2133 up to 32GB
	Storage Drive : Based on estimated storage requirement for 6 months TLC data (at least 500 GB Solid-State Drive-in case estimated capacity is lesser)
	Supports SATA3.02 x PCIe expansion Slot
	Supports VGA and DVI display,
	Minimum 01 PCIe expansion slots, 4 x USB 3.0, 2 x USB 2.0
	4 x COMs ports Serial port support RS-485 auto flow control
	2 X Ethernet RJ-45 network port, 10/100/1000 Mbps Ethernet controller, support Wake On LAN 8
	Operating System: Linux or Windows latest or Embedded
	Application Software: Lane Software, Antivirus
	Overall MTBF: 30,000 hrs Overall MTTR: 0.5 hrs – 1 hrs

b) **AVC including sensors, loop and detector (Non-intrusive technology – Profiler-based)**

i. **Accuracy Level:**

The AVC system shall be 100% auditable and accuracy of vehicle counting should be 100% and classification accuracy shall not be less than 98%.

ii. **Auditability:**

The AVC System shall comply with the following auditability criteria:

- Each transaction recorded by the system shall be uniquely and sequentially numbered.
- The AVC System shall be able to provide information to a laptop or to any computer connected to the same network. AVC computer shall be used for auditing the classification of the AVC as well as the classification of the lane operator without interruption to Toll Collection operation. The audit function shall be done in the following manner:
- The auditor shall
  - ➢ connect to the AVC computer through network or RS-232 port or latest of the AVC computer.
  - ➢ Start audit application/data extraction application
  - ➢ Supply Plaza name, AVC number, User id and Password
  - ➢ Enter the date and duration for the audit.
  - ➢ Press enter to start data extraction (any time the auditor shall be able to cancel current command to start with other specific duration).
- Obtain output of the audit report in XLS format and it shall contain at least the following:
  - ➢ Transaction sequence number
  - ➢ Date & time of the transaction
  - ➢ Lane ID
  - ➢ Shift ID
  - ➢ TLC class
  - ➢ AVC class
  - ➢ MOP
  - ➢ Incident type and details associated with the transaction, if any

iii. The Contractor shall provide a data extraction tool to IHMCL, it shall be possible to extract the AVC/TLC data for a user defined period in XLS format using that tool.

iv. For audit purposes, it shall be possible to enable all transactions as incidents in order to grab LPIC images and ICS image for Supervisor / Auditor review per lane / direction / all lanes.

v. Description and Functions

- The automatic vehicle classification equipment shall be installed in the lane after pay-axis.

- The purpose of the AVC is to sense the presence of a vehicle (differentiate it from non-vehicular crossing), to measure and interpret certain physical characteristics of the vehicle as it passes through the AVC.

- The AVC system shall be able to generate profile image of the vehicle which shall be used for auditing purpose.

- The AVC system shall be able to distinguish between classes as per the applicable notifications of MORTH

- This class information shall be stored locally at AVC level and communicated to the TLC. Simultaneously a still image of the vehicle shall be captured / grabbed by the Incident Capture System (ICS) Camera as the vehicle triggers the AVC sensors. The TLC shall then check whether this AVC class matches the vehicle class (the CCH Class mapped to the Toll Plaza class) as read from the tag. If there is a discrepancy between the two classifications, the license plate image (captured when the vehicle passed through the ETC exit) and the ICS camera image shall be saved and stored with all transaction and incident information watermarked on them. The images and discrepancy information shall be communicated to the Local ETC server for further action and processing by the toll supervision staff.

- The Equipment Contractor shall submit details of the performance of existing AVC systems duly validated by the existing operators of the systems.

- The AVC shall be capable of detecting and reporting the following vehicle movements and incidents in the lane to the TLC:

  ➢ The AVC system must be able to count and distinguish two wheelers, autos rickshaw, three-wheeler and four-wheelers separately.

  ➢ Vehicle Standing – the vehicle presence sensing equipment stays active for longer than a preset time. The preset time shall be parameter settable.

- All AVC elements (loops, Profiler based sensor, cameras, etc.) shall be fully weatherproof and installed in a location where vehicle damage by accident is not possible.

- When the TLC is inoperative, or communication between the TLC and the AVC is severed, the AVC shall record the last transaction number transmitted and shall be able to independently count and record (store) vehicle classes passing through or over it. A sequential vehicle counter at AVC level shall be implemented to reconcile. The AVC shall have its own battery backup and data extraction facility on to a external storage media to a laptop computer.

- The AVC shall be able to generate violation if the ETC lane is not logged- in and a vehicle passes through it.

- The AVC shall be able to generate violation if the ETC lane is logged- in and a vehicle passes through it without paying.

- In following cases, the AVC shall generate an alarm on the plaza level and send record to incident control system for supervisory action apart from the incidents defined:

  ➢ Degraded classification (in case of any single Transmit / Receive failure)

  ➢ Unable to classify

- The accuracy of the AVC shall not be affected by temperature or any weather /environmental conditions and shall be independent of vehicle speed / weight.

c) **AVC System Design**

i. Functional requirements:

- The AVC shall be able to automatically classify the classes of vehicles as indicated in the vehicle class table to an accuracy of 98% without manual intervention and class correction or validation. Unless, the above criteria is achieved, the AVC shall never classify a vehicle to any defined category in the Classification table; it shall be categorized as unable to classify so that it triggers an incident and there is no chance for revenue loss. This can be used to fine tune the AVC to improve the accuracy later.

- The functional specification for the AVC shall include the hardware, software and operational requirements. The design requirements of the AVC are to be seen as a system in which all failures, events and other events are logged, stored and managed. The following design criteria shall be used in the AVC:

  ➢ AVC Classification Table

  ➢ AVC Configuration

  ➢ Vehicle Detection and Classification

  ➢ AVC Interfaces

  ➢ AVC Technical Requirements

  ➢ Data Storage

- All operating data shall be stored on the local Solid State Drive of the AVC computer. "Thrashing" of the Solid State Drive shall be prevented. The AVC shall have enough memory to load and maintain all necessary program tables and data in memory. All other transaction

data shall be stored on the local hard drive of the AVC and a copy to be transmitted to the LOCAL ETC SERVER.

- The following minimum information is to be stored at AVC level:
  - Classification table
  - AVC configuration
  - Data of at least one year (transaction, event, AVC centric incident etc.)

- Two separate streams of data, carrying vehicle classification information from TLC and AVC shall be copied at LOCAL ETC SERVER level for comparison, evaluation and audit purposes. There shall be provisions for drawing separate reports for TLC and AVC classifications at LOCAL ETC SERVER level. An AVC accuracy and reconciliation report shall be present in the toll system.

- The performance of the AVC shall form the basis for the accuracy checks, functional tests, installation, commissioning and handover to achieve the required accuracy and performance. All design and installation approvals shall be obtained from IHMCL before installation and commissioning. The Contractor shall submit a detailed list of vehicles with photographs and Indian RTO authorized classification category of all models of vehicles found in India as part of Technical specifications delivery. The configuration of AVC classification table into the system shall be done in the presence of the authorized representative of NHAI.

- The plaza lane area detailed AVC layout including the following items shall be provided at the time of technical specifications delivery by the Contractor so that the design process can be implemented at site. The Contractor shall ensure that the equipment layout is in conformance with the Lane Design Drawings as provided by IHMCL.

- The system architecture shall provide the details of the equipment layouts and the physical location of each component of the system in the ETC toll lane.

- The loop detector units/cards shall conform to the following minimum requirements: -
  - The unit shall be easily removable and shall be fitted with at least two (2) loops per card.
  - The unit shall have a minimum of 4 separate adjustable sensitivity and frequency levels.
  - The unit shall have indicators for vehicle presence, loop on/off and failure.

- The AVC Profiler shall comply with the following specification and are mounted in a manner as to ensure that the following minimum specifications are adhered to at all times.

➢ Ensure that no vehicle can pass through the AVC and miss axle counting.

➢ Number of Axles per vehicle is accurately counted for every vehicle passage

➢ Ensure to generate profile image of each vehicle.

➢ Sensor replacement time shall not exceed 30 minutes.

- It shall be noted that the equipment enclosures shall be mounted in the tunnel/booth at the toll plaza, sufficient ventilation shall be provided by the equipment Service Provider for this enclosure and the enclosure shall have IP65 protection.

- The AVC enclosure shall be mounted in the tunnel/booth. The AVC enclosure shall be secured using suitable corrosion resistant fixtures, and all fixtures shall be approved before the mounting of the AVC can take place.

- The AVC enclosure shall be provided with a switch to detect that the AVC door is open or closed, and the status shall be updated at plaza level in real time.

- All mounting shall be done in a neat and professional manner and shall be approved by IHMCL.

- All AVC cables that enter the enclosure shall be protected between the enclosure and the sensors, using a suitable flexible steel re-enforced trunking / cable tray / ducting as approved by IHMCL to reduce the risk of tampering. All the cable entries to the AVC enclosure shall be sealed properly with glands / sealant, as approved.

- The quality control procedure manual shall be provided with the proposal by the equipment Contractor, which shall include a minimum of:

  ➢ AVC Installation Log Sheet

  ➢ Loop Resistance Testing and Loop Earth Testing Procedure

  ➢ Cross-talk Verification Process

  ➢ Loop Chatter (Bobbing) Verification Process

  ➢ Basis of classification logic of AVC

d) AVC Controller Configuration

The following minimum configuration requirements shall be met:

Descriptions	Remarks
TYPE	Industrial Grade Computer (IPC)
Processor Board	ATX / Micro ATX / Mini -ITX Industrial Mother Board
Power Supply	ATX 450 or as per need of Industrial grade computer

Mains Input	AC input from 200~240V, 50 Hz
Cables	Power Cable, UTP cable
Color	Manufacturer's Original Color
Access for maintenance, modularity of construction	Minimal maintenance, Commercially off-the-shelf product
Environmental Considerations	-20°C to 60°C Operating Temperature, 95% @ 40°C (non-condensing)
IPC Design Criteria	Processor : Intel Core i7- 6500 Processor (Quad Core, 6 MB Cache, upto 3.20 Ghz w/Turbo Boost) or better RAM : 16 GB (2 X 8 GB) DDR4 Synchronous Dynamic RAM Supports Dual channel (Non-ECC) DDR4 1866/2133 up to 32GB Storage Drive: Based on estimated storage requirement for 6 months TLC data (at least 500 GB Solid-State Drive-in case estimated capacity is lesser) Supports SATA3.02 x PCIe expansion Slot Supports VGA and DVI display, 4 x USB 2.0, 4 x COMs ports Serial port support, RS-485 auto flow control, 2 X Ethernet RJ-45 network port, 10/100/1000 Mbps Ethernet controller, support Wake On LAN 8 Operating System: Linux or Windows latest or Embedded Application Software: Lane Software, Antivirus Overall MTBF: 30,000 hrs Overall MTTR: 0.5 hrs – 1 hrs

e) AVC Enclosure

The AVC and all related peripheral controllers should be enclosed in an IP65 compliant cabinet.

i.   Locking System: Each cabinet shall have a unique key allowing access to the AVC.

ii.   Door monitoring: The cabinet door shall be monitored utilizing proximity / limit switch. Door open / close events shall be recorded as Event / Alarm incidents identified by time and Lane identification. The incidents are to be displayed on the LSDU at plaza level.

iii.   TLC Panel Temperature Monitoring: The cabinet temperature shall be monitored utilizing thermostat Switch. Higher Temperature events shall be recorded as event / alarm incidents identified by time and Lane identification. The incidents are to be displayed on the LSDU at plaza level.

iv.   Cabling Layout: All external cables shall be protected against the effects of lightning and shall comply with all requirements for the control of interference from EMI. All data cables shall be screened and shall be properly separated and shielded from all power cables.

v.   Ventilation and internal temperature: All equipment endorsed by the cabinet shall be kept at a temperature consistent with manufacturers recommendations.

vi.   Finishing: The cabinet surfaces shall be protected from the environment in which it shall be used and the Equipment Contractor shall specify the surface treatments to be applied. Each cabinet shall be painted and numbered in a manner consistent with the toll lanes and consistent with all equipment related functions (e.g. reporting to the plaza software subsystem).

vii.   Cable dressing: All cables (power & signal) shall be properly routed and dressed with suitable railings inside the enclosure and ties.

viii.   Cable numbering: The signal & power cable terminations shall be identified by proper numbering. In addition to the termination at the controller end, this numbering shall also be maintained at locations where the cables are exposed (like manholes, junctions) and at the peripheral end. Further, all the individual component boards shall be properly identified by labelling.

ix.   Cable terminations: The signal & power cable (from the peripherals) terminations shall be kept separated inside the cabinet. The cable routing inside the enclosures shall be done in a proper manner, so that, aesthetics apart, the cable faults can be traced and faulty cables replaced, easily and less time consuming.

f) ETC Server (Plaza Server)

i.   The local ETC server is responsible for the control, data storage, processing and administration of the toll operation. It shall be the responsibility of toll management server to synchronize all activities of toll collection process, data and time of all workstations.

ii.   There shall be a separate partition for Operating System. All Data files shall be stored in a separate partition. Image files shall have a separate 3rd partition. This scheme is applicable not only for the LOCAL ETC SERVER but in all levels of Toll System.

iii.   Storage sizing at each level shall be backed up with corresponding file size per transaction / record as part of technical specifications delivery. If required, the HDD finalized as part of BOQ shall be revised to handle the data storage capacity requirement as per the requirement without any additional cost to the Purchaser.

iv. General Requirements

- The manufacturer of the server and workstations shall:

  ➢ Be a well-known and established company worldwide in the field of Information Technology.

  ➢ Have an established and appointed representative or authorized agency in project location.

- The Contractor of the server and workstations shall:

  ➢ Be a well-known and established IT hardware supply company in project location.

  ➢ Be a registered representative of the original equipment manufacturer in project location.

  ➢ Be capable of supplying adequate after-sales service and support on 24X7 basis.

v. Platform

- The server shall make use of minimum 64-bit platform.

vi. Configuration

- Processor board: shall have the capacity to accept up to 2, 64-bit central processor units.

- Central Processor Unit/s: shall be 64-bit, Xenon 3 GHz or superior latest available speed at the time of delivery to the site.

- Number of Processors: 2

- RAM: Min. 64 GB

- RAID (Redundant Array of Inexpensive Disks): shall use RAID5 with hardware RAID controller.

- SCSI Controller: shall have a minimum of two channels

- HDD: Min. 3 x 2 TB x 7.2K SATA 6Gb Hot Swap 512n HDD; capacity shall be based on data retention of all data for a period of 5 years

- Network Devices: 4-Port RJ45 - 1 GPBS Ethernet Adapter

- Power Supply: shall have a dual hot swap power supply to provide redundancy

- Connectivity:, Four USB (Universal Serial Bus) ports (High Speed USB 2.0), SVGA Screen port

- Light path diagnostic with external visible panel

- LCD display for server operational log (events)

- Integrated system management processor on board

- Redundant hot swap fans

- Optical scroll Mouse

- 18.5" TFT monitor

vii. The server including all accessories listed above shall be installed in rack.

viii. Software Compatibility

The server shall be capable of supporting the following software platforms:

Operating System:

Windows

UNIX

LINUX (64bit platform) or compatible

Database:

Industry standard

ix. Licensing

License for each server, workstation operating system, Database management system software, database maintenance software (like TOAD, etc.) or any other software (MS-OFFICE package, Adobe, GHOST etc.) used in toll system, which requires a license, shall be provided by the Service Provider in the name of the Authority without any additional cost to the Authority.

x. Database Management System

- Database shall be a relational database management system.

- Lane system shall not have any direct database access. Data from the lane going to the database shall be through dedicated software that runs on database server.

g) FIREWALL HARDWARE

i. Physical Interfaces

- LAN ports: Four (4) 10/100/1000 Mbps auto-sensing, Auto Uplink RJ-45 ports
- WAN ports: Two (2) 10/100/1000 Mbps auto-sensing, Auto Uplink RJ-45 ports to connect to any broadband modem, such as DSL or cable

ii. Network Requirements

- Firewall should operate in Route mode and transparent mode.
- Traffic shaping/bandwidth management on a per policy basis for specific network/IP/Interface/Zone (individual or shared) and should be able to define guaranteed, burstable/maximum bandwidth per policy. Also, able to set different level of priority.
- Support DHCP server, DHCP client, DHCP relay, DNS client and NTP client. xix. Support NAT (SNAT and DNAT) with following modes Static, Dynamic, PAT and IPv6 to IPv4 (vice a versa).
- Support both IPv4 and IPv6
- The appliance should support Link aggregation (IEEE 802.3ad) technology to group multiple physical links into a single logical link of higher bandwidth and link fail over capability.
- Remote access VPN (client-to-site), site-to-site VPN
- IPsec NAT traversal (VPN pass-through)

iii. Data Leak Prevention requirements:-

- Should have the ability to prevent data loss through SMTP, FTP, HTTP, HTTPS & IM
- Should have built in pattern database

iv. Support SSL VPN with following requirements:

- Should support at least 20 SSL VPN users with at least 10 users from day 1.
- Should support two factor authentications with LDAP, Radius and using tokens/email/SMS.
- Support for clientless or client-based VPN in Full Tunnel and Split Tunnel mode.
- Should support HTTP/HTTPS proxy, FTP, RDP, SSH, VNC, SMB service access provision through portal.
- Support on 32 bit and 64-bit OS.
- Certified by ICSA preferred.

- Support for all major browsers like Firefox/IE/Chrome etc. Java Script, Basic and Advanced Network Extensions.
- Management over GUI using HTTPS or equivalent secure mechanism, SSH and console access.
- Generate GUI based reports categorized on IP, user etc.
- The Firewall should support for TWO modes of SSL VPN:
- Web-only mode: for thin remote clients equipped with a web browser only and support web application such as: HTTP/HTTPS PROXY, FTP, SMB/CIFS, SSH, VNC, RDP
- Tunnel mode, for remote computers that run a variety of client and server applications
- The system shall provide SSL VPN tunnel mode that supports 32 and 64-bit Windows operating systems
- The proposed solution shall allow administrators to create multiple bookmarks to add to a group and make these bookmarks available for SSL-VPN users.

v. Support IPS with following requirements

- ICSA and NSS certified preferred.
- Anomaly detection and prevention up to layer 7 traffic including application type, SSL/TLS and must be applicable on any firewall policy.
- Should be able to respond to any unauthorized activity, Dos/Distributed Dos, network missuses, pre-attack probes like various types of TCP/UDP scanners etc. that originate from both inside and outside network.
- Management over GUI using HTTPS or equivalent secure mechanism, SSH and console access..
- Generate GUI based reports categorized by alerts, attackers, severity wise, protocol etc.

vi. Web content filtering

- Support web content filtering up to layer 7 traffic like HTTP, HTTPS, FTP, DNS, SMTP, IMAP, POP3 etc., with Application identification like IM, torrent etc., Allow/Deny traffic based on Src / Dst IP / Networks, Web URLs, Regular expressions, Web plug-ins such as ActiveX , Java Applet & Cookies, Regular file extensions, Spy wares, Ad wares, Time/Day.
- Should have URL database of 20 million or more for web content filtering based on categories.
- Data leak prevention for up to layer 7 traffic.
- Should provide an option to send customized Access denied message to the end user.

- The proposed solution must block HTTP or HTTPS based anonymous proxy request available on the Internet.
- Support for geographical based filtering like country level TLD etc.

vii. Gateway Antivirus

- Should provide protection against viruses, worms or any other malicious content in traffic like SMTP, POP3, IMAP, HTTP/S, FTP etc. and must be configurable/applicable on specific firewall Policy.
- Should be able to scan the file either on the basis of flow or buffering.
- Should have option to respond to virus detection in several ways like delete/quarantine the file And send notification via e-mail/SMS.
- Antivirus signature updates must be done automatically/schedule and should not require reboot of the appliance.
- Management over GUI using HTTPS or equivalent secures mechanism, SSH and console access.
- Support at least 1 million or more signatures
- The antivirus signature database of proposed solution should comprise of up to date list of signatures of virus, malwares, spyware etc.
- Support on quarantined facility on the appliance or on a remote system.
- Allow/Block/quarantine file type extensions
- Generate GUI based reports categorized by virus signatures, host/user infected etc.

viii. Logging and Reporting

- Have standard report templates
- Support scheduling of reports
- Support sending of reports by email at scheduled intervals
- Should provide standard dashboards
- Should be possible to offload logs from the logging and reporting appliance to other external storage for long term retention.
- Logging up to layer 7 traffic details (firewall policy level, denied traffic details etc.)
- Should provide log report in Web/GUI /dashboard-based format with detailed information categorized by IP/Application/Port/Protocol etc., able to forward logs to syslog server and sending schedule reports and send via email.
- Log storing facility on a local disk or on to a remote system. Logs stored on the local disk must be transferable over network(scheduled) to a remote system and must be in a

generic format like CSV, HTML, PDF, Excel(formats) or if proprietary, must provide appropriate software/hardware to generate the report.

- Support configurable option for E-mail or SMS alerts (Via SMS gateway) in case of any event trigger.
- Should provide information of real time data transfer/bandwidth utilization of individual IP/Application/protocol/port/Interface/Zone.

h) Workstations for MIS, Cashup, Audit & LSDU System (in control room)

The following minimum configuration requirements shall be met:

> Make   :   Reputed Branded

> Grade   :   Workstation

> HDD   :   based on estimated storage requirement for 6 months data (at least 1 TB in case estimated capacity is lesser) of latest RPM

> RAM   :   4 GB or latest

> Processor   :   latest Intel Processor

> Processor speed :   latest available in the market at the time of delivery to the site

> USB Port   :   4 nos.(high speed)

> NIC   :   1 Gbps On-board

> Monitor   :   Colour 18.5" TFT

> Mouse   :   Optical

> Keyboard   :   Standard

6.14   CONTRACT PERIOD

The initial period of engagement shall be 03 years from date of signing of Contract Agreement. The period of engagement may be further extendable by additional 1 year at the sole discretion of NHAI/IHMCL. In case of extension in Contract period, Service Provider shall furnish the extended PBG as per Clause under RFP.

6.15   INSURANCE

The Service Provider shall effect and maintain the insurance of ETC system at its own cost, during the Contract period, such insurances for such maximum sums as may be required under the

Applicable Laws, and such insurances as may be necessary or prudent in accordance with Good Industry Practice to cover third party claims, theft, accidental damage, vandalism, fire, flood, and Force Majeure events. The insurance document shall be submitted after the completion of implementation work at each toll plaza.

6.16 FORCE MAJEURE

a) Neither party shall be responsible to the other for any delay or failure in performance of its obligations due to any occurrence of a Force Majeure event which is beyond the control of any of the Parties, including, but without limited to, fire, flood, explosion, acts of God or any governmental body, public disorder, riots, embargoes, or strikes, acts of military authority, epidemics, strikes, lockouts or other labour disputes, insurrections, civil commotion, war, enemy actions.

b) If a Force Majeure arises, the Service Provider shall promptly notify IHMCL in writing of such condition and the cause thereof. Unless otherwise directed by IHMCL, the Service Provider shall continue to perform his obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event. The Parties shall be excused from performance of their respective obligations in whole or part as long as such Force Majeure event continues to prevent or delay such performance by the Parties. However, in case such Force Majeure event lasts for a continuous period of 60 days, either Party may terminate the Contract.

6.17 INDEMNIFICATION

a) The Service Provider shall indemnify, defend, save and hold harmless, IHMCL,NHAI and MoRTH and their officers, servants, agents (hereinafter referred to as the "IHMCL Indemnified Persons") against any direct loss, damage, claims, cost and expense of whatever kind and nature (including without limitation, legal fees, claims and expenses incurred in connection with any suit, action or proceeding or any claim asserted, as such fees and expenses are incurred), joint or several, that arise out of or are based upon any order passed by any statutory authority including Courts, tribunals or other judicial/quasi judicial authorities, on account of breach of the Service Provider's obligations under this Contract or any other related agreement or otherwise, any fraud or negligence attributable to the Service Provider or its Agents under contract or tort or on any other ground whatsoever, all eventualities of theft, dacoity, robbery, etc., except to the extent that any such suits, proceedings, actions, demands and claims has arisen due to any breach or default of this Contract on the part of IHMCL Indemnified Persons.

b) The Service Provider shall indemnify IHMCL Indemnified Persons from all legal obligations in

respect of professionals deployed by the Service Provider. IHMCL Indemnified Persons also stand absolved of any liability on account of death or injury sustained by the Service Provider's staff during the performance of their work and also for any damages or compensation due to any dispute between the Service Provider and its staff.

c) In addition to the aforesaid, the Service Provider shall fully indemnify, hold harmless and defend IHMCL Indemnified Persons from and against any and all direct loss, damage, cost and expense of whatever kind and nature (including, without limitation, legal fees and other expenses incurred in connection with any suit, action or proceeding or any claim asserted, as such fees and expenses are incurred), joint or several, that arise out of, or are based upon any demands, claims, suits or proceedings arising out of claims of infringement of any domestic or foreign patent rights, copyrights or other intellectual property, proprietary or confidentiality rights with respect to any materials, information, design or process used by the Service Provider or by the Agents in performing the Service Provider's obligations or in any way incorporated in or related to this Contract. If in any such suit, action, claim or proceedings, a temporary restraint order or preliminary injunction is granted, the Service Provider shall make every reasonable effort, by giving a bond (of the type and value as required) or otherwise, to secure the revocation or suspension of the injunction or restraint order and continue to perform its obligations hereunder. If the Service Provider is unable to secure such revocation within a reasonable time, it shall, at its own expense, and without impairing the Specifications and Standards, shall rectify such defaults and shall also be liable for damages to IHMCL for the corresponding loss during the interim period on this account.

d) The provisions of this Clause shall survive Termination.

e) The remedies provided under this Clause are not exclusive and shall not limit any rights or remedies that may otherwise be available to IHMCL Indemnified Persons at law or in equity.

6.18 TERMINATION

a) ON EXPIRY OF THE CONTRACT: Subject to the condition mentioned under Clause 6.14, the Agreement shall be deemed to have been automatically terminated on the expiry of the Contract Period unless IHMCL has exercised its option to further renew the Contract Period in accordance with the provisions, if any, of the Contract.

b) ON ACCOUNT OF FORCE MAJEURE: Either party shall have the right to terminate the Contract on account of Force Majeure, as set forth in Clause 6.16.

c) ON BREACH OF CONTRACT: IHMCL may terminate the Contract if the Service Provider causes a fundamental breach of the Contract. Fundamental breach of Contract include, but shall not be limited to, the following:

    i.   The Service Provider fails to carry out any obligation under the Contract.

    ii.   The Service Provider without providing any justifiable reason fails to commence the work in accordance with relevant clauses or, and the performance of the Service Provider is not as per requirements specified in the Contract/RFP.

    iii.   Has failed to furnish the required securities or extension thereof in terms of the Contract.

    iv.   the Service Provider stops work and the stoppage has not been authorized by IHMCL;

    v.   the Service Provider at any time during the term of the Contract becomes insolvent or makes a voluntary assignment of its assets for the benefit of creditors or is adjudged bankrupt

    vi.   If the Service Provider, in the judgment of the Employer, has engaged in the corrupt or fraudulent practice in competing for or in executing the Contract.

d) The Service Provider sub-contracts any assignment under this Agreement without approval of IHMCL.

e) Any other fundamental breaches as specified in the RFP.

f) Notwithstanding the above, IHMCL may terminate the Contract in its sole discretion by giving 30 days prior notice without assigning any reason.

g) Upon Termination (except on account of expiry of Term of this Agreement, Force Majeure), IHMCL shall be entitled at the sole discretion to:

    i.   Appropriate the entire Performance Security or part thereof as Damages; and

    ii.   Debar/Blacklist the Service Provider from participating in any other project/assignment/work of IHMCL for a period as determined by IHMCL in its sole discretion.

6.19 ARBITRATION/ RESOLUTION OF DISPUTES

a) Any dispute, difference or controversy of whatever nature howsoever arising under or out of or in relation to the Contract (including its interpretation) between the Parties, and so notified in writing by either Party to the other Party (the "Dispute") shall, in the first instance, be attempted to be resolved amicably in accordance with the conciliation procedure set forth in Clause 6.19(d).

b) The Parties agree to use their best efforts for resolving all Disputes arising under or in respect of the Contract promptly, equitably and in good faith, and further agree to provide each other with reasonable access during normal business hours to all non-privileged records, information and data pertaining to any Dispute.

c) **Mediation**

In the event of any Dispute between the Parties, either Party may call upon the Chairman in case of IHMCL or his nominee and the Managing Director/ /CEO/Director , as the case may

be, in case of the Service Provider to mediate in arriving at an amicable settlement thereof. If after expiry of 30 days of receipt of the documents in relation to the Dispute or such extended period as the Parties may agree in writing, the Dispute remains unresolved, the Parties shall attempt to resolve the dispute through conciliation and/or Arbitration under the Arbitration and Conciliation Act, 1996, in accordance with the procedure specified in Clause 6.19(d) and Clause 6.19(e).

d) Conciliation

The Parties shall attempt to select one of the experts from the list of empanelled arbitrators of the Society for Affordable Redressal of Disputes ("SAROD") as the Conciliator to mediate and assist the Parties in arriving at an amicable settlement thereof. If the Parties fail to agree on nominating a conciliator within 15 (fifteen) days or the Dispute is not resolved as evidenced by the signing of written terms of settlement within 60 (sixty) days of the notice in writing or such longer period as may be mutually agreed by the Parties, either Party may refer the Dispute to arbitration in accordance with the provisions of Clause 6.19(e).

e) Arbitration

Any Dispute which is not resolved amicably by conciliation, as provided in Clause 6.19(d), shall be finally settled by arbitration as set forth below:

i. The Dispute shall be referred to the SAROD. The dispute shall be dealt with in terms of Rules of SAROD. The detailed procedure for conducting Arbitration shall be governed by the Rules of SAROD and provisions of Page 33 of 53 Arbitration & Conciliation Act, 1996, as amended from time to time.

ii. The seat of Arbitration shall be New Delhi and the language for all documents and communications between the parties shall be English.

iii. The expenses incurred by each party in connection with the preparation, presentation, etc., of arbitral proceedings shall be borne by each party itself.

f) The arbitrators shall make a reasoned award (the "Award").

g) The Service Provider and IHMCL agree that an Award may be enforced against the Service Provider and/or IHMCL, as the case may be, and their respective assets wherever situated.

h) This Agreement and the rights and obligations of the Parties shall remain in full force and effect, pending any proceedings hereunder. Further, the Parties unconditionally acknowledge and agree that notwithstanding any Dispute between them, each Party shall proceed with the performance of its respective obligations, pending resolution of Dispute in accordance with this Clause.

6.20 Appropriation of Performance Security

a) Upon failure of the Service Provider to commence the services, for any reason whatsoever, within the period set forth in this Contract or the extended period thereunder, IHMCL shall, without prejudice to its other rights and remedies hereunder or in law, be entitled to levy Damages as per Clause 6.10 hereinabove.

b) IHMCL shall, without prejudice to its other rights and remedies hereunder or in law, be entitled to encash and appropriate the relevant amounts from the Performance Security as Damages or any other amounts payable to IHMCL under this Contract as and when such Damages or other amounts become due and payable. Upon such encashment and appropriation from the Performance Security, the Service Provider shall, within 10 days thereof, replenish, in case of partial appropriation, to its original level of the amount guaranteed under the Performance Security, and in case of appropriation of the entire Performance Security, provide a fresh Performance Security, as the case may be failing which IHMCL shall be entitled to terminate this Agreement in accordance with clause 6.18 hereof.

6.21 MISCELLANEOUS

a) Standard of Performance

The Service Provider shall undertake to perform the services with the highest standards of professional and ethical competence and integrity which are, amongst others, ESSENCE of this assignment. Keeping in view the sensitivity involved in such assignments, the personnel deployed should maintain confidentiality/integrity at all times and should work in a professional manner to protect the interest of IHMCL. The firm shall promptly replace any personnel deployed under this contract that IHMCL considered unsatisfactory

b) Representations and Warranties of the Parties

The Parties represents and warrants to the each other that:

i. It is duly organized and validly existing under the applicable laws, and has full power and authority to execute and perform its obligations under this Contract and to carry out the transactions contemplated hereby;

ii. It has taken all necessary corporate and other actions under applicable laws to authorize the execution and delivery of this Contract and to validly exercise its rights and perform its obligations under this Contract;

iii. This Contract constitutes its legal, valid and binding obligation, enforceable against it in accordance with the terms hereof, and its obligations under this Contract will be legally valid, binding and enforceable obligations against it in accordance with the terms hereof;

iv. The information furnished in the Bid and as updated on or before the date of this Contract is true and accurate in all respects as on the date of this Contract;

v. The execution, delivery and performance of this Contract will not conflict with, result in the breach of, constitute a default under, or accelerate performance required by any of the terms of its Memorandum and Articles of Association [or those of any member of the Consortium] or any Applicable Laws or any covenant, contract, agreement, arrangement, understanding, decree or order to which it is a party or by which it or any of its properties or assets is bound or affected;

vi. 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 this Contract or which individually or in the aggregate may result in any material impairment of its ability to perform any of its obligations under this Contract;

c) Waiver of immunity

Each Party unconditionally and irrevocably:

i. Agrees that the execution, delivery and performance by it of this Contract constitute commercial acts done and performed for commercial purpose;

ii. Agrees that, should any proceedings be brought against it or its assets, property or revenues in any jurisdiction in relation to this Contract or any transaction contemplated by this Contract, no immunity (whether by reason of sovereignty or otherwise) from such proceedings shall be claimed by or on behalf of the Party with respect to its assets;)

iii. Waives any right of immunity which it or its assets, property or revenues now has, may acquire in the future or which may be attributed to it in any jurisdiction; and

iv. Consents generally in respect of the enforcement of any judgment or award against it in any such proceedings to the giving of any relief or the issue of any process in any jurisdiction in connection with such proceedings (including the making, enforcement or execution against it or in respect of any assets, property or revenues whatsoever irrespective of their use or intended use of any order or judgment that may be made or given in connection therewith).

d) Waiver

i. Waiver, including partial or conditional waiver, by either Party of any default by the other Party in the observance and performance of any provision of or obligations under this Contract:

- Shall not operate or be construed as a waiver of any other or subsequent default hereof or

of other provisions of or obligations under this Contract;

- Shall not be effective unless it is in writing and executed by a duly authorised representative of the Party; and

- Shall not affect the validity or enforceability of this Contract in any manner.

ii. Neither the failure by either Party to insist on any occasion upon the performance of the terms, conditions and provisions of this Contract or any obligation there under nor time or other indulgence granted by a Party to the other Party shall be treated or deemed as waiver of such breach or acceptance of any variation or the relinquishment of any such right hereunder.

e) Liability for review of Documents

Except to the extent expressly provided in this Contract:

i. no review, comment or approval by IHMCL, any document submitted by the CService Provider nor any observation or inspection of the Services performed by the Contractor nor the failure to review, approve, comment, observe or inspect hereunder shall relieve or absolve the Contractor from its obligations, duties and liabilities under this Contract, the Applicable Laws and applicable permits; and

ii. IHMCL shall not be liable to the Service Provider by reason of any review, comment, approval, observation or inspection referred to in Sub-clause (a) above.

f) Exclusion of implied warranties etc.

This Contract expressly excludes any warranty, condition or other undertaking implied at law or by custom or otherwise arising out of any other agreement between the Parties or any representation by either Party not contained in a binding legal agreement executed by both Parties.

g) Survival

i. Termination shall:

- not relieve the Contractor or IHMCL, as the case may be, of any obligations hereunder which expressly or by implication survive Termination hereof; and

- except as otherwise provided in any provision of this Contract expressly limiting the liability of either Party, 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.

ii. All obligations surviving Termination shall only survive for a period of 3 (three) years following

the date of such Termination

h) Entire Agreement

This Contract, the RFP and the Sections hereto together constitute a complete and exclusive statement of the terms of the agreement between the Parties on the subject hereof and no amendment or modification hereto shall be valid and effective unless such modification or amendment is agreed to in writing by the Parties and duly executed by persons especially empowered in this behalf by the respective Parties. All prior written or oral understandings, offers or other communications of every kind pertaining to this Contract are abrogated and withdrawn. For the avoidance of doubt, the Parties hereto agree that any obligations of the Contractor arising from the Request for Proposals shall be deemed to form part of this Contract and treated as such.

i) Severability

  If for any reason whatever any provision of this 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 will negotiate in good faith with a view to agreeing to one or more provisions which may be substituted for such invalid, unenforceable or illegal provisions, as nearly as is practicable to such invalid, illegal or unenforceable provision. Failure to agree upon any such provisions shall not be subject to the Dispute Resolution Procedure set forth under this Contract or otherwise.

j) No partnership

This Contract shall not be interpreted or construed to create an association, joint venture or partnership between the Parties, or to impose any partnership obligation or liability upon either Party and neither Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party.

k) Third parties

This Contract is intended solely for the benefit of the Parties and their respective successors and permitted assigns and nothing in this Contract shall be construed to create any duty to, standard of care with reference to, or any liability to, any person not a Party to this Contract

l) Successors and assigns

This Contract shall be binding upon and inure to the benefit of the Parties and their respective successors and permitted assigns.

m) Notices

Any notice or other communication to be given by any Party to the other Party under or in connection with the matters contemplated by this Contract shall be in writing and shall:

- In the case of the Contractor, be given by facsimile or e-mail and by letter delivered by hand to the address given and marked for attention of the person set out below or to such other person as the Contractor may from time to time designate by notice to IHMCL; provided that notices or other communications to be given to an address outside Delhi may, if they are subsequently confirmed by sending a copy thereof by registered acknowledgement due, air mail or by courier, be sent by facsimile or e-mail to the number as the Contractor may from time to time designate by notice to IHMCL;

- In the case of IHMCL, be given by facsimile or e-mail and by letter delivered by hand and be addressed to the [•] of IHMCL with a copy delivered to the Authority Representative or such other person as IHMCL may from time to time designate by notice to the Contractor; provided that if the Contractor does not have an office in Delhi it may send such notice by facsimile or e-mail and by registered acknowledgement due, air mail or by courier; and

- Any notice or communication by a Party to the other Party given in accordance herewith shall be deemed to have been delivered when in the normal course of post it ought to have been delivered and in all other cases, it shall be deemed to have been delivered on the actual date and time of delivery; provided that in the case of facsimile or e-mail, it shall be deemed to have been delivered on the working day following the date of its delivery

n) Sub-Contracting

The Service Provider shall not sub-contract any assignment (excluding minimum civil work) to a third party. The Service Provider shall remain solely responsible for all works under this Agreement.

o) Confidentiality of the Assignment/Findings

The agency shall not, during the term of assignment and within two years after its expiration, disclose any propriety or confidential information relating to the services, this assignment or IHMCL's business or operations without prior written consent of IHMCL.

p) Modification

Modification of the terms and conditions of this Contract, including any modification of the scope of the Services, may only be made by written agreement between the Parties as the case may

be, has been obtained.

q) Language

All notices required to be given by one Party to the other Party and all other communications, Documentation and proceedings which are in any way relevant to this Contract shall be in writing and in English language.

Part VII – ANNEXURES AND FORMS

7.1 BID FORM

(In the Bidder's Letter Head)

Date: _____

From,   To,

(Name & Address of the Bidder)   Chief Operating Officer

_____   Indian Highways Management Co. Ltd.

_____   G-5 & 6, 1st Floor, NHAI Building, Sector –10,

                                               Dwarka,New Delhi 110 075

Subject: _____

Ref.: Tender No_____

Dear Sir/Madam,

After examining/reviewing the Bidding Documents for _____ etc. the receipt of which is hereby duly acknowledged, we, the undersigned, are pleased to bid to execute the whole of the Job for the item in conformity with, the said RFP Documents, including Corrigendum / Addenda Nos. _____.

We confirm that this bid is valid for a period of 180 days from the date of opening of Bid, and it shall remain binding upon us and may be accepted by any time before the expiration of that period.

If our bid is accepted, we will provide the required performance guarantee as per the tender document.

Until a final Contract is prepared and executed between us, the bid together with your written acceptance thereof in your notification of award shall constitute a binding Contract between us.

We undertake that, in competing for (and, if the award is made to us, in executing) the above Contract, we will strictly observe the laws against fraud and corruption in force in India namely "Prevention of Corruption Act 1988" and other applicable law. We understand you are not bound

to accept any Proposal you receive.

Yours sincerely,

(Signature of the Authorized signatory):

Name and Designation of the Authorized signatory: Name and Address of Bidder:

Phone, Fax & E-Mail.

7.2 UNDERTAKING

Bidders are required to resubmit the undertaking only if there have been changes in the statements asserted in the RFQ No. IHMCL/HETC/2020/01, dated 08th Jan 2020. Bidders may refer to the same RFQ for the format of the undertaking.

7.3 POWER OF ATTORNEY

Bidders are required to resubmit the Power of Attorney only if there have been changes in the statements asserted in the RFQ No. IHMCL/HETC/2020/01, dated 08th Jan 2020. Bidders may refer to the same RFQ for the format of the same.

7.4 FORM OF PERFORMANCE SECURITY (BANK GUARANTEE)

(In the Bidder's Letter Head)

To

Indian Highways Management Co. Ltd.

G-5 & 6, 1st Floor, NHAI Building, Sector –10,

Dwarka,New Delhi 110 075

WHEREAS _____ (Name and address of Contractor) (hereinafter called "the Contractor")* has undertaken, in pursuance of Contract No. _____dated _____to execute _____(Name of contract and brief description of works) (hereinafter called the "the Contract").

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with his obligations in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee; NOW THEREOF we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Contractor up to a total of _____(amount of Guarantee)**_____(in words) , such sum being payable in the types and proportions of currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____(amount of Guarantee)as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed there under or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

The liability of the Bank under this Guarantee shall not be affected by any change in the constitution of the contractor or of the Bank.

Notwithstanding anything contained herein before, our liability under this guarantee is restricted to Rs._____(Rs._____)and the guarantee shall remain valid till _____.Unless a claim or a demand in writing is served on us on or before_____ all our liability under this guarantee shall cease

Signature and seal of the Guarantor_____   In presence of

Name and Designation _____ 1._____

(Name, signature & Occupation)

Code no. of the officer(s) signing the guarantee(s)

Name of the Bank_____

Address_____ 2._____

(Name, signature & Occupation)

Date_____

Controlling Office of the Bank:

Contact Person: _____

Address   : _____

Tel. No   : _____

Note:

** An amount is to be inserted by the Guarantor, representing the percentage of the contract price specified in the Contract and denominated in Indian Rupees.

7.5 BID SECURITY DECALARATION FORM

Bid Security Declaration Form

(To be submitted by Bidder in the Letter head)

Date: _____   RFP Ref. _____

To,

Chief Operating Officer

Indian Highways Management Compancy Ltd. (IHMCL)

I/We. The undersigned, declare that:

I/We understand that, according to your conditions, bids must be supported by a Bid Securing Declaration.

I/We accept that I/We may be disqualified from bidding for any contract with you for a period of one year from the date of notification as well as may be delisted from list of empannelled SIs if I am /We are in a breach of any obligation under the bid conditions, because I/We

a)   have withdrawn/modified/amended, impairs or derogates from the tender, my/our Bid

    during the period of bid validity specified in the form of Bid; or

b)   having been notified of the acceptance of our Bid by the purchaser during the period of bid validity (i)fail or reuse to execute the contract, if required, or (ii) fail or refuse to furnish the Performance Security, in accordance with the Instructions to Bidders.

I/We understand this Bid Securing Declaration shall cease to be valid if I am/we are not the successful Bidder, upon the earlier of (i) the receipt of your notification of the name of the successful Bidder; or (ii) thirty days after the expiration of the validity of my/our Bid.

Signed: (insert signature of person whose name and capacity are shown)

in the capacity of   (insert legal capacity of person signing the Bid Securing Declaration)

Name: (insert complete name of person signing he Bid Securing Declaration)

Duly authorized to sign the bid for an on behalf of (insert complete name of Bidder)

Dated on _____ day of _____ (insert date of signing)

Corporate Seal (where appropriate)

7.6 FORMAT FOR FINANCIAL BID SUBMISSION

(To be submitted on in the excel format as available on the e-procurement portal)

It may be noted that the Capex Component of the Total Price shall not exceed 75% of the Total Price. Any financial bid where the Capex component is more than 75% of the Total Price shall be summarily rejected and not considered for evaluation.

7.7 Annexure-A

The key items to be covered within the project include the following table, Bidders may also refer to the IHMCL/HETC/2020/01 dated 08 Jan 2020 for details regarding items minimum standards and acceptable configuration of the item(s)

Lane Level			
S.No	Equipment Description	Unit	Qty
1	RFID ETC transceiver near Pay-axis – (mounted on canopy/Pole as per site feasibility)	No	(1 per lane)
2	Electronics Enclosure	No	(1 per lane)
3	Lane Controller with Industrial PC	No	(1 per lane)
4	AVC including sensors, Controller, loop and detector	Set	(1 per lane)
5	User Fare Display with mounting pole	Set	(1 per lane)
6	Automatic Barrier Gate	No	(1 per lane)
7	Overhead Lane Status light (OHLS)	No	(1 per lane)
8	Traffic light with mounting pole	Set	(1 per lane)
9	Loop with detector	Set	(2 per lane)
10	Incident Capture Camera with mounting pole	Set	(1 per lane)
11	License Plate Image Capture Camera with mounting poles	Set	(1 per lane)
12	TFT Monitor	No	(1 per lane)
13	Customized industrial grade keyboard	No	(1 per lane)
14	Thermal Receipt Printer	No	(1 per lane)
15	Violation light & Alarm (on existing pole) and Foot switch in booth	No	(1 per lane)
16	Booth CCTV camera with voice recording	No	(1 per lane)

17	Cabling/Networking/Installation/Commissioning (Lump sum)	LS	1
18	Software – Lane Level	No	(1 per lane)
19	Intercom Slave unit in booth	No	(1 per lane)
20	Lane Level UPS	No	(1 per lane)
Plaza Level			
21	ETC Server (Plaza)	No	1
22	Workstations for MIS, Cashup, Audit & LSDU System (in control room)	No	4
23	24 Port Network switch (Layer 3)	No	2
24	Software – Plaza level	Job	1
25	Broadband/Dedicated Internet Lease Line (01 Static IP) with minimum 04 Mbps link for CCH connectivity	Facility	2
26	UPS system as required for complete ETC system (10 KVA or above)	No	2
27	Network Video Recorder (NVR) for CCTV recording with 30 days of storage	No	1
28	CCTV cameras for Plaza building surveillance (server room, control room, cash room, admin)	No	4
29	Master Intercom System	No	1
30	Servo Stabilizer (60 KVA -03 phase)	No	1
31	Firewall Hardware	No	1
Operation and Maintenance per Toll Plaza			
32	Quarterly O&M Charges During DLP	Quarter	12

7.8 Annexure-B

The subsequent table captures the list of toll plaza(s) within the scope of the project

S.No	RO	PIU	Plaza Name	Total no. of Lanes
1	Lucknow- West	Bareilly	Near Sarai Sundarpur Village at Design Km 9.840	08
2	Lucknow- West	Bareilly	Near Hitouta Village at Design Km 69.700	08

7.9 Annexure-C

Technical System Specification Delivery Complaince Report

S.No	Name of Equipment	Specification Parameters	Specificaton Details	Complied as per Contract Agreement(Yes/NO)	Remarks(if any)
1	e.g. Toll Lane Controller	e.g. Type			
		e.g. Power Supply			

We do hereby confirm and undertake that equipment delivered at toll plaza comply with specific mentioned in Contract Agreement/RFP. Further, we acknowledge that in case of any devi found, we shall replace the equipment with those which are complying with specifications.

Yours sincerely,

(Signature of the Authorized signatory):

Name and Designation of the Authorized signatory:

Name and Address of Bidder:

Phone, Fax & E-mail