

# **`NOTICE INVITING EXPRESSION OF INTEREST (EOI)**

**EOI NO.: RCIL/NR\_RO/EOI/MKTG//2023-24/01 DATED  
17.07.2023**

**Expression of Interest (EOI) for “Supply Installation testing and commissioning of network infrastructure including LAN & Wireless work and integration with existing system for the customer of M/s RailTel Corporation of India Limited (CoR)”**



Issued by:

**RailTel Corporation of India Ltd**

*(A Mini-Ratna PSU under Ministry of Railways)*

Northern Region, 6<sup>th</sup> Floor, 3<sup>rd</sup> Block,

Delhi IT Park, Shastri Park, New Delhi-110053

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**Disclaimer**

RailTel Corporation of India Ltd. (herein after called the RailTel) has prepared this Expression of Interest (EOI) document solely to assist prospective bidders in making their decision of whether bid or not to bid.

While the RailTel has taken due care in the preparation of information contained herein and believes it to be accurate, neither the RailTel or any of its Authorities or Agencies nor any of their respective officers, employees, agents or advisors give any warranty or make any representations, express or implied as to the completeness or accuracy of the information contained in this document or any information which may be provided in association with it.

This information is not intended to be exhaustive and interested parties are required to make their own inquiries and do site visits that it may require in order to submit the EOI. The information is provided on the basis that it is non-binding on RailTel, any of its authorities or agencies or any of their respective officers, employees, agents or advisors. The RailTel reserves the right not to proceed with the bidding/EOI process at any stage without assigning any reasons thereof, or to alter the timetable reflected in this document or to change the process or procedure to be applied. It also reserves the right to decline to discuss the EOI further with any party submitting an EOI. No reimbursement of cost of any type will be paid to persons or entities submitting the EOI.

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## **EOI NOTICE**

RailTel Corporation of India Limited, Northern Region, 6<sup>th</sup> Floor, 3<sup>rd</sup> Block,

Delhi IT Park, Shastri Park, New Delhi-110053

**EOI Notice No: RCIL/NR RO/EOI/MKTG//2023-24/01 DATED 17.07.2023**

**RailTel Corporation of India Ltd., (here after referred to as “RailTel”) invites EOIs from RailTel’s Empaneled Partners for Selection of Implementation Partner from RailTel Empaneled Business Associate for “Supply Installation testing and commissioning of network infrastructure including LAN & Wireless work and integration with existing system for the customer of M/s RailTel Corporation of India Limited (CoR)”**

The details are as under:

### **SCHEDULE OF EVENTS**

Date of EOI Floating	17 <sup>th</sup> July, 2023 at 13:00 Hours
Last date for submission of Bids against EOI	20 <sup>th</sup> July, 2023 at 15:00 Hours
Opening of Bids received against EOI	20 <sup>th</sup> July, 2023 at 15:30 Hours
Number of copies to be submitted	Single Stage (Two Packet System)
EOI document cost inclusive tax (non-refundable)	Nil
EOI processing fee inclusive tax (non-refundable)	Rs. 8,500/-
Estimated amount of EOI	Rs. 2,89,92,406/- (Including GST)
EMD*	Rs. 2,89,924/-
Bid Submission Mode	Online on <a href="https://railtel.enivida.com">https://railtel.enivida.com</a>

Note: RailTel reserves the right to change the above dates at its discretion.

### **Earnest Money Deposit (EMD)**

- i. EMD can be received in the form of bank guarantee/online Bank Transfer/. Bank Guarantee has to be confirmed with Structured Financial Massaging System (SFMS) confirmation from the issuing Bank in favor of RailTel. In case of Fixed Deposit, lien in favor of RailTel is to be ensured.

**Bidder has the option to submit EMD of Rs. 2,89,924/- through NEFT/RTGS/BG with this EOI.)**

The EMD should be in the favor of RailTel Corporation of India Limited payable at Delhi through online bank transfer/RTGS / NEFT/BG. Partner needs to share the online payment transfer details like

UTR No. date and Bank along with the proposal.

**EMD can be submitted in any of the following form:**

- **NEFT/ RTGS:** Account Name: RailTel NR Collection Account Bank Name: Union Bank of India Branch Name: Connaught Place Delhi Account Number: 307801010917906 IFSC Code: UBIN0530786 MICR Code: 110026006 or
- **Demand Draft/BG:** In favour of RailTel Corporation of India Limited payable at New Delhi.

- ii. Offers not accompanied with EMD shall be summarily rejected.
- iii. The EMD may be forfeited if a bidder withdraws or amends its/his EoI or impairs or derogates from the EoI in any respect within the period of validity of the EoI or in the case of a successful bidder, if the bidder fails to accept the Purchase order/LOA or fails to furnish performance bank guarantee (security deposit).

Eligible Business Associates are required to direct all communications related to this Invitation for EoI document, through the following Nominated Point of Contact persons:

**Contact Details for this EOI:**

Level:1 Contact: Sh. Alok Ranjan, Sr. Manager/Marketing  
Email: alok@railtelindia.com Contact: +91-9717644178

Level:2 Contact: Sh. Hemant Yadav, DGM/Marketing  
Email: hemantyadav@railtelindia.com Contact: +91-9717644137

Level:3 Contact: Sh. Dipu Shyam, GM/Marketing  
Email: d.shyam1998@railtelindia.com Contact: +91-7007831841

Note:

1. The EOI response is invited from eligible Empaneled Partners of RailTel only.
2. All the document must be submitted with proper indexing and page no.
3. Only those bids shall be opened, which have been submitted within the stipulated time as mentioned in this EOI document.
4. Bidder has to submit technical & Financial documentation including MAF by OEM, Technical certificates, Warranty Certificate for the Technical compliance. /.
5. No exemption/relaxation is applicable to MSME/Startups.
6. Bidder may submit their response in form of duly signed and stamped and submit techno-commercial bid at the E-nivida portal through Online mode, within the stipulated date and time, as mentioned in this EOI document.
7. Only those bids shall be opened, which have been submitted within the stipulated time as mentioned in this EOI document.



## 1. About RailTel

RailTel Corporation of India Ltd (RailTel) is one of the largest neutral telecom infrastructure providers in the country owning a Pan-India optic fibre network on exclusive Right of Way (ROW) along Railway track. The OFC network presently reaches to over 4500 towns & cities of the country including several rural areas. With its Pan India high-capacity network, RailTel is working towards creating a knowledge society at various fronts. The portfolio of services provided by RailTel includes Data Centre & DR services, Tele-presence as a service, NLD services, IP-1 services, Internet and Broadband services on a pan-India basis.

Equipped with an ISO 9001, 20000-1:2011 & 27000 certification, RailTel offers a wide gamut of managed telecom services to Indian Telecom market including Managed lease lines, Tower colocation, MPLS based IP-VPN, Internet, Data Centre services, NGN based voice carriage services to Telecom Operators, Dark fibre leasing to MSOs/LCOs. The major customer segment for RailTel comprises of Enterprises, Banks, Government Institutions/Department, Educational Institutions/Universities, Telecom Service Providers, Internet Service Providers, MSOs, etc. RailTel being a “Mini Ratna (Category-I)” PSU is steaming ahead in the enterprise segment with the launch of various services coupled with capacity augmentation in its Core network.

## 2. Background of EOI

RailTel Corporation of India Ltd (hereafter referred to as ‘RailTel’) an ICT arm of Indian Railway has been in the forefront of building innovative platforms and solutions and vision to build range of Information and Communication Technology (ICT) Services for its customers.

RailTel intends to execute the work for “**Supply Installation testing and commissioning of network infrastructure including LAN & Wireless work and integration with existing system for the customer of M/s RailTel Corporation of India Limited (CoR)**” and accordingly seeks to select a suitable partner to complete the work.

The details of pertinent tender are as below:

**Tender Title: Supply Installation testing and commissioning of network infrastructure including LAN & Wireless work and integration with existing system for the customer of M/s RailTel Corporation of India Limited (CoR).**

RailTel invites EOIs from RailTel’s Empaneled Partners for the selection of suitable partner for participating in above mentioned work of our prestigious customer for the event of National Importance. The empaneled partner is expected to have excellent execution capability and good understanding of the local environment.

## 3. Scope of Work

1. Supply of IP/MPLS Router, QSFP28, Charger, Battery, Rack etc, as per Schedule of Requirement.
2. Deployment of LAN Infra (supply and installation of I/O ports, switches, CAT6 Cables, patch chords) and monitoring along with NMS for the 03 months period.
3. Deployment of Wireless Access Network of 75 Access points with supporting system (Laying of optical fiber and CAT6 cables & patch chords, Switches, Captive portal, AAA) and SMS & required Resource at DC will be provided by RCIL for the 03 months period.
4. To demonstrate the functionality of all the modules & software and hardware component as and when required by RailTel or its customer.
5. Laying Fiber in ring architecture to connect Halls with Admin block and Convention center.

Deployment of Fiber maintenance teams inside premises for Fiber maintenance. Installation of switches for catering to the need of LAN and Wireless network.

6. The bidder shall handle all matters including the configuration, operation, monitoring, management, maintenance of the proposed solution during the contract period.
7. Warranty of three year on the supply items as mentioned in the Schedule of Requirement.
8. Manpower support (Splicer, technician, Helper, L1, L2 & L3 engineers) for supporting Visitors for 03 months period as per Schedule of Requirement.
9. Scope of LAN and Wireless work is as below:
  - a) For the 3 buildings, namely, Hall No- 5, Hall No-14 and Convention Centre is as below
    - i. Hall No- 5, Media Centre Requirement:
      - 3000 Accredited media persons with 6000 personal devices (5 MBPS per device) =15 GBPS with Wi-Fi Coverage.
      - 500 Media houses (100 MBPS per live stream devices) i.e 25 GBPS
      - Approx 1000 fixed line desktops in media centre and media control room (4 MBPS per device) i.e 2 GBPS ( + 2GBPS backup)
      - Press Conference Area (1 press conference hall and 4 press briefing rooms)- Four 500 MBPS lines in each hall i.e 2 GBPS
      - Additional people support staff etc in media centre i.e 500 Mbps (additional Bandwidth)
    - ii. Hall No-14, Country offices:
      - 42 Country offices, MEA control Room, Security Control Room and few other Control Rooms. Approx 100 computers. Total no. of people around 1000-1500
      - Lan Connection to each office with Wi-Fi coverage for Mobile
    - iii. Convention Centre: Lounge may have around 800-1000 people and Summit Room may have 120 people. Adequate coverage to complete convention centre on Wi-Fi.

#### 4. Partner Selection: -

Interested partners may note that this is a Single stage Two Packet Bid. Financial bids will be opened for those bidders who have are eligible as per EoI eligibility criteria.

#### 4.1 Technical Bid contains following :-

- (i) Eligibility Criteria: -

S.No.	Type	Description	Document Required
1	Existence/ Origin	The company must be registered in India.	Certificate of Incorporation

S.No.	Type	Description	Document Required
2	General	The company must have: I. valid PAN card. II. Been registered with GST. III. has paid ITR for last 3 financial year ending 31 <sup>st</sup> March 2023.	I. Copy of PAN Card. II. Copy of GST registration certificate. III. Copy of ITR filed.
3	Turnover	The bidder must have cumulative turnover atleast 150% of the EOI value in the last three financial year ending 31 <sup>st</sup> Mar,2023 and upto the date of inviting of EOI.	Balance Sheet & CA certificate
4	Net Worth	The bidder must have positive net worth in last 3 FY's ending 31 <sup>st</sup> March 2022.	Balance Sheet & CA certificate
5	Experience	<p>The bidder must have executed similar work in last 7 years ending last day of month previous to the one in which EOI is invited.</p> <p>1. One similar work of not less than 60% of the Value of EOI.</p> <p>OR</p> <p>2. Two similar works each of not less than 40% of the Value of EOI.</p> <p>OR</p> <p>3. Three similar works each of not less than 30% of the Value of EOI.</p> <p>of estimated value of contract.</p> <p><b>Definition of similar work:</b> Works entailing completion of Supply, Installation, Testing and Commissioning of a project in the field of NOC/SOC/Security Surveillance/IT/ICT/Telecom for any Government department or Public Sector Units or public listed companies.</p> <p><b>Note:</b> Ongoing works will be considered for value of completed work (minimum 70% work completion) certified by PO issuing authority / customer mentioning completed work value on the certificate along with satisfactory completion certificate for work completed so far. <b>It shall be additional to above mentioned clause.</b></p>	<p>Copy of Purchase/ Work Order &amp; completion certificate issued by customer / PO issuing authority.</p> <p>The bidder must provide details of a personnel for verification purpose at PO/ certificate issuing organization clearly mentioning name of client, designation, contact number and mail ID on bidder's letter head.</p> <p><b>For ongoing works:</b> Ongoing works will be considered for value of completed work (minimum 70% work completion) certified by PO issuing authority / customer mentioning completed work value on the certificate along with satisfactory completion certificate for work completed so far.</p>
6	Empanelment	Bidder must be empaneled with RailTel as business associate.	Copy of Empanelment letter and Empanelment PBG submitted, if any.

### **Evaluation of offer**

- (a) During evaluation of offer, if required RailTel may ask clarification from the bidder.
- (b) Additional features offered by the bidder, over and above the ones asked for in the tender documents, shall not be considered for evaluation of bids.
- (c) The bidder should make available the offered products, if desired during technical evaluation of offered equipment for testing and benchmarking at any testing facility approved by RailTel.
- (d) The bidders should quote for all items & the offer will be evaluated in totality. The bidders should indicate brand name, type/model number of the products offered. Optional items (if any) will not be considered for evaluation of offers. The equipment and software should be supplied as per Technical Specifications given in EoI.
- (e) Inter se position of the offers will be determined on total cost which will include basic rate, custom duty, CGST, SGST, IGST, UTGST, freight, insurance and any other charge or cost quoted by the tenderer, including GST payable, on reverse charge by RailTel.

#### (ii) Compliance Requirements for Interested Bidders: -

- (a) The interested bidder should be an **Empaneled Partner** with RailTel on the last date of bid submission of EOI & has to provide relevant documents to qualify for this EOI.
- (b) The interested bidder should submit **Earnest Money Deposit (EMD)** if applicable, in the format as mentioned in this EOI document along with the bid.
- (c) The bid should be duly signed and submitted by Authorized Signatory. The bidder has to submit notarized of non-judicial stamp paper of appropriate value Power of Attorney having authorized signatory's nomination along with board resolution in favour of **power of attorney**.
- (d) Selected partner should not submit directly or indirectly any techno-commercial solution/association with any other Organization once selected in this EOI (before and after submission of proposal to prospective customer Organization by RailTel).**
- (e) Bidders to provide the undertaking from the respective OEM for supply of material within 2 weeks from the date of confirmed PO.
- (f) Delivery timelines for supply providing end to end services by the selected bidder is 3 weeks from the date of issuance of work order.
- (g) Selected partner should not submit directly or indirectly any techno-commercial solution/association with any other Organization once selected in this EOI (before and after submission of proposal to prospective customer Organization by RailTel).**
- (h) The interested bidder should not be seeking / extending / exploring similar arrangements / engagements with any other organization except RailTel
- (i) Transfer and Sub-letting: The Business Associate has no right to give, bargain, sell, assign or sublet

or otherwise dispose-off the Contract or any part thereof, as well as to give or to let a third party take benefit or advantage of the present Contract or any part thereof.

- (j) The selected bidder will have to accept all Terms & Conditions of the EOI..
  - (k) Terms and conditions of EOI document will prevail in case of any conflict between T&C of RailTel and the bidder.
  - (l) OEM considered by SI for this project have to mandatorily comply all the eligibility & technical criteria/compliance with RailTel's EOI and corrigendum(s) issued thereof.
  - (m) Bidder has to agree to comply with all OEM technical & Financial documentation including MAF, Technical certificates/others as per RailTel's EOI.
  - (n) Bidder will submit MAF of major items of the proposed solution and other documents required in in favour of RailTel against the proposed products.
  - (o) Bidder may check the price/commercial bid as per BOQ and if found any discrepancy, may be brought in the notice of RCIL immediately and may modify their financial bid format .
  - (p) The bidder has to submit Annexure 7 with proposed OEM Name & Make and Model.
  - (q) The bidder has to mandatorily submit notarized Annexure-09 on non-judicial stamp paper of Rs. 100, else bid shall be summarily rejected.
  - (r) The interested bidder should be in compliance to insertion of Rule 144(xi) in the GFR, 2017 vide office OM no. 6/18/2019-PPD dated 23-July-2020 issued by Ministry of Finance, Government of India, including revisions.
  - (s) The interested bidder should submit annexure-2 for maintaining of 'Local Content Compliance' certificate mentioning the 'Local Content Percentage' duly signed and stamped by statutory auditor/ cost auditor/ authorized signatory of the interested partner.
  - (t) The interested bidder should not be backlisted by any State / Central Government Ministry / Department / Corporation / Autonomous Body on the last date of submission of EOI. There should not be any ongoing or past, arbitration case(s) between 'RailTel or Organizations under Indian Railways' and 'Interested Bidder' on the last date of submission of EOI.
  - (u) The interested bidder shall not have a conflict of interest with one or more bidding parties. Participation of interested bidder(s) with a conflict-of-interest situation will result in the disqualification of all bids in which it is involved. A bidder may be in a conflict of interest with one or more parties if including but not limited to: (1) Have controlling shareholders as his/her family members viz. spouse, son, daughter, father, mother or brother etc. in common or; (2) Have a relationship with each other directly or through common third parties that puts them in a position to have access to information about or influence on the bid of another interested partner.
  - (v) The interested partner should have a valid Goods and Service Tax Identification Number (GSTIN), as on the last date of submission of EOI.
  - (w) The interested bidder should submit duly signed and stamped EOI cover letter as per the format mentioned at Annexure-01 of this EOI document, as unconditional submission of meeting the clauses mentioned above, from Clause (a) to (u).
- (iii) Prospective bidder's bid evaluation will be done based on above mentioned documents.
- (iv) Based on evaluation of outcome against 4.1 (i) complying eligibility criterion & 4.1 (ii) compliances requirement, whoever may qualify may be treated as Technically qualified partner.

#### **4.2 Financial Bid:**

For the opened bid as per outcome of Clause 4.2 above, the bidder will be selected on the lowest quote (L-1) basis for complete 'Scope of Work' as mentioned in the EOI document and documents of technical specifications subject to the respective overall bid is in compliance to the requirements of this EOI.

The so selected partner will be termed as 'Commercially Suitable Partner (hereafter referred to as 'CSP')'. It is re-mentioned that the final selection of CSP will be on the L-1 basis only. Further, RailTel reserves the right to have negotiation with the CSP.

Annexure no.6 & 8 will be signed by the successful CSP.

#### **5. Other Terms & Conditions**

- 5.1 As of now, EoI response from interested partners is invited considering that the selected partner will be responsible for delivering of complete 'Scope of Work' as mentioned in the EOI document and subsequent corrigendum. However, RailTel at its discern, may take- up a certain portion / percentage of 'Scope of Work' by communicating to the CSP at any point of time during the engagement period. (The day at which 'CSP' is declared, will mark the start of engagement period.
- 5.2 In case, RailTel receives the work order then the engagement period will get auto-extended to the period RailTel serves Customer for the concerned work, unless terminated earlier by RailTel as per terms and conditions mentioned in this EoI document). In this scenario, commercial engagement with the CSP will be for that portion / percentage only, which has not been taken by RailTel. Accordingly, resultant value of work will be derived on the basis of negotiated (in case) commercial bid of the CSP.
- 5.3 RailTel on the basis of inputs / factors available to it from various resources, past experiences of its ICT projects and on the basis of negotiated (in case) commercial bid of the CSP, will endeavour to place best techno-commercial bid in response to the EOI..

#### **6. Proposal Preparation and Submission Cost**

The interested partner is responsible for all costs incurred in connection with participation in this EOI process, including, but not limited to, cost incurred in conduct of informative and other diligence activities, participation in meetings/discussions/presentations, preparation of proposal, in providing any additional information required by RailTel to facilitate the evaluation process or all such activities related to the bid process. RailTel will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process. This EOI document does not commit to award a contract or to engage in negotiations.

#### **7. Amendment to EOI Document**

At any time prior to the deadline for submission of bids, RailTel, may, for any reason can modify the EOI document by an amendment. All the amendments made in the document would be informed by displaying on RailTel's ([www.railtelindia.com](http://www.railtelindia.com)) website only. The interested bidders are advised to visit the RailTel website on regular basis for checking necessary updates. RailTel also reserves the rights to amend the dates mentioned in this EOI for bid process. RailTel may, at its discretion, extend the last date for receipt of EoI response.

#### **8. Bid Validity Period**

- 8.1 Bid of Interested partners shall remain valid for the period of 30 days from the last date of submission of EOI, as mentioned in this EOI document.

8.2 RailTel may request for an extension of the period of validity. The validity of the 'EMD', should also be suitably extended if called upon to do so by RailTel. The request and the responses thereto shall be made in writing through e-mail communication only. Further, whenever the bid validity extension is submitted by the interested partner, it should be ensured by interested partner that their PBG related to the empanelment should have minimum validity of 90 days from the last date of extended bid validity period.

## **9. Right to Terminate the Process**

RailTel may terminate the EOI process at any time without assigning any reason. RailTel makes no commitments, express or implied, that this process will result in a business transaction with anyone. This EOI does not constitute an offer by RailTel. The interested bidder's participation in this process may result in RailTel selecting the CSP to engage in further discussions and negotiations toward execution of a contract. The commencement of such negotiations does not, however, signify a commitment by RailTel to execute a contract or to continue negotiations. RailTel may terminate negotiations at any time without assigning any reason.

## **10. Language of Bid**

The bid prepared by the interested partner and all correspondence and documents relating to the bids exchanged by the bidder and RailTel, shall be written in English Language, provided that any printed literature furnished by the Bidder in another language shall be accompanied by an English translation in which case, for purposes of interpretation of the bid, the English translation shall govern. If any supporting documents submitted are in any language other than English, translation of the same in English language is to be duly attested by the Authorised Signatory of the interested partner.

## **11. Submission of Bid**

- 11.1 The interested bidder should take into account any Corrigendum to this EOI document that may have been published before submitting their EOI response. The bid is to be submitted in the mode as mentioned in this EOI document. EOI response submitted in any other mode will not be entertained.
- 11.2 Interested bidders in their own interest are advised to submit the EOI response well in time before the last date and hence to avoid any inconvenience at the last moment.
- 11.3 An Organization / Interested Bidder can submit only 'One EOI Response'. Submission of multiple EOI Response by interested bidder(s) may lead to rejection of all of its bid.

## **12. Rights to Accept / Reject any or all EOI Response**

RailTel reserves the right to accept or reject any EOI Response, and to annul the bidding process and reject all Bids at any time prior to award of the Contract, without thereby incurring any liability to the affected interested bidder(s), or any obligation to inform the affected Bidders of the ground for RailTel's action.

## **13. Payment Terms**

- 13.1 Payment terms for supply items i.e. SoR item no. 1 to 7 payment will be released after supply of items and on submission of the following documents:
  - i) Tax Invoice
  - ii) Delivery Challan

- iii) Packing list.
- iv) Consignee receipt
- v) Warranty certificate of OEM
- vi) Insurance certificate for transit insurance
- vii) Contractor's All Risk Insurance Policy
- viii) Inspection certificate.

13.2 Payment will be on '**back-to-back**' basis and as per the payment terms and condition of the work order placed by RailTel's Customer for SOR item 8 to 10 and on submission of the following documents

- i) Tax Invoice
- ii) Delivery Challan
- iii) Packing list.
- iv) Consignee receipt
- v) Warranty certificate of OEM
- vi) Insurance certificate for transit insurance
- vii) Contractor's All Risk Insurance Policy

Payment will be released after receiving the invoice for the work / services and after RailTel has received the payment from the Customer for the same work / services. Any deduction /Penalties levied by Customer on invoices of RailTel will be carried **back-to-back** and will be deducted from CSP's invoices, subject to the cause to deduction / penalty is due to deviation in terms and conditions of service standards by the CSP.

13.3 No advance payment will be given to selected BA if Railtel gets the same from end customer.

#### 14. Performance Bank Guarantee (PBG)

**14.1** In case of successful award of work by the customer and subsequent engagements with CSP, The CSP shall at its own expense, deposit with department, within fifteen (15) days of the notification of award (done through issuance of the Purchase Order / Work Order etc.) and communicated through email, an unconditional and irrevocable Performance Bank Guarantee (PBG) from a Nationalized/ Commercial Scheduled Indian Bank as per the format enclosed in this EOI, payable on demand, for the due performance and fulfilment of the contract by the CSP. This PBG will be for an amount of 5 (%) of the contract value. The quantum of this 'percentage (%)' will be equal to the PBG % as asked by Customer from RailTel. All charges whatsoever such as premium, commission, etc. with respect to the PBG shall be borne by the CSP. Besides, if the total BG amount comes upto ₹05 Lakhs, then same may be deposited through DD/RTGS/NEFT. Along with submission of PBG, CSP needs to submit PBG issuing bank's SFMS report. The SFMS report is also to be submitted in case of renewal / extension of PBG.

14.2 The PBG should have validity for a period of 15 months . The PBG may be discharged / returned by RailTel upon being satisfied that there has been no due performance of the obligations of the CSP under the contract. However, no interest shall be payable on the PBG. In the event, CSP being unable to service the contract for whatsoever reason, RailTel would invoke the PBG at its discern. Notwithstanding and without prejudice to any rights whatsoever of RailTel under the contract in the matter, the proceeds of the PBG shall be payable to RailTel as compensation for any loss resulting from the CSP's failure to complete its obligations under the contract. RailTel shall notify the CSP in writing of the exercise of its right to receive such compensation within 14 days, indicating the contractual obligation(s) for which the CSP is in default.

**14.3** RailTel shall also be entitled to make recoveries from the CSP's bills, PBG or from any other amount



due to him, the equivalent value of any payment made to him due to inadvertence, error, collusion, misconstruction or misstatement.

**14.4** If the service period gets extended by virtue of extension of same by Customer, PBG should also be extended accordingly.

**14.5** During the contract period, RailTel may issue Purchase Order(s) for the additional services ordered by Customer (in case) to RailTel. In such scenario(s) also, Clause No. 14.1. to Clause No. 14.4. are to be followed by the CSP.

**14.6** In case the Customer has sought PBG of the contract in the terms of Indemnity Bond from RailTel, the selected bidder has to provide the equivalent value PBG from scheduled Bank to RailTel. No Indemnity Bond from Selected Bidder will be accepted in lieu of PBG from Scheduled Bank.

**14.7** In case Customer has sought any other types of PBG in this contract at present or in future, same remain applicable on selected Bidder. The Said PBG will be issued by Selected Bidder from Scheduled Bank favoring RailTel Corporation of India Limited. No Indemnity Bond in lieu of such PBG will be accepted by RailTel.

**14.8** If, Customer ask for submission for value more than 03%, same also needs to be submitted by the selected BA.

## **15 Details of Commercial Bid / Financial Bid**

**15.1** Interested partner should submit commercial bid strictly as per the format mentioned under the EOI document or subsequent corrigendum (if any).

**15.2** The commercial bid should clearly bring out the cost of the services with detailed break-up of taxes.

**15.3** The rates mentioned in the commercial bid of the CSP will form basis of commercial transaction between RailTel and bidder.

**15.4** The quantity of 'Line Items' may vary at the time of placing of Purchase Order during the Contract Period, as communicated by Customer (in case) to RailTel. In such scenarios, the 'Per Unit' cost will be considered to arrive on contractual amount between RailTel and CSP.

**15.5** It is also possible that Customer may surrender / increase, some or all of the quantities of service items ordered to RailTel during the contract period and accordingly the contractual amount between RailTel and CSP shall be considered, at sole discretion of RailTel.

**15.6** It is also possible that during the contract period, Customer may raise Purchase Order to RailTel for the line items (and respective quantities) which are not mentioned in this current EOI. In such scenario, RailTel at its sole discretion, may extend the scope of the contract with CSP by placing order, **on back-to-back basis**.

**15.7** In addition to the Payment Terms, all other Contractual Terms will also be on '**back-to-back**' basis between RailTel and CSP. MAF (Manufacturer's Authorization Form) in the name of RailTel, whose product is mentioned in commercial bid format, should also be ensured by the partner.

**15.8** The contract duration shall be same as of Customer contract duration with RailTel until otherwise terminated

earlier. **Indicative contract duration is for 3 months**, unless otherwise terminated earlier, as mentioned in this EOI document. The contract duration can be renewed /extended by RailTel at its discern, in case Customer extends / renews services with RailTel by virtue of extending / renewing / new issuance of one or more Purchase Order(s) placed by Customer to RailTel.

15.9 All CoR (Customer of RCIL) terms and conditions will supersede this EOI terms and conditions. All observations and interpretations to be governed by CoR on selected bidder and RCIL. All terms and conditions of CoR will be applicable on back to back basis on selected BA.

16.0 All the Hardware, licenses of Firmware and Software of the offered solution under this EoI would be registered in favor of M/s RCIL or its nominated organization, which shall be informed to the successful bidder at the time of placement of PO.

### **17. Restrictions on ‘Transfer of Agreement’**

The CSP shall not assign or transfer its right in any manner whatsoever under the contract / agreement to a third party or enter into any agreement for sub-contracting and/or partnership relating to any subject matter of the contract / agreement to any third party either in whole or in any part i.e., no sub-contracting / partnership / third party interest shall be created.

### **18. Suspension, Revocation or Termination of Contract / Agreement**

18.1 RailTel reserves the right to suspend the operation of the contract / agreement, at any time, due to change in its own license conditions or upon directions from the competent government authorities, in such a situation, RailTel shall not be responsible for any damage or loss caused or arisen out of aforesaid action. Further, the suspension of the contract / agreement will not be a cause or ground for extension of the period of the contract / agreement and suspension period will be taken as period spent. During this period, no charges for the use of the facility of the CSP shall be payable by RailTel.

18.2 RailTel may, without prejudice to any other remedy available for the breach of any conditions of agreements, by a written notice of Three (03) month, terminate/or suspend the contract / agreement under any of the following circumstances:

- a) The CSP failing to perform any obligation(s) under the contract / agreement.
- b) The CSP failing to rectify, within the time prescribed, any defect as may be pointed out by RailTel.
- c) Non adherence to Service Level Agreements (SLA) which RailTel has committed to Customer for the pertinent tender.
- d) The CSP going into liquidation or ordered to be wound up by competent authority.
- e) If the CSP is wound up or goes into liquidation, it shall immediately (and not more than a week) inform about occurrence of such event to RailTel in writing. In that case, the written notice can be modified by RailTel as deemed fit under the circumstances. RailTel may either decide to issue a termination notice or to continue the agreement by suitably modifying the conditions, as deemed fit under the circumstances.
- f) It shall be the responsibility of the CSP to maintain the agreed Quality of Service, even during

the period when the notice for surrender/termination of contract / agreement is pending and if the Quality of Performance of Solution is not maintained, during the said notice period, it shall be treated as material breachliable for termination at risk and consequent of which CSP's PBG related to contract / agreement along with PBG related to the Empanelment Agreement with RailTel shall be forfeited, without any further notice.

- g) Breach of non-fulfillment of contract / agreement conditions may come to the notice of RailTel through complaints or as a result of the regular monitoring. Wherever considered appropriate RailTel may conduct an inquiry either Suo- moto or on complaint to determine whether there has been any breach in compliance of the terms and conditions of the agreement by the successful bidder or not. The CSP shall extend all reasonable facilities and shall endeavor to remove the hindrance of every type upon such inquiry. In case of default by the CSP in successful implementation and thereafter maintenance of services / works as per the conditions mentioned in this EOI document, the PBG(s) of CSPavailable with RailTel can be forfeited.

## **19. Dispute Settlement**

19.1 In case of any dispute concerning the contract / agreement, both the CSP and RailTel shall try to settle the same amicably through mutual discussion / negotiations. Any unsettled dispute shall be settled in terms of Indian Act of Arbitration and Conciliation 1996 or any amendment thereof. Place of Arbitration shall be New Delhi.

19.2 The arbitral tribunal shall consist of the Sole Arbitrator. The arbitrator shall be appointed by the Chairman & Managing Director (CMD) of RailTel Corporation of India Ltd.

19.3 All arbitration proceedings shall be conducted in English.

## **20. Governing Laws**

The contract shall be interpreted in accordance with the laws of India. The courtsat New Delhi shall have exclusive jurisdiction to entertain and try all matters arising out of thiscontract.

## **21. Statutory Compliance**

21.1 During the tenure of this Contract nothing shall be done by CSP in contravention of any law, act and/ or rules/regulations, there under or any amendment thereof and shall keep RailTel indemnified in this regard.

21.2 The Bidder shall comply and ensure strict compliance by his/her employees andagents of all applicable Central, State, Municipal and Local laws and Regulations and undertaketo indemnify RailTel, from and against all levies, damages, penalties and payments whatsoeveras may be imposed by reason of any breach or violation of any law, rule, including but not limited to the claims against RailTel or its Customer under Employees Compensation Act, 1923, The Employees Provident Fund and Miscellaneous Provisions Act, 1952, The Contract Labour (Abolition and Regulation) Act 1970, Factories Act, 1948, Minimum Wages Act and Regulations, Shop and Establishment Act and Labour Laws which would be amended/modifiedor any new act if it comes in force whatsoever, and all actions claim and demand arising therefrom and/or related thereto.

## **22. Intellectual Property Rights**

22.1 Each party i.e., RailTel and CSP, acknowledges and agree that the other party retains exclusive ownership and rights in its trade secrets, inventions, copyrights, and other intellectual property and

any hardware provided by such party in relation to this contract / agreement.

- 22.2 Neither party shall remove or misuse or modify any copyright, trademark or any other proprietary right of the other party which is known by virtue of this EOI and subsequent contract in any circumstances.

## **23 Severability**

In the event any provision of this EOI and subsequent contract with CSP is held invalid or not enforceable by a court of competent jurisdiction, such provision shall be considered separately and such determination shall not invalidate the other provisions of the contract and Annexure/s which will be in full force and effect.

## **24 Force Majeure**

- 24.1 If during the contract period, the performance in whole or in part, by other party, of any obligation under this is prevented or delayed by reason beyond the control of the parties including war, hostility, acts of the public enemy, civic commotion, sabotage, Act of State or direction from Statutory Authority, explosion, epidemic, quarantine restriction, strikes and lockouts (as are not limited to the establishments and facilities of the parties), fire, floods, earthquakes, natural calamities or any act of GOD (hereinafter referred to as EVENT), provided notice of happenings of any such event is given by the affected party to the other, within twenty one (21) days from the date of occurrence thereof, neither party shall have any such claims for damages against the other, in respect of such non-performance or delay in performance. Provided service under this contract shall be resumed as soon as practicable, after such EVENT comes to an end or ceases to exist.
- 24.2 In the event of a Force Majeure, the affected party will be excused from performance during the existence of the force Majeure. When a Force Majeure occurs, the affected party after notifying the other party will attempt to mitigate the effect of the Force Majeure as much as possible. If such delaying cause shall continue for more than sixty (60) days from the date of the notice stated above, the party injured by the inability of the other to perform shall have the right, upon written notice of thirty (30) days to the other party, to terminate this contract. Neither party shall be liable for any breach, claims, and damages against the other, in respect of non-performance or delay in performance as a result of Force Majeure leading to such termination.

## **25 Indemnity**

- 25.1 The CSP agrees to indemnify and hold harmless RailTel, its officers, employees and agents (each an "Indemnified Party") promptly upon demand at any time and from time to time, from and against any and all losses, claims, damages, liabilities, costs (including reasonable attorney's fees and disbursements) and expenses (collectively, "Losses") to which the Indemnified party may become subject, in so far as such losses directly arise out of, in any way relate to, or result from:
- 25.2 Any mis-statement or any breach of any representation or warranty made by CSP or
- 25.2.1 The failure by the CSP to fulfill any covenant or condition contained in this contract by any employee or agent of the Bidder. Against all losses or damages arising from claims by third Parties that any Deliverables (or the access, use or other rights thereto), created by CSP pursuant to this contract, or any equipment, software, information, methods of operation or other intellectual property created by CSP pursuant to this contract, or the SLAs (i) infringes a copyright, trade mark, trade design enforceable in India, (ii) infringes a patent issues in India, or (iii) constitutes misappropriation or unlawful disclosure or use of another Party's trade secrets under the laws of India (collectively, "Infringement Claims"); or
- 25.2.2 Any compensation / claim or proceeding by any third party against RailTel arising out of any act, deed or

omission by the CSP or

25.2.3 Claim filed by a workman or employee engaged by the CSP for carrying out work related to this agreement. For the avoidance of doubt, indemnification of Losses pursuant to this section shall be made in an amount or amounts sufficient to restore each of the Indemnified Party to the financial position it would have been in had the losses not occurred.

25.3 Any payment made under this contract to an indemnity or claim for breach of any provision of this contract shall include applicable taxes.

## **26 Limitation of Liability towards RailTel**

26.1 The CSP liability under the contract shall be determined as per the Law in force for the time being. The CSP shall be liable to RailTel for loss or damage occurred or caused or likely to occur on account of any act of omission on the part of the CSP and its employees (direct or indirect), including loss caused to RailTel on account of defect in goods or deficiency in services on the part of CSP or his agents or any person / persons claiming through under said CSP, However, such liability of the CSP shall not exceed the total value of the contract.

26.2 This limit shall not apply to damages for bodily injury (including death) and damage to real estate property and tangible personal property for which the CSP is legally liable.

## **27 Confidentiality cum Non-disclosure**

27.1 The Receiving Party agrees that it will not disclose to third party/parties any information belonging to the Disclosing Party which is provided to it by the Disclosing Party before, during and after the execution of this contract. All such information belonging to the Disclosing Party and provided to the Receiving Party shall be considered Confidential Information. Confidential Information includes prices, quotations, negotiated issues made before the execution of the contract, design and other related information. All information provided by Disclosing Party to the Receiving Party shall be considered confidential even if it is not conspicuously marked as confidential.

27.2 Notwithstanding the foregoing, neither Party shall have any obligations regarding non-use or non-disclosure of any confidential information which:

27.2.1 Is already known to the receiving Party at the time of disclosure:

27.2.2 Is or becomes part of the public domain without violation of the terms hereof;

27.2.3 Is shown by conclusive documentary evidence to have been developed independently by the Receiving Party without violation of the terms hereof:

27.2.4 Is received from a third party without similar restrictions and without violation of this or a similar contract.

27.3 The terms and conditions of this contract, and all annexes, attachments and amendments hereto and thereto shall be considered Confidential Information. No news release, public announcement, advertisement or publicity concerning this contract and/or its contents herein shall be made by either Party without the prior written approval of the other Party unless such disclosure or public announcement is

required by applicable law.

27.4 Notwithstanding the above, information may be transmitted to governmental, judicial, regulatory authorities, if so, required by law. In such an event, the Disclosing Party shall inform the other party about the same within 30 (thirty) Days of such disclosure.

27.5 This Confidentiality and Non- Disclosure clause shall survive even after the expiry or termination of this contract.

## **28 Assignment**

Neither this contract nor any of the rights, interests or obligations under this contract shall be assigned, in whole or in part, by operation of law or otherwise by any of the Parties without the prior written consent of each of the other Parties. Any purported assignment without such consent shall be void. Subject to the preceding sentences, this contract will be binding upon, inure to the benefit of, and be enforceable by, the Parties and their respective successors and assigns.

## **29 Insurance**

The CSP agrees to take insurances to cover all the elements of the project under this EOI including but not limited to Manpower, Hardware, Software etc. as per tender specified terms.

## **30 Exit Management**

### **30.1 Exit Management Purpose**

30.1.1 This clause sets out the provision, which will apply during Exit Management period. The parties shall ensure that their respective associated entities carry out their respective obligation set out in this Exit Management Clause.

30.1.2 The exit management period starts, in case of expiry of contract, at least 03 months prior to the date when the contract comes to an end or in case of termination contract, on the date when the notice of termination is sent to the CSP. The exit management period ends on the date agreed upon by RailTel or Three (03) months after the beginning of the exit management period, whichever is earlier.

30.2 Confidential Information, Security and Data: CSP will promptly, on the commencement of the exit management period, supply to RailTel or its nominated agencies the following (if asked by RailTel in writing):

30.2.1 Information relating to the current services rendered and performance data relating to the performance of the services; documentation relating to the project, project's customized source code (if any); any other data and confidential information created as part of or is related to this contract;

30.2.2 All other information (including but not limited to documents, records and agreements) relating to the services reasonably necessary to enable RailTel and its nominated agencies, or its replacing vendor to carry out due diligence in order to transition the provision of the services to RailTel or its nominated agencies, or its replacing vendor (as the case may be).

30.3 Employees : Promptly on reasonable request at any time during the exit management period, the CSP shall, subject to applicable laws, restraints and regulations (including in particular those relating to privacy) provide RailTel a list of all employees (with job titles and communication address), dedicated to providing the services at the commencement of the exit management period; To the extent that any Transfer Regulation does not apply to any employee of the CSP, RailTel or the replacing vendor may make an offer of contract for services to such employees of the CSP and the CSP shall not enforce or impose any contractual

provision that would prevent any such employee from being hired by RailTel or any replacing vendor.

30.4 Rights of Access to Information: Besides during the contract period, during the exit management period also, if asked by RailTel in writing, the CSP shall be obliged to provide an access of information to RailTel and / or any Replacing Vendor in order to make an inventory of the Assets (including hardware / software / active / passive), documentations, manuals, catalogues, archive data, Live data, policy documents or any other related material.

**Note:** RailTel at its sole discern may not enforce any or all clauses / sub-clauses under the 'Exit Management' clause due to administrative convenience or any other reasons as deemed fit.

### **31 Waiver**

Except as otherwise specifically provided in the contract, no failure to exercise or delay in exercising, any right, power or privilege set forth in the contract will operate as a waiver of any right, power or privilege.

### **32 Changes in Contract Agreement**

No modification of the terms and conditions of the Contract Agreement shall be made except by written amendments signed by the both CSP and RailTel.

**EOI COVER LETTER**  
(On Organization Letter Head)

EoI Ref No.: RCIL/NR\_RO/EOI/MKTG//2023-24/01 DATED 17.07.2023

Date:

To,

General Manager (Mktg),  
RailTel Corporation of India Limited, Northern Region,  
6th Floor, 3rd Block, Delhi IT Park, Shastri Park, New Delhi-110053

Dear Sir/Madam,

1. I, the undersigned, on behalf of M/s ....., having carefully examined the referred EOI offer to participate in the same, in full conformity with the said EOI and all the terms and conditions thereof, including corrigendum issued till last date of submission of EOI. It is also undertaken and submitted that we are in abidance of all Clauses 4 of EOI.
2. I agree to abide by this Proposal, consisting of this letter, our Pre-qualification, Technical and Commercial Proposals, for a period of 30 days from the date fixed for submission of Proposals as stipulated in the EOI and modifications resulting from contract negotiations, and it shall remain binding upon us and may be accepted by you at any time before the expiration of that period.
3. I acknowledge that the Authority will be relying on the information provided in the Proposal and the documents accompanying the Proposal for selection of the Commercially Suitable Partner (CSP) for the aforesaid Service, and we certify that all information provided therein is true and correct; nothing has been omitted which renders such information misleading; and all documents accompanying the Proposal are true copies of their respective originals.
4. I undertake, if our Bid is accepted, to commence our services as per scope of work as specified in the contract document.
5. Until a formal Purchase Order or Contract is prepared and executed, this Bid and supplement / additional documents submitted (if any), together with your written acceptance thereof in your notification of award shall constitute a binding contract between us.
6. I hereby undertake and give unconditional acceptance for compliance of all terms & conditions of EOI issued vide ref no. .... dated ..... on https://..... portal, against this EOI based customer's requirement.
7. I hereby undertake that there will be no deviation from the Terms and Conditions of EOI issued vide ref no. .... dated ..... on https://.....

Signature of Authorised Signatory Name

Designation



**Local Content Compliance**  
(On Organization Letter Head)

EoI Ref No.: RCIL/NR\_RO/EOI/MKTG//2023-24/01 DATED 17.07.2023

Date:

General Manager (Mktg),  
RailTel Corporation of India Limited, Northern Region,  
6th Floor, 3rd Block, Delhi IT Park, Shastri Park, New Delhi-110053

Dear Sir/Ma'am,

I, the undersigned, on behalf of M/s ..... , hereby submits that our technical solution for the 'Scope of Work' mentioned under the EoI document is in compliance of local content requirement and makes us equivalent to 'Class-I local supplier' / 'Class-II local supplier' (mention whichever is applicable) for the EoI under reference, as defined under the order No. P-45021/2/2017-PP(BE-II) dt. 04-June-2020 issued by Ministry of Commerce and Industry, Govt. of India.

I hereby certify that M/s ..... fulfills all requirements in this regard and is eligible to be considered and for the submitted bid Local Content Percentage is % (write in figures as well as in words).

I hereby acknowledge that in the event of acceptance of bid of M/s ..... on above certificate and if the certificate is found to be false at any stage, the false certificate would be a ground for immediate termination of contract and further legal action in accordance with the Law, including but not limited to the encashment of Bank Guarantee related to Empanelment and Performance Bank Guarantee (PBG), as available with RailTel, related to this EoI.

Signature of Authorised Signatory

Name Designation

**CHECKLIST OF DOCUMENTS FOR BID SUBMISSION**

S. No.	Document
1	EOI Cover Letter (Annexure-01)
2	Local Content Compliance & Percentage Amount (Annexure-02)
3	EMD as per EOI document (EMD or Bank Guarantee as per annexure-10)
4	This EOI copy duly Signed and Stamped by the Authorized Signatory of Bidder
5	Compliance of eligibility criteria related documents as per Clause 3
6	Annexure-7
7	Annexure-9 (Non submission may cause summarily rejection)
8	Any relevant document found suitable by bidder
8	MAFs as per requirement
10	Power of attorney /Board Resolution for signing authority
11	Annexure-11 (Technical Specification)

**Note:**

1. The technical bid should have a 'Index' at the starting and all pages of bid should be serially numbered and should be traceable as per the 'Index'.
2. All the submitted documents should be duly stamped and signed by the Authorized Signatory at each page.
3. The above checklist is indicative only. RailTel may ask for additional documents from the bidders, as per the requirement.

**Annexure – 04**

(On Organization Letter Head)

**TO BE UPLOADED AS BOQ SHEET**

EoI Ref No.: RCIL/NR\_RO/EOI/MKTG//2023-24/01 DATED 17.07.2023

General Manager (Mktg),  
RailTel Corporation of India Limited, Northern Region,  
6th Floor, 3rd Block, Delhi IT Park, Shastri Park, New Delhi-110053

S.No.	Particular	Item Details	
Item 1		Make	
		Model	
		HSN Code	
Item 2		Make	
		Model	
		HSN Code	
....			
Item N		Make	
		Model	
		HSN Code	
Total			

**SOR**

EoI Ref No.: RCIL/NR\_RO/EOI/MKTG//2023-24/01 DATED 17.07.2023

Date:

To,

General Manager (Mktg),  
RailTel Corporation of India Limited, Northern Region,  
6th Floor, 3rd Block, Delhi IT Park, Shastri Park, New Delhi-110053

Schedule of requirement for Network Infrastructure					
SN.	Item Description	Qty (in nos.)	Unit Price	GST	Amount including Tax in Rs.
1	Supply of IP MPLS Router as per Technical Specification at Annexure-11	7			
2	Supply of Optical, QSFP28, 100GBase-LR as per Technical Specification at Annexure-11	12			
3	Supply of Optical, QSFP28, 100GBase-ER4 as per Technical Specification at Annexure-11	14			
4	Supply of IP Patch cord - SC/APC-LC/PC-5 mtr as per Technical Specification at Annexure-11	44			
5	Supply of Battery: 12V/42 AH VRLA (maintenance free)/SMF batteries. as per Technical Specification at Annexure-11	16			
6	Supply of IP Charger 230 V AC to 48V DC Rack mounted with charger 6.25A SMR's (2+1) as per Technical Specification at Annexure-11	4			
7	Supply of Rack-19" 42U as per Technical Specification at Annexure-11	2			
8	LAN Infra deployment and monitoring along with NMS (supply and installation of I/O ports, switches, CAT6 Cables, patch chords). For 03 months as per customer requirements and scope of work.	1100			
9	Manpower support (Splicer, technician, Helper, L1, L2 & L3 engineers) for supporting Visitors. For 03 months as per customer requirements and scope of work.	100			

10	Deployment of Wireless Access Network of 75 Access points with supporting system (Laying of optical fiber and CAT6 cables & patch chords, Switches, Captive portal, AAA) and SMS & required Resource at DC will be provided by RCIL. For 03 months as per customer requirements and scope of work.	75			
	<b>Total in Figure (Rs.)</b>				
	<b>Total in words</b>				

**PROFORMA FOR PERFORMANCE BANK GUARANTEE**

(On Stamp Paper of ₹ One Hundred)

To,  
General Manager (Mktg),  
RailTel Corporation of India Limited, Northern Region,  
6th Floor, 3rd Block, Delhi IT Park, Shastri Park, New Delhi-110053

1. In consideration of the RailTel Corporation of India Limited (CIN: L64202DL2000GOI107905), having its registered office at Plate-A, 6<sup>th</sup> Floor, Office Block Tower-2, East Kidwai Nagar, New Delhi – 110023 (herein after called “RailTel”) having agreed to exempt..... (CIN : ..... ) having its registered office at ..... (hereinafter called “the said Contractor”) from the demand, under the terms and conditions of Purchase Order No. ....dated ..... made between RailTel and ..... for (hereinafter called “the said Agreement”) of security deposit for the due fulfilment by the said Contractor of the terms and condition contained in the said Agreement, or production of a Bank Guarantee for Rs. .... ( Rs. .... Only). We ..... (indicate the name and address and other particulars of

the Bank) (hereinafter referred to as ‘the Bank’) at the request of.....contractor do hereby undertake to pay RailTel an amount not exceeding Rs. .... ( Rs ..... Only) against any loss or damage caused to or suffered or would be caused to or suffered by the RailTel by reason of any breach by the said Contractor of any of the terms or conditions contained in the said Agreement.

2. We, ..... the Bank do hereby undertake to pay the amounts due and payable under this Guarantee without any demur, merely on demand from the RailTel stating that the amount is claimed is due by way of loss or damage by the said Contractor of any of terms or conditions contained in the said Agreement by reason of the Contractor’s failure to perform the said Agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs ..... ( Rs ..Only).

3. We, ..... the Bank undertake to pay the RailTel any money so demanded notwithstanding any dispute or disputes raised by the Contractor in any suit or proceedings pending before any court or Tribunal relating thereto our liability under this present being, absolute and unequivocal. The payment so made by us under this Bond shall be a valid discharge of our liability for payment there under and the Contractor shall have no claim against us for making such payment.

4. We, ..... the Bank further agree that the Guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall

continue to be enforceable till all the dues of the RailTel under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till RailTel certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said contractor and accordingly discharges this Guarantee. Unless a demandor claim under the Guarantee is made on us in writing on or before ..... . We shall be discharged from all liability under this Guarantee thereafter.

5. We, ..... the Bank further agree with the RailTel that the RailTel shall have fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the Agreement or to extend time of or to postpone for any time or from time to time any of the powers exercisable by the RailTel against the said Contractor and to forbear or enforce any of the terms and conditions relating to the said Agreement and

we shall not be relieved from our liability by reason of any such variation, or extension to the said Contractor or for any forbearance, act or omission on the part of RailTel or any indulgence by the RailTel to the said Contractor or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

This Guarantee will not be discharge due to the change in the constitution of the Bank or the Contractor.

( ..... indicate the name of Bank ..... ) lastly undertake not to revoke this Guarantee during its currency except with the previous consent of RailTel in writing.

Dated the ..... Day of ..... 2022 for ..... (Name of Bank)

In the presence of Witnesses:

1. Signature With Date

2. Signature With Date Name

Name

**Encl:** SFMS PBG Report

**NON-DISCLOSURE AGREEMENT**

This Non-Disclosure Agreement (this “Agreement”) is made and entered into on this \_\_\_\_\_ day of \_\_\_\_\_, 2022 (the “Effective Date”) at \_\_\_\_\_.

By and between

RailTel Corporation of India Limited, (CIN: L64202DL2000GOI107905), a Public Sector Undertaking under Ministry of Railways, Govt. of India, having its registered and corporate office at Plate-A, 6th Floor, Office Block, Tower -2, East Kidwai Nagar, New Delhi-110023 & Northern Region office at 6th Floor, 3rd Block, Delhi IT Park, Shastri Park, New Delhi - 110053, (hereinafter referred to as 'RailTel'), which expression shall unless repugnant to the context or meaning thereof, deem to mean and include its successors and its permitted assignees of the ONE PART,

And

\_\_\_\_\_ (CIN: \_\_\_\_\_), a company duly incorporated under \_\_\_\_\_

the provisions of Companies Act, having its registered office at

\_\_\_\_\_, (hereinafter referred to as '\_\_\_\_\_'), which expression shall unless repugnant to the context or meaning thereof, deem to mean and include its successors and its permitted assignees of OTHER PART

RailTel and \_\_\_\_\_ shall be individually referred to as “Party” and jointly as “Parties”

WHEREAS, RailTel and \_\_\_\_\_, each possesses confidential and proprietary information related to its business activities, including, but not limited to, that information designated as confidential or proprietary under Section 2 of this Agreement, as well as technical and non- technical information, patents, copyrights, trade secrets, know-how, financial data, design details and specifications, engineering, business and marketing strategies and plans, forecasts or plans, pricing strategies, formulas, procurement requirements, vendor and customer lists,

inventions, techniques, sketches, drawings, models, processes, apparatus, equipment, algorithms, software programs, software source documents, product designs and the like, and third party confidential information (collectively, the “Information”);

WHEREAS, the Parties have initiated discussions regarding a possible business relationship for

\_\_\_\_\_  
WHEREAS, each Party accordingly desires to disclose certain Information (each Party, in such disclosing capacity, the “Disclosing Party”) to the other Party (each Party, in such receiving capacity, the “Receiving Party”) subject to the terms and conditions of this Agreement.

NOW THEREFORE, in consideration of the receipt of certain Information, and the mutual promises made in



this Agreement, the Parties, intending to be legally bound, hereby agree as follows:

**1. Permitted Use.**

(a) Receiving Party shall:

- (i) hold all Information received from Disclosing Party in confidence;
- (ii) use such Information for the purpose of evaluating the possibility of entering into a commercial arrangement between the Parties concerning such Information; and
- (iii) restrict disclosure of such Information to those of Receiving Party's officers, directors, employees, affiliates, advisors, agents and consultants (collectively, the "Representatives") who the Receiving Party, in its reasonable discretion, deems need to know such Information, and are bound by the terms and conditions of (1) this Agreement, or (2) an agreement with terms and conditions substantially similar to those set forth in this Agreement.

(b) The restrictions on Receiving Party's use and disclosure of Information as set forth above

shall not apply to any Information that Receiving Party can demonstrate:

- (i) is wholly and independently developed by Receiving Party without the use of Information of Disclosing Party;
- (ii) at the time of disclosure to Receiving Party, was either (A) in the public domain, or (B) known to Receiving Party;
- (iii) is approved for release by written authorization of Disclosing Party; or
- (iv) is disclosed in response to a valid order of a court or other governmental body in the India or any political subdivision thereof, but only to the extent of, and for the purposes set forth in, such order; provided, however, that Receiving Party shall first and immediately notify Disclosing Party in writing of the order and permit Disclosing Party to seek an appropriate protective order.

(c) Both parties further agree to exercise the same degree of care that it exercises to protect its own Confidential Information of a like nature from unauthorized disclosure, but in no event shall a less than reasonable degree of care be exercised by either party.

**2. Designation.**

(a) Information shall be deemed confidential and proprietary and subject to the restrictions of this Agreement if, when provided in:

- (i) written or other tangible form, such Information is clearly marked as proprietary or confidential when disclosed to Receiving Party; or
- (ii) oral or other intangible form, such Information is identified as confidential or proprietary at the time of disclosure.

**3. Cooperation.** Receiving Party will immediately give notice to Disclosing Party of any unauthorized use or disclosure of the Information of Disclosing Party.

**4. Ownership of Information.** All Information remains the property of Disclosing Party and no license

or other rights to such Information is granted or implied hereby.

Notwithstanding the foregoing, Disclosing Party understands that Receiving Party may currently or in the future be developing information internally, or receiving information from other parties that may be similar to Information of the Disclosing Party. Notwithstanding anything to the contrary, nothing in this Agreement will be construed as a representation or inference that Receiving Party will not develop products, or have products developed for it, that, without violation of this Agreement, compete with the products or systems contemplated by Disclosing Party's Information.

**5. No Obligation.** Neither this Agreement nor the disclosure or receipt of Information hereunder shall be construed as creating any obligation of a Party to furnish Information to the other Party or to enter into any agreement, venture or relationship with the other Party.

**6. Return or Destruction of Information.**

(a) All Information shall remain the sole property of Disclosing Party and all materials containing any such Information (including all copies made by Receiving Party) and its Representatives shall be returned or destroyed by Receiving Party immediately upon the earlier of:

- (i) termination of this Agreement;
- (ii) expiration of this Agreement; or
- (iii) Receiving Party's determination that it no longer has a need for such Information.

(b) Upon request of Disclosing Party, Receiving Party shall certify in writing that all Information received by Receiving Party (including all copies thereof) and all materials containing such Information (including all copies thereof) have been destroyed.

**7. Injunctive Relief:** Without prejudice to any other rights or remedies that a party may have, each party acknowledges and agrees that damages alone may not be an adequate remedy for any breach of this Agreement, and that a party shall be entitled to seek the remedies of injunction, specific performance and/or any other equitable relief for any threatened or actual breach of this Agreement

**8. Notice.**

(a) Any notice required or permitted by this Agreement shall be in writing and shall be delivered as follows, with notice deemed given as indicated:

- (i) by personal delivery, when delivered personally;
- (ii) by overnight courier, upon written verification of receipt; or
- (iii) by certified or registered mail with return receipt requested, upon verification of receipt.

(b) Notice shall be sent to the following addresses or such other address as either Party

specifies in writing.

RailTel Corporation of India limited:

Attn:

Address:

Phone:Email.:

Attn:

Address:

Phone:Email

**9. Term, Termination and Survivability.**

- (a) Unless terminated earlier in accordance with the provisions of this agreement, this Agreement shall be in full force and effect for a period of \_\_\_\_\_ years from the effective date hereof.
- (b) Each party reserves the right in its sole and absolute discretion to terminate this Agreement by giving the other party not less than 30 days' written notice of such termination.
- (c) Notwithstanding the foregoing clause 9(a) and 9 (b) , Receiving Party agrees that its obligations, shall:
  - (i) In respect to Information provided to it during the Term of this agreement, shall survive and continue even after the expiry of the term or termination of this agreement; and
  - (ii) not apply to any materials or information disclosed to it thereafter.

**10. Governing Law and Jurisdiction.** This Agreement shall be governed in all respects solely and exclusively by the laws of India without regard to its conflicts of law principles. The Parties hereto expressly consent and submit themselves to the jurisdiction of the courts of New Delhi.

**11. Counterparts.** This agreement is executed in duplicate, each of which shall be deemed to be the original and both when taken together shall be deemed to form a single agreement

**12. No Definitive Transaction.** The Parties hereto understand and agree that no contractor agreement with respect to any aspect of a potential transaction between the Parties shall be deemed to exist unless and until a definitive written agreement providing for such aspect of the transaction has been executed by a duly authorized representative of each Party and duly delivered to the other Party (a "Final Agreement"), and the Parties hereby waive, in advance, any claims in connection with a possible transaction unless and until the Parties have entered into a Final Agreement.

**13. Settlement of Disputes:**

- (a) The parties shall, at the first instance, attempt to resolve through good faith negotiation and consultation, any difference, conflict or question arising between the parties hereto relating to or concerning or arising out of or in connection with this agreement, and such negotiation or consultation shall begin promptly after a Party has delivered to another Party a written request for such consultation.
- (b) In the event of any dispute, difference, conflict or question arising between the parties hereto, relating to or concerning or arising out of or in connection with this agreement, is not settled through good faith negotiation or consultation, the same shall be referred to arbitration by a sole arbitrator.

**14.** The sole arbitrator shall be appointed by CMD/RailTel out of the panel of independent arbitrators

maintained by RailTel, having expertise in their respective domains. The seat and the venue of arbitration shall be New Delhi. The arbitration proceedings shall be in accordance with the provision of the Arbitration and Conciliation Act 1996 and any other statutory amendments or modifications thereof. The decision of arbitrator shall be final and binding on both parties. The arbitration proceedings shall be conducted in English Language. The fees and cost of arbitration shall be borne equally between the parties.

**15. CONFIDENTIALITY OF NEGOTIATIONS**

Without the Disclosing Party's prior written consent, the Receiving Party shall not disclose to any Person who is not a Representative of the Receiving Party the fact that Confidential Information has been made available to the Receiving Party or that it has inspected any portion of the Confidential Information or that discussions between the Parties may be taking place.

**16. REPRESENTATION**

The Receiving Party acknowledges that the Disclosing Party makes no representation or warranty as to the accuracy or completeness of any of the Confidential Information furnished by or on its behalf. Nothing in this clause operates to limit or exclude any liability for fraudulent misrepresentation.

**17. ASSIGNMENT**

Neither this Agreement nor any of the rights, interests or obligations under this Agreement shall be assigned, in whole or in part, by operation of law or otherwise by any of the Parties without the prior written consent of each of the other Parties. Any purported assignment without such consent shall be void. Subject to the preceding sentences, this Agreement will be binding upon, inure to the benefit of, and be enforceable by, the Parties and their respective successors and assigns.

**18. EMPLOYEES AND OTHERS**

Each Party shall advise its Representatives, contractors, subcontractors and licensees, and shall require its Affiliates to advise their Representatives, contractors, subcontractors and licensees, of the obligations of confidentiality and non-use under this Agreement, and shall be responsible for ensuring compliance by its and its Affiliates' Representatives, contractors, subcontractors and licensees with such obligations. In addition, each Party shall require all persons and entities who are not employees of a Party and who are provided access to the Confidential Information, to execute confidentiality or non-disclosure agreements containing provisions no less stringent than those set forth in this Agreement. Each Party shall promptly notify the other Party in writing upon learning of any unauthorized disclosure or use of the Confidential Information by such persons or entities.

**19. NO LICENSE**

Nothing in this Agreement is intended to grant any rights to under any patent, copyright, or other intellectual property right of the Disclosing Party, nor will this Agreement grant the Receiving Party any rights in or to the Confidential Information of the Disclosing Party, except as expressly set forth in this Agreement.

**20. RELATIONSHIP BETWEEN PARTIES:**

Nothing in this Agreement or in any matter or any arrangement contemplated by it is intended to constitute a partnership, association, joint venture, fiduciary relationship or other cooperative entity between the parties for any

purpose whatsoever. Neither party has any power or authority to bind the other party or impose any obligations on it and neither party shall purport to do so or hold itself out as capable of doing so.

**21. UNPUBLISHED PRICE SENSITIVE INFORMATION (UPSI)**

\_\_\_\_\_ agrees and acknowledges that \_\_\_\_\_, its Partners, employees, representatives etc., by virtue of being associated with RailTel and being in frequent communication with RailTel and its employees, shall be deemed to be “Connected Persons” within the meaning of SEBI (Prohibition of Insider Trading) Regulations, 2015 and shall be bound by the said regulations while dealing with any confidential and/ or price sensitive information of RailTel. \_\_\_\_\_ shall always and at all times comply with the obligations and restrictions contained in the said regulations. In terms of the said regulations, \_\_\_\_\_ shall abide by the restriction on communication, providing or allowing access to any Unpublished Price Sensitive Information (UPSI) relating to RailTel as well as restriction on trading of its stock while holding such Unpublished Price Sensitive Information relating to RailTel

**22. MISCELLANEOUS.**

This Agreement constitutes the entire understanding among the Parties as to the Information and supersedes all prior discussions between them relating thereto. No amendment or modification of this Agreement shall be valid or binding on the Parties unless made in writing and signed on behalf of each Party by its authorized representative. The failure or delay of any Party to enforce at any time any provision of this Agreement shall not constitute a waiver of such Party’s right thereafter to enforce each and every provision of this Agreement. In the event that any of the terms, conditions or provisions of this Agreement are held to be illegal, unenforceable or invalid by any court of competent jurisdiction, the remaining terms, conditions or provisions hereof shall remain in full force and effect. The rights, remedies and obligations set forth herein are in addition to, and not in substitution of, any rights, remedies or obligations which may be granted or imposed under law or in equity.

IN WITNESS WHEREOF, the Parties have executed this Agreement on the date set forth above.

:

RailTel Corporation of  
India Limited:

By

By

\_ Name:

\_ Name:

Title:

Title:

Witnesses:

**Annexure 07****Technical Compliance****EoI Ref. No.:** RCIL/NR\_RO/EOI/MKTG//2023-24/01 DATED 16.07.2023**Date:**

Business Associates are requested to mention the details of compliance of technical solution proposed.

<b>S. No</b>	<b>Scope Item</b>	<b>Specification as per technical Document</b>	<b>Proposed OEM Name</b>	<b>MAF Provided (Yes/No)</b>	<b>Compliance sheet</b>
<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>
1	To be filled by Bidder  As per Technical Document Copy of CoR	To be filled by Bidder  As per Technical Document Copy of CoR	To be filled by Bidder	To be filled by Bidder	To be filled by Bidder
2	To be filled by Bidder	To be filled by Bidder	To be filled by Bidder	To be filled by Bidder	To be filled by Bidder

**Annexure 09**

**FORMAT FOR AFFIDAVIT TO BE UPLOADED BY BA ALONGWITH THE EOI DOCUMENTS**

(To be executed in presence of Public notary on non-judicial stamp paper of the value of Rs. 100/-. The paper has to be in the name of the BA) \*\*

I \_\_\_\_\_ (Name and designation)\*\* appointed as the attorney/ authorized signatory of the BA (including its constituents), M/s \_\_\_\_\_ (hereinafter called the BA) for the purpose of the EOI documents for the work of \_\_\_\_\_ as per the EOI No. \_\_\_\_\_ of (RailTel Corporation of India Limited), do hereby solemnly affirm and state on the behalf of the BA including its constituents as under:

1. I/we the BA (s), am/are signing this document after carefully reading the contents.
2. I/we the BA(s) also accept all the conditions of the EOI and have signed all the pages in confirmation thereof.
3. I/we hereby declare that I/we have downloaded the EOI documents from RailTel website [www.railtelindia.com](http://www.railtelindia.com). I/we have verified the content of the document from the website and there is no addition, no deletion or no alternation to be content of the EOI document. In case of any discrepancy noticed at any stage i.e., evaluation of EOI, execution of work or final payment of the contract, the master copy available with the RailTel Administration shall be final and binding upon me/us.
4. I/we declare and certify that I/we have not made any misleading or false representation in the forms, statements and attachments in proof of the qualification requirements.
5. I/we also understand that my/our offer will be evaluated based on the documents/credentials submitted along with the offer and same shall be binding upon me/us.
6. I/we declare that the information and documents submitted along with the EOI by me/us are correct and I/we are fully responsible for the correctness of the information and documents, submitted by us.
7. I/we undersigned that if the certificates regarding eligibility criteria submitted by us are found to be forged/false or incorrect at any time during process for evaluation of EOI, it shall lead to forfeiture of the EOI EMD besides banning of business for five years on entire RailTel. Further, I/we (insert name of the BA)\*\* and all my/our constituents understand that my/our constituents understand that my/our offer shall be summarily rejected.
8. I/we also understand that if the certificates submitted by us are found to be false/forged or incorrect at any time after the award of the contract, it will lead to termination of the contract, along with forfeiture of EMD/SD and Performance guarantee besides any other action provided in the contract including banning of business for five years on entire RailTel.
9. I/we the BA(s) have carefully read and understand terms and conditions of the tender/RFP/EOI of CoR and also accept all the terms and conditions of the tender/RFP/EOI of CoR including addendum/corrigendum.
10. I/we understand that we will submit all the required MAF/documents/annexures as per requirement of tender/RFP/EOI of CoR before reasonable time as conveyed by competent Authority of RailTel : one day before the bid submission date of CoR. Failing which, our bid may be disqualified.

DEPONENT

SEAL AND SIGNATURE OF THE BA VERIFICATION

I/We above named EOI do hereby solemnly affirm and verify that the contents of my/our above affidavit are true and correct. Nothing has been concealed and no part of it is false.

DEPONENT  
SEAL AND SIGNATURE OF THE BA

Place:

Dated:

\*\*The contents in Italics are only for guidance purpose. Details as appropriate, are to be filled in suitably by BA.  
Attestation before Magistrate/Notary Public.



## EMD BANK GUARANTEE FORMAT

EOI Ref No: RCIL/NR\_RO/EOI/MKTG//2023-24/01 DATED 16.07.2023 Date:

WHEREAS, \_\_\_\_\_ [name of Bidder] (hereinafter called "the Bidder") has submitted his Bid dated \_\_\_\_\_ [date] Selection of Implementation Partner from RailTel Empaneled Business Associate for exclusive ARRANGEMENT for the work of "....." [name of Contract] (hereinafter called "the Bid").

KNOW ALL PEOPLE by these presents that We \_\_\_\_\_ [name of bank] of \_\_\_\_\_ [name of country] having our registered office at \_\_\_\_\_

\_\_\_\_\_ (Hereinafter called "the Bank") are bound unto RailTel Corporation of India Limited., 6th Floor, IIIrd Block, Delhi Technology Park, Shastri Park, Delhi-110053 [name of Employer] (hereinafter called "the Employer") in the sum of Rs. xxxxxxx (Rupees **in words** only) for which payment well and truly to be made to the said Employer the Bank binds itself, his successors and assigns by these presents.

SEALED with the Common Seal of the said Bank this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_. THE CONDITIONS of this obligation are:

(1) If after Bid opening the Bidder withdraws his bid during the period of Bid validity specified in the Form of Bid;

or

(2) If the Bidder having been notified of the acceptance of his bid by the Employer during the period of Bid validity:

a) Fails or refuses to execute the Form of Agreement in accordance with the Instructions to Bidders, if required;

or

b) fails or refuses to furnish the Performance Security, in accordance with the Instruction to Bidders;

or

c) does not accept the correction of the Bid Price;

we undertake to pay to the Employer up to the above amount upon receipt of his first written demand, without the Employer having to substantiate his demand, provided that in his demand the Employer will note that the amount claimed by him is due to him owing to the occurrence of one or any of the three conditions, specifying the occurred condition or conditions.

This Guarantee will remain in force up to and including the date \_\_\_\_\_\* days after the deadline for submission of Bids as such deadline is stated in the Instructions to Bidders or as it may be extended by the Employer, notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this guarantee should reach the Bank not later than the above date.

DATE \_\_\_\_\_ SIGNATURE OF THE BANK \_\_\_\_\_ WITNESS \_\_\_\_\_  
SEAL \_\_\_\_\_

[Signature, name, and address]

\* \_\_\_\_\_ days after the end of the validity period of the Bid.

## **Annexure 11**

### **Technical specification**

EoI Ref No.: RCIL/NR\_RO/EOI/MKTG//2023-24/01 DATED 17.07.2023

**Note:-**

**All Equipment should be:**

- i. Back-to-Back warranty with respective OEMs for both Hardware and Software. The certificates/Undertaking for the same will have to be submitted along with bid from respective OEM.
- ii. Equipped with necessary hardware/software to comply all above required / support features.

**Item S.no. 1: IP/MPLS Router.**

S. No.	Description	Compliance (Yes/No)
1	Router should support minimum 1G/10G SFP+ ports (Including 8X10G SFP+ module) and 4 number of 100G interface (excluding XFP/SFP/QSFP) from day one.	
2	Total throughput (Full duplex): Minimum 280 Gbps	
3	MAC Table Size : 64K	
4	IPv4 RIB/FIB : Minimum 1M/128K	
5	IPv6 RIB/FIB : Minimum 512K/32K	
6	MPLS Labels : Minimum 32K	
7	Label Stack : 5	
8	L2 / L3 VPN VRF : Minimum L2 1000, Minimum L3 256	
9	Support of number of queues per system : Minimum 4K	
10	Number of VLAN support : 1000	
11	Operating Temperature : (0 to 40 degree C or better)	
12	Storage Temperature : (-10 to 60 degree C or better)	
13	Router can be of either modular/fixed type and shall have modular Operating system where it shall support individual restart of critical processes without affecting other processes or rebooting the entire operating system.	
14	All 10G interfaces should support LR, ER and ZR.	
15	Router shall have option checking configuration before committing and option of rolling back to at least five configurations.	
16	Router should have redundant DC ( with the operating range of - 40 to -72 VDC) power supplies	
17	Digital Optical Monitoring (DOM) should be supported, optics information retrievable including RX/TX-power, threshold-monitoring/alarming, inventory.	
18	It shall support role based privileges for the system access and radius authentication for the System admin.	
19	The router should have a Console or Out-of-band Management.	
20	Alerts for environmental or other hardware based alarms should be visibly implemented on the chassis.	
21	All interfaces shall support services like L2VPN, L3VPN, VPLS and multicast VPN for both IPv4 and IPv6	
22	The router should have mechanism to protect itself from DDoS attack.	

23	The router should be IPv6 ready from day one.	
24	The router should support filtering based on different parameters like: src ip, dst ip, src port, dst port, protocol etc	
25	The router should support Netflow, Jflow or equivalent	
26	The router should support IP SLA or RPM (or equivalent) for performance measurements, it should also support monitoring of IP SLA/RPM (or equivalent) probes using SNMP polling (OEM has to provide SNMP MIB information)	
27	Shall support QoS, option of traffic shaping per Interface based.	
28	Shall support following class of service features:	
	a) Classification, policing, marking, shaping, filtering	
	b) Manage congestion using a weighted random early detection (WRED) algorithm	
	c) RFC 2474, Definition of the Differentiated Services Field in the IPv4 and IPv6 Headers	
	d) Single Rate Three Color Policer RFC 2697	
	e) RFC 2698, A Two Rate Three Color Policer	
	f) congestion Management through CBWFQ, Round-Robin or equivalent, WFQ or equivalent	
	g) RFC 2597, Assured Forwarding PHB Group	
	h) RFC 2598, An Expedited Forwarding PHB	
	i) Router should be able to classify based on 802.1 ad, 802.1 p, EXP and DSCP bits	
	j) The router shall support traffic interface mirroring in both ingress & egress directions for both IPv4 & IPv6	
29	The router shall support provision for event based scripts that shall be capable of performing actions based on certain triggers	
30	The router shall support aggregated Ethernet and it shall be possible to bundle Upto 16 links.	
31	Shall support following MPLS features	
	a) LDP and RSVP signalling	
	b) RFC 5036, LDP Specification	
	c) RFC 3212 OR Constraint-Based LSP Setup using LDP	
	d) RFC 3215, LDP State Machine	
	e) RFC 3478, Graceful Restart Mechanism for LDP	
	f) RFC 2858, Multiprotocol Extensions for BGP-4	
	g) RFC 3063, MPLS Loop Prevention Mechanism	
	h) RFC 3031, Multiprotocol Label Switching Architecture	
	i) RFC 3032, MPLS Label Stack Encoding	
	j) The router should be able to do load-balancing over multiple equal cost MPLS LSP	

32	The Router shall support MPLS Fast Reroute both link protection and Node protection.	
33	MPLS Ping, MPLS Trace Route	
34	Fast Reroute Extensions to RSVP-TE for LSP Tunnels	
35	The router shall Support of Sync-E & PTP technology (License price to be quoted separately)	
36	Shall support MPLS based VPN services	
	a) L3VPN, L2VPN (Kompella BGP/ Martini LDP),	
	b) Internet draft, draft-ietf-l2vpn-vpls-bgp-08.txt, Virtual Private LAN Service (VPLS) Using BGP for Auto-discovery and Signaling	
	c) RFC 4762 Virtual Private LAN Service (VPLS) Using Label Distribution Protocol (LDP) Signaling	
	d) Next Generation mVPN (P2MP) based on ( Draft-ietf-13vpn-2547bis-mcast-01.txt) & mVPN (draft-rosen-vpn-mcast).	
37	The router shall support the following routing features	
	a) BGPv4, BGP confederations and route reflector	
	b) Dynamic Host Configuration Protocol (DHCP)	
	c) RFC 3101, The OSPF NSSA Option	
	d) RFC 2328, OSPF Version 2	
	e) RFC 3623, OSPF Graceful Restart	
	f) RFC 3630, Traffic Engineering (TE) Extensions to OSPF Version 2	
	g) RFC 1195, Use of OSI IS-IS for Routing in TCP/IP and Dual Environments	
	h) RFC 2104, HMAC: Keyed-Hashing for Message Authentication	
	i) RFC 2973, IS-IS Mesh Groups	
	j) RFC 3358, Optional Checksums in IS-IS	
	k) RFC 3359, Reserved Type, Length and Value (TLV) Code points in IS-IS	
	l) RFC 3373, Three-Way Handshake for IS-IS Point-to-Point Adjacencies	
	m) RFC 5305, IS-IS Extensions for Traffic Engineering	
	n) RFC 3847, Restart Signalling for IS-IS	
	o) RFC 3590, Source Address Selection for Multicast Listener Discovery Protocol	
	p) IGMP v2 and v3 as described in RFC 2236 and RFC 3376 with IGMP Routing Policies to filter IGMP requests.	
38	The router shall support Virtual Router Redundancy Protocol (VRRP) as per IETF RFC 3768	
39	Router shall support SNMP v2/v3 and NTP	

40	Shall support BFD for both single hop and multihop sessions	
41	Shall support the following OAM features and actions such as syslog/link down should be configurable on OAM event trigger:	
	a) 802.3ah	
	b) 802.1ag	
	c) Y.1731	
42	Shall support Multi-chassis LAG	
43	IPv6 Features	
	a) IPv6 Ping	
	b) IPv6 trace route	
	c) OSPF v3	
	d) IS-IS	
	e) VRRPv3	
	f) IPv6 CoS (classification & rewrite, scheduling based on TC )	
	g) IPv6 ACL	
	h) 6PE and 6VPE	
44	Multicast Feature: It shall support following:	
	a) It shall support IGMP snooping v2/v3	
	b) The router shall support PIM Sparse Mode, RFC 4601(optional)	
	c) Rendezvous Point (RP) - ability to be configured as an RP	
	d) RFC 3569, Source Specific Multicast (SSM)	
	e) RFC 2365, Administratively Scoped IP Multicast	
	f) RFC 3446, Anycast Rendezvous Point (RP) Mechanism using Protocol Independent Multicast (PIM) and Multicast Source Discovery Protocol (MSDP).	
	g) RFC 3618, Multicast Source Discovery Protocol (MSDP).	
45	The proposed router should be NEBS level 3 compliant. NEBS Certification is not required for PMA. However, OEM has to produce certificate from standard lab approved or authorized by Govt. of India that the supplied Products are equivalent to NEBS and meet all standard and specification of NEBS.	
46	The device should comply to the following safety standards	
	a) EN 55022 Class A Emissions (Europe)	
	b) FCC Class A (USA) Radiated Emissions	
	c) UL 60950-1 Information Technology Equipment – Safety	
	d) EN 60825-1 Safety of Laser Products	
	e) EN-61000-4-11 Voltage Dips and Sags	
	f) ETS-300386 Electromagnetic Compatibility Requirements	
	g) The device will conform to the following EN/IEC standard:	

	i. 61000-4-2 – ESD	
	ii. 61000-4-3 Radiated Immunity	
	iii. 61000-4-4 – EFT	
	iv. 61000-4-5 – Surge	
	v. 61000-4-6 – Low Frequency common immunity	
47	The offered devices must support following functionalities to support 3rd party SDN (in future)	
	(a) The router should support RFC 6020, YANG - A Data Modeling Language for the Network Configuration	
	(b) Protocol (NETCONF)	
	(c) The solution should support the network configuration protocol (NETCONF) that provides mechanisms to install, manipulate, and delete the configuration of network devices, RFC 6241	
	(d) The router should be able to act as Path computation client in the PCE architecture defined in RFC 4655.	
	(e) The router should support PCECP as defined in RFC5440.	
	(f) The router should support BGP link-state (BGP-LS), RFC 4655	
	(g) The router should support SPRING	
48	Devices shall support following for Provisioning	
	(a) Use NETCONF (RFC 6241, RFC 6242, RFC 5277)	
	(b) REST based CRUD operations for configuration and management.	
	(c) Web Services based operations for configuration and management	
49	The offered devices must support API/NBIs for auto discovery of Services and Physical & Logical Topology	
50	TELEMETRY Function: It shall support following:	
	a) The router should support telemetry based on push model for monitoring network devices	
	b) The router should support various software models/sensors for capturing different health parameters from the devices	
	c) The router should support sending telemetry data to multiple consumers simultaneously	
	d) The router shall support GPB/GRPC/KAFKA encoding for telemetry data	
	e) The software model/sensors should be based on either yang, xml or open config	
	f) The solution shall use either UDP or GRPC for transport of telemetry data	



	g) The system should support streaming granularity of atleast 10 sec	
	h) The router shall have the ability to interact with open standard based tools	
	i) The system should support REST API for communication with third party tools and applications	
	j) Enabling telemetry should not have any adverse impact on the performance of the device/router	
	k) Some of the streaming models/sensors the router should support are:	
	<u>System</u>	
	Chassis Environment	
	Line card utilization (memory , processor, QoS, Temp, Port utilization ), errors counters	
	Controller Card sensors (memory, CPU, Temp etc)	
	Fabric statistics	
	ARP table state	
	Routing prefix information	
	<u>Interface</u>	
	Interface statistics (Physical and logical interfaces)	
	Interface optical diagnostic	
	Congestion and latency	
	Filter statistics	
	Protocol	
	BGP peer information	
	ISIS State, Interface, Adjacency statistics, LSDB	
	ISIS SPRING / Segment Routing Statistics	
	RSVP Interface Statistics	
	LSP statistics	
	LSP Event Export, Experimental	
	IP SLA/RPM (or equivalent) reporting	
	Segment Routing statistics	
	DHCP statistics	
51	Router should support Dual Image/Partition with USB flash drive booting option for OS recovery	
52	Router should support jumbo frame.	
53	Router should support port mirroring	
54	Router should support security features of Broadcast/Multicast/Unicast Storm control.	

55	Router should comply to following Temperature performance parameters:	
	i. Operating Temperature: 0 to 40 degree C or better	
	ii. Storage Temperature: -10 to 60 degree C or better	
56	Routers should support following Metro Ethernet Features:	
	i. ITU-T G.8032 Ethernet Ring Protection designed for loop protection or alternate mechanism to achieve ring protection in less than 50 ms.	
	ii. Should support multiple Ring up to 8 ring(main and sub ring) protection failover with in 50 ms or ITU-T G.8032 v2.	
57	The operating system of the Routers category/series/family should be MEF-9/14 or CE(Carrier Ethernet) Certified.	
58	The Router shall be designed for continuous operations with dual fan system.	
59	Router should support CFM and LFM alarms.	
60	Shall support HQoS, option of traffic shaping per VLAN based.	
	i. Shall support at least 4K Queues.	
	ii. Per-VLAN policing.	
	iii. Per-VLAN rewrite	
	iv. Per-VLAN two-rate tri-color marking.	
	v. Per-VLAN classification	
	vi. Per-VLAN filtering	
61	Support for P and PE router functionality for MPLS on the same router simultaneously and on all the interfaces.	
62	Router shall support E-Line or E-LAN MEF standards.	
63	Routers should be rack mountable to fit into a standard 19-inch rack	
64	OEM shall ensure that use of third party optics shall not be explicitly blocked on the Router. Router must support all MSA complied Optics available in market.	
65	Segment Routing	
i	Router should be able to support SR standards on IPv6 whenever it is firmed upt without any cost to RCIL.	
ii	The router should support SR-MPLS dataplane and protocols OSPF,IS-IS and BGP Segment routing extensions	
iii	Traffic Steering of SR policies with Autoroute Include and Segment Routing TI-LFA SRLG Protection	
iv	LSP ping, trace-route, Pseudo wire Ping over Segment Routing, trace route for binding-SID	
v	MPLS-LDP interworking with SR-ISIS and SR-OSPF	

vi	TI-LFA with IGP (Link, Node, Local SRLG, Remote SRLG protection)	
vii	Controller instantiated SR Policy (PCEP, BGP) and SR policy based on On demand next hop	
viii	Router should have capability to calculate Bandwidth based path using centralized controller.	
ix	Shall support SR and MPLS (LDP) Interworking Mapping Server	
x	The router shall support dynamic point-to-point interface latency performance measurement. The measurement must be integrated in the IGP and BGP LS for SDN Controller Analysis.	
xi	Label distribution protocol and segment routing should coexist and there should support option to prefer LDP over segment routing.	
66	EVPN Features	
i	Router should have support of Ethernet VPN (EVPN with single homing, multi homing	
ii	Router should have support of following features on EVPN: EVPN-IRB, EVPN VPWS, EVPN VPWS Preferred Path over SR-TE Policy	
67	i) Specification Router to support GRE tunnels (RFC 2784).	
<b>Note</b>	<b>NEBS Certification is not required for PMA. However, they have to produce certificate from standard lab approved/ authorized by Govt. of India that their product are equivalent to NEBS and meets all standard and specification of NEBS.</b>	

## Item S.no. 2: QSFP 28, 100G Base-LR

S. No	Technical Specification	Compliance (Yes/No)
1	SFP modules should comply with multi-source agreement (MSA), enabling compatibility with other vendors equipment.	
2	Optics Should support upto 10 km optical distance on single mode fiber	
3	Connector type Dual LC	
4	Signaling rate, each channel 25.78125 GBd +/-100 ppm	
5	Standards compliance (Ethernet/OTN Standard, for e.g. 100GBASE-LR4) IEEE 802.3ba-2010	
6	Operating Temperature (range) 0° C to 70° C	
7	Transmitter output power, each lane (minimum, maximum) –4.3 dBm, 4.5 dBm	

8	Cable type SMF	
9	Receiver input power, each lane (minimum, maximum)	
10	<b>Transmitter wavelengths (range):</b> 1294.53nm ~ 1296.59 nm 1299.02nm ~1301.09 nm 1303.54nm ~ 1305.63 nm 1308.09nm ~ 1310.19 nm	
11	<b>Should support below Digital Diagnostic Monitoring features:</b> Transceiver temperature Laser bias current(4-Channel) Transmitted optical power (4-Channel) Received optical power (4-Channel) Transceiver supply voltage Power consumption < 3.5W	
12.	The offered QSFP should be compatible with IP/MPLS Router offered as per SOR Item no. 1.	

### Item 3: QSFP28, 100Gbase-ER4

SN	Parameter	Value	Compliance (Yes/No)
1	Module Form Factor	QSFP+	
2	Aggregate Data Rate	100 Gb/s	
3	Link Length Supported	40 KM	
4	Protocols Supported	Typical applications include OTN OTU4, 100G Ethernet	
5	Fiber type	Dual Fibre, Duplex LC Connector	
6	Operating temperature range	0°C to 70°C	
7	Power dissipation	< 4 W	
8	Average Launch Power	-2.5 dBm to 4.5 dBm	
9	Receiver Sensitivity	- 18.5 dBm or better	
10	Should have RoHS-6 Compliant		
11	The offered QSFP should be compatible with IP/MPLS Router offered as per SOR Item no. 1.		
12	Built in Digital Diagnostic Function		

<b>13</b>	OEM must have ISO 9001 & 14001 Certificates	
<b>14</b>	Product must be IEC 60825 (Laser Safety) and IEC 60950 (Electrical Safety) certified by CSA or equivalent	
<b>15</b>	Manufacturer should be able to provide Factory test report for supplied transceiver parts.	

**Item S.no. 4: Patch cord – SC/APC-LC/PC – 5 Mtr.**

The Patch cords should be confirming to TEC NO.: TEC/GR/TX OFJ-01/05/NOV-09 with latest amendment No. TEC/T/OFC-OFJ/155/2013. However, the Patch cords should have the following:

i) Operating Temperature: -40°C to +85°C.

ii) Insertion Loss:

- a) Insertion Loss of complete patch cord including adapter when tested from each direction in all conditions of operations:  $\leq 0.3$  dB
- b) Insertion Loss of Adaptors:  $\leq 0.1$  dB

iii) Return Loss for each connector of patch cord:

- a) Type-I SC-APC:  $\geq 65$  dB
- b) Type-II LC:  $\geq 50$  dB

iv) The length and type of connector of each Patch Cord: As per SOR.

v) The patchcord with connectors and adaptors shall conform to the TEC Specification No. TEC/GR/TX/OFJ-01/05 NOV-09 with amendment No. TEC/T/OFC-OFJ/155/2013 (latest).

v) Connector Body:

- a) FC-PC: Ni plated brass body (Ni plating shall be as per BIS Standards)
- b) SC-PC & SC-APC: Engineering thermoplastic (Glass filled PBT: Polybutylene Terephthalate)
- c) LC: PEI (Polyetherimide)/ PPS (Polyphenylene Sulphide)

vii) Color of connector body:

- a) FC-PC connector: Ni plated Brass
- b) SC-PC connector: Blue
- c) SC-APC connector: Green
- d) LC connector: Blue

viii) Radius of curvature:

- a) FC-PC: 10 to 25 mm
- b) SC-PC: 10 to 25 mm
- c) SC-APC: 5 to 12 mm
- d) LC: 10 to 25 mm

ix) Minimum bending radius of the cable:

- a) Loaded: 50 mm

**Item S.no. 5: Battery: 12V/42AH VRLA**

S.No.	Technical specification	Compliance (Yes/No)
1	The battery set should consist of VRLA (maintenance free)/SMF batteries.	
2	The one set of battery should consist of 4 Nos. of 12V, 42AH capacity batteries	
3	should be capable to work on High Temperature Ranging from 27°C to 52°C.	

**Item S.no. 6: Charger: 230V AC to 48V DC Rack Mounted with charger 6.25 SMR's (2+1)**

No.	Technical Specification	Compliance (Yes/No)
1	The charger should be mountable on standard telecom rack i.e. 600x400 mm (width x depth).	
2	It should be capable of working in ambient temperature of -5 to +52 degree C.	
3	It should be capable of working within the input AC voltage range 165 to 260 V and	
4	Indication for availability of AC mains to the unit should be provided as LCD display or in the form of LED.	
5	The nominal output DC Voltage should be 48 to 52V with a range of 48 to 56V.	
6	The output current should be 12.5A with 6.25A (min.) SMRs in 2+1 Configuration. In case the higher capacity SMRs are being provided, these should be in N+1 configuration where N indicates the numbers of SMRs being provided to cater the rated load (12.5A or higher) of the unit. The SMRS shall work on current sharing basis for a maximum combined output of 18.75A of main + stand-by SMR's.	
7	The output load & line regulation should be +/-1%.	
8	The output ripples should not be more than +/-3%.	

9	All the circuit breakers and fuses provided on the unit should be of proper rating and well leveled.	
10	The unit should be provided with following potential Free contacts (Normally open) for extending the alarms to the NMS: i) AC mains fail ii) Group alarm iii) Low DC alarm	
11	The Group alarm as indicated in item No. 6 above shall also be available in case any of the SMR gets faulty in addition to other problems related with input/output supply or unit.	
12	The Low DC alarm shall either be fixed at 46 V or should be adjustable between 42 to 47V.	
13	There should be an arrangement of earthing at the unit on its body.	
14	The following protections should be provided with the unit: i) Transient and surge protection ii) Lightning protection iii) Over voltage protection at input and Output iv) Overload protection at output v) Reverse battery protection. vi) Battery LVD (preferably adjustable and in case fix then 41.5 V DC).	
15	The charger should have an arrangement for the charging of the batteries (48 V up to 42 AH) with LVDS.	
16	There should be built in protection against high surge and transient, there should be delay in input switching upon mains recovery to protect the charger from high surges and transient, upon switching on.	
17	There should be protection against lightening and it should be possible to replace the protection tube without opening the unit (external arrangement).	
18	There should be digital display/analogue meter to display the values of, input & output voltage, battery voltage, load Current and charging current.	

**Item S.no. 7: Rack -19” 42U**

S. No.	Item	Technical specification	Compliance (Yes/No)
1	Dimension	42U (Height) x 600 mm (Width) x 600 mm (Depth)	
2	Side panels	To be provided across whole height of the rack should be openable with latching arrangement at top and bottom.	

3	Front door	Rack should have front door tough and transparent glass fitted on MS/CRCA sheet on sides with Lock and key.	
4	Rear side	Shall be perforated for appropriate level as per industry standard.	
5	Top & Bottom	Rack top and bottom should be MS/CRCA steel made with cable entry provision with glands at both side.	
6	Fan module	Compact fan module of 90 CFM working on 48V DC 4 nos. with each rack properly fitted at top of rack.	
7	Earthing Provision	Rack Should have earthing provisions.	
8	Cable manager	2 nos. horizontal and 2 nos. vertical cable manager with cable loops to be provided with each rack.	
9	Power Distribution Unit (PDU)	PDU should be an arrangement for providing 6 MCBs and 1 no. 16 Amp single pole MCB & 1 no. 32 Amp double pole MCB should be provided MCB should be branded make complying IS/IEC 60898-1 standard	
10	Material used	CRCA/MS with Thickness varying from 1.6 Mm to 2.0 mm	
11	The rack should be fitted with one modem tray 19"		
12	The earthing kit consisting of copper bus bar with dimensions 20 inch length, 1.0 inch breadth & 5mm thickness (min.) having 12 holes and 3 brass nut bolts and washers for fixing of earthing cables shall be fixed near the bottom of the rack.		
13	The good quality powder coating light grey in colour shall be used for painting of the rack		
14	The rack should be fitted with dual source power supply distribution board.		
15	"RailTel Logo along with Year" in bold and easily recognizable fonts should be written at the front top of the rack preferably in black or blue color.		
16	OEM should have a valid ISO 9001 certification on the date of opening of bid.		
17	Rack should also comply with EIA 310/DIN 41494 standards.		

**Item S.no. 10: INDOOR AP 4\*4**

S.No.	Reference	Parameters	Technical specification	Compliance (Yes/No)
1	CT2HW1	Hardware	The Wireless Access Point must have be an Indoor Type	
2	CT2HW2	Hardware	The Wireless Access Point must be shipped with the mounting accessories which shall be used for mounting access point.	
3	CT2HW3	Hardware	The Wireless Access Points proposed must include radios for both 2.4 GHz and 5 GHz.	



4	CT2HW4	Hardware	The Wireless Access Point must be able to simultaneously support 2.4 and 5 GHz band	
5	CT2HW5	Hardware	The Wireless Access Point must support operating humidity of 10 to 90% (noncondensing)	
6	CT2HW6	Hardware	The Wireless Access Point point shall have wired uplink interfaces i.e. 1X10/100/1000/2.5G BASE-T Ethernet	
7	CT2WS1	Wireless Standard	The Wireless Access Point must have 802.11 ax Wi-Fi 6 standard.	
8	CT2WS2	Wireless Standard	The Wireless Access Point must have backwards compatibility to 802.11a/b/g/n/ac/ax Wi-Fi standards	
9	CT2WS3	Wireless Standard	The Wireless Access Point must have OFDMA (at least 1024 QAM)	
10	CT2WS4	Wireless Standard	The Wireless Access Point must have 5GHz and 2.4GHz 802.11ax 4x4 MIMO	
11	CT2WS5	Wireless Standard	The Wireless Access Point 5GHz radio must have Four spatial stream Single User (SU) MIMO for up to 2.4Gbps wireless data rate with individual 4SS HE80 (or 2SS HE160) 802.11ax client devices, or with four 1SS or two 2SS HE80 802.11ax MU-MIMO capable client devices simultaneously.	
12	CT2WS6	Wireless Standard	The Wireless Access Point 2.4GHz radio: Four spatial stream Single User (SU) MIMO for up to 1,150Mbps wireless data rate with individual 4SS HE40 802.11ax client devices or with two 2SS HE40 802.11ax MU-MIMO capable client devices simultaneously	
13	CT2WS7		The Wireless Access Point must support 802.11ax: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM	
14	CT2WS8	Wireless Standard	The Wireless Access Point must support 802.11n high-throughput (HT) support: HT20/40 802.11ac very high throughput (VHT) support: VHT20/40/80/160 802.11ax high efficiency (HE) support: HE20/40/80/160	
15	CT2WS9	Wireless Standard	The Wireless Access Point must support following minimum transmit power for both 2.4Ghz and 5Ghz radios. (i) 2.4-Ghz band : +21dBm (ii) 5.0-Ghz band: +24dBm	
16	CT2WS10	Wireless Standard	The Wireless Access Point must support VLAN trunking (802.1q) and VLAN based SSID for user traffic.	
17	CT2WS11	Wireless Standard	The Wireless Access Point must support Automatic Offloading: Hotspot 2.0 / Passpoint (802.11u) - seamless roaming (and offloading) among Wi-Fi and cellular networks (one-way)	
18	CT2WS12	Wireless Standard	The Wireless Access Point shall support 16 WLANs per AP for SSID deployment flexibility.	
19	CT2WS13	Wireless Standard	The Wireless Access Point shall support MDO (Mobile Data offload).	

20		Wireless Antenna	The Wireless Access Point must have minimum 4 Internal Antenna.	
21		Wireless Antenna	The Wireless Access Point Antenna must be Omnidirectional Antenna of +3 dBm or more	
22		Wireless Antenna	The Wireless Access Point Antenna Radiation Pattern must be provided.	
23		Performance	The Wireless Access Point Support for up to 1,024 associated client devices per radio	
24		Performance	The Wireless Access Point must support up to at least a 100 active outdoor clients	
25	CT2RF1	RF	The Wireless Access should have the technology to improve downlink performance.	
26	CT2RF2	RF	The Wireless Access shall be able to load-balance between 2.4Ghz and 5Ghz band/Band Steering.	
27	CT2RF3	RF	The Wireless Access must have -90dB to -100dB or better Receiver Sensitivity.	
28	CT2RF4	RF	The Wireless Access Point must support configurable carrier sense threshold.	
29	CT2M1	Mesh	The Wireless Access Point shall support Mesh capabilities for temporary connectivity in areas with no Ethernet cabling.	
30	CT2M2	Mesh	The Wireless Access Point shall facilitate automatic mesh formation.	
31	CT2M3	Mesh	The Wireless Access Point Mesh Backhaul shall operate in 5Ghz	
32	CT2M4	Mesh	The Wireless Access Point Mesh must Support Encrypted and authenticated connectivity between all backhaul components	
33	CT2R1	Roaming	The Wireless Access Point Must support Proactive Key Caching and/or other methods for Fast Secure Roaming.	
34	CT2R2	Roaming	The Wireless Access Point must support Fast Roaming.	
35	CT2R3	Roaming	The Wireless Access Point shall support Infrastructure-controlled zero-loss handover mechanism for standard Wi-Fi clients.	
36	CT2R4	Roaming	The Wireless Access Point shall support roaming for PSK based SSID	
37	CT2R5	Roaming	The Wireless Access Point shall support roaming for Captive Portal based SSID	
38	CT2S1	Security	The Wireless Access Point must support Management Frame Protection.	
39	CT2S2	Security	The Wireless Access Point must support locally-significant certificates on the APs using a Public Key Infrastructure (PKI) or preinstalled certs on AP for authentication	

40	CT2S3	Security	The Wireless Access Point must support Wireless IDS (WIDS) to detect rouge AP / Evil Twins.	
41	CT2E1	Encryption	The Wireless Access Point must support a distributed encryption/decryption model.	
42	CT2E2	Encryption	The Wireless Access Point must support hardware or software based encryption .	
43	CT2MO1	Monitoring	The Wireless Access Point must support the ability to serve clients or monitor the RF environment.	
44	CT2MO2	Monitoring	The Wireless Access Point must be able to be both a client-serving AP and parallely monitor wireless spectrum.	
45	CT2O1	Operational	The Wireless Access Point must support telnet or SSH or console login to APs directly for troubleshooting flexibility.	
46	CT2O2	Operational	The Wireless Access Point must support automatic detection of dropped connection to controller.	
47	CT2O3	Operational	The Wireless Access Point must support automatic failover to secondary controller, upon detecting lost connection to controller	
48	CT2O4	Operational	The Wireless Access Point must support DHCP Option 82, defined in RFC 3046, including support for Sub-option 01 (Circuit-Id) and Sub-option 02 (Remote Id) fields.	
49	CT2O5	Operational	The Wireless Access Point must support for basic AP monitoring statistics for each radio: Bytes Sent, Bytes Received, Packets Sent, Packets Received, Radio Channel Utilization, Noise.	
50	CT2O6	Operational	The Wireless Access Point shall support SNMP v1 Or higher (V2/V3)	
51	CT2P1	Power	Must support Power over Ethernet/PoE+/UPoE/Power Injector/AC/DC .	
52	CT2Q1	Quality of Service	The Wireless Access Point must have the support of 802.11e and WMM	
53	CT2Q2	Quality of Service	The Wireless Access Point must be WPC Approved and ETA Certified	
54	CT2Q3	Quality of Service	The Wireless Access Point must support QoS to prioritize video ,voice and Data traffic	
55	CT2Q4	Quality of Service	The Wireless Access Point should support QoS for voice over wireless.	
56	CT2Q5	Quality of Service	The Wireless Access Point must support the support the below QOS Policies › WMM Access Categories with DSCP and 802.1p support › QoS-based scheduling	

			› Directed Multicast › L2/L3/L4 ACLs	
57	CT2Q6	Quality of Service	The Wireless Access Point must support QoS and Video Call Admission Control capabilities.	
58	CT2EES1	Environmental and Electrical Specifications	The Wireless Access Point must support powering from POE/PoE+/UPoE /Power Injector/AC/DC.	
59	CT2EES2	Environmental and Electrical Specifications	The Wireless Access Point must support pole, wall, and roof mounting options.	
60	CT2EES3	Environmental and Electrical Specifications	The Wireless Access Point must Geographic orientation flexibility – tilt angle for pole, wall, and roof mounting units	
61	CT2EES4	Environmental and Electrical Specifications	The Wireless Access Point must shall support up to 100 MPH sustained winds & 140 MPH wind gusts.	
62	CT2EES5	Environmental and Electrical Specifications	The Wireless Access Point must have be IP67 Rated Weather Proof.	
63	CT2EES6	Environmental and Electrical Specifications	The Access point shall be rated for operation over an ambient temperature range of 0C to +55 C	
64	CT2EES7	Environmental and Electrical Specifications	Should Support Surge Protection on Ethernet Ports to meet the requirement at High Voltage Transmission Line running across the Railway Platform. If any OEM/Bidder can't provide inbuilt surge protection in AP, external surge protection must be proposed. Surge protection of $\pm 2$ kV on copper Ethernet ports.	
65	CT2N1	Networking	The Wireless Access Point (from a data-plane plane perspective) must support: - Ethernet over GRE IPv6 tunnel - Automatic detection of failed tunnel termination, with configurable connection retry and timeout. - Automatic failover to secondary tunnel termination address.	
66	CT2N2	Networking	The Wireless Access Point must support data-plane split tunneling in which ACLs may be configured to enable a range of destination net blocks and/or IPs to bypass the data-plane tunnel and be bridged on the wired interface.	
67	CT2N3	Networking	The Wireless Access Point should have capability to split tunnel for both IPv4 and IPv6 tunnel to segregate the management and data traffic.	
68	CT2N4	Networking	The Wireless Access Point should have capability to split tunnel for specific destination IP/Subnet (For	

			implementing policy based Caching solutions) using local NAT and forward user traffic.	
69	CT2N5	Networking	The Wireless Access Point shall provide flexibility of segregating control plane & user plane traffic.	
70	CT2N6	Networking	The Wireless Access Point shall support Layer 2 tunnelling technologies. Vendors to provide details of the protocol supported.	
71	CT2N7	Networking	The Wireless Access Point shall support Layer 3 tunnelling protocols. Vendors to provide details of the protocol supported.	
72	CT2N8	Networking	The Wireless Access Point shall provide VPN support through the following: IPSec, PPTP, L2TP, IP-Filtering	
73	CT2N9	Networking	The Wireless Access Point shall support ARP, DHCP snooping.	
74	CT2N10	Networking	The Wi-Fi Access Points and the solution should support configuration in both Bridge and NAT modes.	
75	CT2N11	Networking	The Wireless Access Point must support WAN Configurations of PPPoE DHCP Static IP VLAN	
76	CT2N12	Networking	The Wireless Access Point must support LAN Configurations of DHCP Server	
77	CT2N13	Networking	The Wireless Access Point must support the below Tunnels › L2TP › GRE/EoGRE › SSLVPN › L2TP/IPSEC › PPTP › Wireguard	
78	CT2N14	Networking	The Wireless Access Point must support a selection of the Networking Mode per SSID. E.g. SSID1 in Gateway Mode (with DHCP Server) SSID2 in Bridged Mode	
79	CT2N15	Networking	The Wireless Access Point must support Static Routing.	
80	CT2N16	Networking	The Wireless Access Point must support Dynamic Routing especially BGP and OSPF.	
81	CT2N17	Networking	The Wireless Access Point must have ability to support addressing for both IPv4 and IPv6 and work actively between the two networks.	
82	CT2N18	Networking	Multicast Broadcast Support must have the ability to deliver information using multicast packets to a client instead of a unicast packet	
83	CT2FW1	Firmware Update	The Wireless Access Point must provide continuous firmware upgrades to protect the Wi-Fi Access Points against any vulnerabilities.	

84	CT2FW2	Firmware Update	The Wireless Access Point must have at least 3 years of firmware upgrades	
85	CT2FW3	Firmware Update	The Wireless Access Point must be remotely upgradeable from the Wireless Controller.	
86	CT2SE1	Security	The Wireless Access Point must have a built-in Firewall Capability.	
87	CT2SE2	Security	The Wireless Access Point must have a support URL/Web Filtering	
88	CT2SE3	Security	The Wireless Access Point must have a support L7 Application Filtering	
89	CT2SE4	Security	The Wireless Access Point must support the DPI function to identify the Applications being used by Individual users and devices.	

## WIRELESS CONTROLLER

S.No.	Reference	Parameters	Technical specification	Compliance (Yes/No)
1	WCHW1	Hardware and Standards	The Wireless controller Must be compliant with IEEE CAPWAP or equivalent for controller-based WLANs.	
2	WCHW2	Hardware and Standards	The Wireless Controller must be available as an On-Premise Solution.	
3	WCHW3	Hardware and Standards	The Wireless Controller must support a minimum 5000 Access Points and be scalable to support 20,000 or more APs.	
4	WCHW4	Hardware and Standards	The Wireless Controller shall support 10,000 concurrent sessions from a single chassis	
5	WCHW5	Hardware and Standards	The Wireless Controller shall support Mobile data offload as a feature or as a solution.	
6	WCHA1	High Availability	The Wireless Controller should support 1+1 or N+1 redundancy from the day one.	
7	WCHA2	High Availability	The Wireless controller must have feature for stateful recovery without re-authentication of the client in the event of LAN and WLAN infrastructure disruption to deliver a non-stop client session	
8	WCHA3	High Availability	The Wireless Controller if provided as Physical Hardware must support internal 230 VAC redundant power supplies.	
9	WCRF1	RF Management	The Wireless controller must support an ability to dynamically adjust channel and power settings based on the RF environment.	
10	WCRF2	RF Management	The Wireless controller Radio coverage algorithm must allow adjacent APs to operate on different	

			channels, in order to maximize available bandwidth and avoid interference	
11	WCRF3	RF Management	The Wireless controller Must have Automatic 802.11 interference detection, identification, , and mitigation.	
12	WCRF4	RF Management	The Wireless controller Must support coverage whole detection and correction	
13	WCRF5	RF Management	The Wireless controller Must support RF Management with 20/40/80 MHz channels with 802.11a/b/g/n/ac/ax Wi-Fi standards	
14	WCRF6	RF Management	The Wireless Controller must support AI driven Radio Resource Management for power, channel, coverage hole detection and performance optimization	
15	WCRF7	RF Management	The Wireless controller should provide real-time charts/log showing interferers per access point, on a per- radio, per-channel	
16	WCRF8	RF Management	The Wireless controller must be able to change to a better channel without any human intervention in an immediate or on-demand basis.	
17	WCRF9	RF Management	The Wireless controller must be able to visually display the source of interference.	
18	WCRF10	RF Management	The Wireless controller should have rogue AP detection and automatic containment feature	
19	WCRF11	RF Management	The Wireless controller should be able to classify and identify different types of interference	
20	WCRF12	RF Management	The Wireless controller should provide a snapshot of air quality in terms of the performance and impact of interference on the wireless network identifying the problem areas.	
21	CT2SE1	Security	The Wireless controller must adhere to the strictest level of security standards, including 802.11i Wi-Fi Protected Access 2 (WPA2), WPA, Wired Equivalent Privacy (WEP), 802.1X with multiple Extensible Authentication Protocol (EAP) types, including Protected EAP (PEAP), EAP with Transport Layer Security (EAP-TLS), EAP with Tunnelled TLS (EAP-TTLS)	
22	CT2SE2	Security	The Wireless controller Should support Management frame protection for the authentication of 802.11 management frames by the wireless network infrastructure.	
23	CT2SE3	Security	The Wireless controller should be able to detect attacks like Broadcast deauthentication, NULL probe, from day one for all access points	
24	CT2SE4	Security	The Wireless controller should have profiling of devices based on protocols like HTTP/DNS, DHCP and more to identify the end devices on the network	

25	WCG1	Guest Wireless	The Wireless controller must support internal and external web authentication.	
26	WCF1	Functionality	The Wireless controller must be able to set a maximum per-user bandwidth limit on a per-SSID basis.	
27	WCF2	Functionality	The Wireless controller must support user load balancing across Access Points.	
28	WCF3	Functionality	The Wireless controller must provide Mesh capability for Mesh supported AP.	
29	WCM1	Monitoring	Deleted	
30	WCR1	Roaming	The Wireless controller must support clients roaming across at least 500 APs.	
31	WCO1	Operational	The Wireless Controller must support Zero Touch Initial Account Configuraton and Setup.	
32	WCO2	Operational	The Wireless Controller must support adding new AP via Mac Address/Serial Number.	
33	WCO3	Operational	The Wireless Controller must be able to Bulk Upload the AP in any Site.	
34	WCO4	Operational	The Wireless Controller must push all the configuration of the site to all the Wi-Fi Access Points without any configuration steps.	
35	WCO5	Operational	The Wireless Controller must support distributed management features to enable Multi-Site Management.	
36	WCO6	Operational	The Wireless Controller must support Site creation based on Logical location or Physical Location.	
37	WCO7	Operational	The Wireless Controller must be able to perform an on-demand speedtest on any Wireless Access Point.	
38	WCO8	Operational	The Wireless Controller must perform an ongoing speedtest at regular intervals to ensure the health of the network link is optimal.	
39	WCO9	Operational	The Wireless Controller must be able to perform an on-demand Network Performance Test/Check.	
40	WCO10	Operational	The Wireless Controller must perform an ongoing network performance test to check evaluate the suitability of the network for applications like voice, video, streaming etc.	
41	WCO11	Operational	The Wireless controller must support AP over-the-air packet capture for export to a tool such as Wire shark.	
42	WCO12	Operational	The Wireless controller shall support API's for NB and SNMP Integration with CNMS	
43	WCO13	Operational	The Wireless controller shall support Reporting functionality with or without external server	



44	WCO14	Operational	<p>The Wireless controller should support following Information through SNMP</p> <ul style="list-style-type: none"> <li>i) Interface utilization.</li> <li>ii) Interface errors and discards.</li> <li>iii) Connected APs (count) , Connected Clients (count),Access Point Failed Assoc. Count</li> <li>iv) Connected Stations (count), Admin Status (on/off) ,Broadcast SSID (on/off).</li> <li>v) CPU and Memory statistics.</li> <li>vi) AP name , AP IP address ,AP Model , AP uptime , AP admin status , operational status ,POE Status ,Ethernet speed , number of clients and AP mode .</li> <li>vii) Should also support snmp traps on failure conditions.</li> </ul>	
45	WCO15	Operational	The Wireless controller must provide reports type like number of clients, system resource utilization, Transmit and Receive bytes on AP/radio or set of AP or a particular site should be generated.	
46	WCO16	Operational	The Wireless controller should have a troubleshooting tool to detect user experience issues.	
47	WCO17	Operational	The Wireless controller should display health and traffic data for each AP to evaluate site performance.	
48	WCO18	Operational	The Wireless Controller should have role-based admin rights.	
49	WCO19	Operational	The Wireless Controller should provide granular control on each and every access rights.	
50	WCO20	Operational	The Wireless Controller must have an Audit Trail to log all the activities on the Wireless Access Point.	
51	WCO21	Operational	The Wireless Controller must not override any settings or changes but create a copy of the same to ensure the changes can be reverted.	
52	WCO22	Operational	The Wireless Controller must use end to end strong encryption for all the communication between the Cloud Wireless Controller and the Wireless Access Point.	
53	WCO23	Operational	The Wireless Controller should be able to exclude clients based on excessive/multiple authentication failure.	
54	WCO24	Operational	The Wireless Controller should be able to stop/revoke any Wireless Access Point instantly.	
55	WCO25	Operational	The Wireless Controller must support Link Status Monitoring to continuously monitor the link availability across all the sites.	
56	WCO26	Operational	The Wireless Controller must support defining the SLA for the Link Quality based on the type of the link in terms of Jitter, Packet Loss, Latency, MOS, Uptime and Throughput.	
57	WCO27	Operational	The Wireless Controller must support Link Quality Monitoring to monitor the link Quality in realtime	

			across all the sites and show the realtime status on the dashboard.	
58	WCO28	Operational	The Wireless Controller must report the Link Utilization per Link to ensure the optimum utilization of the link and link expansion if required.	
59	WCO29	Operational	The Wireless Controller must be able to send a scheduled summary report of all the entire system on a Daily/Weekly/Monthly manner to all the key stakeholders.	
60	WCQ1	Quality of Service	The Wireless controller must support 802.11e and WMM	
61	WCQ2	Quality of Service	The Wireless controller Shall able to prioritize all traffic such as (Data ,voice and video)	
62	WCQ3	Quality of Service	The Wireless controller Should have rate limiting per user and per SSID basis for encrypted tunnel mode	
63	WCQ4	Quality of Service	The Wireless controller must deliver optimal bandwidth usage, reliable multicast must use single session between AP and Wireless Controller.	
64		Firmware	Should support encrypted mechanism to securely upload/download software images to and from wireless controllers	
65	WCIP1	Networking	The Wireless Access Controller should support L2 and L3 roaming of IPv6 clients.	
66	WCIP2	Networking	The Wireless Access Controller should support Guest-access functionality for IPv6 clients	
67	WCIP3	Networking	The Wireless Access Controller should support Ethernet over GRE IPv4 tunnel to northbound gateway	
68	WCIP4	Networking	The Wireless Access Controller should support Ethernet over GRE IPv6 tunnel to northbound gateway.	
69	WCIP5	Networking	The Wireless Access Controller Must support automatic detection of failed tunnel termination, with configurable connection retry and timeout	
70	WCIP6	Networking	The Wireless Access Controller Must support automatic failover to secondary tunnel termination address.	
71	WCIP7	Networking	The Wireless Access Controller Must support controller-based configuration of Ethernet over GRE tunnel termination	
72	WCIP8	Networking	The Wireless Access Controller shall support various modes of operations like Tunnel Mode and local Breakout on the Same AP	
73	WCIP9	Networking	The Wireless Access Controller must support configuration of data-plane split tunneling by enabling specific destination IP addresses and net	

			blocks to bypass the data-plane tunnel and be bridged on the wired interface	
74	WCIP10	Networking	The Wireless Access Controller shall support Mobile Data Offload.	
75	WCIP11	Networking	The Wireless Access Controller shall integrate with existing firewall.	