

SOUTHERN RAILWAY

CHENNAI

TENDER DOCUMENT (TWO PACKET)

Provision of Electronic Interlocking Signalling arrangements (Both Indoor and Outdoor) at Nagari and Podatturpettai of Chennai division in connection with Construction of New line between Nagari and Tindivanam.

E-Tender Notice No: SGCNMTPNG-PDTI-2024 Dated: 20.07.2024

Estimated Cost of the Work	Rs. 35,70,45,204.06/- (Rupees Thirty Five Crores Seventy Lakhs Forty Five Thousand Two Hundred and Four Rupees and Six paise only).
Cost of Tender Document	NIL
Cost of Bid Security (EMD)	Rs. 19,35,200.00
Validity of Offer	90 Days from date of tender opening
Completion Period	9(Nine) Months
Last Date & Time for submission of Tender	12.08.2024 before 14.00hrs
Date and Time for Tender opening	12.08.2024 after 14.00 hrs
Date and time of opening of Technical Bid (Packet –I)	12.08.2024 after 14.00 hrs

Office of Executive Signal &Telecommunication Engineer/Construction and Metropolitan Transport Projects,Chetpet, Southern Railway, G.C building, GroundFloor, Mc Nichols Rd, Chennai – 600 031.

Signature of Tenderer & Seal

PACKET- I
TECHNICAL BID DOCUMENT
(TWO PACKET SYSTEM)

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CHAPTER-1

TENDER NOTICE

SOUTHERN RAILWAY

TENDER NOTICE

E-Tender Notice No: SGCNMTPNG-PDTI-2024 Dated: 20.07.2024

Office of Executive Signal &Telecommunication Engineer/Construction and Metropolitan Transport Projects,Chetpet, Southern Railway, G.C building, GroundFloor, Mc Nichols Rd, Chennai – 600 031.

- 1.0 Office of Executive Signal &Telecommunication Engineer/Construction and Metropolitan Transport Projects, Chetpet, Chennai-31 for and on behalf of 'President of India' invites OPEN E-Tender in a TWO packet from the competent, experienced & established contractors having sufficient experience in similar work and satisfying minimum eligibility criteria on the prescribed form for the under noted work:

1	Name of the Work	Provision of Electronic Interlocking Signalling arrangements (Both Indoor and Outdoor) at Nagari and Podatturpettai of Chennai division in connection with Construction of New line between Nagari and Tindivanam.
2	Estimated cost of the work	Rs. 35,70,45,204.06 (Rupees Thirty Five Crores Seventy Lakhs Forty Five Thousand Two Hundred and Four Rupees and Six paise only.)
3	Bid Security (EMD)	Rs. 19,35,200.00 (Rupees Nineteen Lakhs Thirty Five Thousand and Two Hundred only) (Payment of Bid Security should be accepted through e payment gateway or submitted as Bank Guarantee bond
4	Completion period	9 (Nine) Months.
5	Last date and Time of online submission (closing) of tender document	12.08.2024 before 14.00 hrs
6	Validity of offer	90 days from the date of opening of tender

7	Last date and time for submission of Tender	12.08.2024 before 14.00 hrs
8	Date and time of opening of Tender	12.08.2024 after 14.00 hrs
9	Website Particulars for bid submission	<p>a) Bids are to be submitted online only.</p> <p>b) Tenderers must register on Indian Railways E-Procurement System (IREPS) site i.e., www.ireps.gov.in for participating in E-tender system. Necessary changes, Corrigendum/Addendum if required, would be posted on this site only.</p> <p>c) Bidders will be able to submit their original/revised bids up to closing date & time only.</p> <p>d) Manual bids/offers are not allowed against this</p>
10	Cost of the Tender Document	Nil
11	Participation of Joint Venture	Allowed for this tender as per Railway Board Guidelines

Further particulars can be obtained from Indian Railways Website www.ireps.gov.in. Tenderers who wish to participate in tenders invited on www.ireps.gov.in have to register on the website mandatorily. Please refer to website for more details. Tenderers can submit their Bid Security through e payment gateway or shall upload as Bank Guarantee bond in IREPS website. Other than above means will not be accepted as Bid Security for tenders invited on IREPS (E-Tender portal)

Executive Signal &Telecommunication
Engineer, Construction and Metropolitan
Transport Projects, Chetpet, Chennai –31
For & on behalf of the President of India

****END OF CHAPTER –1 ****

CHAPTER - 2

SPECIAL CONDITIONS OF CONTRACT

CHAPTER - 2

SPECIAL CONDITIONS OF CONTRACT

2.1 GENERAL INSTRUCTIONS:

- i) This Chapter shall be read in conjunction with Indian Railways Standard General Conditions of Contract (GCC) 2022 and advance correction slip No.1,2,3,4,5&6, which shall be subject to modifications, additions or supersession by these Special Conditions of Contract (SCC) and/or specifications/conditions, if any, which is part of this Tender Document.
- ii) The regulations for tenders and contracts shall be read in conjunction with the General Conditions of Contract which are referred to therein and wherever there is a conflict between the Special condition with GCC and SCC of S&T SOR 2011, then SCC of this contract prevails.
- iii) It may be noted that the “General Conditions of Contract – April 2022” together with its correction slips is attached to the tender form.
- iv) Any deviations from these Special Conditions of Contract, Technical Requirement & Specifications, Schedule of Material & Supplies and/or any condition of tender document, if any, stated by the tenderer in his tender or subsequently introduced by the Railway shall be a part of the Contract only to such extent as have been explicitly accepted by the Railway and incorporated in the contract. Details shall be given in **Form No. 3** (in Forms and Annexures part of chapter 3).
- v) All offers are required to be submitted online on www.ireps.gov.in before the last date and time indicated in the Tender Notice.
- vi) Manual offers are not allowed for this tender. If any manual tenders are received same shall be ignored.
- vii) Provisions of Make in India Policy 2017 issued by Govt of India as amended from time to time shall be followed for consideration of tenders.
- viii) Any additional information regarding the tender, if required by the tenderer may be obtained from the XSTE/CN&MTP/MSC, Southern Railway, Chetpet, Chennai -31 during office hours.

2.2 RULES & GENERAL INFORMATION TO TENDERER:

- (i) Non- transferable tender documents may be downloaded by registered bidder from www.ireps.gov.in. Bids are to be submitted online before the expiry of time and date of tender opening. Payment regarding the cost of Bid Security (Earnest Money Deposit) shall be through e payment gateway or shall submit as Bank Guarantee bond only in IREPS website. The notice header can be seen at www.ireps.gov.in. **FDRs are not acceptable against Bid Security (Earnest Money Deposit) for this tender.**
- (ii) Tenderer(s) are advised to refer, the “User Manual For Contractors” available in ‘Learning Centre’ tab in left navigation block on home page of E-Tendering portal www.ireps.gov.in for detailed instructions on submitting EMD/Tender cost/Bids online.
- (iii) Permitting downloading of tender document by Railway is facility for convenience of Tenderer(s). In case, tender document is not uploaded on website or download failure or incomplete document downloaded, Railway shall not be responsible in anyway. Railway shall not be responsible for any direct/indirect loss of business/Profit resulting from inability to use this facility.
- (iv) Tender document is not transferable and the cost of the tender form is Zero; hence tenderers have the facility to download to enable more participation.
- (v) The tenderer shall maintain the integrity of downloaded tender document and shall not make any change/alteration/deletion/tampering, whatsoever, in the downloaded documents. If the tenderer(s) deliberately give(s) wrong information in his/their tender, create(s) circumstances for the acceptance of his/their tender, Railway reserves the right to reject such tender at any stage. The tenderer’s offer shall be rejected and full earnest money shall be forfeited, in case it is detected after submission of offer, that they have made any modification in downloaded documents. In case such modification is noticed after award of contract, Railway is liable to terminate the contract on Contractor’s default. In addition Railway reserves the right to take action against the firm as deemed fit, which may include banning of business dealings with the firm and the firm is also liable to be prosecuted as per the law. In case of any dispute over the discrepancy noted in tender document submitted by Tenderer, the master document kept with Railway shall prevail and decision of Railway thereon shall be final and binding on the tenderer/contractor. The declaration in Form- 9 shall be given by the Tenderers while submitting the tender. [Refer Forms & Annexures of Chapter-3 of Tender Document]
- (vi) The tenderer(s) shall keep him updated about any modification in E-tender notice and E-tender document issued by Railway through newspapers, website or any other means and shall act accordingly. Tenderers are advised to download the tender documents well in advance and submit the tender before the stipulated date and time. It is the responsibility of the tenderer to check any correction or any modifications published subsequently in IREPS Web site and the same shall be taken into account while submitting the tender. The Tenderers shall download corrigendum (if any), and upload it with the main tender document with his/her digital signature. Tender documents not accompanied by published corrigendum(s) are liable to be rejected

- (vii) The tender shall be signed by individual or individuals legally authorised to enter into commitments on behalf of the tenderer. Any individual(s) signing the tender documents or other documents connected therewith should specify whether he is signing:
 - a. As a sole proprietor of the firm or attorney of the sole proprietor.
 - b. As a partner or partners of the firm.
 - c. As a Director, Manager or Secretary or official with Power of Attorney as per memorandum/article of association in a Limited Company.
 - d. Individual(s) signing the tender documents must state that he/she is authorised to sign the same and submit documentary proof for same.
- (viii) Every tenderer shall state in the tender his postal address fully and clearly. Any communication sent in time to the tenderer by post at the said address shall be deemed to have reached the tenderer duly and in time. He shall also give telephone and fax number for communication. Important documents shall be sent by registered post.
- (ix) Incomplete and conditional tenders will generally not be considered and are liable to be rejected. Railway reserves the right to reject any special conditions stipulated by the tenderer as considered unacceptable to the Railway. If any deviations from the General conditions of Contract /Special Conditions of Contract/ Technical Specifications & Requirements/Schedule of works & Supplies are proposed by the tenderer, they should be mentioned on statement of deviation in **Form No.3** (in Forms & Annexures part of Chapter - 3) and not elsewhere in the tender document. If the tender has no exceptions, the **Statement of Deviations** shall be submitted with a 'NIL' statement. If the tenderer does not include this with the tender it shall be conclusive evidence that all conditions of contract are entirely acceptable to the Tenderer. All the relevant documents shall be uploaded along with the tender form as per the terms and conditions of the tender.
- (x) Tenderer without submitting requisite earnest money through online shall not be able to participate in the E-tendering process.
- (xi) All the relevant documents shall be uploaded along with tender form as per terms and condition of tender.
- (xii) All supporting documents to the offers shall be either type written/printed or written neatly in indelible ink in English and scanned with sufficient resolution for uploading on E-tendering portal such that clear hard copy can be taken for the same. Each page of the offer must be numbered consecutively, should bear the tender number and each page of the tender document including technical brochures, manuals etc., should be signed by the tenderer & should bear the seal of the firm. A reference to the total No. of pages comprising the offer must be made at the top righthand corner of the first page. Photocopies of all the certificates etc., submitted by tenderer should be attested by tenderer as true copies, unless required to be attested by Notary public by other conditions of tender. No scribbling is permissible in the tender documents. Tender containing erasures and alterations in the tender documents are liable to be rejected. Any correction made by the tenderer(s) in his/their entries must be attested by him/them.

(xiii) Errors, Omission & Discrepancies (in the tender document):

- a. The contractor(s) shall not take any advantage of any misinterpretation of the conditions due to typing or any other error and if in doubt shall bring it to the notice of the tender inviting authority, without delay. In case of any contradiction, only the printed rules and books should be followed and no claim for the misinterpretation shall be entertained.
 - b. If a tenderer finds discrepancies in, or omission from the drawing or any of the tender document or he has any doubt to their meaning, he should at once notify XSTE/CN&MTP/MSC, Southern Railway, Chetpet, Chennai-31 who may send a written clarification to all Tenderers or upload the Amendment & Corrigendum in www.ireps.gov.in as required.
- (xiv) After opening of the tender, any document/credential pertaining to the technical & financial eligibility and constitution of the firm will neither be asked nor be entertained/considered under any circumstance & nor claim nor representation whatever in this regard, from the tenderer shall be entertained.
- (xv) Clarification of Bids: To assist in the examination, evaluation & comparison and pre-qualification of the Tender, the Railway may, at its discretion, ask any Bidder for a clarification of its Bid. Any clarification submitted by a Bidder that is not in response to a request by the Railway shall not be entertained or considered. The Railway request for clarification and the response of the bidder in this regard shall be in writing. However, if a Bidder does not provide clarification of its bid by the date and time communicated in the Railway request for clarification, the bid shall be evaluated as per the documents submitted along with the bid.
- (xvi) The comparative tabulation of bids received against the open E-tender will be available online to participating firms immediately after opening of the Bid by Railway. However, tenderer or his authorized representative may attend the opening in the office of XSTE/CN&MTP/MSC, Southern Railway, Chetpet, Chennai – 31.
- (xvii) Date of inviting tender shall be the date of publishing tender notice on IREPS website.

2.3 NAME OF THE WORK:

Provision of Electronic Interlocking Signalling arrangements (Both Indoor and Outdoor) at Nagari and Podatturpettai of Chennai division in connection with Construction of New line between Nagari and Tindivanam.

2.4 BRIEF SCOPE OF WORK:

The scope of this work is broadly for the execution of works such as

- The scope of this work is broadly for provision of indoor and outdoor signalling arrangements with Trenching as per Cable Route Plan, Laying of OFC/

Signalling and Telecom cables as per Cable Core Plan, Erection of colour light signals, Apparatus cases, erection of cable termination racks and relay racks in the new Relay room/ hut/LC hut, Termination of cables in cable termination rack and apparatus cases, Wiring of relays in the relay racks and apparatus case, Installation and wiring of point machines, Installation of power supply arrangements and batteries, Supply of Signal equipments, Matching of new cables at existing locations, Releasing of existing Signalling gadgets, Testing and Commissioning the entire installation.

- The work involves Supply, Installation, Testing and Commissioning of the Electronic Interlocking system, as per Technical Specifications prescribed by RDSO Specification RDSO/SPN/192/2019 with latest amendment on the date of tender opening and as per approved signalling plans.
- The work will include supply and execution of all items of supply required for the installation of EI, Relay Racks, Relay fixing and wiring up to Cable Termination Rack and to EI Equipment rack. The tenderer/ contractor has to transport all required equipments to the site of installation.
- Only unstabilized 230V AC supply shall be provided for powering the EI equipment. The tenderer/ Contractor shall make necessary arrangements like cable laying and other associated works for extending the 230V Supply from SM Room/ IPS Room/ Power Room to the EI System, Object Controllers, VDU and MT as instructed by Railway Engineer.
- Supply and provision of MSDAC.
- Supply and provision of HASSDAC for BPAC.
- Supply and provision of Solid-State Block Instrument for Single Line
- Training to the Railway officials at OEM premises or at reputed training institutions.

2.4.1 CONTRACTOR'S SCOPE OF WORK :

- i) The contractor has to make all supplies as per schedule of works except the items mentioned under heading "Works to be done by Railways" in the tender document under Para 2.4.2
- ii) The contractor shall be responsible for employing of qualified personnel for supervision and execution of work as per GCC Clause No 26.
- iii) The contractor shall be responsible for supply of equipment/materials as per Technical specification & Requirement in line with Tender schedules.
- iv) The contractor shall be responsible for proper execution of work in line with Tender schedules.

- v) Lifting of materials/cables from designated stores/workshops to the site. Stacking the materials received and providing security arrangements to avoid any damage/loss of materials.
- vi) The contractor shall be responsible for Supply of Technical documents for the equipment offered by him.
- vii) Arranging the OEM Engineer for proper technical guidance during the work when needed.
- viii) Testing and commissioning of all equipment's with approved system design.
- ix) Wiring and cabling power supply & other modules, fuses and relay rack, surge protection device etc., .
- x) The contractor shall be responsible for warranty of the assets supplied and installed by him for a period of ONE Year i.e., after issuing of completion certificate by a JAG officer.

2.4.2 WORK TO BE DONE BY THE RAILWAYS:

Following works shall be done by Railways:

- i) Supply of raw EB Power supply. For any installation activities like drilling, soldering etc., **necessary electric power supply shall be arranged by contractor.**
- ii) Supervision of testing and commissioning of installation/equipment. This activity shall be done once tenderer has completed the testing of complete installation and offers it to Railways for their testing, verification and validation.
- iii) Supervising the entire project execution being carried out by the contractor.
- iv) Making personal available for operation of equipments after commissioning.

2.5 QUALIFYING & ELIGIBILITY CRITERIA:

2.5.1 SIMILAR NATURE OF WORK:

For satisfying eligibility criteria for the subject tender, similar nature of work means “**Any Signal interlocking works involving EI or RRI or PI or IBS or LC gate Interlocking or UFSBI or Track circuit AFTC or (SSDAC or MSDAC or HA-SSDAC) or Automatic signaling**”.

Following Special conditions of contract for this work to be followed:

- a. While bidding, the bidder should submit an undertaking that they will procure items from RDSO approved firm
- b. The successful bidder shall submit an MOU with RDSO approved EI OEM.

- c. MoU shall include after sales Support required during warranty period and beyond the Warranty period up to the codal life of the item, training to railway officials, AMC or ARC etc.

2.5.2 TECHNICAL ELIGIBILITY:-

Tenderer must have successfully completed or substantially completed any of the following during last 07 (SEVEN) years, ending last day of month previous to the one in which tender is invited.

One Similar work costing not less than the amount equal to 60% of the advertised tender value.

(OR)

Two Similar work costing not less than the amount equal to 40% of the advertised tender value.

(OR)

Three Similar work costing not less than the amount equal to 30% of the advertised tender value.

Work experience certificate from Private individual shall not be considered. However, in addition to work experience certificates issued by any Govt Organisation, work experience certificate issued by Public Listed Company having average annual turnover of Rs. 500 Crores and above in last 3 Financial Years excluding the current financial year, listed on National Stock Exchange or Bombay Stock Exchange, incorporated/registered at least 5 years prior to the date of opening of tender, shall also be considered provided the work experience certificate has been issued by a person authorized by the Public Listed company to issue such certificates.

In case tenderer submits work experience certificate issued by Public listed company, the tenderer shall also submit along with work experience certificate, the relevant copy of work order, bill of quantities, bill wise details of payment received duly certified by Chartered Accountant, TDS certificates for all payments received and copy of final/last bill paid by company in support of above work experience certificate.

The tenderer shall submit a certificate to this effect in the format given in **Form No.1A for physically completed works and in Form No 1B for substantially completed works** (in Forms & Annexures part of Chapter - 3) of the tender document. Certificates to be duly certified by minimum JAG Officer.

Note :

- a) Substantially Completed Work means an ongoing work in which payment equal to or more than 90% of the present contract value (excluding the payment made for adjustment of Price variation (PVC), if any) has been made to the contractor in that ongoing contract and no proceedings of termination of contract on Contractor's default has been initiated.

The credential certificate in this regard should have been issued not prior to 60 days of date of invitation of present tender.

b) In case a work is started prior to 07 (seven) years, ending last day of month previous to the one in which tender is invited, but completed in last 07 (seven) years, ending last day of month previous to the one in which tender is invited, the completed work shall be considered for fulfilment of credentials.

c) If a work is physically completed and completion certificate to this extent is issued by the concerned organization but final bill is pending, such work shall be considered for fulfilment of credentials.

d) In case of completed work, the value of final bill (gross amount) including the PVC amount (if paid) shall be considered as the completion cost of work. In case final bill is pending, only the total gross amount already paid including the PVC amount (if paid) shall be considered as the completion cost of work.

e) In case of substantially completed work, the total gross amount already paid including the PVC amount (if paid), as mentioned in the certificate, shall be considered as the cost of substantially completed work.

f) In case a work is considered similar in nature for fulfilment of technical credentials, the overall cost including the PVC amount (if paid) of that completed work or substantially completed work, shall be considered, and no separate evaluation for each component of that work shall be made to decide eligibility.

g) If a bidder has successfully completed work as a subcontractor and the work experience certificate has been issued for such work to the subcontractor by a Govt. Organization or public listed company as defined in a note for item 10.1 part I of GCC, the same shall be considered to fulfil credentials.

h) In the case of a newly formed partnership firm, the credentials of individual partners from previous propriety firm(s) or dissolved previous partnership firm(s) or split previous partnership firm(s) shall be considered only to the extent of their share in previous entity on the date of dissolution/split and their share in a newly formed partnership firm. For example, partner A had a 30% share in the previous entity, and his share in the present partnership firm is 20%. Therefore, in the present tender under consideration, the credentials of partner A will be considered to the extent of $0.3 \times 0.2 \times \text{value of the work done in the previous entity}$. For this purpose, the tenderer shall submit along with his bid all the relevant documents, which include a copy of previous partnership deed(s), dissolution deed(s), and proof of surrender of PAN No.(s) in case of dissolution of a partnership firm(s), etc.

i) In the case of an existing partnership firm, if anyone or more partners quit the partnership firm, the credentials of the remaining partnership firm shall be re-worked out, i.e., the quitting partner(s) shall take away his credentials to the extent of his share on the date of quitting the partnership firm (e.g., in a partnership firm of partners A, B & C having share 30%, 30% & 40% respectively and credentials of Rs 10 crore; in case of partner C quits the firm, the credentials of this partnership firm shall remain as Rs 6 crore). For this purpose, the tenderer shall submit along with his bid all the relevant documents, which include a copy of previous partnership deed(s), dissolution deed(s), and proof of surrender of PAN No.(s) in case of dissolution of a partnership firm(s), etc.

- j) In case of existing partnership firm if any new partner(s) joins the firm, without any modification in the name and PAN/TAN no. of the firm, the credentials of partnership firm shall get enhanced to the extent of credentials of newly added partner(s) on the same principles as mentioned in item 6 above. For this purpose, the tenderer shall submit along with his bid all the relevant documents which include copy of previous partnership deeds, dissolution/splitting deeds and proof of surrender of PAN No.(s) in case of dissolution of partnership firm etc.
- k) Any partner in a partnership firm cannot use or claim his credentials in any other firm without leaving the partnership firm i.e., In a partnership firm of A&B partners, A or B partner cannot use credentials of partnership firm of A&B partners in any other partnership firm or propriety firm without leaving partnership firm of A&B partners.
- l) In case a partner in a partnership firm is replaced due to succession as per succession law, the proportion of credentials of the previous partner will be passed on to the successor.
- m) If the percentage share among partners of a partnership firm is changed, but the partners remain the same. In that case, the firm's credentials before such modification in the share will continue to be considered for the firm as it is without any change in their value. Further, if a partner of a partnership firm retires without taking away any credentials from the firm, the credentials of the partnership firm shall remain the same as it is without any change in their value.
- n) In a partnership firm "AB" of A&B partners, in case A also works as propriety firm "P" or partner in some other partnership firm "AX," credentials of A in propriety firm "P" or in another partnership firm "AX" earned after the date of becoming a partner of the firm AB shall not be added in partnership firm AB.
- o) In case a tenderer is LLP, the credentials of the tenderer shall be worked out on the above lines similar to a partnership firm.
- p) In case company A is merged with company B, then company B would also get company A's credentials.

2.5.3 FINANCIAL ELIGIBILITY:-

The tenderer must have minimum average annual contractual turnover of V/N or "V" whichever is less: where,

V= Advertised value of the tender in crores of Rupees

N= Number of years prescribed for completion of work for which bids have been invited.

The average annual contractual turnover shall be calculated as an average of "total contractual payments" in the previous three financial years, as per the audited balance sheet. However, in case balance sheet of the previous year is yet to be prepared/ audited, the audited balance sheet of the fourth previous year shall be considered for calculating average annual contractual turnover.

The tenderers shall submit requisite information as per **Form No.2**, along with copies of Audited Balance Sheets duly certified by the Chartered Accountant/ Certificate from Chartered Accountant duly supported by Audited Balance Sheet.

2.5.4 Bid Capacity:

The available bid capacity shall be calculated with the formula as mentioned in Annexure-A5. For tenders having advertised value more than Rs 20 crore wherein eligibility criteria includes bid capacity also, the tenderer will be qualified only if its available bid capacity is equal to or more than the total bid value of the present tender. The tender/technical bid will be evaluated based on bid capacity formula detailed as Annexure-A5.

2.6 GUIDELINES FOR PARTICIPATION OF JOINT VENTURE FIRMS:

- (i) Separate identity/name shall be given to the Joint Venture firm.
- (ii) Number of members in a JV firm shall not be more than THREE.
- (iii) A member of JV firm shall not be permitted to participate either in individual capacity or as a member of another JV firm in the same tender.
- (iv) The tender form shall be purchased and submitted only in the name of the JV firm and not in the name of any constituent member. The tender form can however be submitted by JV or any of its constituent member or any person authorized by JV through Power of Attorney to submit tender.
- (v) Bid Security shall be deposited by JV or authorized person of JV through E-payment gateway or Bank Guarantee Bond either in the name of JV, or in the name of all members of JV as per MOU irrespective of their share in the JV.
- (vi) One of the members of the JV firm shall be its Lead Member who shall have a majority (at least 51%) share of interest in the JV firm. The other members shall have a share of not less than 20% each in case of JV firms with up to three members. In case of JV firms with foreign member (s), the lead member has to be an Indian firm with a minimum share of 51%.

- (vii) A copy of Memorandum of Understanding (MOU) duly executed by the JV members on stamp paper, shall be submitted by the JV along with the tender. The complete details of the members of the JV firm, their share and responsibility in the JV etc., particularly with reference to financial, technical and other obligations shall be furnished in the MOU. The MOU format for this purpose is enclosed as **Annexure-1** (in Forms & Annexure part of chapter 3).
- (viii) Once the tender is submitted, the MOU shall not be modified/alterd/ terminated during the validity of the tender. In case the tenderer fails to observe / comply with this stipulation, the full Bid Security (EMD) shall be forfeited. In case of successful tenderer, the validity of this MOU shall be extended till the currency of the contract expires.
- (ix) Approval for change of constitution of JV shall be at the sole discretion of the Railways. The constitution of the JV shall not normally be allowed to be modified after submission of the tender bid by the JV, except when modification becomes inevitable due to succession laws etc. and in any case the minimum eligibility criteria should not get vitiated. However, the Lead Member should continue to be the Lead Member of the JV. Failure to observe this requirement would render the offer invalid.
- (x) Similarly, after the contract is awarded, the constitution of JV shall not be normally allowed to be altered during the currency of contract except when modification become inevitable due to succession laws etc. and in any case the minimum eligibility criteria should not get vitiated. Failure to observe this stipulation shall be deemed to be breach of contract with all consequential penal action as per contract conditions.
- (xi) On award of contract to a JV, a single performance guarantee shall be submitted by the JV as per tender conditions. All the Guarantee's like Performance Guarantee, Bank Guarantee for Mobilization Advance etc., shall be accepted only in the name of the JV firm and no splitting of guarantee amongst the members of the JV firm shall be permitted.
- (xii) On issue of LOA (Letter of Acceptance), the JV entity to whom the work has been awarded, shall form a legal entity if not already formed, which shall have the same shareholding pattern, as was declared in the MOU/JV agreement submitted along with the tender. The entity shall be got registered before the Registrar of the companies under "The Companies Act-2013" (in case JV entity is to be registered as Company) or before the Registrar/Sub-Registrar under the 'The Indian Partnership Act, 1932' (in case JV entity is to be registered as Partnership Firm) or under "The LLP Act 2008" (in case JV

entity is to be registered as LLP). A separate PAN shall be obtained for this entity. The documents pertaining to this entity including its PAN shall be furnished to Railways before signing the contract agreement for the work. In case the tenderer fails to observe/comply with this stipulation within 60 days of issue of LOA, contract is liable to be terminated.

(xiii) This JV agreement shall be submitted by the JV firm to the Railways before signing the contract agreement for the work. This agreement should invariably be made on the basis of agreed terms and conditions as made in the MOU. In case the tenderer fails to observe/comply with this stipulation, the full Bid Security (EMD) shall be forfeited and other penal actions due shall be taken against partners of the JV and the JV. This joint venture entity so registered, in the registered documents, shall have, inter-alia, the following clauses:

- a) **Joint and several liabilities:** The members of the JV entity to which the contract is awarded shall be jointly and severally liable to the Railway for execution of the project in accordance with General and special conditions of the contract. The members of the JV entity shall also be liable jointly and severally for the loss, damages caused to the Railways during the course of execution of the contract or due to non-execution of the contract or part thereof.
- b) **Duration of the Joint Venture Registered Entity:** It shall be valid during the entire currency of the contract including the period of extension, if any and the maintenance/warranty period after the work is completed.
- c) **Governing laws:** The Joint Venture Registered Entity shall in all respect be governed by and interpreted in accordance with Indian Laws.

(xiv) **Authorised Member:** Joint Venture members in the JV MOU shall authorise one of the members on behalf of the Joint Venture to deal with the tender, sign the agreement or enter into contract in respect of the said tender, to receive payment, to witness joint measurement of work done, to sign measurement books and similar such action in respect of the said tender/contract. All notices/correspondences with respect to the contract would be sent only to this authorised member of the JV.

(xv) No member of the Joint Venture shall have the right to assign or transfer the interest right or liability in the contract without the written consent of the other members and that of the Railways in respect of the said tender/contract.

(xvi) Documents to be submitted/uploaded by the JV along with the tender:

(A) In case one or more of the members of the JV is/are partnership firm(s), the following documents shall be submitted:

- a) A notarized copy of the Partnership Deed, or a copy of the Partnership deed registered with the Registrar.
- b) A copy of consent of all the partners or individual authorised by partnership firm, to enter into the Joint Venture Agreement on a stamp paper.
- c) A notarized or registered copy of Power of Attorney (duly registered as per prevailing law) in favour of the individual to sign the MOU/JV Agreement on behalf of the partnership firm and create liability against the firm.
- d) An undertaking by all partners of the partnership firm that they are not blacklisted or debarred by Railways or any other Ministry / Department of the Govt. of India from participation in tenders / contracts as on the date of submission of bids, either in their individual capacity or in any firm/LLP in which they were / are partners/members. Any Concealment / wrong information in regard to above shall make the bid ineligible or the contract shall be determined under Clause 62 of the Standard General Conditions of Contract.

(B) In case one or more members is/are proprietary firm or HUF, the following documents shall be enclosed:

A copy of notarized affidavit on Stamp paper declaring that his concern is a Proprietary Concern and he is sole proprietor of the Concern OR he/she is in position of "KARTA" of Hindu Undivided Family (HUF) and he/she has the authority, power and consent given by other partners to act on behalf of HUF.

(C) In case one or more members of the JV is/are companies, the following documents shall be submitted:

- a) A copy of the resolution of the Directors of the Company, permitting the company to enter in to a JV agreement.

- b) A Copy of Memorandum and Articles of Association of the Company.
 - c) A copy of Certificate of Incorporation
 - d) A copy of Authorization/ Copy of Power of Attorney issued by the Company (backed by the resolution of Board of Directors) in favour of the individual to sign the tender, sign MOU/JV agreement on behalf of the company and create liability against the company.
- (D) In case one or more members of the JV is/are LLP firm/s, the following documents shall be submitted:
- a) A copy of LLP Agreement
 - b) A copy of Certificate of Incorporation of LLP
 - c) A copy of resolution passed by partners of LLP firm, permitting the Firm to enter into a JV agreement
 - d) A copy of Authorization /copy of Power of Attorney issued by the LLP firm (backed by resolution passed by the Partners) in favour of the individual, to sign the tender and/or sign the MOU/ JV agreement on behalf of the LLP and create liability against the LLP.
 - e) An undertaking by all partners of the LLP that they are not blacklisted or debarred by Railways or any other Ministry / Department of the Govt. of India from participation in tenders / contracts as on the date of submission of bids, either in their individual capacity or in any firm/LLP or JV in which they were / are partners/members. Any Concealment / wrong information in regard to above shall make the contract liable for determination under Clause 62 of the Standard General Conditions of Contract.
- (E) In case one or more members of the JV is/are Society/s or Trust/s, the following documents shall be submitted:
- a) A copy of Certificate of Registration
 - b) A copy of Memorandum of Association of Society/Trust Deed
 - c) A copy of Rules & Regulations of the Society
 - d) A copy of Power of Attorney, in favour of the individual to sign the tender documents and create liability against the Society/Trust.
- (F) All the members of the JV shall certify that they are not black listed or debarred by Railways or any other Ministry/Department/PSU (Public Sector Undertaking) of the Govt.

of India/State Govt. from participation in tenders/contract on the date of opening of bids either in their individual capacity as members of the JV in which they were/are members.

2.6.1 PROSPECTIVE JOINT VENTURE FIRM SHALL SATISFY THE MINIMUM ELIGIBILITY CRITERIA AS GIVEN BELOW:

2.6.1.1 Technical Eligibility Criteria – (in conjunction with Para 2.5.2 above)

The Technical eligibility for the work as per Para 2.5.2 above, shall be satisfied by either the “JV in its own name & style” or “Lead member of the JV”.

Each other (non-lead) member(s) of JV, who is/are not satisfying the technical eligibility for the work as per Para 2.5.2 above, shall have technical capacity of minimum 10% of the cost of the work i.e., each non-lead member of JV must have satisfactorily completed or substantially completed during the last 07 (seven) years, ending last day of month previous to the one in which tender is invited, one similar single work for a minimum of 10% of advertised value of the tender.

Note:

- 1) Value of completed work done by a member in an earlier JV shall be reckoned only to the extent of the concerned member's share in that JV for the purpose of satisfying his/her compliance to the above-mentioned technical eligibility criteria in the tender under consideration.
- 2) Details of Similar Works executed shall be given in the format given in **Form No. 1A** (in Forms & Annexures Part of Chapter-3).

2.6.1.2 Financial Eligibility Criteria - (in conjunction with Para 2.5.3 above):

The JV shall satisfy the requirement of “Financial Eligibility” mentioned at Para 2.5.3 above.

Note:

- a) The Financial capacity of the Lead partner of JV shall not be less than 51% of the financial eligibility criteria mentioned in Para 2.5.3 above.
- b) The arithmetic sum of individual “Financial Capacity” of all the members shall be taken as JV's “Financial Capacity” to satisfy the requirement.
- c) Contractual payment received by a member in an earlier JV shall be reckoned only to the concerned member's share in that JV for the purpose of satisfying compliance of the above-mentioned financial eligibility criteria in tender under consideration.
- d) Details shall be given in the format given in **Form No.2** (In Forms & Annexure part of chapter 3).
- e) Separate forms should be used for each JV member as required and then consolidated as per format in **Form No.2** (In Forms & Annexure part of chapter 3).

2.7 Earnest Money Deposit / Bid Security:

- (1) (a) The tenderer shall be required to submit the Bid Security with the tender for the due performance with the stipulation to keep the offer open till such date as specified in the tender, under the conditions of tender. The Bid Security shall be as under:

Value of the Work	Bid Security
For works estimated to cost up to ₹ 1 crore	2% of the estimated cost of the work
For works estimated to cost more than ₹ 1 crore	₹ 2 lakh plus ½% (half percent) of the excess of the estimated cost of work beyond ₹ 1 crore subject to a maximum of ₹ 1 crore

Note:

- (i) The Bid Security shall be rounded off to the nearest ₹100. This Bid Security shall be applicable for all modes of tendering.
 - (ii) Any firm recognized by Department of Industrial Policy and Promotion (DIPP) as 'Startups' shall be exempted from payment of Bid Security detailed above.
 - (iii) Labour Cooperative Societies shall submit only 50% of above Bid Security detailed above.
- (b) It shall be understood that the tender documents have been issued to the tenderer and the tenderer is permitted to tender in consideration of stipulation on his part, that after submitting his tender he will not resile from his offer or modify the terms and conditions thereof in a manner not acceptable to the Engineer. Should the tenderer fail to observe or comply with the said stipulation, the aforesaid amount shall be liable to be forfeited to the Railway.
- (c) If his tender is accepted, this Bid Security mentioned in sub para (a) above will be retained as part security for the due and faithful fulfilment of the contract in terms of Clause 16 of the Standard General Conditions of Contract. The Bid Security of other Tenderers shall, save as herein before provided, be returned to them, but the Railway shall not be responsible for any loss or depreciation that may happen thereto while in their possession, nor be liable to pay interest thereon.
- (2) The Bid Security shall be deposited either in cash through e-payment gateway or submitted as Bank Guarantee bond from a scheduled commercial bank of India or as

mentioned in tender documents. The Bank Guarantee bond shall be as per **Annexure 3** and shall be valid for a period of 90days beyond the bid validity period.

(3) **In case, submission of Bid Security in the form of Bank Guarantee, following shall be ensured:**

- i. A scanned copy of the Bank Guarantee shall be uploaded on e-Procurement Portal (IREPS) while applying to the tender.
 - ii. The original Bank Guarantee should be delivered in person to the official nominated as indicated in the tender document before closing date for submission of bids **(i.e. excluding the last date of submission of bids)**.
 - iii. Non submission of scanned copy of Bank Guarantee with the bid on e-tendering portal (IREPS) and/or non-submission of original Bank Guarantee within the specified period shall lead to summary rejection of bid.
 - iv. The Tender Security shall remain valid for a period of 90 days beyond the validity period for the Tender.
 - v. The details of the BG, physically submitted should match with the details available in the scanned copy and the data entered during bid submission time, failing which the bid will be rejected
 - vi. The Bank Guarantee shall be placed in an envelope, which shall be sealed. The envelope shall clearly bear the identification **“Bid for the “Name of Work”** and shall clearly indicate the name and address of the Bidder. In addition, the Bid Due Date should be indicated on the right -hand top corner of the envelope.
 - vii. The envelope shall be addressed to the officer and address as mentioned in the tender document.
 - viii. If the envelope is not sealed and marked as instructed above, the Authority assumes no responsibility for the misplacement or premature opening of the contents of the Bid submitted and consequent losses, if any, suffered by the Bidder.
- a) For the due performance with the stipulation to keep the offer open till such date as specified in the tender, under the tender conditions.

- b) After submitting his tender, he will not resile from his offer or modify the terms and conditions thereof in a manner not acceptable to the Engineer. Should the tenderer fail to observe or comply with the said stipulation, the Bid Security mentioned above shall be forfeited by the Railway.

Note:

If the tenderer withdraws his offer within the validity date of his offer, the full Bid Security shall be forfeited.
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- ii) The Bid Security will not be accepted in cash, FDR (Fixed Deposit Receipt), or banker's cheques/Demand Drafts.
- iii) The tenderer shall not submit any bids online unless the tenderer has deposited requisite Bid Security online / submitted as Bank Guarantee bond on the E-Tendering portal of Indian Railways www.ireps.gov.in.
- iv) No interest shall be payable on Bid Security by Railways.
- v) No previous Bid Security or Security Deposit, etc., submitted earlier in connection with any tender (s), will be adjusted towards the present, nor will any such request or correspondence be entertained.
- vi) Any firm recognized by the Department of Industrial Policy and Promotion (DIPP) as 'Startups' shall be exempted from payment of Bid Security
- vii) Labour Co-operative Societies shall deposit only 50% of the above Bid Security deposit detailed above.
- viii) If the tender is accepted, the amount of Bid Security will be retained and adjusted as part of the security deposit for the due and faithful fulfilment of the contract.
- ix) The deposit shall be forfeited without prejudice to any other right or remedies if the tenderer does not execute the contract agreement after acceptance of the tender within 7 (seven) days after receipt of notice issued by the railways that such documents are ready and or the tenderer does not commence the work within fifteen days from date of issue of the acceptance letter.

- x) If the Contractor submits the Cash or Term Deposit Receipt issued from a Scheduled commercial bank of India or irrevocable Bank Guarantee Bond from a Scheduled Commercial bank of India towards Full Security Deposit or the Part Security deposit equal to or more than Bid Security, the Railway shall return the Bid Security so retained to the Contractor.
- xi) The Bid Security of the unsuccessful tenderer(s) will, save as hereinbefore provided, be returned to the unsuccessful tenderer(s) within a reasonable time. Still, the Railway shall not be responsible for any loss or depreciation that may happen to the security for the due performance of the stipulation to keep the offer open for the period specified in the tender document or to the Bid Security while in their possession nor be liable to pay interest thereon.

2.8 STUDY OF LOCAL CONDITIONS:

The intending tenderer are advised to study the Tender Document, Technical specifications, Schedule of supplies and other instructions carefully. The tenderer shall inspect the proposed site of work and acquaint himself with the site conditions, working hours, layout of land, trees and shrubs that he will have to cut, type of strata likely to be met while excavation, stacking space for materials, approach roads, pathways available etc., and all relevant items connected with execution for the work. No claim shall be entertained for the contractors making his own arrangements for approach roads from outside Railway land and contractors will bear entire expenses such as road taxes, payment for right of way etc., to outsiders and for constructions of approach roads etc.,

It will be imperative for the tenderer to fully acquaint themselves with all the local conditions and other factors which would have any effect on the performance of the contract and cost of the stores. After the offer is accepted by the Indian Railway, no request for the change of rate or time schedule of delivery of stores/execution of work shall be entertained on account of any local condition or factors.

The tenderer may undertake study/survey of existing telecom systems, working of existing TDM/IP networks as per the practice of Railways and makes his own assessment of the work. In the event of the tenderer desiring to have a field visit before furnishing his offer, he may apply to XSTE/CN&MTP/MSR, Southern Railway, for permission in this regard. Such permission shall be granted by the Railway but the expenses in this regard shall be borne by the tenderer completely.

Any submission of an offer by the tenderer shall be deemed to have been done after a careful study and examination of this tender document and site conditions with full understanding of the implication thereof. It will be understood that the tenderer has/have got herself/himself/themselves clarified on all the points and interpretation by proper authorities of the Indian Railway Administration. These conditions and specifications shall be deemed to have been accepted unless otherwise, specifically commented upon by the Tenderer in his offer. Failure to adhere to anyone or all these instructions may render his offer liable to be ignored without any reference.

2.9 CLARIFICATION REQUIRED BY THE TENDERER:

Specifications, Drawings, Plans etc. related to the above subject work can be obtained from the office of Executive Signal Telecommunication Engineer/CN&MTP, Southern Railway, Chetpet, Chennai-31.

If a Tenderer finds discrepancies in or omission from the drawing or any of the Tender document or should he be in doubt as to their meaning, he should at once notify the Railway i.e., authority inviting tenders by post or email to dstemtp@sr.railnet.gov.in, who may send a written clarification to all Tenderer(s). Any clarification regarding discrepancies in the tender should be submitted in writing Executive Signal Telecommunication Engineer/CN&MTP, Southern Railway, Chetpet, Chennai-31 before participating in the tender.

2.10 SUBMISSION OF DOCUMENTS REQUIRED:

The online Tender shall be accompanied by relevant documents of technical conditions and requirements mentioned in the tender document. Furthermore, all uploaded documents shall be digitally signed by the tenderer. Hence, the tenderer(s) must ensure that these documents are uploaded, duly signed digitally, with their offer.

The Tenderer shall be submitted with the following documents:

- I) Offer letter complete along with tender document including tender forms (First sheet & Second sheet), complete tender document downloaded from the website including its addendums/corrigendum's if any, duly signed digitally.

- II) The tenderer shall specify whether the tender is submitted on his own (Proprietary Firm) or on behalf of a Partnership Firm / Company / Joint Venture (JV) / Registered Society / Registered Trust / HUF etc. In addition, the tenderer(s) shall enclose the attested copies of the constitution of their concern and a copy of the PAN Card along with their tender. Tender Documents in such cases are to be signed by such persons as they may be legally competent to sign them on behalf of the firm, company, association, trust, or society, as the case may be. Refer to Para 14 of Tender Form Second Sheet [in Forms & Annexures of Chapter-3] regarding documents to be submitted by the tenderer.
- III) Requisite Bid Security shall be submitted online; otherwise, the tenderer shall not be able to participate in the E-tendering process. Bid Security (EMD) shall only be submitted online through Net-Banking/Debit/Credit cards or payment gateway. A scanned copy of the Bank Guarantee shall be uploaded on e-Procurement Portal (IREPS) while applying to the tender. The original Bank Guarantee should be delivered in person to the official nominated as indicated in the tender document before closing date for submission of bids (**i.e. excluding the last date of submission of bids**). Non submission of scanned copy of Bank Guarantee with the bid on e-tendering portal (IREPS) and/or non-submission of original Bank Guarantee within the specified period shall lead to summary rejection of bid.
- IV) The documents required for ascertaining Technical & Financial capability as specified in Qualifying Criteria, i.e., Para 2.5 of Chapter-2 of this Tender document, shall be enclosed in the offer. In addition, the tenderer should upload, duly signed digitally, detailed documents to fulfil each condition stipulated above in the criteria.
- V) **Work experience certificate/Credential Certificate/Performance Certificate:** (In English or transcript in English with a copy of original document) describing work, the organization for whom executed approximate value of the contract at the time of award, date of award, and date of scheduled/actual completion of work. Date of actual start, the actual date of physical completion, and the final value of the contract regarding meeting Eligibility Criteria Para 2.5.2 for satisfactory and physical completion as per **Form No.1A** (in Forms & Annexures part of Chapter -3). The performance certificate (s) from user Railway (with contact details of FAX, phone, and E-Mail of issuing authority) satisfying the above conditions and satisfactory working of the system shall be furnished.

Note:

The experience/credential certificate should have been issued by an officer, not below JA Grade

- VI) The detailed list of year-wise contractual payments received in **Form No. 2** (in Forms & Annexure part of Chapter 3) regarding meeting financial eligibility criteria i.e., Para 2.5.3. The tenderers shall submit requisite information as per **Form No. 2** (in Forms & Annexure part of Chapter 3), along with copies of Audited Balance Sheets duly certified by the Chartered Accountant/Certificate from Chartered Accountant duly supported by Audited Balance Sheet.
- VII) **List of Works Completed/ List of works on hand:** The attested certificate from tenderer shall include description of work, an organization for whom executed approx. Value of contract at the time of award, date of award and date of scheduled completion of work, the actual date of physical completion, year-wise payments made, and total payment made up to the date of tender opening as per **Form No. 8** (in Forms & Annexures part of Chapter-3). List of similar types of work completed and works on hand duly indicating the description of work, contract value, date of award of contract, and details of contractual amount received duly certified by tenderer in Form-8 (in Forms and Annexures Chapter-3).
- VIII) Certification regarding employment of a retired Engineer of the Gazetted Rank or any other Gazetted officer working before his retirement.
- IX) The tenderer shall also enclose in their offer that they accept all the terms and conditions of Railways. Furthermore, the tenderer shall indicate paragraph by paragraph for each section and each clause and sub-clause of the entire tender document that complies in every respect with the requirements of each clause and sub-clause if not precisely how they differ from the requirements of the tender. In the latter case, the tenderer shall enclose a separate **-Statement of Deviations as per Form No. – 3** (in forms and annexure part of chapter 3) given, indicating only the deviations for any clause or sub-clause of GCC, Special Conditions of Contract, Specification and Schedule of Works and Supplies, etc., which they propose with 'detailed justifications for deviations proposed.' Railway reserves the right to accept or **reject** these deviations, and the Railway's decision thereon shall be final.

If the tender has no exceptions, the **Statement of Deviations** shall submit a “NIL” statement. If the tenderer does not include this with the tender, it shall be conclusive evidence that all contract conditions are entirely acceptable to the Tenderer.

- X) List of Personnel, Organization available on hand and proposed to be engaged for the subject work. Similarly, a list of Plant & Machinery available on hand and proposed to be inducted and hired for the tendered work.
- XI) The tenderer shall submit a copy of the certificate stating that they are not liable to be disqualified and all their statement/documents submitted along with the bid are accurate and factual. The standard format of the affidavit to be submitted by the bidder is enclosed as **Form No 9** (in forms and annexure part of chapter 3). In addition, **Form 9(A)** shall also be submitted by the each member of a Partnership Firm /Joint venture (JV)/Hindu Undivided Family(HUF) /Limited Liability Partnership (LLP) etc. as the case may be. **Non-submission of certificate by the bidder shall result in summary rejection of his/their bid.** In addition, it shall be mandatorily incumbent upon the tenderer to identify, state, and submit the supporting documents duly self-attested/ digitally signed by which they/he are/is qualifying the Qualifying Criteria mentioned in the Tender Document.
- XII) Provisions of Make in India Policy 2017 issued by Govt of India as amended from time to time shall be followed for consideration of tenders.
- XIII) Any other information desired to be submitted by the tenderer as per the terms and conditions of tender.

Note:

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| <p>1) No scribbling is permissible in the tender documents. Tenders containing erasures and alterations in the tender documents are liable to be rejected. Any correction made by the tenderer in his entries must be self-attested.</p> <p>2) Tenderer must furnish duly filled – CHECK LIST given under Annexure 4 – (in forms and Annexure part of Chapter-3) of the tender document along with all supportive documents.</p> |
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- 3) The Railway reserves the right to verify all statements, information, and documents submitted by the bidder in his tender offer, and the bidder shall, when so required by the Railway, make available all such information, evidence, and documents as may be necessary for such verification. However, any such verification or lack of such verification by the Railway shall not relieve the bidder of its obligations or liabilities hereunder, nor will it affect any rights of the Railway there under.
- 4) In case any information submitted by the tenderer is found to be false, forged, or incorrect during the process for evaluation of tenders, it shall lead to forfeiture of the tender Bid Security besides banning business for a period of up to FIVE years.
- 5) In case of any information submitted by the tenderer is found to be false forged or incorrect after the award of contract, the contract shall be terminated. Bid Security (EMD), Performance Guarantee, and Security Deposit available with the Railway shall be forfeited. In addition, other dues of the contractor, if any, under this contract shall be forfeited, and the agency shall be banned from doing business for a period of up to FIVE years

2.11 SUBMISSION OF FINANCIAL rates/percentage:

- i) All rates must be submitted in the tab for financial offer only on the E-tendering portal. The financial bid will be opened subsequently (on a date which will be notified later) for the tenderer who fulfil the laid down technical and financial eligibility criteria. The offers which are found techno-commercially ineligible will be dismissed.
- ii) Rates of stores, materials and works are to be quoted according to the (online web portal) proforma of "Schedule of work and supplies" (Financial Bid). Rates in the offer should be in Indian Rupees only. Offers in foreign currency will not be accepted.
- iii) Tenderers are requested to quote the individual rate for each item in schedule – A in the Financial Bid in IREPS online web portal only.
- iv) The tenderer shall quote the complete rate for all items of works given in the schedule of works and supplies in the Financial Bid in IREPS portal only to complete entire scope of work and make system completely functional. Offer received for only part of schedule will not be considered and bid shall be rejected.
- v) **No Rates to be quoted/enclosed in Technical Bid document otherwise offer is not considered for evaluation.**

2.12 VALIDITY OF OFFERS:

- 2.12.1 The tenderer shall keep the offer open for a minimum period of **90 Days** from the date of opening of tender. Within that period, the tenderer cannot withdraw her/his/their offer subject to the period being extended further if required by mutual agreement from time to time. Any contravention of the above condition will make the tenderer liable for forfeiture of his Bid Security.
- 2.12.2 It is understood that the tender document has been sold/issued to the Tenderer and the Tenderer is / are permitted to tender in consideration of the stipulation on her/his/their part that after submitting her/his/their subject to the period being extended further he will not resile from his offer or modify the terms and conditions thereof in a manner not acceptable to Railway. Should the Tenderer fail to observe or comply with the forgoing stipulation, the amount deposited as Earnest Money for the due performance of the above stipulation shall be forfeited by the Railways.

2.13 COMPLETION PERIOD:

- a) The time schedule for the entire work is of utmost importance. The entire work is required to be fully executed within **9 Months** from date of issue of Letter of Acceptance (LOA). The contractor shall depute adequate number of competent Engineers/qualified staff to survey, install, test and commission the equipment/system at site.
- b) Expected time schedule for supply, installation and commissioning of the System shall be as follows:
- c) Please note that Railway will provide all the arrangements as furnished vide 2.4.2 as per the requirement of the contractor. Further Railways will ensure no undue delay in arranging approvals etc.

2.14 OPENING OF TENDERS

Tender will be opened online as per stipulated date and time mentioned in Tender Notice and Website in the office of XSTE/CN&MTP/MSC, Chetpet, Southern Railway, Chennai-31 in the presence of Tenderer/ representatives (whoever chooses to attend). In the event of the specified date of bid opening being declared holiday for the Railway, the Bids shall be opened at the same time and location on the next working day. The tenderer/representatives, who are present during the opening of Bids, should sign a register as token of their attendance.

2.15 RIGHT OF RAILWAYS TO DEAL WITH TENDERS:

The authority for the acceptance of the tender will rest with the Railway administration for and on behalf of President of India, who shall not be bound to accept the lowest or any tender or to assign any reason for declining to consider, non-acceptance or rejection of a tender. Railway administration reserves the right to accept any tender in respect of the whole or any portion of the work specified in the tender document or to reduce the scope of the work or to accept any tender for less than the tendered quantities without assigning any reason whatsoever.

Railway administration also reserves the right to cancel any or all tenders at any stage. Cost of tender document will not be refundable in such cases. Railway reserves the right to accept or reject the deviations proposed by the tenderer and Railway's decision thereon shall be final. The deviation quoted by the tenderer will become part of Contract Agreement only to the extent to which they are specifically mentioned as accepted in Letter of Acceptance.

2.16 ACCEPTANCE OF TENDER:

A letter of acceptance (LOA) of the offer will be issued by the Railway Administration to the successful Tenderer that his offer has been accepted, on receipt of which he shall submit a Performance Bank Guarantee (PBG) bond of 5% of cost of work and shall execute a formal Contract Agreement with the President of India acting through XSTE/CN&MTP/MSC, Southern Railway, Chetpet, Chennai-31 or his authorised representative for carrying out the work according to terms and conditions of the tender including "General Conditions of Contract" of Indian Railway and Special Conditions/Specifications of this tender. Upon issuing of LOA, the contract for the work shall be deemed to have been awarded to the tenderer and accordingly the completion period will be reckoned from the date of issue of LOA irrespective of the date of signing of contract agreement subsequently.

2.17 SIGNING OF AGREEMENT:

The tenderer(s) whose offer is accepted will be required to present herself/himself or her/his duly authorised representative in the office of XSTE/CN&MTP/MSC, Chetpet, Southern Railway, Chennai-31 to execute the contract document within seven days of receipt of notice that the contract documents are ready. There would be no need for appear in person if agreement is signed digitally.

2.18 COMMENCEMENT OF WORK

The successful tenderer upon receipt of LOA shall commence the work by way of submitting a detailed time schedule in terms of Chapter 2 – Special Conditions of Contract, for completion of work within the stipulated completion period.

2.19 CONSIGNEE:

Consignee for the material supplied by the contractor shall be as follows: -

- i) Materials along with all accessories shall be supplied to Authorised representative of XSTE/CN&MTP/MSC, Chetpet at the store of the nominated consignee i.e., SSE/ST/CN&MTP/PER.
- ii) After supply of the material by contractor, same shall be issued to contractor against indemnity Bond. Contractor shall provide proper storage space ensuring protections from theft, fire and flooding. Contractor shall obtain authorisation of Railway before transporting the material to site of work. Contractor shall submit monthly statements of material delivery/issues to site, indicating dates and quantity of equipment received and issued every month along with overall summary.
- iii) Any change/addition required in consignee, it shall be done after mutual consultation between contractor and Railway.

2.20 CONTRACTOR'S OFFICE & STORES DEPOT:

The contractor shall, within a month of issue of letter of acceptance (LOA) of tender, establish an office and store depot at a convenient place for receiving & storing equipment and materials and progressing field work expeditiously in consultation and with the approval of the Engineer-in-charge, where all correspondence should be sent. **Contractor will intimate office address along with Telephone/Fax, E-mail and name of Key-personnel responsible for execution of work.** Any communication sent to the contractor by post at his said address shall be deemed to have reached the contractor duly and in time. The critical document shall be sent by Registered post.

2.21 CHANGES IN ADDRESS:

Any change in the address of the contractor shall be forthwith intimated in writing to the Railway. The Railway will not be responsible for any loss/inconvenience suffered by the Contractor on account of his failure to comply with this.

2.22 SECURITY DEPOSIT:

The Security Deposit shall be 5% of the contract value. The Bid Security submitted by the Contractor with his tender will be retained/encashed by the Railways as part of security for the due and faithful fulfillment of the contract by the Contractor. Provided further that, if Contractor submits the Cash or Term Deposit Receipt issued from a

Scheduled commercial bank of India or irrevocable Bank Guarantee Bond from a Scheduled commercial bank of India, either towards the Full Security Depositor the Part Security Deposit equal to or more than Bid Security, the Railway shall return the Bid Security, to the Contractor.

Balance of Security Deposit may be deposited by the Contractor in cash or Term Deposit Receipt issued from Scheduled commercial bank of India or irrevocable Bank Guarantee bond issued from Scheduled commercial bank of India or may be recovered at the rate of 6% of the bill amount till the total Security Deposit is recovered. Provided also that in case of defaulting Contractor, the Railway may retain any amount due for payment to the Contractor on the pending "on account bills" so that the amounts so retained (including amount guaranteed through Performance Guarantee) may not exceed 8% of the total value of the contract.

The Irrevocable Bank Guarantee submitted towards Security deposit shall be initially valid up to the stipulated date of Maintenance period plus 60 days and shall be extended from time to time, depending upon extension of contract granted in terms of Clause 17A and 17B of the Standard General Conditions of Contract.

Further, suppose Security Deposit has been submitted as Term Deposit Receipt/Bank Guarantee Bond in the total amount. In that case, the Bid Security deposited by the Contractor with his tender will be returned by the Railways.

Note:

- 1) After the work is physically completed as certified by the competent authority, Security Deposit recovered from the running bills of a Contractor can be returned to him, if he so desires, in lieu of Term Deposit Receipt/irrevocable Bank Guarantee for equivalent amount from Scheduled Bank, to be submitted by him.
- 2) Security Deposit deposited in cash by the Contractor or recovered from the running bills of a Contractor or submitted by contractor as Term Deposit Receipt(s) can be refunded/returned to the contractor, in lieu of irrevocable Bank Guarantee bond issued from scheduled commercial bank of India, to be submitted by him, for an amount equal to or more than the already available Security Deposit, provided however that, in a contract of value less than Rs. 50 Crore, such refund/ return of the already available Security Deposit is permitted up to two times and in a contract of value equal to or more than Rs. 50 Crore, such refund / return of the already available Security Deposit is permitted up to three times.

- 3) Whenever the contract is rescinded as a whole under clause 62 (1) of these conditions, the Security Deposit already with Railways under the contract shall be forfeited. However, in case the contract is rescinded in part or parts under clause 62 (1) of these conditions, the Security Deposit shall not be forfeited.
- 4) No interest shall be payable upon the Bid Security and Security Deposit or amounts payable to the Contractor under the Contract, but Government Securities deposited in terms of Sub-Clause 16.(4)(b) of GCC will be payable with interest accrued thereon.

2.23 REFUND OF SECURITY DEPOSIT:

Security Deposit mentioned in Para 2.22 above shall be returned to the Contractor after the following:

- a) Final Payment of the Contract as per GCC Clause 51.(1)AND
- b) Execution of Final Supplementary Agreement or Certification by Engineer that Railway has No Claim on Contractor AND
- c) Issue of Maintenance Certificate on expiry of the maintenance period as per GCC clause 50.(1)
- d) After entering into the AMC contract with the concerned division.
- e) Before releasing of Security Deposit, the contractor shall submit a certificate to the Engineer or Engineer's representatives that "I have uploaded the correct details of contract labours engaged in connection with this contract and payments made to them during the wage period in Railway's Shramikkalyan portal at www.shramikkalyan.indianrailways.gov.in

2.24 PERFORMANCE GUARANTEE:

The procedure for submission of Performance Guarantee is outlined below:

- (a) The successful bidder shall have to submit a Performance Guarantee (PG) within 21 (Twenty-one) days from the date of issue of Letter of Acceptance (LOA). Extension of

time for submission of PG beyond 21 (Twenty-one) days and up to 60 days from the date of issue of LOA may be given by the Authority who is competent to sign the contract agreement. However, a penal interest of 12% per annum shall be charged for the delay beyond 21 (Twenty-one) days, i.e., from the 22nd day after the date of issue of LOA. Further, if the 60th day happens to be a declared holiday in the concerned office of the Railway, submission of PG can be accepted on the next working day.

In all other cases, if the Contractor fails to submit the requisite PG even after 60 days from the date of issue of LOA, the contract is liable to be terminated. If the contract is terminated, Railway shall be entitled to forfeit Bid Security and other dues payable against that contract. Furthermore, suppose a tenderer has not submitted Bid Security on the strength of their registration as a Start-up recognized by the Department of Industrial Policy and Promotion (DIPP) under the Ministry of Commerce and Industry. In that case, DIPP shall be informed to this effect.

The failed Contractor shall be debarred from participating in re-tender for that work.

- i. The successful tenderer(s) shall submit the Performance Guarantee (PG) in any of the following forms, amounting to **5% of the original contract value**:
 - 1) A deposit of Cash.
 - 2) Irrevocable Bank Guarantee.
 - 3) Government Securities including State Loan Bonds at 3% below the market value.
 - 4) Pay Orders and Demand Drafts tendered by any Scheduled Commercial Bank of India
 - 5) Guarantee Bonds executed or Deposits Receipts tendered by all Scheduled Banks.
 - 6) Deposit in the Post Office Saving Bank.
 - 7) Deposit in the National Savings Certificates.
 - 8) Twelve years National Defence Certificates.
 - 9) Ten years Defence Deposits.
 - 10) National Defence Bonds and
 - 11) Unit Trust of India Certificates at 3% below market value or at face value, whichever is less. Also, FDR in favour of FA&CAO/CN/MS (free from any encumbrance) may be accepted.
- ii. The Performance Guarantee shall be submitted by the successful tenderer(s) after the Letter of Acceptance (LOA) has been issued but before the signing of the

contract agreement. This P.G. shall be initially valid up to the stipulated completion date plus 60 days beyond that. However, if the time for completion of work gets extended, the contractor shall get the validity of P.G. extended to cover such extended time for completion of work plus 60 days.

- iii. The value of PG to be submitted by the contractor is based on Original Contract value and shall not change due to subsequent variation(s) in the original contract value.
- b) The Performance Guarantee (PG) shall be released after the physical completion of the work based on the 'Completion Certificate' issued by the competent authority stating that the contractor has completed the work in all respects satisfactorily. Before releasing of Performance Guarantee, the contractor shall submit a certificate to the Engineer or Engineer's representatives that "I have uploaded the correct details of contract labours engaged in connection with this contract and payments made to them during the wage period in Railway's Shramikkalyan portal at 'www.shramikkalyan.indianrailways.gov.in'"
- (c) The Security Deposit shall be forfeited whenever the contract is rescinded, and the Performance Guarantee shall be encashed. The balance work shall be got done independently without Risk & Cost of the failed contractor. The failed contractor shall be debarred from participating in the tender for executing the balance work. If the failed contractor is a JV or a Partnership firm, then every member/partner of such a firm shall be debarred from participating in the tender for the balance work in their individual capacity or as a partner of any other JV /partnership firm.
- (d) The Engineer shall not make a claim under the Performance Guarantee except for amounts to which the President of India is entitled under the contract (not withstanding and/or without prejudice to any other provisions in the contract agreement) in the event of:
 - i) Failure by the contractor to extend the validity of the Performance Guarantee as described herein above, in which event the Engineer may claim the full amount of the Performance Guarantee.
 - ii) Failure by the contractor to pay President of India any amount due, either as agreed by the contractor or determined under any of the Clauses/Conditions of the Agreement, within 30 days of the service of notice to this effect by Engineer.

- iii) The Contract being determined or rescinded under Clause 62 of these conditions.
- iv) Details of BG shall be given in the format as shown in **Form No. 4** (in forms and annexure part of chapter 3)

2.25 PROGRAMME OF WORK EXECUTION:

- i) Time is the essence of this contract, and the time schedule shall be strictly adhered to. The entire work as per the Contract will have to be completed within **9 Months** from the Date of issue of letter of acceptance, on a progressive basis. The Tenderer shall be responsible for the progress of work on a progressive basis from the date of issue of the acceptance letter. Since the progress of the work is critically related to the supply of material by the contractor, **he shall be responsible for the supply of duly inspected Material on a progressive basis** so that the work can be completed within the **stipulated period**.
- ii) The contractor shall employ an adequate number of supervisors, technicians, and supporting staff commensurate with the working area available. He will also arrange required materials and equipment to complete the job most expeditiously to ensure that the work is completed within the stipulated period and to the entire satisfaction of the Engineer incharge.
- iii) The Contractor is expected to have worked out a detailed program for execution of the work well before the issue of "Letter of Acceptance" by Railway and submit a Detailed Time and Activity Schedule within 15 days from issue of LOA, for the execution of work aiming at completing the entire work within the stipulated completion time. The Engineer-In-Charge shall thereafter approve this schedule.
- iv) Railway reserves the right to modify the schedule while approving the same as well as at any stage during execution if the situation so warrants. Once approved, in the event of any slippage from the time schedule, especially when resulting in time over-run of the work, the contractor shall submit a revised schedule duly justifying the circumstances without any delay. The Engineer-In-Charge shall approve the revised schedule only when considered justified in his opinion; otherwise, it may attract penal action on the contractor as per the provision of this contract.

- v) The Contractor shall be held responsible for the execution of the work according to the Programme given for the execution of the work in full compliance with the approved documents, drawings, and various clauses of technical specification and requirement. Failure to comply with any of these will be dealt with as per provisions of GCC.
- vi) The contractor will program his work in such a manner so as not to interfere in the working and movement of trains. No extra payment shall be allowed on this account and for taking any precautions or wastage of contractor's labor, time, etc., due to train working.
- vii) No facility whatsoever, e.g., provisions of approach road and provision of the temporary level crossing, etc., shall be provided by Railway for carting materials. However, approach roads within the Railway limits can be used for carting materials.

2.26 INSPECTION OF MATERIAL:

Manufacture premises:

- i. The Inspecting authority of the equipment/materials to be supplied against this contract shall be RDSO/RITES/Consignee, which is mentioned against each schedule of work/supplies in Chapter-4 of this tender document. Generally, the equipment materials to be supplied against this work with IRS/RDSO design or specification and TEC specification will be inspected by RDSO. However, suppose for any reason, inspections of materials are not undertaken by RDSO. In that case, the inspection may be carried out by RITES, or a Railway representative specifically nominated by the Railway for the work.
- ii. Whenever materials are inspected by Authorized Representatives of the Railways/Consignee, the Tenderer will be required to furnish manufacturers/supplier's Guarantee Certificate and performance guarantee for such items. Standard RDSO Drawing referred to in this schedule & technical specification may be collected on payment from RDSO, Lucknow by contractor, if required.
- iii. The Contractor shall give sufficient time notice to RDSO/RITES/Railway's representative when the material is ready for testing/inspection. All facilities as may be necessary shall be provided for carrying out the tests.

2.27 INSPECTION CHARGES:

Inspection charges, if any levied by RDSO/Inspecting Agency shall be borne by the contractor. Also, the tests/analysis required from outside agencies, if any, cost of such tests/analysis shall be borne by the contractor.

2.28 MATERIALS AND WORKMANSHIP:

1. Wherever RDSO specification is prescribed for any material in the tender, the same shall have to be procured from the RDSO approved/recommended firms only.
2. Any material to be used for this work shall not be procured from any sources banned for business dealing with Indian Railways under any circumstances.
3. If the total value of an item to be supplied as per RDSO/IRS specification is less than Rs. 5 Lakhs (Rs. Five Lakhs only), the same shall be inspected by Consignee subject to supplies being from sources approved by RDSO. However, certain specified items irrespective of value shall invariably be inspected by RDSO as per the extant policy of Indian Railways. [Railway Board Letter No: 2000/RS(G)/379/2 Dated 06.09.2017].
4. If the inspection agency requires any modification from RDSO to RITES/Consignee, approval is to be taken from an officer, not below the rank of JAG.
5. The material should be in properly packed condition, and the consignee reserves the right to reject the material even though it was passed by RDSO/nominated inspecting authority of Railways if it is received in damaged or defective condition.
6. All materials shall be procured from the reputed manufacturers or their authorized dealers. Such materials are to be approved by the purchaser's Engineer. The Contractor may be required to furnish the manufacturer's test certificate along with manufacturer's/supplier's guarantee certificate wherever called for by the Engineer. The Railway may also inspect the material again at the Consignee depot.
7. Materials shall be procured from RDSO approved vendors as per RDSO specifications if available.
8. In case materials are to be inspected by consignee, then materials shall be supplied from the firms approved by not below the rank of JAG.

9 All the materials and workmanship used in this work shall be of extremely good quality and high class in every respect and is expected to give trouble-free service.

2.29 STORES - RECEIPT & ACCOUNTAL:

- i) Proper requisition and receipt exchange shall be done on a suitable Proforma as mentioned in **Form No. 6 & 7** (in Forms & Annexures part of Chapter - 3) between the Contractor and the Railway's authorized representative.
- ii) The Contractor shall issue a receipt along with the demand slip for the materials required for the work and obtain a receipt when any material is returned to stores. These transactions shall be done with the consignee.
- iii) All stores drawn by the contractor shall be accounted for either as installed as per recorded site measurements or as surplus stores returned to the respective Consignee (stores).
- iv) On submitting every "on account bill," the contractor has to submit a material statement duly signed by CDMS, Concerned SSE-Incharge, and contractor to the bill passing authority.

2.30 LOADING/UNLOADING & TRANSPORTATION OF MATERIAL:

- a) The Contractor shall deliver the material at the Depot of respective Consignees. Material to be supplied by Railways for the execution of the work and the material delivered by the Contractor will be transported from the Consignee depot or any other nominated depot notified by Railway to site by the Contractor at his own cost. This includes loading and unloading materials at the consignee depot and site by the contractor.

Alternatively, suppose the worksite is ready, and work is in progress, physically. In that case, the materials can be brought to the site directly and supplied with prior approval of the Engineer incharge after appropriate accounting by the consignee. Empty cable drums and balance materials after completion of work, if any, should be returned at the nominated Depot i.e., SSE/ST/CN&MTP/PER by the contractor at his own cost. The contractor will have to furnish an Indemnity Bond **Form No.5** (in Forms & Annexures part of Chapter-3) for the Security of the Railway material issued to him.

Indemnity Bond will be released after commissioning of work and when the contractor returns all balance material. The security of the material brought to the site of work will remain with the Contractor till commissioning.

- b) The contractor shall bear the cost of transit insurance required as per rules.
- c) The nominated depot from where Contractor has to collect the materials is from Perambur, stores. No payment will be made to the contractor for shifting materials from the nominated depot to the worksite.
- d) The material issued to the contractor, if found defective/unserviceable after transporting at the site, the same shall be transported & handed over to the Consignee Depot by the contractor without any extra cost.

2.31 SECURITY OF MATERIAL:

Once the material is handed over to the contractor, the contractor shall be responsible for the security of material irrespective of the fact that the material is kept in Railway premises. The contractor shall make adequate arrangements at site as deemed necessary for guarding the same from the thefts or damage of any sort. In the event of any loss, the contractor shall be responsible to that effect and shall execute an indemnity bond for the materials, which has been supplied by the Railway and will remain in his custody. The cost of stores lost/damaged shall be realized by the Railway out of any payments due to the contractor in this contract or from any other contract executed by Govt. of India.

2.32 RETURN OF SURPLUS STORES:

The Contractor shall return the stores at his own cost found to be surplus to Consignee. The contractor shall account for all material that is issued to him. A register shall be maintained at site which shall be signed by the Contractor as a token of receipt of material. All the issued material shall either be used in the installation or returned to Consignee.

2.33 RETURN OF RELEASED STORES:

Released material/equipment shall be returned and deposited to Consignee in systematic manner. Proper care of material shall be taken while releasing & transporting the stores.

2.34 PACKING AND FORWARDING:

- a) Packing shall conform to Para14 of RDSO Specification No RDSO/SPN/192/2019 Ver 2
- b) The contractor shall pack at his own cost the stores sufficiently and properly for transit by Rail/Road, Air, and/or Sea as provided in the contract to ensure their being free from loss or damage on arrival at their destination.
- c) All containers (including packing cases, boxes, tins, drums, and wrappings) in which the contractor supplies the stores shall be considered as non-returnable and their cost as deemed to have been included in the contractor price.
- d) Each packing delivered under the contract shall be marked by the contractor at his own expenses. Such marking shall be distinct (all previous irrelevant marking being carefully obliterated and shall clearly indicate the description and quantity of stores, the name and address of the Contractor with a distinctive number of mark sufficient for the purpose of identification). All marking shall be carried out with such material as may be found satisfactory by the inspecting officer as regard quickness of drying, fastness and indelibility. Materials and Equipment meant for each section shall be separately packed in separate boxes and marked with name of section, consignee and Railway.
- e) The inspecting officer may reject the store if the stores are not packed and/or marked as aforesaid and in case where the packing materials are separately prescribed, if such materials are not in accordance with the term of contract such rejection of the stores by the inspecting officer shall be binding on the contractor and he shall arrange for removal of such rejected store within 7 days.
- f) In case the cable is supplied by the railways, the empty cable drums should be returned to the stores, failing which the recovery shall be made from the contractor.

2.35 FREIGHT AND INSURANCE:

The freight and insurance cost for the material to site of work shall be borne by the contractor.

2.36 CONSIGNEE'S RIGHT OF REJECTION:

- i) Notwithstanding any approval which the Inspecting Officer may have given in respect of the stores or any materials or the work or workmanship involved in the performance of the contract (whether with or without any test carried out by the Contractor or the

Inspecting Officer) and notwithstanding delivery of the stores where so provided to the interim consignee, it shall be lawful for the consignee, on behalf of the purchaser, to reject the stores or any part, portion of consignment thereof within a reasonable time after actual delivery thereof to him at the place or destination specified in the contract if such stores or part, portion of consignment thereof is not in all respects in conformity with the terms and conditions of the contract whether on account of any loss, deterioration or damage before dispatch or delivery or during transit or otherwise howsoever.

- ii) The Railway shall have full right to reject any material that the Railway may consider to be defective or inferior in quality of material, workmanship, and design or otherwise, not in accordance with the specifications and drawings specified by the Railway and the Railway's decision shall be final, even though they might have been inspected by RDSO/RITES. The contractor shall remove forthwith any such material rejected and replace them promptly at his own cost.

2.37 CONSEQUENCES OF REJECTION (Rejected stores):

When any stores delivery at the depots is rejected, the contractor shall remove this within 7 days, from the date of rejection. Such rejected stores shall lie at the consignee's risk from the date of rejection. If the Contractor does not remove the stores within this period, the Railway or his nominee shall have the right to dispose of such stores, as though fit, at the contractor's risk and account. The Railway shall also be entitled to recover from the contractor, handling and ground rent/demurrage and any other charges for the period during the rejected stores are not removed after the period aforementioned.

2.38 EXECUTION OF WORKS:

- 2.38.1 SPECIFICATIONS, DRAWINGS:** All the work shall be executed in strict conformity to the provisions of the contract document and according to detailed drawings, specifications and instructions as may be approved from time to time by Railway and OEM, based on detailed design and engineering carried out by the contractor in line with requirements as per contract document. The contractor shall be responsible for ensuring that the work throughout are executed in the most substantial, proper and workman like manner with the quality of material and workmanship in strict accordance with the specifications and as per sound industrial practices and to the entire satisfaction of the Railway. In case of any doubts regarding any particulars of

construction and any ambiguities in the plans, the decision of the Railway's Engineer shall be final and binding on the contractor

Specifications, drawings, requisites and requirements referred to in the body of this specification form an essential part thereof. The sources of the drawings & specifications referred to in this Tender, can be obtained from Engineer-in-charge.

Installation shall comply with the requirements to the following Indian Railways manuals/books and respective Zonal Railway practices in vogue-Indian Railways.

- I. Signal Engineering Manual (latest edition).
- II. Indian Railways Telecom Manual
- III. Indian Railways Engineering code
- IV. Indian Railways P - Way Manual
- V. Indian Railways Works Manual
- VI. Indian Railways AC traction Manual
- VII. General & Subsidiary Rules of Indian Railway and Southern Railway

These books are available on the Indian Railways website and in the office of CSTE/CN/MS, Southern Railway, Egmore, Chennai.

2.38.2 SUPERVISION& LABOUR:

- i) Tenderer shall keep sufficient and competent staff as per G.C.C. Clause No.26 at the work site. The work shall be carried out as per Railway's extant practice.
- ii) Qualified Engineers may be deployed for execution of the work as per GCC conditions. Their payments/salary should not be less than the minimum wage act.

Contract value	Deployment of Qualified Engineers	Remarks
200 Lakhs & above	One qualified Graduate Engineer to be employed	In case contractor fails to employ qualified engineer, he shall be liable to pay an amount of Rs.40,000/- for each month or part thereof for the default period.
More than 25 lakhs, but less than 200 lakhs	One qualified Diploma Holder Engineer to be employed	In case contractor fails to employ qualified engineer, he shall be liable to pay an amount of Rs.25,000/- for each month or part thereof for the default period.

- iii) During the execution of the works, the contractor or his representative shall not leave the site where the works are being carried out. At the site of work, the contractor shall always make available one representative who shall be approved by the Railway Administration and who shall be invested with adequate powers by the Contractor so that orders or instruction given to the said representative by the Railway Administration in writing could be considered as duly given or conveyed to the Contractor himself. Representative of the Railway will check up the work from time to time. Supervision and Erection of work will be done by the contractors with their own labour, till completion and testing of the work.
- iv) The field Supervisor shall receive instructions from the Engineer-in-charge of the work or his representative at site and comply with the instructions. The Contractor shall be responsible for the compliance of such instructions.
- v) If the supervisor acting on behalf of the Contractor disregards the instructions of the Railway's supervisor/representative and does not execute the work to the satisfaction of this Railway supervisor, the Railway's Engineer, in consultation with superior will have the authority to order stoppage of work and/or ask for the replacement of the supervisor, which it shall be binding on the contractor.
- vi) The contractor shall make his own arrangement for accommodation, for his staff during installation, testing & commissioning and till completion. Water for drinking purpose if available at the station location will be given. However, Railways take no guarantee for this facility.
- vii) Compliance of Labour Laws:** To be complied as per GCC Clause 54, 55, 55-A, 55-B, 55-C, 55-D, 57 and 59(2).
- viii) Contractor is to abide by the provisions of Payment of Wages act & Minimum Wages act in terms of clause 54 and 55 of Indian Railways General Condition of Contract. In order to ensure the same, an application has been developed and hosted on website 'www.shramikkalyan.indianrailways.gov.in'. Contractor shall register his firm/company etc. and upload requisite details of labour and their payment in this portal. These details shall be available in public domain. The Registration/ updation of Portal shall be done as under:

- i. Contractor shall apply for onetime registration of his company/firm etc. in the Shramikkalyan portal with requisite details subsequent to issue of Letter of Acceptance. Engineer shall approve the contractor's registration in the portal within 7 days of receipt of such request.
- ii. Contractor once approved by any Engineer, can create password with login ID (PAN No.) for subsequent use of portal for all LOAs issued in his favour.
- iii. The contractor once registered on the portal, shall provide details of his Letter of Acceptances (LOA) / Contract Agreements on shramikkalyan portal within 15 days of issue of any LOA for approval of concerned engineer. Engineer shall update (if required) and approve the details of LOA filled by contractor within 7 days of receipt of such request.
- iv. After approval of LOA by Engineer, contractor shall fill the salient details of contract labours engaged in the contract and ensure updating of each wage payment to them on shramikkalyan portal on monthly basis.
- v. It shall be mandatory upon the contractor to ensure correct and prompt uploading of all salient details of engaged contractual labour & payments made thereof after each wage period.

2.38.3 SAFETY OF WORK, TRAINS & PERSONNEL:

- i) The contractor should abide by all the Railway regulations and also ensure that the same are followed by his representatives, agents, servants or workmen. He is therefore bound under these clauses to give notice to them about the provision of this clause and the consequent liability of the contractor under the agreement. The contractor shall conform to all the Railway Rules relating to safety of personnel and operation of signals and points. In the A.C. electrified areas the special precautions as laid down in AC Traction Manual shall be followed.
- ii) No petroleum spirit within the meaning of the Indian Petroleum Act shall be stored at site or adjacent land until the approval of the Railway and necessary license under the Act has been obtained by the contractor. The tenderer shall also ensure that approval of the Engineer has been obtained for storing any other inflammable material well in advance.

- iii) The contractor's employees and workers shall not for any reason operate any appliances or installations of the Railway concerning the safety of train movements, but they should whenever necessary notify the qualified Railway staff who will then take necessary steps. The contractor shall also be responsible for any damage that may cause due to the carelessness of his workmen and will bear the consequences in this regard.
- iv) The work must be carried out most carefully in such a way that they do not hinder the Railway operation except as agreed to by the Railway. The Contractor shall do no work that may interfere with traffic until protection has been provided by the Railway and under supervision of Railway's representative. When the work is required to be carried out on the track itself or as close to the track as may pose a hazard to rail traffic, the work shall be carried out under the supervision of an authorized Railway representative Junior Engineer/Senior Section Engineer (JE/SSE). Whenever trackside work are undertaken by the contractors, areas for unloading of bulk materials should be clearly demarcated and barricades provided if necessary with the consent of the (SSE/JE) Signal/Telecom, in-charge of the work. Suitable steps shall also be taken to prevent transport vehicles and such other machinery gaining access so near the track as to threaten the safety of running trains. That, whenever it becomes inescapable to allow transport vehicles or mobile machinery to operate in close proximity to the running lines the maximum moving dimensions for the said lines shall be adequately protected by fencing or such other suitable measures. No vehicle will normally be permitted to ply adjacent to the running lines.
- v) The contractor will be responsible for the safety of hired trucks and men etc. working at the site. He will also be responsible for any damage caused to the Railway property, staff and passengers travelling on the line on account of his truck/vehicles having been allowed to ply on the bank.
- vi) The contractor shall take all precautionary measures in order to ensure protection of his own personnel moving about or working on the Railway premises and shall have to conform to the Rules and Regulations of the Railway.
- vii) Suitable ladders for climbing the post and slings for supporting men on the post shall be used. Ropes as required shall be used for erection of the poles. The size of the rope shall be adequate. The contractor shall take necessary precaution for working near the power lines. If at any time the Railway finds the safety arrangements are inadequate or insufficient, the contractor shall take immediate corrective action as directed by the

Railway's representative at site. However, it is not obligatory on the part of the Railway's to give such directions. The issue or non-issue of any direction in the matter by the Railway shall in no way absolve the contractor of his sole responsibility to adopt safe working methods. The stone-breakers, if employed shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.

- viii) Necessary personal safety equipment as considered adequate by the Engineer-in – Charge should be kept available by the contractor for the use of the persons employed on the site and maintained in condition suitable for immediate use and the contractor should take adequate steps, to ensure proper use of equipment by these concerned. When not in use, electrical apparatus shall be switched off. No paint containing lead or lead products shall be used except in the form of paste or ready mixed paints. Suitable face masks should be supplied by the contractor for use by the workers when paint is applied in the form of spray.
- ix) Within the station premises and especially on passenger platforms, the contractor shall ensure sufficient free space for movement of passenger traffic. He must cover and protect the excavations carried out in such areas with a view to avoid any accidents.
- x) In case of an accident of any nature, the contractor will indemnify the Railway for any losses caused by him as a result of the accident.
- xi) The contractor will not be entitled to any compensation for any damage or loss sustained by him during execution of the work, for any idle labour transport or any loss or deterioration of the material or tools.
- xii) During testing and commissioning, signal aspects shall be displayed or changed and slot given to adjoining cabin/ground frame only as authorized by Railway. During testing and commissioning, point setting shall be changed only as authorized by the Railway. The contractor shall do no work that may interfere with traffic until protections has been provided by the Railway and under the supervision of Railway's representative. While testing and commissioning of the system, the contractor shall not work without authorization from the Railway's Engineer in-charge of the work.
- xiii) The contractor shall also be responsible for any damage that he may cause due to the carelessness of his workmen and will bear the consequences in this regard.

2.38.4 EMERGENCY WORKS:

In the event of any accident or failure occurring in or about the work or arising out of or in connection with the construction, completion or maintenance of the works which in the opinion of the Engineer requires immediate attention, the Railway may bring its own workmen or other agency to execute or partly execute the necessary work or carry out repairs if the Engineer considers that the contractor(s) is/are not in a position to do so in time and charge the cost thereof to the contractor, as to be determined by the Railway.

2.38.5 NIGHT WORKS:

Notwithstanding the provision in the General Conditions of Contract, if the Engineer is satisfied that the work is not likely to be completed in time, except by resorting to night work, he may order the contractor(s) to carry out the works even at night without conferring any right on the contractor for claiming any extra payment for the same. The contractor at his own cost shall make all adequate lighting arrangements and shall take precautions to avoid any mishap during night.

2.39 INSPECTION OF WORKS:

- i) The Engineer or his representative may inspect and test the various portions of the work at all stages and shall have full power to reject all or any portion of the work that he may consider to be defective or inferior in quality of materials, workmanship or design in comparison to what is called for in the specification. In the event of rejection of any work already executed and not in accordance with specification as in this tender and/or as determined by the Engineer or which the Contractor has been apprised, the Contractor shall carry out alterations/replacements to such works to the satisfaction of the Engineer for which no additional expenses will be borne by the Railway.
- ii) The responsibility of providing facilities for inspection lies with the contractor. He shall be responsible for providing required facilities i.e. tools, equipment for inspection at the place of work, for which no additional payments shall be made. For the purpose of inspection, the contractor shall make a written request for inspection of sites to be done next day.
- iii) The completed installation at all stages shall be subjected to checks and test as decided by Railways and the contractor shall be liable to remedy such defects as discovered during these checks and test and make good all deficiencies brought out. However, complete installation will be taken over finally on completion of the full system. It will be the responsibility of the contractor to rectify any discrepancy noticed within a reasonable

period from the date the complete system is taken over. For the purpose of taking over, joint inspection will be carried out by nominated representative of Railways.

- iv) The contractor will be called upon to pay all the expenses incurred by the Railway in respect of any work found to be defective or of inferior quality, adulterated or otherwise unacceptable.
- v) During the execution of the contract, samples may be taken for the purpose of test and/or analysis under the conditions laid down in specification, such samples to be prepared for testing and forwarded free of all cost to the Railway.
- vi) Before the cables are actually laid, Railway's representative and the Engineer's representative shall jointly inspect the quality and depth of trenches, chases, quality of bricks and arrangements for tamped filling. The measurement of length for all these items, which is found to be suitable, will be recorded by the Engineer's representative who will permit the laying of cables after issuing the certificates that the above works have been done as per required Specifications.

vii) **SITE ORDER BOOK:**

An Inspection Register/Site Order book shall be maintained at the site of work by the contractor, wherein the Engineer in-charge of the work or his executive subordinate shall record instructions regarding the working etc. It is expected that the Contractor or his representative at the site shall note such instructions whenever asked upon to do so and take action accordingly. His non-noting the logbook entries shall not be considered sufficient grounds for non-compliance of the instructions.

This register shall have entry on day-to-day basis regarding the progress of work. Record should also be kept with joint signature of Railways & firms representative for all release material too. This should be produced during the inspection & check of Railway engineer in charge or his authorised representative along with drawing showing new installation locations.

2.40 PROGRESS REPORTING:

- i) The contractor shall submit to Railways at his own cost periodic progress reports at regular intervals regarding the state and progress of work. The details and pro-forma of the report will mutually be agreed after award of the Contract. Such reports shall be for weekly work progress (man power, equipment and work development) and monthly

progress review reports. All actions as directed by Railway's representative to such reports shall be promptly attended to by Contractor.

- ii) The purchaser's engineer shall also conduct monthly meetings with the contractor to assess and review the programme of works. The action proposed to progress the work as planned, difficulties, assistance required etc. shall be clearly brought out and remedial action taken. The minutes of these meetings shall be jointly signed by Railway and contractor.

2.41 CLEARANCE OF SITE:

2.41.1 Contractor at his own expenses clean the site, set out all works and provide all necessary labours, pits, string, steel to enable the Railways or any of his representatives to check all setting out and the contractor will correct all errors at his own expenses.

2.41.2 At the end of the work in each section the contractor shall as a part of his contractual obligation leave the area completely cleared of rubbish and obstruction of all kinds according to the instructions of the Railway's representatives. Besides, he shall take execution of work to avoid the presence of loose earth and ballast on platforms, in drains, on the track formation and pathways, in the vicinity. If within fortnight of completion of the particular item of site work, the refuse is not cleared, the Railway, will arrange to get them removed at the cost of the contractor. However, before the Railway actually gets the site cleared, intimation in writing shall be given to the Contractor.

2.41.3 **Offloading of Part(s) of Work:** At the final stage of completion/ commissioning of work, in case the contractor fails to complete the final part(s) of the work and the value of such part(s) of the work is limited to 5% of the original contract value, the Engineer may allow/decide for offloading of such part(s) of works, either after the Contractor's request in writing to do so or after serving a 14 (Fourteen) days suo-moto notice (as per annexure- VIIA of GCC), if the Engineer is of the opinion that :-

- (i) Such Offloading of works (up to 5% of original contract value) would enable successful completion of contract/work,
- (ii) Termination/ Part termination of the contract at this stage is not be in the interest of the Railway/work;, and

- (iii) The anticipated additional cost for execution of such works through other mode would not be substantial and can be recovered from the pending dues of the contractor;

The Contractor shall be informed, in due course, by the Engineer of the mode and cost of execution of such offloaded work through other agency(ies) (as per annexure- VIIB of GCC). The extra expenditure so incurred in execution of the offloaded work, shall be recovered from subsequent Bill(s) or any other dues of the Contractor, but not exceeding the value of Performance Guarantee available in the contract. There shall be no other repercussion of such offloading on execution of the balance contract. The Contractor shall have no claim on account of above mentioned offloading of works.

2.42 COMPLETION OF WORKS:

As soon as in the opinion of the Engineer, the work has been completed (i.e, which will be considered as date of commissioning of complete system), the Engineer shall issue a completion certificate duly indicating the date of completion in respect of the work and the warranty period of the work shall commence from the date of completion mentioned in such certificate.

The certificate of completion in respect of the works shall not absolve the contractor from his liability to make good any defects imperfections, shrinkages or faults which may appear during the period of maintenance specified in the tender arising in the opinion of the Engineer from materials or workmanship not in accordance with the drawings or specifications or instruction of the Engineer, which defects, imperfections, shrinkages or faults shall upon the direction in writing of the Engineer be amended and made good by the contractor at his own cost; and in case of default on the part of contractor, the Engineer may employ labour and materials or appoint another contractor to amend and make good such defects, imperfections, shrinkages and faults and all expenses consequent thereon and incidental thereto shall be borne by the contractor and shall be recoverable from any moneys due to him under the contract.

2.43 WARRANTY:

Contractor is responsible for Warranty of all the materials supplied and installed by him for a period of ONE year from date of issue of completion certificate, which will be considered as date of commissioning of complete system. Completion certificate will be issued by JAG officer after obtaining "No Due" certificate from SSE-Incharge stating that all works are completed in all respects.

During the period of warranty contractor shall be responsible for:

- i) The contractor shall guarantee that all material & equipment to be supplied and installed as per this contract shall be free from defect and fault in design, material, workmanship and manufacture and shall be of the highest grade and consistent with established and generally accepted standard for materials of the type ordered and in full conformity with the contract specification.
- ii) The contractor shall be responsible to the extent expressed in this clause for any defects that may develop under the conditions provided for by the contractor and under proper use, arising from faulty materials, design or workmanship on the plant or from faulty erection of the equipment under the supervision of the contractor, but not to do so by the purchaser who shall state in writing in what the portion is faulty.
- iii) The Contractor shall remain responsible to arrange replacement and for setting right at his own cost any equipment supplied by him which is of defective manufacture or defective design or defective material/component become unworkable due to any cause whatsoever. The decision to attend to any damage or defect in work shall be final and binding on the contractor.
- iv) If it becomes necessary for the contractor to replace or renew any defective portions of the system under this clause, the **provision of the above clauses shall apply to the replaced/renewed equipment for the period of six months from the date of such replacement or renewal or until date of warranty period whichever may be later**. If any defect is not remedied within reasonable time, the Railway may proceed to do the work at contractor's risk and expenses, but without prejudice to any other rights, which the Railway may have against the contractor in respect of such defects.
- v) If the replacement or renewals are of such a character as may affect the efficiency of the system, **the Railway shall have the right to give the contractor within one month from such replacement or renewal notice in writing that test on completion will be carried out at his cost**. Should such tests show that the plant sustains the guarantee in the contract; the cost of the tests shall be borne by the purchaser. Should the guarantees not be sustained, the cost of the tests shall be borne by the contractor.
- vi) Until the completion of work, the contractor shall have the right to entry with permission of Railways, at his own risk and representatives, whose names shall have previously

been communicated, in writing, to the Railways at all reasonable working hours upon all necessary parts of the works for the purpose of inspecting the working and the records of the plant and taking notes there from and if he desires at his own risk and expense, making any tests, subject to the approval of the purchaser which shall not be unreasonably withheld.

- vii) All inspections, replacement or renewals carried out by the Contractor during the maintenance period shall be subject to the same condition of the contract.
- viii) All replacement and repairs and design change that the railway shall call upon the contractor **to deliver or perform under this warranty period shall be delivered and performed by the contractor within three months**, promptly and satisfactorily.
- ix) The decision of the Railway in regard to contractor's liability and the amount, if any, payable under this warranty shall be final and conclusive.
- x) During failure analysis/de-bugging, if any design deficiency is pointed out by the Railway, the contractor shall rectify it at his own cost.

2.44 VARIATION IN CONTRACT QUANTITIES:

In addition to Clause 42 of GCC. The procedure detailed below shall be adopted for dealing with variations in quantities during execution of works contracts.

Individual Items in the contract shall be operated with quantity variation of plus or minus 25%, and payment would be made as per the agreement rate. In case an increase in the quantity of an individual item by more than 25% of the agreement quantity is considered unavoidable, then the same shall be executed at the following rates

- (a) The contractor shall be bound to carry out the work at the agreed rates and shall not be entitled to any claim or any compensation whatsoever upto the limit of 25% variation in quantity of individual items of works.
- (b) Quantities operated in excess of 125%, but upto 140% of the agreement quantity of the concerned item, shall be paid at 98% of the rate awarded for that item in that particular tender.

- (c) Quantities operated in excess of 140%, but upto 150% of the agreement quantity of the concerned item shall be paid at 96% of the rate awarded for that item in that particular tender.
- (d) Variation in quantities of individual items beyond 150% will be avoided and permitted only in exceptional unavoidable circumstances and shall be paid at 96% of the rate awarded for that item in that particular tender.
- (e) Variation to quantities of Minor Value Item:
The limit for varying quantities for minor value items shall be 100% (as against 25% prescribed for other items). For this purpose, a minor value item is defined as an item whose original agreement value is less than 1 % of the total original contract value.
 - i. Quantities operated upto and including 100% of the agreement quantity of the concerned minor value item shall be paid at the rate awarded for that item in that particular tender.
 - ii. Quantities operated in excess of 100%, but upto 200% of the agreement quantity of the concerned minor value item shall be paid at 98% of the rate awarded for that item in that particular tender;
 - iii. Variation in quantities of individual minor value items beyond 200% will be avoided and permitted only in exceptional unavoidable circumstances and shall be paid at 96% of the rate awarded for that item in that particular tender.
- (f) No variation limit shall apply in the case of foundation work, and the Contractor shall carry out the work at agreed rates irrespective of any variation.
- (g) As far as Standard SOR items are concerned, the variation limit of 25% would apply to the value of the SOR schedule(s) as a whole and not on individual SOR items. However, in the case of NS items, the limit of 25% would apply on the individual items irrespective of quoting the rate (single percentage rate or individual item rate).
- (h) Execution of quantities beyond 150% of the overall agreement value should not be permitted and, if found necessary, should be only by negotiating with a contractor, with the prior personal concurrence of Principal FA&CAO/FA&CAO(C) and approval of General Manager

- (i) In cases where the decrease is involved during execution of the contract:
 - i) The contract signing authority can decrease the quantities of items up to 25% of the individual item.
 - ii) For a decrease beyond 25% for individual items or 25% of contract agreement value, the approval of an officer not less than the rank of S.A. Grade may be taken after obtaining "No Claim Certificate" from the contractor and with finance concurrence.

Note:

- 1) In case of need for the introduction of any new items (New NS Items) not covered in the schedule of quantities and rates to provide for any additional activity not covered in the original scope of contract shall be done at the rates, terms, and conditions mutually decided between Railway and contractor. The assessment of rates for extra item(s) shall be arrived at based on the prevailing market rates of labour, machinery & materials and by taking guidance from the following documents in order of priority:
 - i) S&T SOR from Different Zonal Railways if available
 - ii) Market Analysis
- 2) In case there is a need for introducing SOR items that are originally not available in the tender and further required to be included as per site conditions. Then the rate for such New SOR items shall be applicable at the same originally accepted percentage by the contractor and Railways. However, the cumulative value of all such extra item(s) together (modified by the respective tender percentage) shall not exceed 10 % of the original contract value.

2.45 PRICE VARIATION CLAUSE

As per GCC correction slip No.1, Price Variation Clause (PVC) shall be applicable only in tender having advertised value above Rs.2 Crores. Provided further that, in a contract where PVC is applicable, following shall be outside the purview of price adjustments. under clause 46A of GCC 2022(i.e., shall be excluded from the gross value of the work for the purpose of price variation):

- a. Materials supplied by Railway to the Contractors, either free or at fixed rate.
- b. Any extra item(s) included in subsequent variation falling outside the purview of the Bill(s) of Quantities of tender, under clause 39. (1)(b) of these Standard

General Conditions of Contract, unless applicability of PVC and 'Base Month' has been specially agreed, while fixing the rates of such extra item(s).

2.46 RIGHT OF RAILWAYS TO KEEP BACK FROM THE CONTRACT ANY PORTION OF WORK:

The successful tenderer will, however, have no claim or right in the execution of work which in the opinion of the Engineer should be carried out departmentally or otherwise, and the Railway reserves the right to keep back from the contract and carry out the work or any portion of work through any other agency, it may think without assigning any reason, any time after the acceptance of the tender. Therefore, no claim for compensation/loss or whatsoever on this account will be entertained by the Railway. In case if tender is accepted in part by Railway administration, Letter of Acceptance shall be issued as counter offer to the Tenderer, which shall be subject to acceptance by the Tenderer.

2.47 APPROVAL AND MEASUREMENT OF WORK: (Measurement of Works by Railway only)

- i) The contractor shall obtain written approval of the Railway supervisor after completion of the various sub-items of each work mentioned in the schedule. The contractor should ensure that correct measurements have been made for such work which are not possible to measure subsequently and shall remain hidden. E.g. Measurement of cable trench before laying of cables and back filling.
- ii) The contractor shall sign the measurement book as a token of acceptance of the measurement entered by the supervisor in-charge of the work.
- iii) **MEANING AND INTERPRETATION BY RAILWAY TO BE FINAL** All measurements, method of measurement, meaning and intent of specifications and interpretation of Special Conditions of Contract, given and made by the Railways or by the Railway's Engineer shall be final and binding and shall be considered "excepted matter" (matters not arbitrable) in terms of conditions laid down in the General Conditions of Contract.
- iv) The date and time on which 'on account' or 'final' measurements are to be made shall be communicated to the Contractor who shall be present at the site and shall sign the results of the measurements (which shall also be signed by the Engineer or the Engineer's representative) recorded in the official measurements book as an acknowledgement of his acceptance of the accuracy of the measurements. Failing the

Contractor's attendance, the work may be measured up in his absence and such measurements shall, notwithstanding such absence, be binding upon the Contractor whether or not he shall have signed the measurement books provided always that any objection made by him to measurement shall be duly investigated and considered in the manner set out below:

(a) It shall be open to the Contractor to take specific objection to any recorded measurements or Classification on any ground within seven days of the date of such measurements. Any re-measurement taken by the Engineer or the Engineer's representative in the presence of the Contractor or in his absence after due notice has been given to him in consequence of objection made by the Contractor shall be final and binding on the Contractor and no claim whatsoever shall thereafter be entertained regarding the accuracy and Classification of the measurements.

(b) If an objection raised by the Contractor is found by the Engineer to be incorrect the Contractor shall be liable to pay the actual expenses incurred in measurements.

2.48 EXTENSION OF COMPLETION PERIOD:

Extension to the contract will be granted by Railways as per Clause of GCC 17-A & 17B.

Note: In case Extension for Delay is due to Railways i.e., Clause 17A, then Railways may grant such extension or extensions of the completion date as may be considered reasonable. The Contractor shall indicate the period for which the work is likely to be delayed and shall seek extension of time as may be considered necessary under clause 17A(i) or/and 17A(ii) or/ and 17A(iii) above, as soon as the cause thereof shall arise and, in any case, not less than 15 days before the expiry of the date fixed for completion of the works. The Engineer shall consider the same and shall grant and communicate such extension of time as in his opinion is reasonable having regard to the nature and period of delay and the type and quantum of work affected thereby. No other compensation shall be payable for works so carried forward to the extended period of time; the same rates, terms and conditions of contract being applicable, as if such extended period of time was originally provided in the original contract itself. The non-submission of request for extension or submission of request within less than 15 days before the expiry of the date fixed for completion of the works, shall make him ineligible for extension under these sub clauses, subject to final decision of Engineer.

2.49 LOSS SUSTAINED DUE TO DEFAULT AND DELAY:

In the event of any loss to the Railways on account of execution and/or delay in completion of the work or any part thereof by agencies engaged by the contractor, the contractor shall be liable to reimburse the loss to purchaser without prejudice to the other rights and remedies of the purchaser, and the reimbursement in full or in part as the case may be, shall be met, at the option of the purchaser from out of all or any of the following sources viz:

- i) Any amount due and payable to the contractor by the purchaser on any account whatsoever;
- ii) The Contractor's security deposit in hands of the purchaser as far as available, and any other assets whatsoever of the contractor;

In the event of re-imbursement from out of sources (i) and/or (ii) above mentioned, the Railway shall have the right of appropriation suo-moto.

2.50 CONTRACTOR'S LIABILITIES FOR COST AND DAMAGES

Withholding and lien in respect of sums claimed will be applicable as per Clause of GCC 52 & 52-A.

2.51 SYSTEM OF QUOTING RATES:

The Tender consists of Six Schedules i.e., Schedule-A1- SOR items, Schedule-A2, A3, A4, A5& A6 - Non-SOR items respectively. Tenderer has to quote individual rates for each item in Schedule A4 and Single percentage for Schedule A1, A2, A3, A5& A6 individually.

The prices quoted by the Tenderer shall include the prices of materials including all incidental charges for transport, packing, loading/unloading and handling of materials, cost for arranging dispatch by rail/road direct from manufacturer's premises and completing all necessary formalities in all respect. The prices shall include all taxes, duties, insurance, Royalty, land levies applicable to this Works Contract. Therefore, tenderer should quote their prices taking into account the rate of GST as applicable for this contract as per extant Government orders from time to time.

- a) The Unit prices offered against the various items in schedules will include beside labour the following elements of cost:-

- i. Cost of all materials required for preparing the cable routes, laying the cables and all other incidentals connected therewith excluding the materials supplied by the Railways.
 - ii. Special tools & installation materials for cable laying etc.,
 - iii. Cost of transportation of material, supplied by the Railway from place of delivery to the site of work.
 - iv. Return of released materials, left over cables and other materials from the site of work and handing over to the Engineer at specified locations or stores depot.
 - v. Return of damages materials due to transportation.
 - vi. Cost of preparation of detailed documentation, completion plans/drawings.
 - vii. All other miscellaneous expenses necessary for the execution of work and fulfilment of contractual obligation.
 - viii. Conditions for reimbursements of levy/tax/cess if levied after receipt of tenders.
- b) Before submitting a tender, the tenderer will be deemed to have satisfied himself by actual inspection of the site and locality of the works, that all conditions liable to be encountered during the execution of the works are taken into account and that the rates entered in the tender forms are adequate and all-inclusive to accord with the provisions in Clause-37 of the standard GCC (Annexure 4 of Chapter 3) for the completion of works to the entire satisfaction of the engineer.
- c) Tenderers shall examine the various provisions of the Central Goods and Services Tax Act, 2017(CGST)/ Integrated Goods and Services Tax Act, 2017(IGST)/Union Territory Goods and Services Tax Act, 2017(UTGST)/ respective state's state Goods and Services Tax Act (SGST) also as notified by Central/State Govt& as amended from time to time and applicable taxes before bidding. Tenderers shall ensure that full benefit of input Tax Credit (ITC) likely to be availed by them is duly considered while quoting rates.
- d) The successful tenderer who is liable to be registered under CGST/IGST/UTGST/SGST Act shall submit GSTIN along with other details required under CGST/IGST/UTGST/SGST Act to railway immediately after the award of contract, without which no payment shall be released to the contractor. The contractor shall be responsible for deposition of applicable GST to the concerned authority.

- e) In case the successful tenderer is not liable to be registered under CGST/IGST/UTGST/SGST Act, the railway shall deduct the applicable GST from his/their bills under reverse charger mechanism (RCM) and deposit the same to the concerned authority.

However, if rates of existing GST or cess on GST for Works Contract is increased or any new tax /cess on Works Contract is imposed by Statute after the date of opening of tender but within the original date of completion/date of completion extended under clause 17 & 17A and the Contractor thereupon properly pays such taxes/cess, the Contractor shall be reimbursed the amount so paid.

Further, if rates of existing GST or cess on GST for Works Contract is decreased or any tax/cess on Works Contract is decreased / removed by Statute after the date of opening of tender, the reduction in tax amount shall be recovered from Contractor's bills/Security Deposit or any other dues of Contractor with the Government of India.

2.52 TERMS OF PAYMENT:

The Contractor will be entitled to be paid from time to time by way of "On Account payment" for supply of materials and works as in the opinion of the engineer who has executed in terms of the contract.

All bills shall be subject to any deduction or recovery which the Railway may be entitled to make under contract.

The Contractor shall be entitled to be paid from time to time by way of "On Account" payment as per clause 46(i) of General Conditions of Contract. While processing payment of any 'On Account Bill' contractor shall submit a certificate to the Engineer or Engineer's representatives that "I have uploaded the correct details of contract labours engaged in connection with this contract and payments made to them during the wage period in Railway's Shramikkalyan portal at 'www.shramikkalyan.indianrailways.gov.in' till ____Month, ____Year."

ON ACCOUNT PAYMENT:

Such "On Account Payments" will be made for supply of equipment, materials indicated in the supply schedule on receipt of materials in good condition at the Stores of SSE/ST/CN&MTP/PER.

A) Works involving Goods and Goods incidental:

90% of value of material will be paid on receipt of materials at Railway's Stores i.e. SSE/ST/CN&MTP/PER depot accompanied by inspection certificate.

- i. **5% of value of material** will be paid after successful completion and commissioning of the work in each block section.
- ii. **5% value of material** as per agreement shall be paid in final bill (as per GCC Para.51 (1)).

i)Store receipt certificate issued by consignee.

ii)Original Inspection certificate issued by Inspecting Official viz. RDSO/RITES/Railway Representative or Inspection Waiver Certificate issued by competent authority.

iii)Manufacturer's certificate for the equipment that the materials are in accordance with the specifications of the contract.

iv)Challan/Invoice in duplicate. The payment of supply items should be accepted as per time frame mentioned in SCC.

v)The contractor has to furnish an indemnity bond see **Form No.5**(in Forms & Annexures part of Chapter - 3) before payment is claimed, indemnifying the Railway Administration until completion of the work, against all damages, costs, charges, expenses, loss and liability, which the Railways may sustain, incur or be put to, by reasons or in subsequence directly or indirectly due to the Contractor not fulfilling the portion of the Contract involving the installation, testing and commissioning of the items supplied by the Contractor.

B) Item of works involving works and services incidental:

70% of the value of material as per agreement shall be paid as on accounts bills on production of certificates.

- i) **20% of the value of material** as per agreement shall be paid after successful installation, testing and commissioning of the material/equipments in each station.
- ii) **5% of the value of material** as per agreement shall be paid after successful submission of all "As-Made" documents wherever applicable.

- iii) **5% value of material** as per agreement shall be paid in final bill (as per GCC Para.51 (1)).

C) Item of works of services incidental:

- i) **90% of the value** as per agreement shall be paid after successful installation, testing and commissioning of the material/equipment in each station.

- iii) **5% of the value as per agreement shall be paid after successful submission of all “As-Made” documents.**

- iv) **5% value as per agreement shall be paid in final bill (as per GCC Para.51 (1)).**

2.53 FINAL PAYMENT:

- i) Final payment of 5% (Five Percent) of contract value shall be made after Warranty Period is completed as per Para 2.41 of SCC and as per para 51(1) of GCC.
- ii) The contract for this work will be considered complete after completion of Warranty Period as per Para 2.41 of SCC.
- iii) For releasing of Final Bill, contractor shall submit a certificate to the Engineer or Engineer's representatives that “I have uploaded the correct details of contract labours engaged in connection with this contract and payments made to them during the wage period in Railway's Shramikkalyan portal at 'www.shramikkalyan.indianrailways.gov.in' till ____ Month, ____ Year.”

On the basis of (i), (ii) and (iii) above for all the works in all the section covered in this contract, and reconciliation of materials issued, the final bill for the balance payment for each item of work shall be submitted by the Contractor along with a clear 'No Claim Certificate '.

On the Engineer's certificate of completion in respect of the works, adjustment shall be made and the balance of account based on the Engineer or the Engineer's representative's certified measurements or Engineer's certified “contractor's authorized engineer's measurements” of the total quantity of work executed by the Contractor up to the date of completion and on the rates accepted in Bill of quantities and for extra works on rates determined under Clause 39(of GCC 2022)of these Conditions shall be paid to the Contractor subject always to any deduction which may be made under these presents and further subject to the Contractor having signed

delivered to the Engineer enclosing either a full account in detail of all claims he may have on the Railway in respect of the works or having delivered No Claim Certificate and the Engineer having after the receipt of such account given a certificate in writing that such claims are not covered under excepted matter i.e. Clauses 7(j), 8, 18, 22(5), 39.1, 39.2, 40A, 43(2), 45(i)(a), 55, 55-A(5), 57, 57A, 61(1), 61(2) and 62(1), 63(iv) and 63.2.11 of Standard General Conditions of Contract or in any Clause of the Special Conditions of the Contract, that the whole of the works to be done under the provisions of the Contracts have been completed, that they have been inspected by him since their completion and found to be in good and substantial order, that all properties, works and things, removed, disturbed or injured in consequence of the works have been properly replaced and made good and all expenses and demands incurred by or made upon the Railway for or in the respect of damage or loss by from or in consequence of the works, have been satisfied agreeably and in conformity with the contract.

Note:

For releasing of Final Bill, contractor shall submit a certificate to the Engineer or Engineer's representatives that "I have uploaded the correct details of contract labours engaged in connection with this contract and payments made to them during the wage period in Railway's Shramikkalyan portal at 'www.shramikkalyan.indianrailways.gov.in' till ____Month, ____Year."

2.54 POST PAYMENT AUDIT:

It is an agreed term of contract that the Railway reserves to itself the right to carry out a post-payment audit and/ or technical examination of the works and the final bill including all supporting vouchers, abstracts etc. and to make a claim on the Contractor for the refund of any excess amount paid to him till the release of security deposit or settlement of claims, whichever is later, if as a result of such examination any over-payment to him is discovered to have been made in respect of any works done or alleged to have been done by him under the contract.

2.55 MODE OF PAYMENT TO CONTRACTOR:

All payments to contractors/suppliers will be made through National Electronic Fund Transfer (NEFT) system. It is mandatory to enclose, MANDATE Form given in (**Annexure-2** of Chapter-3 Forms & Annexure) which will require to be filled in along

with the offer. Indian Financial System Code (IFSC) of the concerned bank shall be given in the MANDATE form or through Letter Of Credit (LC) arrangements.

In case Tenderer seeks payment through Letter of Credit then the option can be exercised at the time of bidding only. Special condition for Letter of Credit in works tender vide Railway Board Lr No 2018/CE-I/CT/9 Dt 04.06.2018 are given below:

- (i) For all the tenders having advertised cost of Rs.10 lakhs or above, the contractor shall have the option to take payment from Railways through a letter of credit (LC) arrangement.
- (ii) This option of taking payment through LC arrangement has to be exercised in IREPS (Indian Railway Electronic Procurement System -the e-application on which tenders are called by Railways) by the tenderer at the time of bidding itself, and the tenderer shall affirm having read over and agreed to the terms and conditions of the LC option.
- (iii) The option so exercised, shall be an integral part of the bidder's offer.
- (iv) The above option of taking payment through LC arrangement, once exercised by tenderer at the time of bidding, shall be final and no change shall be permitted, thereafter, during execution of contract
- (v) In case tenderer opts for payment through LC, following shall be the procedure to deal release of payment through LC
 - (a) The LC shall be a sight LC
 - (b) The contractor shall select his Advising/Negotiating bank for LC. The incidental cost towards issue of LC and its operation thereof shall be borne by the contractor
 - (c) SBI, New Delhi, Main Branch will be the nodal branch for issue of LCs based on online requests received from Railway Accounts Units for tenders opened in financial year 2018-19. SBI branches where the respective Railway Accounts Office has its Account (local SB1branch) will be the issuance/reimbursing branch for LC issued under this arrangement. The Bank shall remain same for this tender till completion of contract. The incidental cost @0.15% per annum of LC value, towards issue of LC and operation thereof shall be borne by the contractor and shall be recovered from his bills
 - (d) The LC shall be opened initially for duration of 180 to 365 days in consultation with contractor. The LC shall be extended time to time as per the progress of the contract, on the request of the contractor. The value of LC to be opened initially as well as extended thereafter shall be finalised by the engineer in consultation with the contractor on the basis of expected progress of work

- (e) The LC terms and conditions shall inter-alia indemnify and save harmless the Railway from and against all losses, claims and demands of every nature and description brought or recovered against the Railways by reason of any act or omission of the contractor, his, agents or employees, in relation to the Letter of Credit (LC). All sums payable/borne by Railways on this account shall be considered as reasonable compensation and paid by contractor
- (f) The LC terms and conditions shall inter-alia provide that Railways will issue a Document of Authorisation (format enclosed as Annexure 2) after passing the bill for completed work, to enable contractor to claim the authorized amount from their bank
- (g) The acceptable, agreed upon document for payments to be released under the LC shall be the Document of Authorisation
- (h) The Document of Authorisation shall be issued by Railway Accounts Office against each bill passed by Railways
- (i) On issuance of Document of Authorisation, a copy of Document of Authorisation shall be posted on IREPS for download by the contractor. A digitally signed copy of Document of Authorisation shall also be sent by Railway Accounts Office to Railway's bank(Local SBI Branch)
- (j) The contractor shall take print out of the Document of Authorisation available on IREPS and present his claim to his bank (advising Bank) for necessary payments as per LC terms and conditions. The claim shall comprise of copy of Document of Authorisation, Bill of Exchange and Bill
- (k) The payment against LC shall be subject to verification from Railway's Bank (Local SBI Branch)
- (l) The contractor's bank (advising bank) shall submit the documents to the Railway's Bank (Local SBI Branch)
- (m) The railway's bank (issuing bank) shall, after verifying the claim so received w.r.t. the digitally signed Document of Authorisation received from Railway Accounts Office, release the payment to contractor's bank (advising bank) for crediting the same to contractor's account
- (n) Any number of bills can be dealt within one I.C, provided the sum total of payments to contractor is within the amount for which LC has been opened
- (o) The LC shall be closed after the release of final payment including PVC amount, if any, to the contractor
- (p) The release of performance guarantee or security deposit shall be dealt directly by railway with the contractor i.e., not through LC

2.56 FINAL SETTLEMENT:

On expiry of the warranty period as per Para 2.41 of SCC, a fresh Performance Guarantee (PG) shall be submitted based on the value of Annual Maintenance Contract (AMC) for entire 5-year period. On submission of the required PG against AMC and after entering into the AMC contract with the division concerned, the security deposit of this tender will be refunded to the Contractor.

2.57 DEDUCTION FROM ON ACCOUNT BILLS:

All costs, damages or expenses, which Railways may have paid or incurred, which under the provisions of contract are Contractor's obligations will be deducted by Railways from progressive payment Bills/Invoice of Contractor, as and when it is understood that such expenses have been incurred or paid for. All such claims of Railways shall, however, be duly supported by appropriate and certified vouchers, receipts or explanations as are available to enable the Contractor to identify such claims.

2.58 DEDUCTION OF TAXES:

Railways will deduct applicable Taxes such as GST as per extant rules and any other cess to be levied by Government of India. Wherever the law makes it statutory for the purchaser to deduct any amount towards Tax on works contract, the same will be deducted and remitted to the concerned authority. The Contractor and all personnel employed by him shall pay such taxes like Income Tax as are payable under statutory laws of India and the Railways will not accept any liability for the same. In terms of provisions of finance act and income tax act enforce deduction of income tax, surcharge & cess at source shall be made from the contractor and the amount so deducted may be credited to the central government. All other statutory deductions, such as GST, etc., at the rates as applicable at the time of payment, shall be made both from on account bills as well as final bills as per rules in force.

Note:

- | |
|--|
| <ol style="list-style-type: none">1) Income Tax and surcharge, if any, as notified by the Income Tax department will be deducted at source from each bill, unless otherwise authorized by Income Tax Department.2) If rates of existing GST or cess on GST for Works Contract is increased or any new tax /cess on Works Contract is imposed by Statute after the date of opening of tender but within the original date of completion/date of completion extended under clause |
|--|

- 17 & 17A and the Contractor thereupon properly pays such taxes/cess, the Contractor shall be reimbursed the amount so paid.
- 3) Further, if rates of existing GST or cess on GST for Works Contract is decreased or any tax/cess on Works Contract is decreased / removed by Statute after the date of opening of tender, the reduction in tax amount shall be recovered from Contractor's bills/Security Deposit or any other dues of Contractor with the Government of India.
- 4) Deduction of labour cess of 1% as per extant instruction from Railway board.

2.59 INSURANCE:

2.59.1 INSURANCE FOR PERSONS EMPLOYED BY CONTRACTOR

The contractor shall take out and keep in force a policy or policies of insurance against all liabilities of the Contractor or the Railways at common law or under any statute in respect of accidents to persons who shall be employed by the contractor in or about the site for the purpose of carrying out the works on the site. The Contractor shall also take out and keep in force a policy or policies of Insurance against all recognized risks to their offices and depots. Such insurance shall in all respects be to the approval of the Purchaser and if he so requires in his name.

2.59.2 INSURANCE OF MATERIALS & INSTALLATIONS:

The contractor shall take out and keep in force a policy or policies of Insurance for all materials including Railway supply materials, equipment irrespective of whether used up in the portion of work already done or kept for the use in the balance portion of the work until such works are provisionally handed over to the Railways. For this purpose, the works are deemed to have been provisionally handed over when work completion certificate is issued. The Contractor shall not be liable for losses/damages to the materials either used up in the portion of work done or his material kept for use at site, in consequence of mutiny, or other similar causes over which the Contractor has no control and which cannot be insured. Such losses or damages shall be the liability of the Purchaser and if required by the Railways, be made good by the contractor, at the cost of the Purchaser. The Contractor should, however, ensure the stores brought to site, against risks in consequence of war and invasion, as required under the Emergency Risk (Goods) Insurance Act in force from time to time.

It may be noted that the beneficiary of the insurance policy should be Railways or the policies should be pledged in favour of Railway. The contractor shall keep the policy/policies current till the installations are provisionally handed over to the Railways. It may also be noted that in the event of contractor's failure to keep the policy current and alive, renewal of the policy will be done by the Railways for which the cost

of the premium plus 20% of premium shall be recovered from the contractor. For purpose of enabling the contractor to take the insurance cover in connection with this contract, the Railways' engineer will advise the approximate price of all the Railway's supply materials to the contractor.

2.60 RATES DURING NEGOTIATION:

The tenderer shall not increase his quoted rates in case the Railway Administration negotiates for reduction of rates. Such a negotiation shall not amount to cancellation or withdrawal of the original offer and the rates originally quoted will be binding on the tenderer.

2.61 VITIATION:

In the event of vitiation occurring due to increase or decrease in quantities, among the first, second and third lowest valid tenderers etc., the vitiation shall be to the contractors account. The total value of the work done shall be calculated at the rate offered by those tenderers and the amount payable shall be limited to the lowest aggregate value as worked out as per para 1.0 of RB letter dated 08.02.2018.

2.62 LABOUR CAMPS:

Applicable as per GCC Clause 59 (1).

2.63 PAYMENT OF WAGES:

Contractor is to abide by the provisions of Payment of Wages act & Minimum Wages act in terms of clause 54 and 55 of Indian Railways General Condition of Contract. In order to ensure the same, an application has been developed and hosted on website www.shramikkalyan.indianrailways.gov.in. Contractor shall register his firm/company etc. and upload requisite details of labour and their payment in this portal. These details shall be available in public domain. The Registration/updation of Portal shall be done as under.

- (a) Contractor shall apply for one time registration of his company/firm etc. in the Shramikkalyan portal with requisite details subsequent to issue of letter of Acceptance Engineer shall approve the contractor's registration on the portal within 7 days of receipt of such request.
- (b) Contractor once approved by any Engineer, can create password with loginID (PAN No.) for subsequent use of portal for all LOA's issued in his favour.
- (c) The contractor once registered on the portal shall provide details of his letter of Acceptances (LOA)/Contract Agreements on Shramikkalyan portal within 15 days of issue of any LOA/or approval of concerned engineer. Engineer shall

update (if required) and approve the details of LOA filled by contractor within 7 days of receipt of such request.

- (d) After approval of LOA by Engineer, Contractor shall fill the salient details of contract labours engaged in the contract and ensure updating of each wage payment to them on Shramikkalyan portal on monthly basis.
- (e) It shall be mandatory upon the contractor to ensure correct and prompt uploading of all salient details of engaged contractual labour & payment made thereof after each wage period.

While processing payment of any "On Account bill" or "Final bill" or release of "Advance " or "Performance Guarantee/Security deposit", contractor shall submit a certificate to the Engineer or Engineer's representatives that "I have uploaded the correct details of contract labours engaged in connection with this contract and payments made to them during the wage period in Railway's Shramikkalyan portal at www.shramikkalyan.indianrailways.gov.in till _____ Month _____ Year.

2.64 ASSIGNMENT OR SUBLETTING OF CONTRACT:

The Contractor shall not assign or sublet the contract or any part thereof or allow any person to become interested therein in any manner whatsoever without the special permission in writing of the Chief Engineer, save as provided below. Any breach of this condition shall entitle the Railway to rescind the contract under Clause 62 of these Conditions and also render the Contractor liable for payment to the Railway in respect of any loss or damage arising or ensuing from such cancellation; provided always that execution of the details of the work by petty Contractor under the direct and personal supervision of the Contractor or his agent shall not be deemed to be sub-letting under this clause.

In case Contractor intends to subcontract part of work, he shall submit a proposal in writing seeking permission of Chief Engineer for the same. While submitting the proposal to railway, Contractor shall ensure the following:

- (a) (i) Total value of work to be assigned to sub-contractor(s) shall not be more than 50% of total contract value.
- (ii) The subcontractor shall have successfully completed at least one work similar to work proposed for subcontract, in last 5 years, ending date of submission of proposal by Contractor to Railway, costing not less than 35% value of work to be subletted, through a works contract directly given to him by a Govt. Department; or by a Public

listed company having average annual turnover of Rs 500 crore and above in last 3 financial years excluding the current financial year, listed on National Stock Exchange or Bombay Stock Exchange, registered at least 5 years back from the date of submission of proposal by Contractor to Railway and work experience certificate issued by a person authorised by the Public Listed Company to issue such certificates.

In case contractor submits subcontractor's work experience certificate issued by public listed company, the contractor shall also submit along with work experience certificate, the relevant copy of work order, bill of quantities, bill wise details of payment received duly certified by Chartered Accountant, TDS certificates for all payments received and copy of final/last bill paid by company in support of above work experience certificate.

(iii) There is no banning of business with the sub-contractor in force over IR.

- (b) The Contractor shall provide to the Engineer a copy of the agreement to be entered into by Contractor with subcontractor. No subcontractor shall be permitted without a formal agreement between Contractor and subcontractor. This agreement shall clearly define the scope of work to be carried out by subcontractor and the terms of payment in clear & unambiguous manner.
- (c) On receipt of approval from Chief Engineer, Contractor shall enter into a formal agreement legally enforceable in Court of Law with subcontractor and submit a copy of the same to the Engineer.
- (d) The Contractor shall intimate to the Engineer not less than 7 days in advance, the intended date of commencement of subcontractor's work.
- (e) Once having entered into above arrangement, Contractor shall discontinue such arrangement, if he intends to do so at his own or on the instructions of Railway, with prior intimation to Chief Engineer.
- (f) The Contractor shall indemnify railway against any claim of subcontractor.
- (g) The Contractor shall release payment to the Sub-contractor(s) promptly and shall endeavour to resolve all issues amicably and speedily with the Sub-contractor(s), so that the execution of work is not affected in any manner whatsoever.

- (h) In addition to issuance of work experience certificate to Contractor, the Engineer, when, based on documents, is satisfied that subcontracted work has been carried out by subcontractor, shall issue work experience certificate to the subcontractor also for the portion of work subcontracted and successfully completed by the sub-contractor.
- (i) The responsibility of successful completion of work by subcontractor shall lie with Contractor. Subcontracting will in no way relieve the Contractor to execute the work as per terms of the Contract.
- (j) Further, in case Engineer is of the view that subcontractor's performance is not satisfactory, he may instruct the Contractor to remove the subcontractor from the work and Contractor has to comply with the above instructions with due promptness. Contractor shall intimate the actual date of discontinuation of subcontract to Engineer. No claim of Contractor whatsoever on this account shall be entertained by the Railway and this shall be deemed as 'excepted matter' (matter not arbitrable).
- (k) The permitted subcontracting of work by the Contractor shall not establish any contractual relationship between the sub-contractor and the Railway and shall not relieve the Contractor of any responsibility under the Contract.

2.65 DETERMINATION OF CONTRACT

Right of Railway to Determine the Contract will be dealt as per clause 61,62 of GCC 2022

2.66 SETTLEMENT OF DISPUTES:

2.66.1 Matters Finally Determined by the Railways: (Refer GCC Clause 63)

All disputes and differences of any kind whatsoever arising out of or in connection with the contract, whether during the progress of the work or after its completion and whether before or after the determination of the contract, shall be referred by the contractor to the GM and the GM shall, within 120 days after receipt of the contractor's representation, make and notify decisions on all matters referred to by the contractor in writing provided that matters for which provision has been made in Clauses 8, 18, 22(5), 39, 43(2), 45(a), 55, 55-A(5), 57, 57A, 61(1), 61(2) and 62(1) to (xiii)(B) of Standard General conditions of contract or in any clause of the special conditions of contract shall be deemed as 'excepted matters' (matters not arbitrable) and decisions of the Railway authority, thereon shall be final and binding on the contractor; provided

further that 'excepted matters' shall stand specifically excluded from the purview of the Arbitration clause.

2.66.2 Dispute Adjudication Board (DAB): This clause is applicable in the tender having advertised value more than Rs 50 Crore. (Refer Clause 63.2 of GCC 2022 for complete details).

2.67 FORCE MAJEURE: (Refer GCC Clause 17)

If at any time, during continuance of this Contract, the performance in whole or in part, by either party, of any obligation under this contract shall be prevented or delayed by reason of any war, hostility, act of the public enemy, Civil Commotion, Sabotage, serious loss or damage by Fires, Floods, Earth quakes, explosions, strikes, epidemics, Quarantine restrictions, lockouts, any statute, statutory rules, regulations, order of requisitions issued by any Government Department or Competent Authority or acts of God (here-in-after referred to as events) provided, notice of the happening of any such event is given by either party to the other within 30 days from the date of occurrence thereof neither party shall by reason of such event be entitled to terminate this Contract nor shall either party have any claim for damages against the other in respect of such non-performance or delay in performance, and works under the Contract shall be resumed as soon as practicable after such event has come to an end or ceased to exist, and the decision of Engineer as to whether the works have been so resumed or not shall be final and conclusive, PROVIDED FURTHER that if the performance in whole or in part of any obligation under this contract is prevented or delayed by reason of any such event for a period exceeding 120 days, either party may at its option terminate the contract by giving notice to the other party.

2.68 LOCAL CONTENT / PUBLIC PROCUREMENT (Preference to Make in India), Order 2017

Letter issued by Department of Industrial Promotion and Policy (DIPP) (now renamed as the Department for Promotion of Industry and Internal Trade (DPIIT)) under the Ministry of Commerce and Industry regarding PPP-MII policy issued vide their order No. **P-45021/2/2017-PP (BE- II) dated 16-09-2020**, (as amended from time to time) shall be applicable for this tender.

2.69 TRAINING

The tenderer shall undertake to impart training to Railway staff either at site of installation or their factory premises/ at an reputed institution in different aspects of equipment, its architecture, functioning and planning, management supervision ,field installation

supervision, commissioning, testing and maintenance both for H/W and S/W areas in order to transfer complete know how so as to impart full knowledge and confidence to independently execute successfully commissioning EI & MSDAC Systems. The training courses should include hands on the equipment, visits to installations apart from formal classes.

The training course to be conducted at the manufacturing facilities shall be designed to train the trainees in all aspects of System engineering, equipment operation, installation and functional details, theory of operation of equipment, trouble shooting and familiarization with the equipment at card and component level.

All equipment used for training shall be identical to those quoted and supplied for site installation in hardware and software versions.

Expenses on travel for the Railway Staff will be borne by Railway.

The subjects of training, details of courses etc. should be furnished on demand of the Railway and it should be ensured that the trainees are given sufficient material for technical reference and guidance as well as for imparting complete know-how.

The complete documentation on the courses should be supplied to the trainees Railway, however reserves the right to vary the number personnel as well as course modules and training periods so considered necessary.

CD/DVD/USB storage made with the specific intent of giving training on the theory and maintenance of equipment shall also be supplied by the contractor.

After the completion of course, all such materials shall become the property of the PURCHASER. The Purchaser/Engineer reserves their right to suggest any additions/deletions in the program, which shall be incorporated by the bidder at no additional cost.

2.7 Recovery for non-returned cable drums:

The contractor has to return any cut pieces of cables, wires, etc., that may be left out and surplus materials from the drums and other packing materials that might have been handed over to him. No extra payment will be made for this and the unit price quoted against the various items should include this work also. The surplus materials have to be handed over to the Stores of the Engineer-in-Charge of the work. Failure on the part of the contractor to return the empty cable drums will entail the contractor to pay the charges as indicated against various sizes of empty cable drums at the time of final payment, indicated as hereunder:

1. Empty Signalling cable drums upto 12 Core capacity Rs.100/- each (Rupees One Hundred only).

2. Empty Signalling cable drums above 12 Core and upto 31 Core capacity and Telecommunication cable drums Rs.150/- each (Rupees One Hundred and Fifty only).
3. Empty Power cable drum Rs.125/- each (Rupees One Hundred and twenty Five only).
4. The contractor shall take proper written acknowledgement from the Engineers Representative for all the materials returned by him.
5. All tools that are required by the contractor for the purpose of transportation of the materials, digging, concreting and erection, wiring and painting works shall be brought by the contractor himself. This shall include spare parts, fuel and consumable and miscellaneous stores-details. The rates quoted by the contractor shall be deemed to be inclusive of all charges for such items and inclusive of labour required to ensure efficient and methodical execution of work.

******END OF CHAPTER – 2******

CHAPTER –3

FORMS & ANNEXURES

TECHNICAL CREDENTIALS

{Only for Technical Eligibility Criteria (completed similar work)}

[Refer Para 2.5.1 and 2.5.2 of Tender Document]

For the most eligible contractors who had completed similar works, Tenderers shall have to submit the following details along with tender duly attested by the tenderer. The tenderer shall also enclose relevant certificate/documents issued by the concerned authority in this regard:

1.	Name of work.	
2.	Contract awarding Authority.	
3.	Contact agreement No.	
4.	Name of the firm.	
5.	Date of award.	
6.	The original value of the contract.	
7.	The original date of completion.	
8.	(a) Whether work has been physically Completed	
	(b) Actual date of completion.	
9.	The final value of the contract.	
10.	Whether working as a main contractor	
11.	Whether working in an individual capacity or a Joint venture.	
12.	Whether working as a Sub - Contractor	
13.	If the work was executed as a joint venture firm, the share of each partner to be given.	
14.	The brief scope of work.	
15.	Reference with Page No. in the submitted document.	

Signature by officer JAG/ above

Signature & Date

Seal

TECHNICAL CREDENTIALS**{Only for Technical Eligibility Criteria (for substantially completed similar work)}****[Refer Para 2.5.1 and 2.5.2 of Tender Document]**

For the most eligible contractors who had completed similar works, Tenderers shall have to submit the following details along with tender duly attested by the tenderer. The tenderer shall also enclose relevant certificate/documents issued by the concerned authority in this regard:

1.	Name of work.	
2.	Contract awarding Authority.	
3.	Contact agreement No.	
4.	Name of the firm.	
5.	Date of award.	
6.	The original value of the contract.	
7.	The original date of completion.	
8.	(a) Whether work has been Substantially completed	
9.	The present value of the contract (Excluding PVC if any)	
10.	Whether working as a main contractor	
11.	Whether working in an individual capacity or a Joint venture.	
12.	Whether working as a Sub - Contractor	
13.	If the work was executed as a joint venture firm, the share of each partner to be given.	
14.	The brief scope of work.	
15.	Reference with Page No. in the submitted document.	

It is certified that there is NO proceedings of termination of contract on Contractor's default has been initiated

Signature by officer JAG/ above

Signature & Date

Seal

FINANCIAL CREDENTIALS
[Refer Para 2.5.3 of Tender Document]

Each Bidder or each member of a JV must fill in this form separately:

NAME OF BIDDER/JV PARTNER:

Annual Contractual Turnover Data for the Previous 3/4 Years (Contractual Payment only)			
Year	Amount Currency	Exchange Rate	INR Equivalent
Average Annual Contractual Turnover for last 3 years			

1. The average annual contractual turnover shall be calculated as an average of “total contractual payments” in the previous three financial years. However, in case balance sheet of the previous year is yet to be prepared/ audited, the audited balance sheet of the fourth previous year shall be considered for calculating average annual contractual turnover.
2. The information supplied shall be substantiated by data in the audited balance sheets and profit and loss accounts for the relevant years in respect of the bidder or all members constituting the bidder.
3. Contents of this form should be certified by a Chartered Accountant duly supported by Audited Balance Sheet duly certified by the Chartered Accountant.

SEAL AND SIGNATURE OF THE BIDDER

Certified that all figures and facts submitted in this form have been furnished after full consideration of all observations/notes in Auditor's reports. _____

(Signature of Chartered Accountant)

Name of CA: _____

Registration No: _____

(Seal)

**STATEMENT OF DEVIATIONS
PROFORMA FOR STATEMENT OF DEVIATIONS**

The following are the particulars of deviations from tender document:

Chapter No. XXX

SL No.	CLAUSE	DEVIATION	REMARKS (INCLUDING JUSTIFICATION)
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Note: Tenderers are advised to submit the deviations from entire tender document including Annexures. Where there is no deviation, the statement should be uploaded duly signed with an endorsement indicating no deviations. In case, the deviations are not submitted by tenderer, then it will be treated as NIL deviations to the entire tender document.

GUARANTEE BOND TOWARDS PERFORMANCE OF CONTRACTOR

The President of India,
Acting Through the FA&CAO/CN/MS,
Southern Railway,
Chennai-08,

Ref: Letter of Acceptance No _____ of XSTE/CN&MTP/MS, Southern Railway,
Chetpet, Chennai -31 issued to _____ (Name of the contractor) for “ _____
(Name of Work). “

1. In consideration of the President of India acting through the **FA&CAO, Construction, Southern Railway, Chennai, Egmore-600008**(hereinafter called “the Government”) having agreed to exempt Shri _____. (Hereinafter called “the contractor”), from the demand under the terms and conditions of the agreement under execution between the president of India acting through the **FA & CAO Construction, Southern Railway, Egmore, Chennai – 600008** and _____. (“the said contractor”) in terms of Letter of Acceptance No _____. dt: _____. “(Name of Work)” by the said contractor of terms and conditions contained in the said Agreement is on the production of Bank Guarantee for Rs _____ (Rupees. _____). as security towards the satisfactory performance of the work from the said contractor for compliance of his obligations in accordance with the terms and conditions in the said agreement.
2. We _____. (Indicate the name of Bank) a, body corporate constituted under the Banking Companies (Acquisition and Transfer of undertaking) Act, 1970 having its corporate office at _____. hereinafter referred to as “the bank” do hereby undertake to pay to the Government an amount not exceeding Rs _____. (Rupees _____.) against any loss or damage caused to or suffered by or would be caused or suffered by the Government by reasons of any breach by the said contractor/s of any of the terms or conditions contained in the said agreement towards performance of the contract assigned.
3. We _____(indicate the name of Bank) do hereby undertake to pay the amounts due and payable under this Guarantee without any demur, merely on a demand from the Government stating that the amount claimed is required to meet the recoveries due or likely

to be due from the said contractor. 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 _____. (Rupees _____.)

4. We_____ (Indicate the name of the bank) further undertake to pay the Government any money so demanded notwithstanding any dispute or disputes raised by the said Contractor / Supplier in any suit or proceeding 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 valid discharge of our liabilities for payment there under and the said contractor / supplier shall have no claim against us for making such payment.
5. We_____ (indicate the name of the bank) 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 government under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till **XSTE/CN&MTP/MS, Chennai-600031**, ministry of railway certified that the terms and conditions of the said Agreement have been fully and properly carried out by the said contractor and accordingly discharge this guarantee. Unless a demand or claim under this guarantee is made on us in writing on or before the expiry of _____ we shall be discharged from all liability under this guarantee thereafter.
6. In the event of the period of the contract being extended and the contractor fails to extend the validity of this Guarantee for a further period to cover the extended period of the contract before the validity date of this Guarantee, a mere demand or claim made on the bank by the Government on or before the date of discharge of this Bond to the effect that the Contractor has failed to extend the validity of this Bond can be conclusive as regards the amount due and payable by the bank under this Guarantee unless the contractor extend the validity and the bank shall pay the amount forthwith to the Government.
7. We_____ (indicate the name of the bank) further agree with the Government that the Government shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of terms and conditions of the said agreement or to extend the time of performance by the said contractor(s) from time to time or to postpone from any time to time any of the powers exercisable by the Government 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 is granted to the said contractor or forbearance act or omissions on the part of the Government or any indulgence by the Government to the said contractor/s or by any such matter or thing whatsoever under the law relating to sureties would, but for this provision, have the effect of so relieving us.

8. This Guarantee will not be discharged due to the change in the constitution of the bank or of the said Contractor.
9. We, _____. (Indicate the name of Bank) lastly undertake not to revoke this guarantee except with the previous consent of the Government in writing.
10. This Guarantee shall be valid up to _____, being the contract's tentative completion period, including the maintenance period unless extended or demanded by the Government.

Notwithstanding anything contained herein,

1. Our liability under this Guarantee shall not exceed Rs _____ (Rupees. _____)
2. This Guarantee shall be valid up to _____
3. We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if you serve upon us and we receive a written claim or demand on or before _____, being the expiry of the validity period or performance Guarantee Bond. Our liability under this bank guarantee shall be fully discharged beyond the validity period, and you shall not have any claim against this Bank Guarantee.

In witness whereof the, _____. (Indicate the name of Bank) hereby affix our hand and seal on this the _____ day of _____ 2023

For _____
(Indicate the name of Bank)

WITNESSES:

Witness No.1

NAME:

ADDRESS:

PHONE:

SIGNATURE:

Witness No.2

NAME:

ADDRESS:

PHONE:

SIGNATURE:

PROFORMA FOR INDEMNITY BOND

I/We M/s._____ (hereinafter called the Contractor) which expression includes his successors and assignees in favour of the president of India acting through the **XSTE/CN&MTP/MSC, Southern Railway, Ground Floor, GC Building, Mc Nichols Road, Chetpet, Chennai-600031** (herein after called the Railway")

Whereas the parties hereto have entered into an agreement vide letter of Acceptance No_____ dated _____for the purpose of executing the said contract until such time the materials hereinafter mentioned are duly erected or otherwise handed over to the Railway.

Whereas I/We_____ (name of the contractors)am/are required to hold in custody for and on behalf of the railway in trust all-important and indigenous signalling material which have been handed over to me for installation of _____ (name of the work)the vide Letter of Acceptance_____(LOA No and Date) for the purpose of executing the said contract until such time the materials are duly erected and are handed over to Railways. Whereas I/we M/s_____(name of the contractors) are required to furnish an Indemnity Bond.

Now by this indemnity bond, we hereby undertake that we hold in my custody for and on behalf of the president of India and his property in trust of the said imported and indigenous signalling materials handed over to us for the purpose of execution of the said contract until such time the materials duly erected or otherwise handed over to the Railways.

We shall be entirely responsible for the safe custody and protection of the said important and indigenous signalling materials against all risk till they are duly erected or otherwise delivered to **XSTE/CN&MTP/MSC, Southern Railway, Ground Floor, GC Building, Mc Nichols Road, Chetpet, Chennai-600031** to any other officer as he may direct otherwise and shall indemnify the Railway against any loss, damage or deterioration in respect of the said materials which are in possession.

The said material shall at all times be open for Inspection by any authorized Officer of the Railways.

Should any loss, damage, or deterioration occur or refund becomes due, the President of India shall be entitled to recover from us the compensation for such loss or damage or deterioration the amount is to be refunded without prejudice to any other remedies available to Railways and also by deduction from any sum due or any sum which at any time hereinafter may become due to us for this work under other Contract with any other department of the Railways.

The value of the above materials for the purpose of Indemnity that can be claimed this indemnity Bond shall not exceed Rs _____ (Rupees _____)

In the event of any loss or damage or deterioration as aforesaid, the assessment of such loss or damages or deterioration and the assessment of the compensation thereof would be made by the President of India or his authorized nominee, and the said assessment shall be final and binding upon us.

In witness where off we partner of _____ (name of the contractor) have executed this indemnity bond on the date, month and year first written at _____ dated this _____

Signed at _____ on this day of _____

WITNESSES:

Witness No.1

NAME:

ADDRESS:

PHONE:

SIGNATURE:

Witness No.2

NAME:

ADDRESS:

PHONE:

SIGNATURE:

RECEIPT CERTIFICATE (FOR SUPPLY ONLY)

From: Sr. Section Engineer (Signal/Telecom/ ----- Division

No.

Date:

1. Contract No.
2. Name of Work.
3. Item No. as in Schedule of work.
4. Description of Item.
5. Material Inspected by:
6. Dispatch particular & date.
7. Qty as per dispatch particular
8. Qty received.
9. Qty short received.
10. Condition on Stores Received.
11. Name of Firm & Address.
12. Place of receipt.
13. Date of receipt
14. Ledger No.
15. Name & designation of Stores In-charge

Signature of Stores –in–Charge

REQUISITION-CUM-RECEIPT FOR THE MATERIAL

Requisition Serial No: _____

Date: _____

To: SSE/ST/CN&MTP/PER

Please issue the materials for the execution of the ongoing work.

Name of the work:

Name of the Contractor:

Site Supervisor: SSE in-charge:

S.No	Description of material	Unit	Scheduled /planned Qty	Qty so far collected	Qty Now required	Qty now collected

Contractor /Authorized
Representative

SSE/CN&MTP/MSC

AXSTE/XSTE/CN&MTP/MSC

Qty issued as per requisition slip vide challan No. _____

Dated: _____

i. List of Works Completed

Description of work	Organization for whom executed	Approx. value of the contract at the time of award (Rs.)	Date of award	Date of scheduled completion of work	Date of actual completion	The final value of contract (Rs.)

ii. List of Works in Hand

Description of work	Contract Value	Approx. value of balance work yet to be done	Date of award

FORMAT FOR CERTIFICATE TO BE UPLOADED BY TENDERER ALONGWITH THE TENDER DOCUMENTS

I.....(Name and Designation)** appointed as the attorney/authorized signatory of the tenderer (including its constituents).

i. M/s._____ (hereinafter called the tenderer) for the purpose of the tender documents for the work of **“Provision of Electronic Interlocking Signalling arrangements (Both Indoor and Outdoor) at Nagari and Podatturpettai of Chennai division in connection with Construction of New line between Nagari and Tindivanam. “** as per the **E-Tender Notice No: SGCNMTPNG-PDTI-2024 Dated: 20.07.2024** of Southern Railway, do hereby solemnly affirm and state on behalf of the tenderer including its constituents as under:

1. I/We the tenderer (s) am/are signing this document after carefully reading the contents.
2. I/We, the tenderer (s), also accept all the tender conditions and have signed all the pages in confirmation thereof.
3. I/We hereby declare that I/We have downloaded the tender documents from the Indian Railway Website www.ireps.gov.in. I/We have verified the document's content from the website, and there is no addition, no deletion, or alteration to the content of the tender document. However, in case of any discrepancy noticed at any stage, i.e., evaluation of tenders, execution of work, or final payment of the contract, the master copy available with the Railway 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 the same shall be binding upon me/us.**
6. **I/We hereby declare that the information and documents submitted along with the tender 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 certify that I/we the tenderer(s) is/are not blacklisted or debarred by Railways or any other Ministry / Department of Govt. of India from participation in tender on the date of submission of bids, either in individual capacity or as a HUF/ member of the partnership firm/LLP/JV/Society/Trust.
8. I/We undersigned that if the contents of the certificate submitted by us are found to be forged/false or incorrect at any time during the process for evaluation of tenders, it shall lead to forfeiture of the tender Bid Security besides banning of business for five years. Further, I/We (*insert name of the tenderer*) **_____ and all my/our constituents understand that my/our offer shall be summarily rejected.
9. I/We also understand that if the contents of the certificate 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 Bid Security/Security Deposit and Performance Guarantee besides any other action provided in the contract including banning of business for five years.
10. I/We have read the clause regarding restriction on procurement from a bidder of a country which shares a land border with India and certify that I am/We are not from such a country or, if from such a country, have been registered with the competent Authority. I/We hereby certify that I/we fulfil all the requirements in this regard and am/are eligible to be considered (evidence of valid registration by the competent authority is enclosed).

SEAL AND SIGNATURE
OF THE TENDERER

Place:

Dated:

** The contents in Italics are only for guidance purposes. Details as appropriate are to be filled in suitably by the tenderer.

This affidavit is to be given by each member of JV or partners of partnership firm/LLP/etc.

Form 9(A)

E. New Annexure-V(A), Part of GCC shall be read as under

Reference -para 6.1

of ITT

(This certificate is to be given by attorney /authorized signatory/each member of Partnership firm/Joint Venture (JV) Hindu Undivided Family (HUF)/Limited Liability Partnership (LLP) etc.

I/We.....(NAME), attorney/authorised signatory of the(constituent firm/constituent partner) and member/partner of the(tendering firm) hereby solemnly affirm and state as under.

1. I/We certify that..... (constituent firm/constituent partner) is are not blacklisted or debarred by Railways or any other Minister / Department of Govt. of India from participation in tender on the date of submission of bids, either in individual capacity or as a HUF/member of the partnership firm/LLP/JV/Society/Trust.
2. I/We have read the clause regarding restriction on procurement from a bidder of a country which shares a land border with India and certify that I/We are not from such a country or, if from such a country, have been registered with the competent Authority. I/We hereby certify that I/We fulfil all the requirements in this regard and am/are eligible to be considered (evidence of valid registration by the competent authority is enclosed).

SEAL AND SIGNATURE OF THE
CONSTITUENT FIRM/CONSTITUENT PARTNER

Place:

Dated:

**SOUTHERN RAILWAY
TENDER FORM (FIRST SHEET)**

E- Tender Notice No: SGCNMTPNG-PDTI-2024 Dated: 20.07.2024

Name of the work: Provision of Electronic Interlocking Signalling arrangements (Both Indoor and Outdoor) at Nagari and Podatturpettai of Chennai division in connection with Construction of New line between Nagari and Tindivanam.

To the President of India,
acting through the XSTE/CN&MTP/MSC,
Southern Railway, Chennai.

- 1.0 I/We _____ (name of the tenderer) have read the various conditions to tender attached hereto and agree to abide by the said conditions. I/We also agree to keep this offer open for acceptance for a period of **90 days** from the date fixed for closing of the tender and in default thereof, I/We will be liable for forfeiture of my/our "Bid Security". I/We offer to do the work for _____ Railway, at the rates quoted in the attached bill(s) of quantities and hereby bind myself/ourselves to complete the work in all respects **within 9 months** from the date of issue of letter of acceptance of the tender.
- 2.0 I/We also hereby agree to abide by the Indian Railways Standard General Conditions of Contract, with all correction slips up-to-date and to carry out the work according to the Special Conditions of Contract and Specifications of materials and works as laid down by Railway in the annexed Special Conditions/Specifications, Schedule of Rates with all correction slips up-to-date for the present contract.
- 3.0 A Bid Security of Rs. _____ (enter amount mentioned as per tender notice) has already been deposited online / submitted as Bank Guarantee bond. Full value of the Bid Security shall stand forfeited without prejudice to any other right or remedies in case my/our Tender is accepted and if:
- a. I/We do not execute the contract agreement within seven days after receipt of notice issued by the Railway that such documents are ready and
 - b. I/We do not commence the work within fifteen days after the receipt of LOA to that effect and;

- c. I/we do not submit a performance Guarantee within time specified in the tender document.
- 4.0 (a) I/We am/are a Startup firm registered by Department of Industrial Policy and Promotion (DIPP) and my registration number is valid upto (Copy enclosed) and hence exempted from submission of Bid Security.
- 5.0 We are Labour Co-operative Society and our Registration No. is _____ with _____ and hence required to deposit only 50% of Bid Security.
- 6.0 Until a formal agreement is prepared and executed, acceptance of this tender shall constitute a binding contract between us subject to modifications, as may be mutually agreed to between us and indicated in the letter of acceptance of my/our offer for this work.

Signature of Witnesses:

(1) _____

(2) _____

Signature of Tenderer(s)

Date _____

Address of the Tenderer(s)

TENDER FORM: (SECOND SHEET)

- 1. Instructions to Tenderers and Conditions of Tender:** The following documents form part of Tender / Contract:
 - (a) Tender Forms – First Sheet and Second Sheet
 - (b) Special Conditions/Specifications (enclosed)
 - (c) Bill(s) of quantities (enclosed)
 - (d) Standard General Conditions of Contract and Standard Specifications (Works and Materials) of Indian Railways as amended/corrected up to latest correction slips, copies of which can be seen in the office of Chief Signal and Telecommunication Engineer/Construction or obtained from the office of the Chief Signal and Telecommunication Engineer/ Construction, Southern Railway on payment of prescribed charges.
 - (e) Standard Schedule of Rates (SSOR) as amended / corrected up to latest correction slips, copies of which can be seen in the office of Chief Signal and Telecommunication Engineer/ Construction or obtained from the office of the Chief Signal and Telecommunication Engineer/ Construction, Southern Railway on payment of prescribed charges.
 - (f) All general and detailed drawings pertaining to this work which will be issued by the Engineer or his representatives (from time to time) with all changes and modifications.
- 2. Drawings for the Work:** The Drawing for the work can be seen in the office of the Chief Signal and Telecommunication Engineer/ Construction, Southern Railway at any time during the office hours. The drawings are only for the guidance of Tenderer(s). Detailed working drawings (if required) based generally on the drawing mentioned above, will be given by the Engineer or his representative from time to time.
- 3. The Tenderer(s) shall quote his / their rates as a **individual rates for each item in Schedule-A in IREPS**.** The quantities shown in the attached Bill(s) of Quantities are given as a guide and are approximate only and are subject to variation according to the needs of the Railway. The Railway does not guarantee work under each item of the Bill(s) of Quantities. The tenderer(s) shall quote rates / rebates only at specified place in Tender Form supplied by Railway. Any revision of rates / rebates submitted (quoted) through a separate letter whether enclosed with the bid (Tender Form) or submitted separately or mentioned elsewhere in the document other than specified place shall be summarily ignored and will not be considered.

4. Tenders containing erasures and / or alterations of tender documents are liable to be rejected. Any correction made by tender(s) in his/their entries must be attested by him / them.
5. The works are required to be completed within a period of 12 (Twelve) months from the date of issue of acceptance letter.
6. Bid Security:
 - (a) Subject to exemptions provided under para 5(1) (a) of Part-1 (ITT) of GCC 2022. The tender must be accompanied by a sum of **Rs. 19,35,200.00 (Rupees Nineteen Lakhs Thirty Five Thousand and Two Hundred only)** as Bid Security deposited in cash through e-payment gateway/as Bank Guarantee bond, failing which the tender shall be summarily rejected.
 - (b) The Tenderer(s) shall keep the offer open for a minimum period of 90 days from the date of closing of the Tender. It is understood that the tender documents have been issued to the Tenderer(s) and the Tenderer(s), is / are permitted to tender in consideration of the stipulation on his / their part that after submitting his / their tender subject to the period being extended further, if required by mutual agreement from time to time, he will not resile from his offer or modify the terms and conditions thereof in a manner not acceptable to the Chief Signal and Telecommunication Engineer/Projects of Southern Railway. Should the tenderer fail to observe or comply with the foregoing stipulation, the amount deposited as or Bank guarantee bond submitted as Bid Security for the due performance of the above stipulation, shall be forfeited to the Railway.
 - (c) If his tender is accepted,
 - (i) the Bid Security mentioned in sub para(a) above deposited in cash through e-payment gateway will be retained as part security for the due and faithful fulfilment of the contract in terms of Clause 16 of the Standard General Conditions of Contract.
 - (ii) The Bid Security mentioned in sub para(a) above submitted as Bank guarantee bond, will be encashed as part security for the due and faithful fulfillment of the contract in terms of Clause 16 of the Standard General Conditions of Contract.
 - (d) In case Contractor submits the Term Deposit Receipt/Bank Guarantee Bond towards either the Full Security Depositor the Part Security Deposit equal to or more than Bid Security, the Railway shall return the Bid Security so retained as per sub para(c) above, to the Contractor.

- 7. Rights of the Railway to deal with Tender:** The authority for the acceptance of the tender will rest with the Railway. It shall not be obligatory on the said authority to accept the lowest tender or any other tender, and tenderer(s) shall neither demand any explanation for the cause of rejection of his/ their tender nor the Railway to assign reasons for declining to consider or reject any particular tender or tenders. In case if tender is accepted in part by Railway administration, Letter of Acceptance shall be issued as counter offer to the Tenderer, which shall be subject to acceptance by the Tenderer.
- 8.** If the tenderer(s) deliberately gives / give wrong information in his / their tender or creates / create circumstances for the acceptance of his / their tender, the Railway reserves the right to reject such tender at any stage.
- 9.** If any partner(s) of a partnership firm expires after the submission of its tender or after the acceptance of its tender, the Railway shall deem such tender as cancelled/contract as terminated under clause 61 of the Standard General Conditions of Contract, unless the firm retains its character as per partnership agreement. If a sole proprietor expires after the submission of tender or after the acceptance of tender, the Railway shall deem such tender as cancelled / contract as terminated under clause 61 of the Standard General Conditions of Contract.

10. Eligibility Criteria:

10.1 Technical Eligibility Criteria:

- (a) The tenderer must have successfully completed or substantially completed any of the following during last 07 (seven) years, ending last day of month previous to the one in which tender is invited:

One similar work each costing not less than the amount equal to 60% of advertised value of the tender.

(OR)

Two similar works each costing not less than the amount equal to 40% of advertised value of the tender,

(OR)

Three similar works each costing not less than the amount equal to 30% of advertised value of the tender,

In case after award of contract or during execution of work it becomes necessary for contractor to change subcontractor, the same shall be done with subcontractor(s) fulfilling the requirements as per clause 7 of the Standard General Conditions of Contract, with prior approval of Chief Engineer in writing.

Note for Item 10.1:

Work experience certificate from private individual shall not be considered. However, in addition to work experience certificates issued by any Govt. Organisation, work experience certificate issued by Public listed company having average annual turnover of Rs 500 crore and above in last 3 financial years excluding the current financial year, listed on National Stock Exchange or Bombay Stock Exchange, incorporated/registered at least 5 years prior to the date of closing of tender, shall also be considered provided the work experience certificate has been issued by a person authorized by the Public listed company to issue such certificates.

In case tenderer submits work experience certificate issued by public listed company, the tenderer shall also submit along with work experience certificate, the relevant copy of work order, bill of quantities, bill wise details of payment received duly certified by Chartered Accountant, TDS certificates for all payments received and copy of final/last bill paid by company in support of above work experience certificate.

10.2. Financial Eligibility Criteria: The tenderer must have minimum average annual contractual turnover of V/N or V whichever is less; where,

V = Advertised value of the tender in crores of Rupees

N = Number of years prescribed for completion of work for which bids have been invited.

The average annual contractual turnover shall be calculated as an average of “total contractual payments” in the previous three financial years, as per the audited balance sheet. However, in case balance sheet of the previous year is yet to be prepared/ audited, the audited balance sheet of the fourth previous year shall be considered for calculating average annual contractual turnover.

The tenderers shall submit requisite information as per **Form No.2**, along with copies of Audited Balance Sheets duly certified by the Chartered Accountant/ Certificate from Chartered Accountant duly supported by Audited Balance Sheet.

10.4 No Technical and Financial credentials are required for tenders having advertised value up to Rs 50 lakh.

10.5 Credentials if submitted in foreign currency shall be converted into Indian currency i.e., Indian Rupee as under:

The conversion rate of US Dollars into Rupees shall be the daily representative exchange rates published by the Reserve Bank of India or entity authorized by RBI to do so for the relevant date or immediately previous date for which rates have been published. Where, relevant date shall be as on the last day of month previous to the one in which tender is invited. In case of any other currency, the same shall first be converted to US Dollars as on the last day of month previous to the one in which tender is invited, and the amount so derived in US Dollars shall be converted into Rupees at the aforesaid rate. The conversion rate of such currencies shall be the daily representative exchange rates published by the International Monetary Fund for the relevant date or immediately previous date for which rates have been published.

[Explanation for Para 10 of the Tender Form (Second Sheet) including Para 10.1 to 10.5 - Eligibility Criteria:

- a)** Substantially Completed Work means an ongoing work in which payment equal to or more than 90% of the present contract value (excluding the payment made for adjustment of Price variation (PVC), if any) has been made to the contractor in that ongoing contract and no proceedings of termination of contract on Contractor's default has been initiated. The credential certificate in this regard should have been issued not prior to 60 days of date of invitation of present tender.
- b)** In case a work is started prior to 07 (seven) years, ending last day of month previous to the one in which tender is invited, but completed in last 07 (seven) years, ending last day of month previous to the one in which tender is invited, the completed work shall be considered for fulfillment of credentials.
- c)** If a work is physically completed and completion certificate to this extent is issued by the concerned organization but final bill is pending, such work shall be considered for fulfillment of credentials
- d)** In case of completed work, the value of final bill (gross amount) including the PVC amount (if paid) shall be considered as the completion cost of work. In case final bill is pending, only the total gross amount already paid including the PVC amount (if paid) shall be considered as the completion cost of work.

In case of substantially completed work, the total gross amount already paid including the PVC amount (if paid), as mentioned in the certificate, shall be considered as the cost of substantially completed work.

- e)** If a bidder has successfully completed a work as subcontractor and the work experience certificate has been issued for such work to the subcontractor by a Govt. Organization or public

listed company as defined in Note for Item 10.1 Para 10 of the Tender Form (Second Sheet), the same shall be considered for the purpose of fulfilment of credentials.

- f)** In case a work is considered similar in nature for fulfilment of technical credentials, the overall cost including the PVC amount (if paid) of that completed work or substantially completed work, shall be considered and no separate evaluation for each component of that work shall be made to decide eligibility.
- g)** In case of newly formed partnership firm, the credentials of individual partners from previous propriety firm(s) or dissolved previous partnership firm(s) or split previous partnership firm(s), shall be considered only to the extent of their share in previous entity on the date of dissolution / split and their share in newly formed partnership firm. For example, a partner A had 30% share in previous entity and his share in present partnership firm is 20%. In the present tender under consideration, the credentials of partner A will be considered to the extent of 0.3×0.2 * value of the work done in the previous entity. For this purpose, the tenderer shall submit along with his bid all the relevant documents which include copy of previous partnership deed(s), dissolution deed(s) and proof of surrender of PAN No.(s) in case of dissolution of partnership firm(s) etc.
- h)** In case of existing partnership firm, if any one or more partners quit the partnership firm, the credentials of remaining partnership firm shall be re-worked out i.e., the quitting partner(s) shall take away his credentials to the extent of his share on the date of quitting the partnership firm (e.g. in a partnership firm of partners A, B & C having share 30%, 30% & 40% respectively and credentials of Rs 10 crore; in case partner C quits the firm, the credentials of this partnership firm shall remain as Rs 6 crore). For this purpose, the tenderer shall submit along with his bid all the relevant documents which include copy of previous partnership deed(s), dissolution deed(s) and proof of surrender of PAN No.(s) in case of dissolution of partnership firm(s) etc.
- i)** In case of existing partnership firm if any new partner(s) joins the firm without any modification in the name and PAN/TAN no. of the firm, the credentials of partnership firm shall get enhanced to the extent of credentials of newly added partner(s) on the same principles as mentioned in item 6 above. For this purpose, the tenderer shall submit along with his bid all the relevant documents which include copy of previous partnership deeds, dissolution/splitting deeds and proof of surrender of PAN No.(s) in case of dissolution of partnership firm etc.
- j)** Any partner in a partnership firm cannot use or claim his credentials in any other firm without leaving the partnership firm i.e., In a partnership firm of A&B partners, A or B partner cannot use credentials of partnership firm of A&B partners in any other partnership firm or propriety firm without leaving partnership firm of A&B partners.

- k)** In case a partner in a partnership firm is replaced due to succession as per succession law, the proportion of credentials of the previous partner will be passed on to the successor.
- l)** If the percentage share among partners of a partnership firm is changed, but the partners remain the same, the credentials of the firm before such modification in the share will continue to be considered for the firm as it is without any change in their value. Further, in case a partner of partnership firm retires without taking away any credentials from the firm, the credentials of partnership firm shall remain the same as it is without any change in their value.
- m)** In a partnership firm “AB” of A&B partners, in case A also works as propriety firm “P” or partner in some other partnership firm “AX”, credentials of A in propriety firm “P” or in other partnership firm “AX” earned after the date of becoming a partner of the firm AB shall not be added in partnership firm AB.
- n)** In case a tenderer is LLP, the credentials of tenderer shall be worked out on above lines similar to a partnership firm.
- o)** In case company A is merged with company B, then company B would get the credentials of company A also.

11. Tenderer Credentials:

Documents testifying tenderer previous experience and financial status should be produced along with the tender.

Tenderer(s) who is / are not borne on the approved list of the Contractors of _____ Railway shall submit along with his / their tender:

- (i) Certificates and testimonials regarding contracting experience for the type of job for which tender is invited with list of works carried out in the past.
- (ii) Audited Balance Sheet duly certified by the Chartered Accountant regarding contractual payments received in the past.
- (iii) The list of personnel / organization on hand and proposed to be engaged for the tendered work. Similarly list of Plant & Machinery available on hand and proposed to be inducted and hired for the tendered work.
- (iv) A copy of certificate stating that they are not liable to be disqualified and all their statements/documents submitted along with bid are true and factual. Standard format of the certificate to be submitted by the bidder is enclosed as Form 9A. In addition to Form 9, in case of other than company/Proprietary firm Form 9(A) shall also be submitted by the

each member of a partnership firm/Joint venture (JV)/Hindu undivided Family (HUF)/Limited liability Partnership (LLP etc, as the case may be. Non submission of a copy of certificate by the bidder shall result in summarily rejection of his/their bid. It shall be mandatorily incumbent upon the tenderer to identify, state and submit the supporting documents duly self-attested/ digitally signed by which they/he are/is qualifying the Qualifying Criteria mentioned in the Tender Document.

- (v) The Railway reserves the right to verify all statements, information and documents submitted by the bidder in his tender offer, and the bidder shall, when so required by the Railway, make available all such information, evidence and documents as may be necessary for such verification. Any such verification or lack of such verification, by the Railway shall not relieve the bidder of its obligations or liabilities hereunder nor will it affect any rights of the Railway there under.
- (vi) (a) In case of any information submitted by tenderer is found to be false, forged or incorrect at any time during process for evaluation of tenders, it shall lead to forfeiture of the tender Bid Security besides banning of business for a period of up to five years.

(b) In case of any information submitted by tenderer is found to be false, forged or incorrect after the award of contract, the contract shall be terminated. Bid Security, Performance Guarantee and Security Deposit available with the railway shall be forfeited. In addition, other dues of the contractor, if any, under this contract shall be forfeited and agency shall be banned for doing business for a period of up to five years.

12. Non-compliance with any of the conditions set forth therein above is liable to result in the tender being rejected.

13. Execution of Contract Documents: The successful Tenderer(s) shall be required to execute an agreement with the President of India acting through the _____, _____ Railway for carrying out the work according to the Standard General Conditions of Contract, Special Conditions / Specifications annexed to the tender and Standard Specifications (Works and Materials) of Railway as amended/corrected up to latest correction slips, mentioned in tender form (First Sheet).

14. Documents to be Submitted Along with Tender

- (i) The tenderer shall clearly specify whether the tender is submitted on his own (Proprietary Firm) or on behalf of a Partnership Firm / Company / Joint Venture (JV) / Registered Society / Registered Trust / Hindu Undivided Family (HUF) / Limited Liability Partnership (LLP) etc. **The tenderer(s) shall enclose the attested copies of the constitution of their concern, and copy**

of PAN Card along with their tender. Tender Documents in such cases are to be signed by such persons as may be legally competent to sign them on behalf of the firm, company, association, trust or society, as the case may be.

(ii) Following documents shall be submitted by the tenderer:

(a)Sole Proprietorship Firm:

- I. All documents in terms of Para 10 of the Tender Form (Second Sheet) above.

(b)HUF:

- I. A copy of notarized affidavit on Stamp Paper declaring that he who is submitting the tender on behalf of HUF is in the position of 'Karta' of Hindu Undivided Family (HUF) and he has the authority, power and consent given by other members to act on behalf of HUF.
- II. All other documents in terms of Para 10 of the Tender Form (Second Sheet) above.

(c)Partnership Firm:

- I. All documents as mentioned in para18 of the Tender Form (Second Sheet).

(d)Joint Venture (JV): All documents as mentioned in para 17 of the Tender Form (Second Sheet).

(e)Company registered under Companies Act2013:

- I. The copies of **MOA (Memorandum of Association) / AOA (Articles of Association)** of the company
- II. A copy of Certificate of Incorporation
- III. A copy of Authorization/Power of Attorney issued by the Company (backed by the resolution of Board of Directors) in favour of the individual to sign the tender on behalf of the company and create liability against the company.
- IV. All other documents in terms Para 10 of the Tender Form (Second Sheet) above.

(f) LLP (Limited Liability Partnership):

- I. A copy of LLP Agreement
- II. A copy of Certificate of Incorporation
- III. A copy of Power of Attorney/Authorization issued by the LLP in favour of the individual to sign the tender on behalf of the LLP and create liability against the LLP.

- IV. An undertaking by all partners of the LLP that they are not blacklisted or debarred by Railways or any other Ministry / Department of the Govt. of India from participation in tenders / contracts as on the date of submission of bids, either in their individual capacity or in any firm/LLP or JV in which they were / are partners/members. Concealment / wrong information in regard to above shall make the contract liable for determination under Clause 62 of the Standard General Conditions of Contract.
- V. All other documents in terms of Para 10 of the Tender Form (Second Sheet).

(g)Registered Society & Registered Trust:

- I. A copy of Certificate of Registration
 - II. A copy of Memorandum of Association of Society/Trust Deed
 - III. A copy of Power of Attorney in favour of the individual to sign the tender documents and create liability against the Society/Trust.
 - IV. A copy of Rules & Regulations of the Society
 - V. All other documents in terms of Para 10 of the Tender Form (Second Sheet) above.
- (iii) If it is NOT mentioned in the submitted tender that tender is being submitted on behalf of a Sole Proprietorship firm / Partnership firm / Joint Venture / Registered Company etc., then the tender shall be treated as having been submitted by the individual who has signed the tender.
- (iv) After opening of the tender, any document pertaining to the constitution of Sole Proprietorship Firm / Partnership Firm / Registered Company/ Registered Trust / Registered Society / HUF/LLP etc. shall be neither asked nor considered, if submitted. Further, no suomoto cognizance of any document available in public domain (i.e., on internet etc.) or in Railway's record/office files etc. will be taken for consideration of the tender, if no such mention is available in tender offer submitted.
- (v) A tender from JV shall be considered only where permissible as per the tender conditions.
- (vi) The Railway will not be bound by any change of power of attorney or in the composition of the firm made subsequent to the submission of tender. Railway may, however, recognize such power of attorney and changes after obtaining proper legal advice, the cost of which will be chargeable to the Contractor.

15. The tenderer whether sole proprietor / a company or a partnership firm / joint venture (JV) / registered society / registered trust / HUF / LLP etc if they want to act through agent or individual partner(s), should submit along with the tender, a copy of power of attorney duly stamped and authenticated by a Notary Public or by Magistrate in favour of the specific person whether he/they be partner(s) of the firm or any other person, specifically authorizing him/them to sign the tender, submit the tender and further to deal with the Tender/ Contract up to the stage of signing the

agreement except in case where such specific person is authorized for above purposes through a provision made in the partnership deed / Memorandum of Understanding / Article of Association /Board resolution, failing which tender shall be summarily rejected.

A separate power of attorney duly stamped and authenticated by a Notary Public or by Magistrate in favour of the specific person whether he/they be partner(s) of the firm or any other person, shall be submitted after award of work, specifically authorizing him/them to deal with all other contractual activities subsequent to signing of agreement, if required.

Note: A Power of Attorney executed and issued overseas, the document will also have to be legalized by the Indian Embassy and notarized in the jurisdiction where the Power of Attorney is being issued. However, the Power of Attorney provided by Bidders from countries that have signed the Hague Legislation Convention 1961 are not required to be legalized by the Indian Embassy if it carries a conforming Apostille certificate.

16. Employment/Partnership etc. of Retired Railway Employees:

(a) Should a tenderer

i) be a retired Engineer of the gazetted rank or any other gazetted officer working before his retirement, whether in the executive or administrative capacity or whether holding a pensionable post or not, in the Engineering or any other department of any of the railways owned and administered by the President of India for the time being, OR

ii) being partnership firm / joint venture (JV) / registered society / registered trust etc have as one of its partners/members a retired Engineer of the gazetted rank or any other gazetted officer working before his retirement, OR

iii) being an incorporated company have any such retired Engineer of the gazetted rank or any other gazetted officer working before his retirement as one of its directors

AND

in case where such Engineer or officer had not retired from government service at least 1 year prior to the date of submission of the tender

THEN

the tenderer will give full information as to the date of retirement of such Engineer or gazetted officer from the said service and as to whether permission for taking such contract, or if the Contractor be a partnership firm or an incorporated company, to become a partner or director as the case may be, has been obtained by the tenderer or the Engineer or officer, as the

case may be from the President of India or any officer, duly authorized by him in this behalf, shall be clearly stated in writing at the time of submitting the tender.

- b) In case, upon successful award of contract, should a tenderer depute for execution of the works under or to deal matters related with this contract, any retired Engineer of gazette rank or retired gazetted officer working before his retirement in the Engineering or any other department of any of the railways owned and administered by the President of India for the time being, and now in his employment, then the tenderer will ensure that retired Engineer or retired gazetted officer had retired from government service at least 1 year prior to the date of his employment with tenderer and in case he had retired from service within a year then he possesses the requisite permission from the President of India or any officer, duly authorized by him in this behalf, to get associated with the tenderer.
- c) Should a tenderer or Contractor being an individual, have member(s) of his family or in the case of partnership firm/ company / joint venture (JV) / registered society / registered trust etc. one or more of his partner(s)/shareholder(s) or member(s) of the family of partner(s)/shareholder(s) having share of more than 1% in the tendering entity employed in gazetted capacity in the Engineering or any other department of the railway, then the tenderer at the time of submission of tender, will inform the authority inviting tenders the details of such persons.

Note: -If information as required as per 16.a), b), c) above has not been furnished, contract is liable to be dealt in accordance with provision of clause 62 of the Standard General Condition of contract.

JOINT VENTURE (JV) IN WORKS TENDERS

17. Participation of Joint Venture (JV) in Works Tender: This para shall be applicable for works tenders wherein tender documents provide for the same.

17.1 Separate identity/name shall be given to the Joint Venture.

17.2 Number of members in a JV shall not be more than three, if the work involves only one department (say Civil or S&T or Electrical or Mechanical) and shall not be more than five, if the work involves more than one Department. One of the members of the JV shall be its Lead Member who shall have a majority (at least 51%) share of interest in the JV. The other members shall have a share of not less than 20% each in case of JV with upto three members and not less than 10% each in case of JV with more than three members. In case of JV with foreign member(s), the Lead Member has to be an Indian firm/company with a minimum share of 51%.

17.3 A member of JV shall not be permitted to participate either in individual capacity or as a member of another JV in the same tender.

17.4 The tender form shall be purchased and submitted only in the name of the JV and not in the name of any constituent member. The tender form can however be submitted by JV or any of its constituent member or any person authorized by JV through Power of Attorney to submit tender.

17.5 Bid Security shall be submitted by JV or authorized person of JV either as :

- (i) Cash through e-payment gateway or as mentioned in tender document, or
- (ii) Bank Guarantee bond either in the name of JV, or in the name of all members of JV as per MOU irrespective of their share in the JV if the JV has not been constituted legally till the date of submission of tender.

17.6 A copy of Memorandum of Understanding (MoU) duly executed by the JV members on a stamp paper, shall be submitted by the JV along with the tender. The complete details of the members of the JV, their share and responsibility in the JV etc. particularly with reference to financial, technical and other obligations shall be furnished in the MoU.

17.7 Once the tender is submitted, the MoU shall not normally be modified / altered / terminated during the validity of the tender. In case the tenderer fails to observe/comply with this stipulation, the full Bid Security shall be liable to be forfeited.

17.8 Approval for change of constitution of JV shall be at the sole discretion of the Railway. The constitution of the JV shall not normally be allowed to be modified after submission of the bid by the JV, except when modification becomes inevitable due to succession laws etc., provided further that there is no change in qualification of minimum eligibility criteria by JV after change of composition. However, the Lead Member shall continue to be the Lead Member of the JV. Failure to observe this requirement would render the offer invalid.

17.9 Similarly, after the contract is awarded, the constitution of JV shall not be normally allowed to be altered during the currency of contract except when modification become inevitable due to succession laws etc. and minimum eligibility criteria should not get vitiated. Failure to observe this stipulation shall be deemed to be breach of contract with all consequential penal action as per contract conditions.

17.10 On award of contract to a JV, a single Performance Guarantee shall be submitted by the JV as per tender conditions. All the Guarantees like Performance Guarantee, Bank Guarantee for Mobilization Advance, Machinery Advance etc. shall be accepted only in the name of the JV and no splitting of guarantees amongst the members of the JV shall be permitted.

17.11 On issue of LOA (Letter of Acceptance), the JV entity to whom the work has been awarded, with the same shareholding pattern as was declared in the MOU/JV Agreement submitted along with the tender, shall be got registered before the Registrar of the Companies under 'The Companies Act -2013' (in case JV entity is to be registered as Company) or before the Registrar/Sub-Registrar under the 'The Indian Partnership Act, 1932' (in case JV entity is to be registered as Partnership Firm) or under 'The LLP Act 2008' (in case JV entity is to be registered as LLP). A separate PAN shall be obtained for this entity. The documents pertaining to this entity including its PAN shall be furnished to the Railways before signing the contract agreement for the work. In case the tenderer fails to observe/comply with this stipulation within 60 days of issue of LOA, contract is liable to be terminated. In case contract is terminated railway shall be entitled to forfeit the full amount of the Bid Security and other dues payable to the Contractor under this contract. The entity so registered, in the registered documents, shall have, inter-alia, following Clauses:

17.11.1 Joint and Several Liability - Members of the entity to which the contract is awarded, shall be jointly and severally liable to the Railway for execution of the project in accordance with General and Special Conditions of Contract. The members of the entity shall also be liable jointly and severally for the loss, damages caused to the Railways during the course of execution of the contract or due to non-execution of the contract or part thereof.

17.11.2 Duration of the Registered Entity - It shall be valid during the entire currency of the contract including the period of extension, if any and the maintenance period after the work is completed.

17.11.3 Governing Laws - The Registered Entity shall in all respect be governed by and interpreted in accordance with Indian Laws.

17.12 Authorized Member - Joint Venture members in the JV MoU shall authorize Lead member on behalf of the Joint Venture to deal with the tender, sign the agreement or enter into contract in respect of the said tender, to receive payment, to witness joint measurement of work done, to sign measurement books and similar such action in respect of the said tender/contract. All notices/correspondences with respect to the contract would be sent only to this authorized member of the JV.

17.13 No member of the Joint Venture shall have the right to assign or transfer the interest right or liability in the contract without the written consent of the other members and that of the Railway in respect of the said tender/contract.

17.14 Documents to be enclosed by the JV along with the tender:

17.14.1 In case one or more of the members of the JV is/are partnership firm(s), following documents shall be submitted:

- (i) A notarized copy of the Partnership Deed or a copy of the Partnership deed registered with the Registrar.
- (ii) A copy of consent of all the partners or individual authorized by partnership firm, to enter into the Joint Venture Agreement on a stamp paper,
- (iii) A notarized or registered copy of Power of Attorney in favour of the individual to sign the MOU/JV Agreement on behalf of the partnership firm and create liability against the firm.
- (iv) An undertaking by all partners of the partnership firm that they are not blacklisted or debarred by Railways or any other Ministry / Department of the Govt. of India from participation in tenders / contracts as on the date of submission of bids, either in their individual capacity or in any firm/LLP in which they were / are partners/members. Any Concealment / wrong information in regard to above shall make the bid ineligible or the contract shall be determined under Clause 62 of the Standard General Conditions of Contract.

17.14.2 In case one or more members is/are Proprietary Firm or HUF, the following documents shall be enclosed:

- I. A copy of notarized affidavit on Stamp Paper declaring that his Concern is a proprietary Concern and he is sole proprietor of the Concern OR he who is signing the affidavit on behalf of HUF is in the position of 'Karta' of Hindu Undivided Family (HUF) and he has the authority, power and consent given by other members to act on behalf of HUF.

17.14.3 In case one or more members of the JV is/are companies, the following documents shall be submitted:

- (i) A copy of resolutions of the Directors of the Company, permitting the company to enter into a JV agreement,
- (ii) The copies of MOA (Memorandum of Association) / AOA (Articles of Association) of the company
- (iii) A copy of Certificate of Incorporation
- (iv) A copy of Authorization/copy of Power of Attorney issued by the Company (backed by the resolution of Board of Directors) in favour of the individual, to sign the tender, sign MOU/JV Agreement on behalf of the company and create liability against the company

17.14.4 In case one or more members of the JV is/are LLP firm/s, the following documents shall be submitted:

- (i) A copy of LLP Agreement
- (ii) A copy of Certificate of Incorporation of LLP
- (iii) A copy of resolution passed by partners of LLP firm, permitting the Firm to enter into a JV agreement
- (iv) A copy of Authorization /copy of Power of Attorney issued by the LLP firm (backed by resolution passed by the Partners) in favour of the individual, to sign the tender and/or sign the MOU/ JV agreement on behalf of the LLP and create liability against the LLP.
- (v) An undertaking by all partners of the LLP that they are not blacklisted or debarred by Railways or any other Ministry / Department of the Govt. of India from participation in tenders / contracts as on the date of submission of bids, either in their individual capacity or in any firm/LLP or JV in which they were / are partners/members. Any Concealment / wrong information in regard to above shall make the contract liable for determination under Clause 62 of the Standard General Conditions of Contract.

17.14.5 In case one or more members of the JV is/are Society/s or Trust/s, the following documents shall be submitted:

- (i) A copy of Certificate of Registration
- (ii) A copy of Memorandum of Association of Society/Trust Deed
- (iii) A copy of Rules & Regulations of the Society
- (iv) A copy of Power of Attorney, in favour of the individual to sign the tender documents and create liability against the Society/Trust.

17.14.6 All other documents in terms of Para 10 of the Tender Form (Second Sheet) above.

17.15 Credentials & Qualifying Criteria: Technical, financial eligibility and Bid capacity of the JV shall be adjudged based on satisfactory fulfilment of the following criteria:

17.15.1 Technical Eligibility Criteria ('a' or 'b' mentioned hereunder):

(a) For Works without composite components

The technical eligibility for the work as per para 10.1 above, shall be satisfied by either the 'JV in its own name & style' or 'Lead member of the JV'.

Each other (non-lead) member(s) of JV, who is/ are not satisfying the technical eligibility for the work as per para 10.1 above, shall have technical capacity of minimum 25% of the cost of work i.e., each non-lead member of JV member must have satisfactorily completed or substantially completed during the last 07 (seven) years, ending last day of month previous to the one in which tender is invited, one similar single work for a minimum of 25% of advertised value of the

tender.

(b) For works with composite components

The technical eligibility for major component of work as per para 10.1 above, shall be satisfied by either the 'JV in its own name & style' or 'Lead member of the JV' and technical eligibility for other component(s) of work as per para 10.1 above, shall be satisfied by either the 'JV in its own name & style' or 'any member of the JV'.

Each other (non-lead) member(s) of JV, who is/ are not satisfying the technical eligibility for any component of the work as per para 10.1 above, shall have technical capacity of minimum 25% of the cost of any component of work mentioned in technical eligibility criteria. i.e., each other (non-lead) member of must have satisfactorily completed or substantially completed during the last 07 (seven) years, ending last day of month previous to the one in which tender is invited, one similar single work for a minimum of 25% of cost of any component of work mentioned in technical eligibility criteria.

Note for Para 17.15.1:

- a) The Major component of the work for this purpose shall be the component of work having highest value. In cases where value of two or more component of work is same, any one work can be classified as Major component of work.
- b) Value of a completed work done by a Member in an earlier JV shall be reckoned only to the extent of the concerned member's share in that JV for the purpose of satisfying his/her compliance to the above-mentioned technical eligibility criteria in the tender under consideration.

17.15.2 Financial Eligibility Criteria

The JV shall satisfy the requirement of "Financial Eligibility" mentioned at para 10.2 above. The "financial capacity" of the lead member of JV shall not be less than 51% of the financial eligibility criteria mentioned at para 10.2 above.

The arithmetic sum of individual "financial capacity" of all the members shall be taken as JV's "financial capacity" to satisfy this requirement.

Note: Contractual payment received by a Member in an earlier JV shall be reckoned only to the extent of the concerned member's share in that JV for the purpose of satisfying compliance of the above-mentioned financial eligibility criteria in the tender under consideration.

17.15.3 Bid Capacity

The JV shall satisfy the requirement of "Bid Capacity" requirement mentioned at para 10.3 above.

The arithmetic sum of individual "Bid capacity" of all the members shall be taken as JV's "Bid capacity" to satisfy this requirement.

18. Participation of Partnership Firms in works tenders:

18.1 The Partnership Firms participating in the tender should be legally valid under the provisions of the Indian Partnership Act.

18.2 The partnership firm should have been in existence or should have been formed prior to submission of tender. Partnership firm should have either been registered with the Registrar or the partnership deed should have been notarized as per the Indian Partnership Act, prior to submission of tender.

18.3 Separate identity / name should be given to the partnership firm. The partnership firm should have PAN / TAN number in its own name and PAN / TAN number in the name of any of the constituent partners shall not be considered. The valid constituents of the firm shall be called partners.

18.4 Once the tender has been submitted, the constitution of the firm shall not normally be allowed to be modified / altered / terminated during the validity of the tender as well as the currency of the contract except when modification becomes inevitable due to succession laws etc., in which case prior permission should be taken from Railway and in any case the minimum eligibility criteria should not get vitiated. The re-constitution of firm in such cases should be followed by a notary certified Supplementary Deed. The approval for change of constitution of the firm, in any case, shall be at the sole discretion of the Railways and the tenderer shall have no claims what-so-ever. Any change in the constitution of Partnership firm after submission of tender shall be with the consent of all partners and with the signatures of all partners as that in the Partnership Deed. Failure to observe this requirement shall render the offer invalid and full Bid Security shall be forfeited.

If any Partner/s withdraws from the firm after submission of the tender and before the award of the contract, the offer shall be rejected and Bid Security of the tenderer will be forfeited. If any new partner joins the firm after submission of tender but prior to award of contract, his / her credentials shall not qualify for consideration towards eligibility criteria either individually or in proportion to his share in the previous firm. In case the tenderer fails to inform Railway beforehand about any such changes / modification in the constitution which is inevitable due to succession laws etc. and the contract is awarded to such firm, then it will be considered a breach of the contract conditions liable for determination of the contract under Clause 62 of the Standard General Conditions of Contract.

18.5 A partner of the firm shall not be permitted to participate either in his individual capacity or as a partner of any other firm in the same tender.

18.6 The tender form shall be submitted only in the name of partnership firm. The Bid Security shall be submitted by partnership firm. The Bid Security submitted in the name of any individual partner or in the name of authorized partner (s) shall not be considered.

18.7 On issue of Letter of Acceptance (LOA) to the partnership firm, all the guarantees like Performance Guarantee, guarantee for various Advances to the Contractor shall be submitted only in the name of the partnership firm and no splitting of guarantees among the partners shall be acceptable.

18.8 On issue of Letter of Acceptance (LOA), contract agreement with partnership firm shall be executed in the name of the firm only and not in the name of any individual partner.

18.9 In case the Letter of Acceptance (LOA) is issued to a partnership firm, the following undertakings shall be furnished by all the partners through a notarized affidavit, before signing of contract agreement.

(a) Joint and several liabilities:

The partners of the firm to which the Letter of Acceptance (LOA) is issued, shall be jointly and severally liable to the Railway for execution of the contract in accordance with General and Special Conditions of the Contract. The partners shall also be liable jointly and severally for the loss, damages caused to the Railway during the course of execution of the contract or due to non-execution of the contract or part thereof.

(b) Duration of the partnership deed and partnership firm agreement:

The partnership deed/partnership firm agreement shall normally not be modified/altered/terminated during the currency of contract and the maintenance period after the work is completed as contemplated in the conditions of the contract. Any change carried out by partners in the constitution of the firm without permission of Railway, shall constitute a breach of the contract, liable for determination of the contract under Clause 62 of the Standard General Conditions of Contract.

(c) Governing laws: The partnership firm agreement shall in all respect be governed by and interpreted in accordance with the Indian laws.

(d) No partner of the firm shall have the right to assign or transfer the interest right or liability in the contract without the written consent of the other partner/s and that of the Railway.

18.10 The tenderer shall clearly specify that the tender is submitted on behalf of a partnership firm. The following documents shall be submitted by the partnership firm, with the tender:

- (i) A notarized copy of the Partnership Deed or a copy of the Partnership deed registered with the Registrar.
- (ii) A notarized or registered copy of Power of Attorney in favour of the individual to tender for the work, sign the agreement etc. and create liability against the firm.
- (iii) An undertaking by all partners of the partnership firm that they are not blacklisted or debarred by Railways or any other Ministry / Department of the Govt. of India from participation in tenders / contracts as on the date of submission of bids, either in their individual capacity or in any firm/LLP in which they were / are partners/members. Any Concealment / wrong information in regard to above shall make the bid ineligible or the contract shall be determined under Clause 62 of the Standard General Conditions of Contract.
- (iv) All other documents in terms of Para 10 of the Tender Form (Second Sheet) above.

18.11 Evaluation of eligibility of a partnership firm:

Technical and financial eligibility of the firm shall be adjudged based on satisfactory fulfillment of the eligibility criteria laid down in Para 10 of the Tender Form (Second Sheet) above.

19.0 Advances to Contractor –

If specifically provided in Tender Documents of tender having advertised value more than Rs 50 Crores, Railway shall make payment, as an Interest-bearing advances, as per Contractor's request. These advances shall carry a simple interest _____ as indicated in the Tender documents. The payment and recovery of such advances shall be made as per manners prescribed in Clause 46.4 of the Standard General Conditions of Contract.

(Signature)

(Designation)

Signature of Tenderer(s) _____ Railway Date _____
Date _____

Declaration of Proprietary Firm or Partnership Firm or Company or Joint Venture (JV) or Registered Society or Registered Trust or Hindu Undivided Family (HUF) or Limited Liability Partnership (LLP) etc.

I/we hereby solemnly declare that I/We ** is/are participating as a Proprietary Firm or Partnership Firm or Company or Joint Venture (JV) or Registered Society or Registered Trust or Hindu Undivided Family (HUF) or Limited Liability Partnership (LLP) for the E-tender Notice No: SGCNMTPNG-PDTI-2024 Dated: 20.07.2024

Signature of Tenderer

With Seal

**** - Name of the Tenderer/Bidder**

Note: Tenderer/Bidder shall clearly specify whether he/they are participating as a Proprietary Firm or Partnership Firm or Company or Joint Venture (JV) or Registered Society or Registered Trust or Hindu Undivided Family (HUF) or Limited Liability Partnership (LLP) in the above

VENDOR MANDATE FORM

Tender notice No.

PARTICULARS OF THE TENDERER:

(a) Name.....

(b) ADDRESS:

(i) Holding No. / Premises:.....

(ii) Room No. :.....

(iii) Street Name :.....

(iv) City/Village/Town

(v) District :.....

(vi) State :..... Country:.....

(vii) PIN :.....

(c) Phone No..... Mobile No.....

Fax No.E-mail-id.....

(d) PAN No.....

GST Registration No.....

Signature of Tenderer

INSTRUCTIONS FOR SUBMITTING THE TENDERS AS JOINT VENTURE

On Non-judicial stamp of Rs. 100/- MEMORANDUM OF UNDERSTANDING FOR JOINT VENTURE AGREEMENT

This memorandum of understanding executed this _____ day of _____ 20____ between _____ (Name of Co.) _____ a company registered under the Companies Act 1956 having its registered office at _____ represented through its Director/Authorized Representative _____ (hereinafter referred to as _____ which expression shall unless repugnant to the context thereof includes its successors) of the **FIRST PART.**

AND /OR

M/s. _____ a partnership firm constituted under the Indian Partnership ACT 1932, having its registered office at _____, represented through its partner Shri _____ /Authorized Representative Shri _____ (hereinafter referred to as _____ which expression shall unless repugnant to the context thereof includes its successors) of the **FIRST PART.**

AND/OR

M/s. _____ a proprietary concern having its registered office at _____ Represented through its sole proprietor Shri _____ (hereinafter referred to as _____ which expression shall unless repugnant to the context thereof includes its successors) of the **FIRST PART.** Whereas, the party of the First part i.e. M/s. _____ details to be supplied of the expertise in their field. Whereas, the party of the Second part M/s. _____ details to be supplied of the expertise in their field. Whereas, the party of the third part M/s. _____ details to be supplied of the expertise in their field.

AND whereas parties to this MOU have agreed to co-operate with each other to associate jointly and to form a Joint Venture to participate in the Southern Railway Tender. **Now**, therefore, in consideration of the promises and mutual promises and of the undertaking contained herein, it is hereby agreed between the parties of the MOU as follows:

1. The purpose of MOU:

M/s. _____, _____ and _____ agree to Co-operate with each other for the purpose of joint participation in the Southern Railway Tender and in the event, the contracts awarded, to jointly execute the contract. The broad interfaces and scope of work of each party is set forth below:_____

2. The name of the Joint Venture shall be_____

3. The parties, hereto, represent that:

- a) They are in **possession** of all approvals and valid authorization for the purpose of execution of this MOU.

They have not entered into any agreement/MOU of equal or similar nature with any third-party for this **E-Tender No: SGCNMTPNG-PDTI-2024 Dated: 20.07.2024**

- b) That each of the parties of JV, agrees and undertake to place at the disposal of the JV , benefits of its individual experience, technical knowledge and skill and shall in all respects bear its share of the responsibility, including the provision of information advice and other assistance required in connection with the works. The share and the participation of the partners in the JV shall broadly be follows:

M/s. _____ %

M/s. _____ %

M/s. _____ %

“That M/s. _____ shall be the lead member of JV firm who shall have a majority (at least 51%) share of interest in the JV firm. The other members shall have a share of not less than 20% each (in case of firm with upto three member) The other members shall have a share of not less than 10% each (in case of JV firm with more than three members). In case of JV firm with foreign member(s), the lead member has to be an Indian firm with a minimum share of 51% (strike out which is not applicable) And all right, interest, liabilities, obligations, work experience and risks (net profits or net losses) arising out of the contract shall be shared or borne by the Parties in proportionate to these shares. Each of the parties

shall bound by guarantees, sureties required for the work as well as its proportionate share in working capital another financial requirements.

3. The parties to this MOU undertake:

- a) That after submission of the tender, the MOU shall not be modified/alterd/terminated during the validity of the tender including extension and maintenance period except when modification becomes inevitable due to succession laws etc., but in no case the minimum eligibility criteria would be vitiated.
- b) That after the contract is awarded the constitution of the JV Firm shall not be altered during the currency of contract except when modification becomes inevitable due to Succession Law etc., "but in no case the minimum eligibility criteria would be vitiated".
- c) That with respect of the Southern Railway Tender neither party, nor any subsidiary company of either Party, not any joint venture company or any other entity, in which the party/parties, is or are in any way interest, shall complete together with or through any third party, nor shall be parties advise, consult for, engage in or otherwise assist in any way person or entity or any affiliate thereof in respect of any orders or contracts related to this tender.
- d) That none of the members of joint ventures is black listed and/or debarred by the Railway Board or and other ministry or department of Govt. of India/State Govt. from participation in contract/under in the past either in individual capacity or the JV Firm or partnership firm in which they were/are members/partners.

4. Joint & Several Liability:

In respect of the Southern Railway Tender, all commercial terms shall comply each part on back-to-basis specifications of the Railway Board Tender or any other mutually agreed terms with the Owner/Customer. The Parties hereto shall, if awarded the contract for the project for which the Joint Venture is formed, be jointly and severally liable to the Railway for execution of the project in accordance with the contract. The Parties hereto also undertake to be liable jointly and severally for the loss, damages caused to the Railway in course of execution or due to non execution of the contract or part thereof arising out of the contract.

6. Shri _____ be authorized partner/person on behalf of the Joint Venture to deal with tender, to sign the agreement or enter into contract in respect of the said tender, to receive payment, to witness joint measurement of work done, to sign measurement books, and similar such action in respect of Southern Railway tender/Contract. All notices

/correspondence with respect to the contracts would be sent only to this authorized partner/person of the JV firm.

7. Notwithstanding anything herein, in respect of the Railway Tender, with regard to the internal relationship, the inter se liabilities between the parties shall be in proportion to their respective scope of work and shall be subject to the provisions of this MOU.

8. Responsibility:

Each Party shall assume and accept full responsibility for its Scope of Work and the obligations imposed in the Contract and in this MOU as if it was, with regard to this Scope of Work, an independent partner contracting individually with the Customer. In the event of any defect and damage or any claim arising from the Customer under the Contract or any third party in relation to or as a consequence of any failure to meet the performance specification the Party, within whose Scope of Work the claim arises, shall be entirely responsible for the claim and shall indemnify and hold harmless the other Party from any liability, demand, claim burden cost, expense attorney's fees and costs arising from thereof.

9. Assign ability:

No party to the Joint Venture has right to assign or transfer the interest, right or liability in the contract without the written consent of the other party and that of the Indian Railway.

10. Use of Machinery, Instruments, Labour Force etc:

The Parties hereto undertake that whatever the machinery, instruments, Labour force (including unskilled, skilled, inspectors, Engineers etc.) they possess at the time of entering into Joint Venture Agreement or which subsequently shall come in their possession and if such machinery, instruments, labour force is required for the speedy and efficient execution of the work, the Party/Parties having the control over the said machinery, instrument, labour force etc. Without having any regard to their share of profit and loss agreed to between the Parties in Joint Venture Agreement shall hand over the same at the disposal of the other party who is actually executing the work for the purpose of execution of the contract without any hindrances and obstacle.

11. Duration of MOU:

It shall be valid during entire currency of contract including the period of extension, if any and also till the maintenance period is over or till all the contractual liabilities including warranty /guarantee obligations are discharge completely.

a) Applicable Law:

The MOU and any arrangement/agreements regarding the performance shall be construed and interpreted in accordance with and governed by the Laws of India and shall be subject to the exclusive jurisdiction of the courts at the place where MOU is executed/signed between the parties.

b) Settlement of Disputes:

In the event of disputes arising from the MOU, the Parties to the MOU undertakes to endeavour to settle the said disputes amongst them amicably. However, if the parties fail to resolve the disputes amongst them amicably, the said disputes arising out of or in connection with the present MOU shall be resolved through Arbitration as per the provisions enshrined under the Arbitration and Conciliation Act, 1996 or /and statutory modifications made thereafter.

14. All communications or notices provided for herein shall be in the English language and be delivered, mailed, or tele-faxed to the Parties addresses as indicated below:-

M/s._____ M/s._____

_____ All correspondence and notices to the Joint Venture firm shall be addressed to the Lead Member i.e.

M/s._____/Shri_____ at the address stated herein below:-

M/s._____ Such communication or notices shall be deemed to have been duly given when so delivered or, if mailed, when received at destination.

15. Each Part shall have full and sole responsibility to bear the expense of and effect the payment of any taxes, duties, special insurance, fees or assessments of any nature whatsoever (including personal income taxes levied or imposed or any of its employees or personnel or any of its subcontractor's employees or personnel) including penalties and interest, if any, levied in connection with the execution of this MOU.

In witness whereof, the Parties have caused this MOU to be executed by their respective authorized representative on the date and year mentioned herein above.

Signature: -

Shri_____ of

M/s._____

1) Witness Name:

2) Address :

Signature: -

Shri_____ of

M/s._____

1) Witness Name:

2) Address:

Signature: -

Shri_____ of

M/s._____

1) Witness Name:

2) Address:

PROFORMA FOR NEFT MANDATE FORM

FROM:

Date:

To,

FA&CAO/ CN/MS,

Southern Railway,

Chennai-08.

Sub:- Willingness to Receive Payment through RBI's NEFT System.

We refer to the National Electronic Fund Transfer (NEFT) System being set up by Southern Railway, Chennai-03 for remittance of our payments using RBI's NEFT scheme and confirm that we are agreeable to our payments being made through the above scheme to our under noted Account:

NAME OF ORGANISATION AND ADDRESS :

MICR CODE OF BANK :

IFS CODE OF BANK

BANK NAME :

BRANCH NAME :

BANK ADDRESS :

BRANCH TELE/FAX NO. :

BANK ACCOUNT NO. :

TYPE OF ACCOUNT :

A Xerox copy of the cheque leaf is attached herewith for necessary action at your end.

Encl : As stated above**Signature & Stamp Confirmed by Bank**

Annexure 3
(Bid Security)

Bank Guarantee Bond from any scheduled commercial bank of India
(On non-judicial stamp paper, which should be in the name of the executing Bank).

Name of the Bank: -----

President of India,

Acting through,

..... Railway,

Beneficiary: Railway

Date:.....

Bank Guarantee Bond No.:

Date:-----

In consideration of the President of India acting through----- (***Designation & address of Contract Signing Authority***), Railway,, (hereinafter called "The Railway") having invited the bid for_____through Notice inviting tender (NIT) No.._____, We have been informed that ***[Insert name of the Bidder]***..... (***hereinafter called "the Bidder"***) intends to submit its bid (hereinafter called "the Bid") .

WHEREAS, the Bidder is required to furnish Bid Security for the sum of ***[Insert required Value of Bid Security]***, in the form of Bank Guarantee, according to conditions of Bid.

AND

WHEREAS,***[Insert Name of the Bank]***, with its Branch***[Insert Address]*** having its Headquarters office at..... ***[Insert Address]***, hereinafter called the **Bank**, acting through***[Insert Name and Designation of the authorised persons of the Bank]***, have, at the request of the Bidder, agreed to give guarantee for Bid Security as hereinafter contained, in favour of the Railway:

1. KNOW ALL MEN that by these present that I/We the undersigned ***[Insert name(s) of authorized representatives of the Bank]***, being fully authorized to sign and incur obligations for and on behalf of the Bank, confirm that the Bank, hereby, unconditionally and irrevocably guarantee to pay to the Railway full amount in the sum of ***[Insert required Value of Bid Security]*** as above stated.

2. The Bank undertakes to immediately pay on presentation of demand by the Railway any amount up to and including aforementioned full amount without any demur, reservation or recourse. Any such demand made by the Railway on the Bank shall be final, conclusive and binding, absolute and unequivocal on the Bank notwithstanding any disputes raised/ pending before any Court, Tribunal, Arbitration or any Authority or any threatened litigation by the Bidder or Bank.
3. The Bank shall pay the amount as demanded immediately on presentation of the demand by Railway without any reference to the Bidder and without the Railway being required to show grounds or give reasons for its demand of the amount so demanded.
4. The guarantee hereinbefore shall not be affected by any change in the constitution of the Bank or in the constitution of the Bidder.
5. The Bank agrees that no change, addition, modifications to the terms of the Bid document or to any documents, which have been or may be made between the Railway and the Bidder, will in any way absolve the Bank from the liability under this guarantee; and the Bank, hereby, waives any requirement for notice of any such change, addition or modification made by Railway at any time.
6. This guarantee will remain valid and effective from.....***[insert date of issue]***till***[insert date, which should be minimum 90 days beyond the expiry of validity of Bid]***. Any demand in respect of this Guarantee should reach the Bank within the validity period of Bid Security.
7. The Bank Guarantee is unconditional and irrevocable.
8. The expressions Bank and Railway herein before used shall include their respective successors and assigns.
9. The Bank hereby undertakes not to revoke the guarantee during its currency, except with the previous consent in writing of the Railway. This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No.758.
10. The Bank hereby confirms that it is on the SFMS (Structured Financial Messaging System) and shall invariably send the advice of this Bank Guarantee to the following bank details –

IFSC CODE	
IFSC TYPE	
BANK NAME	
BRANCH NAME	
CITY NAME	
ADDRESS	
DISTRICT	
STATE	
BG ENABLED	

11. The Guarantee shall be valid in addition to and without prejudice to any other security Guarantee(s) of Bidder in favour of the Railway. The Bank, under this Guarantee, shall be deemed as Principal Debtor of the Railway.

Date

Place..... Bank's Seal and authorized signature(s)

[Name in Block letters]

[Designation with Code No.].....

[P/Attorney] No.

Witness:

1 Signature, Name & Address & Seal

2 Signature, Name& address & Seal

Bank's Seal

*[P/Attorney]*No.

Note: All italicized text is for guidance on how to prepare this bank guarantee and shall be deleted from the final document.

CHECKLIST TO THE TENDER

Name of work: Provision of Electronic Interlocking Signalling arrangements (Both Indoor and Outdoor) at Nagari and Podatturpettai of Chennai division in connection with Construction of New line between Nagari and Tindivanam.

CHECK LIST OF ITEMS TO BE COMPLIED BY THE TENDERERS

SL. No	Description of Item	Compliance	Remarks
1	Bid Capacity documents	Yes/No	
2	Undertaking that the item will be procured from RDSO Approved firm	Yes/No	
3	Statement of Deviation	Yes/No	
4	Power of Attorney	Yes/No	
5	Certificate to be submitted / uploaded by tenderer along with the tender documents (Annexure V), Part I of GCC	Yes/No	
6	Annexure-V(A), Part I of GCC (This certificate is to be given by attorney/authorized signatory/each member of Partnership firm/Joint Venture (JV) / Hindu Undivided Family (HUF) / Limited Liability Partnership (LLP) etc.)	Yes/No	
7	(Bid Security) Bank Guarantee Bond from any scheduled commercial bank of India (Annexure VI(A))	Yes/No	
8	EMD Submitted	Yes/No	
9	List of personnel, organization available on hand and proposed to be engaged for the subject work.	Yes/No	
10	List of plant & machinery available on hand (own) and proposed to be inducted (own and hired to be given separately)	Yes/No	

SL. No	Description of Item	Compliance	Remarks
11	List of works completed in the last three financial years giving description of work, organization for whom executed, approximate value of contract at the time of award, date of award and date of scheduled completion of work. Date of actual start, actual completion and final value of contract should also be given	Yes/No	
12	List of works on hand indicating description of work, contract value, approximate value of balance work yet to be done and date of award.	Yes/No	
13	Copy of PAN card	Yes/No	
14	Documents for Turnover for financial eligibility criteria	Yes/No	
15	Documents for technical eligibility criteria - Performance certificates for single similar nature of work	Yes/No	
16	NEFT Details	Yes/No	
17	GST Registration Certificate Copy	Yes/No	
18	Bid Security Declaration in lieu of EMD Submitted	Yes/No	
19	Organization details	Yes/No	

ANNEXURE – 5

Tenderer's credentials (Bid capacity)

_____ RAILWAY

For tenders having advertised value more than Rs 20 crore wherein eligibility criteria includes bid capacity also, the tenderer will be qualified only if its available bid capacity is equal to or more than the total value of the present tender. The available bid capacity shall be calculated as under:

$$\text{Available Bid Capacity} = [A \times N \times 2] - 0.33 \times N \times B$$

Where,

A = Maximum value of construction works executed and payment received in any one of the previous three financial year or the current financial year (up to date of inviting tender), taking into account the completed as well as work in progress.

N = Number of years prescribed for completion of work for which bids has been invited.

B = Existing commitments and balance amount of ongoing works with tenderer as per the prescribed Proforma of Railway for statement of all works in progress and also the works which are awarded to tenderer but yet not started upto the date of inviting of tender.

Note:

(a) The Tenderer(s) shall furnish the details of -

- (i) Maximum value of construction works executed and payment received in any one of the previous three financial years or the current financial year (up to date of inviting tender) for calculating A, and
- (ii) Existing commitments and balance amount of ongoing works with tenderer as per the prescribed proforma of Railway for statement of all works in progress and also the works which are awarded to tenderer but yet not started upto the date of inviting of tender for calculating B. In case of no works in hand, a 'NIL' statement should be furnished.

The submitted details for (i) and (ii) above should be duly verified by Chartered Accountant.

(b) In case if a bidder is JV, the tenderer(s) must furnish the details of

- (i) Maximum value of construction works executed and payment received in any one of the previous three financial years or the current financial year (up to date of inviting tender) by each member of JV for calculating A, and
- (ii) Existing commitments and balance amount of ongoing works with each member of JV either in individual capacity or as a member of other JV as per the prescribed proforma of Railway for statement of all works in progress and also

the works which are awarded to each member of JV either in individual capacity or as a member of other JV but yet not started upto the date of inviting of tender for calculating B. In case of no works in hand, a 'NIL' statement should be furnished.

The submitted details for (i) and (ii) above should be duly verified by Chartered Accountant.

- (c) Value of a completed work/work in progress/work awarded but yet not started for a Member in an earlier JV shall be reckoned only to the extent of the concerned member's share in that JV for the purpose of satisfying his/her compliance to the above mentioned bid capacity in the tender under consideration.
- (d) The arithmetic sum of individual "bid capacity" of all the members shall be taken as JV's "bid capacity".
- (e) In case, the tenderer/s failed to submit the above statement along with offer, their/his offer shall be considered as incomplete and will be rejected **summarily**.
- (f) The available bid capacity of tenderer shall be assessed based on the details submitted by the tenderer. In case, the available bid capacity is lesser than estimated cost of work put to tender, his offer shall not be considered even if he has been found eligible in other eligibility criteria/tender requirement.

****End of chapter 3****

CHAPTER – 4
SCHEDULE OF WORKS AND SUPPLIES
with Detailed guidelines

SOR No.	Description of work	Unit	Qty	Rate Rs.	Amount Rs.
10_101	Excavation of cable trench 1m depth X 0.3m width	Mtrs	19000	34.65	658350.00
10_102	Excavation of cable trench 1m depth X 0.5m width	Mtrs	4000	42.98	171920.00
10_106	Provision of DWC/RCC pipe at 1m depth for track crossing	Mtrs.	900	208.35	187515.00
10_107	Provision of DWC/RCC pipe at 1m depth for Road crossing	Mtrs.	240	270.83	64999.20
10_108	Provision of GI pipes 50/100mm dia over RCC bridges/Drainage/culverts	Mtrs.	1800	181.95	327510.00
10_110	Provision of GI pipes 50/100mm dia in hard rocky area.	Mtrs.	650	168.08	109252.00
10_111	Laying of Signalling/ power/ telecom cable	Mtrs.	221000	9.83	2172430
10_115	Refilling of cable trench 1m depth X 0.3m width	Mtrs.	19000	8.33	158270.00
10_116	Refilling of cable trench 1m depth X 0.5m width	Mtrs.	4000	10.43	41720.00
10_118	Supply of cable markers (RCC type)	Nos.	750	166.29	124717.50
10_119	Placing of cable markers and concreting (RCC type)	Nos.	750	121.43	91072.50
10_120	Excavation of cable coil pit 1.5m length X 1.5m breadth in rear of relay room/AFTC huts	CUM	15	513.00	7695.00
10_121	Supply of DWC pipe 103.5 mm inner dia 120mm outer dia	Mtrs	27000	263.20	7106400.00
10_122	Supply of GI pipe-50mm dia, 3.65 mm thick	Mtrs	1200	343.20	411840.00
10_123	Supply of GI pipe-100mm dia, 4.5 mm thick	Mtrs	1200	838.80	1006560.00
10_124	Supply of GI pipe-150mm dia, 4.8 mm thick	Mtrs	60	1273.50	76410.00
10_201	Casting of foundation and erection of apparatus case - Full size	Nos.	120	9875.30	1185036.00
10_202	Casting of foundation and erection of apparatus case - Half size	Nos.	70	6966.60	487662.00
10_204	Erection of CT boxes and concreting (for cable throughing)	Nos.	30	3394.50	101835.00

10_205	Erection of CT boxes and concreting (for point machines)	Nos.	28	3411.00	95508.00
10_208_a	Shifting of apparatus case (full)	Nos.	10	2895.00	28950.00
10_208_b	Shifting of apparatus case (half)	Nos.	10	1916.25	19162.50
10_209	Termination of cables on existing terminals	Per Terminal block	2000	39.78	79560.00
10_210_a.	Termination on 25/60mm PBT terminals (new location)(Phynolic sheet)	Per Terminal Block	10000	93.16	931600.00
SOR No.	Description of work	Unit	Qty	Rate Rs.	Amount Rs.
10_210_b.	Termination on PBT fuse block (new location) (Phynolic sheet)	Per Fuse Block	500	113.56	56780.00
10_211_a	Termination of cables on 25/60mm PBT terminals (existing location)	Per Terminal Block	1000	81.68	81680.00
10_211_b	Termination of cables on PBT fuse block (existing location)	Per Fuse Block	200	102.08	20416.00
10_212_a	Wiring of Signal/ point/ LC control circuit (upto 4 relays/Plug in type HMU)	Set	70	2673.25	187127.50
10_212_b	Wiring of Signal/ Point/ LC control circuit (upto 8 relays/Plug in type HMU)	Set	10	4739.60	47396.00
10_212_c	Wiring of Signal/ Point/ LC control circuit (upto 12 relays/Plug in Type HMU)	Set	10	6137.85	61378.50
10_212_d	Wiring of Signal/ Point/ LC control circuit (upto 20 relays/Plug in type HMU)	Set	2	7349.95	14699.90
10_213_a.	Painting of existing apparatus case - Full size	Nos.	50	1278.75	63937.50
10_213_b.	Painting of existing apparatus case - Half size	Nos.	32	1223.25	39144.00
10_216_a	Alteration to painting particulars (apparatus case - Full size)	Nos.	20	884.85	17697.00
10_216_b	Alteration to painting particulars (apparatus case - half size)	Nos.	10	464.10	4641.00
10_217	Filling of earth around locations/ Signals	CUM	500	125.02	62510.00
10_218	Casting of concrete foundation for colour light Signals	Nos.	25	5008.20	125205.00

10_219	Erection of colour light Signal and wiring (upto 4 aspects)	Nos.	25	5501.20	137530.00
10_220	Casting of foundation for ground type shunt Signal	Nos.	5	2518.55	12592.75
10_221	Erection and wiring of ground type shunt Signal	Nos.	5	2097.00	10485.00
10_222	Fixing and wiring of post type shunt Signal	Nos.	15	1613.25	24198.75
10_224_a.	Fixing and wiring of direction type route indicator - 1 way	Nos.	7	1539.75	10778.25
10_224_c.	Fixing and wiring of direction type route indicator - 3 way	Nos.	3	2108.25	6324.75
10_224_d.	Fixing and wiring of direction type route indicator - 4 way	Nos.	1	3183.00	3183.00
10_225	Fixing and wiring of Calling on Signals/ 'A' marker lights	Nos.	20	1427.25	28545.00
10_226	Replacement of tail cables in existing Signals	Per Cable	14	824.25	11539.50
10_231_a	Provision of track circuit in RE/Non RE area (point zone)	Nos.	21	4818.65	101191.65
10_231_b	Provision of track circuit in RE/Non RE area (other than point zone)	Nos.	23	3862.40	88835.20
10_232_a	Alteration to existing track circuits at feed end	Nos.	2	2289.00	4578.00
10_232_b	Alteration to existing track circuits at relay end	Nos.	2	2127.00	4254.00
10_234	Supply and provision of earth electrodes (GI) as per Drg no. SG/CN/02/13	Nos.	250	1799.00	449750.00
10_236	Installation of combined type Point machine	Nos.	20	8856.15	177123.00
10_237	Provision of fencing arrangements for for location boxes.	per sqm ground area	2500	763.00	1907500.00
10_238_a	Supply of colour light Signal pole 4.6m tall and 140 mm dia	Nos.	12	3318.00	39816.00
SOR No.	Description of work	Unit	Qty	Rate Rs.	Amount Rs.
10_238_b	Supply of colour light Signal pole 3.6m tall and 140 mm dia	Nos.	13	2974.00	38662.00
10_239	Supply of surface base for colour light Signal	Nos.	25	4118.00	102950.00
10_240_a	Supply of ladder with platform (4.6m) for CLS	Nos.	12	3203.00	38436.00

10_240_b	Supply of ladder with platform (3.6m) for CLS	Nos.	13	3089.00	40157.00
10_241	Supply of colour light shunt Signal (post type)	Nos.	15	2860.00	42900.00
10_242	Supply of Ground type Shunt Signal	Nos.	5	4118.00	20590.00
10_243_b	Supply of colour light Signal unit (3 aspect)	Nos.	11	10296.00	113256.00
10_243_c	Supply of colour light Signal unit (2 aspect)	Nos.	14	8580.00	120120.00
10_244_a	Supply of Junction type route indicator - 1 way	Nos.	7	10868.00	76076.00
10_244_c	Supply of Junction type route indicator - 3 way	Nos.	3	17732.00	53196.00
10_244_d	Supply of Junction type route indicator - 4 way	Nos.	1	21,164.00	21164.00
10_245_a	Supply of Calling On Signal	Nos.	20	2059.00	41180.00
10_246_a	Supply of Off set bracket - large Nos.	Nos.	30	2059.00	61770.00
10_246_b	Supply of Off set bracket - small	Nos.	23	1487.00	34201.00
10_247	Supply of cable termination box (FRP type)	Nos.	30	9266.00	277980.00
10_248	Supply of Track lead junction box (FRP type)	Nos.	200	1030.00	206000.00
10_249_a	Supply of PBT terminals 25mm centre.	Nos.	55000	44.00	2420000.00
10_249_b	Supply of PBT terminals 60mm centre.	Nos.	7000	60.00	420000.00
10_249_c	Supply of PBT fuse block without ND fuse	Nos.	1100	82.00	90200.00
10_250_b	Supply of Secondary cells - 2V-80AH capacity	Nos.	135	2077.00	280395.00
10_250d	Supply of Secondary cells - 2V-200AH capacity	Nos.	165	4077.00	672705.00
10_251_a	Supply of apparatus case - Full size	Nos.	120	12012.00	1441440.00
10_251_b	Supply of apparatus case - Half size	Nos.	30	8580.00	257400.00
10_252	Supply of Electronic Time delay units (120/ 60 secs)	Nos.	10	2213.00	22130.00
10_253	Supply of lamp proving relay for LED aspects	Nos.	100	3591.00	359100.00

10_254	Supply of QBCA1 heavy duty contact relays for point	Nos.	25	4140.00	103500.00
10_255	Supply of track relay QTA2 type	Nos.	50	2524.00	126200.00
10_256	Supply of QSPA1 relays	Nos.	50	3897.00	194850.00
10_257	Supply of electric key transmitter	Nos.	50	4279.00	213950.00
10_260	Supply of Track feed battery charger	Nos.	50	2460.00	123000.00
10_261	Supply of B type chock	Nos.	100	2076.00	207600.00
10_301_b	Concreting and erection of cable termination rack 500 capacity	Nos.	6	7388.25	44329.50
10_302_a.	Termination using 25/60mm PBT terminals in cable termination rack	Per Terminal Block	2500	90.82	227050.00
SOR No.	Description of work	Unit	Qty	Rate Rs.	Amount Rs.
10_302_b.	Termination using PBT fuse block in cable termination rack	Per Fuse Block	250	108.82	27205.00
10_303_b	Concreting and erection of relay rack - 56 capacity	Nos.	7	1629.75	11408.25
10_304	Fixing and wiring of relays in relay rack	Per Relay	250	565.27	141317.50
10_305	Fixing and wiring of additional relays	Per Relay	10	392.70	3927.00
10_308_a	Provision of interconnections - upto 5 roads	LS	1	41768.15	41768.15
10_308_c	Provision of interconnections - more than 5 roads (different floors)	LS	1	95105.00	95105.00
10_309	Installation power equipments	Nos.	15	923.25	13848.75
10_317	Supply and wiring of 110V/24V - 2A Transformer rectifier	Nos.	10	5924.00	59240.00
10_318	Supply and wiring of 110/110V - 500 VA transformer	Nos.	6	5224.10	31344.60
10_320	Provision of stand and installation of power equipments (more than 5 roads)	Set.	2	121818.60	243637.20
10_323	Installation of power equipments on existing stand/ slabs (upto 5 roads)	Set.	1	70995.40	70995.40
10_331	Supply and installation of DG set with CPCB arrangement - 25 KVA three phase	Nos.	1	329463.00	329463.00
10_335	Supply and installation of DTMF equipment	Set	2	8215.00	16430.00
10_336	Supply and provision of rubber mat	Sft	500	78.30	39150.00

10_337	Provision of signalling arrangements during NI working	Per station	2	18178.95	36357.90
10_338	Provision of PA system and Magneto phone	Per tent per day	10	885.00	8850.00
10_322	Supply, fabrication and provision of power equipment stand (Up to 5 road)	Set	1	89001.80	89001.80
10_414	Installation and wiring of electric key transmitter	Nos.	40	2943.75	117750.00
10_415	Erection and painting of boards with 'LEGENDS'	Nos.	6	2159.00	12954.00
10_416	Erection and painting of goods warning boards	Nos.	5	2929.95	14649.75
10_418	Fixing and wiring of Annunciator	Nos.	2	6596.00	13192.00
10_419	Installation and wiring of way station DTMF equipment	Nos	2	4333.50	8667.00
10_420	Supply and provision of Signal post telephone (paging and talk back)	Nos	5	9345.00	46725.00
10_421	Construction of masonry platform for Signal post telephone	Nos	5	2896.80	14484.00
10_424	Supply and provision of yard layout diagram	Nos	2	9039.00	18078.00
10_426	Provision of 2 pin 5A socket with switch in apparatus cases	Nos	5	398.00	1990.00
10_427_a.	Testing and commissioning of stations (upto 5 roads)	per station	1	21018.75	21018.75
10_427_b.	Testing and commissioning of stations (more than 5 roads)	per station	1	36725.25	36725.25
10_428	Preparation and submission of "As made"	per sheet	700	206.55	144585.00
10_501	Releasing of relay rack/ cable termination rack	Per Rack	5	1068.75	5343.75
10_502	Releasing of Route Indicators of different types	Nos.	2	833.25	1666.50
10_503	Releasing of Stop/ Warning boards	Nos.	2	854.25	1708.50
10_507	Releasing of apparatus cases	Nos.	30	1625.25	48757.50
10_510	Releasing of colour light Signals	Nos.	14	1666.50	23331.00
10_513	Releasing of secondary cells and battery stand	Set	1	2916.75	2916.75
SOR No.	Description of work	Unit	Qty	Rate Rs.	Amount Rs.
10_514	Releasing of block instruments	Nos.	3	958.50	2875.50
10_517	Releasing of ground type Shunt Signals	Nos.	3	1187.25	3561.75
10_518	Releasing of TLD boxes	Nos.	60	86.10	5166.00

10_519	Releasing of existing power equipments - complete	Set	1	6832.50	6832.50
10_520	Releasing of existing control equipments - complete	Set	1	3249.75	3249.75
10_521_a	Transportation of Signalling materials upto 100kms	per ton. Km.	2000	12.30	24600.00
10_521_b	Transportation of Signalling materials more than 100km	per ton. Km.	2100	7.52	15792.00
10_522	Removal of infringing structures/ debris using mechanical excavator	per hour	300	650.00	195000.00
TOTAL ANNEXURE A1					29989969.25
Add: Escalation over SOR 2011 rates				91.95%	27575776.73
Total Railway Assessed Value - Annexure A1					57565745.98
Annexure A2					
NS No.	Description of work	Unit	Qty	Rate Rs.	Amount Rs.
NS1	Design of DISTRIBUTED Electronic Interlocking System (EI) with One OC hut at NAGARI Station as per RDSO/SPN/192/2019 Ver 2 or latest.This schedule includes Design, Preparation and submission of Interface and Application Logic for Nagari station. (Necessary SIP and TOC will be supplied by Railways)	Set	1	1996194.50	1996194.50

NS2	<p>Supply of Microprocessor based Distributed Electronic Interlocking System (Hot standby only) having Dual VDU complete to suit Sketch of NAGARI yard enclosed, as per RDSO Spec RDSO/SPN/192/2019 Ver 2.0 as per technical conditions enclosed This schedule includes supply of</p> <ul style="list-style-type: none"> • Complete supply and design as per RDSO specifications • Microprocessor Equipment, Interface Equipment, Interconnecting cables, Relay Racks, Fixtures, Mounting arrangements and other Accessories necessary to make the EI System installed and functional • All special relays shall be supplied by tenderer, except QNA1, QECX, QUCX and QN1 having different operating voltages i.e., 24V DC, 50V DC, 60VDC etc., which is in the scope of Railways • Operator console (Without Power Supply & Earthing) - a) Supply of Industrial grade Embedded fanless PC with all accessories such as connector, key board, mouse, antivirus etc., as per approved specification as recommended by RDSO - 2 Nos 	Set	1	27906028.08	27906028.08
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	<p>b)Supply of commercial grade operator VDU of size 55" Full HD including all accessories - 2 Nos • Maintenance console (Without Power Supply & earthing)-</p> <p>c)Supply of Industrial grade Embedded fan less PC with all accessories such as connector, key board, mouse, antivirus etc., as per approved specification as recommended by RDSO- 1 Nos</p> <p>d)Supply of commercial grade operator VDU of size 48" Full HD for MaintenanceTerminal - 1 No.</p> <p>Note:Supply of Operator VDU table for SM, Table for Maintenance Terminal & Datalogger, and General Purpose tools for EI maintenance are not covered in this schedule. •</p> <p>Supply of DC-DC converters in N+1 mode individually for A&B systems is not covered under this schedule. • Supply of DC-DC Converters, Inverters including necessary Back-up for Operator VDU and Maintenance VDU is not covered under this schedule. •</p> <p>Accessories such as managed Ethernet switch, RS232, isolator etc. as required to interface EI with VDU shall covered under this schedule.</p>				
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	<ul style="list-style-type: none"> • The system shall have provision for 1) At least 20% additional (spare) input/output ports shall be catered in the installed system hardware for facilitating minor alterations without any hardware additions. 2) The system shall be equipped with and have provision for expansion for accommodating additional 25% of I/O cards in the form of unused I/O cards slots or the unused bits in installed cards. <p>NOTE: The rates of various modules equipments, Subassembly and other stores, if any shall be quoted individually with unit rate. Total cost also should be given in detail by the tenderer (use Annexure for Break-up). See TECHNICAL CONDITIONS FOR EI for full description. (any other materials not quoted in the breakup of NS1 and also for any increased in quantities listed in the breakup but found necessary while commissioning should be supplied free of cost by the contractor). The paralleling of DC track with MSDAC should be done in the EI application logic only. (Inspection by RDSO)</p>				
NS3	Installation, testing and commissioning of EI equipment supplied vide sch No.NS1&2. This includes installation of relay racks and wiring of all types of interface relays. Nondeteriorating fuses, LED indicators for fuses, indoor cable, different wire coils, etc. required to wire the various relays will be supplied by the contractor.	Set	1	4595030.56	4595030.56

NS4	Supply of ESSENTIAL spares @ 10% of each cards/modules/ PCBs for EI system supplied for under NS-2 subject to a minimum of 1 number of each (Inspection by RDSO). Item wise Rates should be quoted in seperate annexure. NOTE: The rates of various modules equipments,Subassembly and other stores shall be quoted individually with unit rate. Total cost also should be given in detail by the tenderer. (Inspection by RDSO)	Set	1	3823720.09	3823720.09
NS5	Supply of As made documents for Indoor signalling arrangements (EI) of NAGARI station commissioned vide NS-1&2. All 'As makes' shall be prepared by the Contractor in AUTOCAD 2000 or latest and submitted in CDs. One copy of the 'As makes' check print shall be submitted before Testing the circuits. The final negatives shall be made in tracing sheet (80 to 90 GSM). All 'As makes' except cable plan, cable route plan, bonding diagram & power supply diagram shall be prepared in A3 size. On approval the contractor shall submit along with the negatives, 8 copies in each, duly making booklet neatly bound. Out of 8 sets, 2 sets of drawings and other plans shall be kept in transparent plastic cover (2 sheets back to back in one plastic cover) and handed over to Railways. Also the contractor has to supply one set of As makes in 'Reproduction Film'	Station	1	394840.88	394840.88
NS6	Design of CENTRALIZED Electronic Interlocking System (EI) at PODATTURPETTAI Station as per RDSO/SPN/192/2019 Ver 2 or latest.This schedule includes Design, Preparation and submission of Interface and Application Logic for Podatturpettai station. (Necessary	Set	1	1015561.57	1015561.57

	SIP and TOC will be supplied by Railways)				
NS7	<p>Supply of Microprocessor based Centralized Electronic Interlocking System (Hot standby only) having Dual VDU complete to suit Sketch of PODATTURPETTAI yard enclosed, as per RDSO Spec RDSO/SPN/192/2019 Ver 2.0 as per technical conditions enclosed This schedule includes supply of • Complete supply and design as per RDSO specifications • Microprocessor Equipment, Interface Equipment, Interconnecting cables, Relay Racks, Fixtures, Mounting arrangements and other Accessories necessary to make the EI System installed and functional • All special relays shall be supplied by tenderer, except QNA1, QECX, QUCX and QN1 having different operating voltages i.e., 24V DC, 50V DC, 60VDC etc., which is in the scope of Railways • Operator console (Without Power Supply & Earthing) - a) Supply of Industrial grade Embedded fanless PC with all accessories such as connector, key board, mouse, antivirus etc., as per approved specification as recommended by RDSO - 2 Nos</p>	Set	1	14715409.69	14715409.69

	<p>b)Supply of commercial grade operator VDU of size 55" Full HD including all accessories - 2 Nos • Maintenance console (Without Power Supply & earthing)-</p> <p>c)Supply of Industrial grade Embedded fan less PC with all accessories such as connector, key board, mouse, antivirus etc., as per approved specification as recommended by RDSO- 1 Nos</p> <p>d)Supply of commercial grade operator VDU of size 48" Full HD for MaintenanceTerminal - 1 No.</p> <p>Note:Supply of Operator VDU table for SM, Table for Maintenance Terminal & Datalogger, and General Purpose tools for EI maintenance are not covered in this schedule. • Supply of DC-DC converters in N+1 mode individually for A&B systems is not covered under this schedule. • Supply of DC-DC Converters, Inverters including necessary Back-up for Operator VDU and Maintenance VDU is not covered under this schedule. • Accessories such as managed Ethernet switch, RS232, isolator etc. as required to interface EI with VDU shall covered under this schedule.</p>				
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	<ul style="list-style-type: none"> • The system shall have provision for 1) At least 20% additional (spare) input/output ports shall be catered in the installed system hardware for facilitating minor alterations without any hardware additions. 2) The system shall be equipped with and have provision for expansion for accommodating additional 25% of I/O cards in the form of unused I/O cards slots or the unused bits in installed cards. <p>NOTE: The rates of various modules equipments, Subassembly and other stores, if any shall be quoted individually with unit rate. Total cost also should be given in detail by the tenderer (use Annexure for Break-up). See TECHNICAL CONDITIONS FOR EI for full description. (any other materials not quoted in the breakup of NS1 and also for any increased in quantities listed in the breakup but found necessary while commissioning should be supplied free of cost by the contractor). The paralleling of DC track with MSDAC should be done in the EI application logic only. (Inspection by RDSO).</p>				
NS8	Installation, testing and commissioning of EI equipment supplied vide sch No.NS6&7. This includes installation of relay racks and wiring of all types of interface relays. Nondeteriorating fuses, LED indicators for fuses, indoor cable, different wire coils, etc. required to wire the various relays will be supplied by the contractor.	Set	1	1395184.00	1395184.00

NS9	Supply of ESSENTIAL spares @ 10% of each cards/modules/ PCBs for EI system supplied for under NS-7 subject to a minimum of 1 number of each (Inspection by RDSO). Item wise Rates should be quoted in seperate annexure. NOTE: The rates of various modules equipments,Subassembly and other stores shall be quoted individually with unit rate. Total cost also should be given in detail by the tenderer. (Inspection by RDSO)	Set	1	3064885.11	3064885.11
NS10	Supply of As made documents for Indoor signalling arrangements (EI) of PODATTURPETTAI station commissioned vide NS-6&7. All 'As makes' shall be prepared by the Contractor in AUTOCAD 2000 or latest and submitted in CDs. One copy of the 'As makes' check print shall be submitted before Testing the circuits. The final negatives shall be made in tracing sheet (80 to 90 GSM). All 'As makes' except cable plan, cable route plan, bonding diagram & power supply diagram shall be prepared in A3 size. On approval the contractor shall submit along with the negatives, 8 copies in each, duly making booklet neatly bound. Out of 8 sets, 2 sets of drawings and other plans shall be kept in transparent plastic cover (2 sheets back to back in one plastic cover) and handed over to Railways. Also the contractor has to supply one set of As makes in 'Reproduction Film'	Station	1	367752.00	367752.00

NS11	Supply of Modular Power Supply arrangement for Electronic Interlocking System at NAGARI station vide NS-1&2. Railways will provide necessary 110V DC. Tenderer has to provide the suitable converters such as 24V/50V DC or as per the requirement of OEM in N+1 configuration for System A and System B individually as recommended by RDSO. (Inspection by RDSO)	Set	1	766424.65	766424.65
NS12	Supply of Modular Power Supply arrangement for Electronic Interlocking System at PODATTURPETTAI station vide NS-6&7. Railways will provide necessary 110V DC. Tenderer has to provide the suitable converters such as 24V/50V DC or as per the requirement of OEM in N+1 configuration for System A and System B individually as recommended by RDSO. (Inspection by RDSO)	Set	1	766424.65	766424.65
NS13	Supply of Modular Power supply arrangement for Operator/Maintenance VDU and Embedded PC at NAGARI and System at PODATTURPETTAI. This consists of a) 110V DC/110V AC, 500VA Inverter - 2 Nos b) 110V DC/24V DC, 10A - 2 Nos Make: Similar to Gallant, Phoenix or better (Inspection by Consignee)	Set	6	192144.44	1152866.64
NS14	Supply of Isolated Ripple Free Battery Charger having specifications 230V AC/110V DC, 20A suitable for LMLA batteries with inbuilt ORING Diode, Active Current sharing. Make: Similar to Gallant Phoenix or better (Supply of LMLA Batteries is not covered in this scope) (Inspection by Consignee)	Numbers	3	166666.64	499999.92

NS15	Training of Railway Personnel in Installation, Testing, Trouble Shooting and in Diagnosing faults by using diagnostic tools/flow charts including supply of necessary documents.	Man-Days	95	2180.46	207143.70
NS16	Training of Railway personnel at OEM factory premises on application software for designing, change in logics and converting it suitable for system and loading the programme into the working system including supply of hard and soft copies of course modules and working instructions.	Man-Days	100	2570.30	257030.00
Total Annexure A2					62924496.04
Annexure A3					
NS No.	Description of work	Unit	Qty	Rate Rs.	Amount Rs.
NS17	Supply, Installation, Testing and Commissioning of Relay based Emergency Panel. This includes supply of Panel, Buttons, Knob, LED fixtures and wiring of circuit. Note: Relays and necessary underground cables for interconnection of Emergency Panel and Location Boxes/FTOT will be in the scope of Railways. Necessary circuit for wiring will be provided by Railways. (Inspection by RDSO)	Station	2	281759.25	563518.50
NS18	Supply, Installation, Testing and Commissioning of Datalogger with 512 Digital Input and 32 Analog Input as per RDSO specification No. IRS:S-99/2006 Amdt 3 (or) latest with power supply arrangements. (This work does not includes wiring of inputs from Relay to Intermediate tag block & from intermediate tag block to Datalogger equipment) (Inspection by RDSO)	Numbers	3	429440.16	1288320.48

NS19	Wiring of Inputs from Relay to Intermediate Tag block & from Intermediate Tag block to Datalogger equipment. (Tag block, wire coil, and all other materials are to be supplied by contractor)	Nos	1500	262.91	394365.00
NS20	Supply of Dual Card RS232 to E1 converter suitable to insert in the Datalogger Eurorack for inter-linking Datalogger/MFEP (Inspection by Consignee)	Nos	2	40783.68	81567.36
NS21	Supply of Protocol Converter to seamlessly interface with Datalogger and EI equipment supplied vide NS-1 and NS-6. (Inspection by Consignee)	Numbers	3	61175.52	183526.56
NS22	Supply and Installation of Fault Analysis Terminal for analysis of fault and generating reports for Datalogger installed at stations with 19 inch display terminal with i5 processor, 4GB RAM, HDD 1TB, Windows 10 Licensed. (Inspection by Consignee)	Numbers	2	70277.21	140554.42
NS23	Supply of Laser Color Printer for Fault Analysis Terminal of supplied vide NS-20. Make: HP M128fn Lasejet or similar (Inspection by Consignee)	Numbers	2	23009.46	46018.92
NS24	Supply and provision of Earthing arrangements for EI cabin as per RDSO specifications as required for the EI system alongwith supply of all required materials. Earthing shall be carried out as per RDSO/SPN/197/2008 and RDSO Lr .No STS/L/SSI/CA/US&S Dt 26.07.2011 for Typical Earthing connections for EI. Painting of earthing diagram as replica of the ground on backside wall of relay room as per the instruction of Site Incharge. (Inspection by RDSO)	Lumpsum	3	257773.82	773321.46
NS25	Transportation of light materials/men with tools, documents from central location to the workspot and back.	Man-Days	365	1830.78	668234.70

NS26	Providing the services of Computer oriented technical manpower to carryout works like Drawing, computation, writeup etc., using computer, using software like AUTOCAD, MS Office etc., for 08.00 hrs in a day with all expenses of transportation, accommodation, food, consumables etc., with all ascents, descents, taxes, octroi, cess, fees, duties, duties with contractors cost etc., as per special conditions/ specifications/ regulations and as directed by Engineer-incharge. Note: The person engaged for providing the services shall be convergent with computer working knowledge in above softwares.	Man-Days	450	1150.89	517900.50
NS27	Supply and Installation of work space as per enclosed drawing No PROJ/SG/MS/70/2019 - of make New Modular/Pyrotech or similar or superior work space (as approved by engineer in charge) with control desk for 2 monitors of min 55" size, 2 operators & one module to be provided for storage in SLAT system - should include space for housing Two nos of Embedded PCs, 2 nos FDMS and their Power supply arrangement for with proper ventilation - Two chairs (Godrej PCH7002DX or superior as approved by officer in charge) to be provided adequate spares as approved by engineer in charge so as to cater for entire codal life of work space - List of spares to be enclosed (Inspection by Consignee)	Set	2	835378.13	1670756.26
NS28	Supply and Fabrication of Table having dimensions 2.5 Mtr x 1 Mtr for accommodation of Datalogger Terminal, Maintenance Terminal including Printer arrangements. This includes supply of one chair (Godrej PCH7002DX or superior as approved by engineer in charge) (Inspection by Consignee)	Numbers	4	27122.67	108490.68

NS29	Fabrication and Supply of wall mounted maintainers Tool kit frame made out of MS sheet 10 guage with powder coated as desired colour at site of size 1.5 Mtrs Length x 0.8 Mtr Width x 0.15 Mtr Depth with all fixtures for mounting individuals, tools inside the board and in front with Acrylic sheet 4mm thickness with locking arrangements and all necessary fixtures to fix on wall. (Inspection by Consignee)	Set	5	19935.16	99675.80
NS30	Supply & Provision of Data concentrator along with one Dual card Modem. (Inspection by Consignee)	Numbers	1	132411.89	132411.89
NS31	Preparation and Submission of NI Drawings, NI Plans, Rule Diagrams, Station Working Rules, CRS Documents, TSAA Documents	Station	2	474646.67	949293.34
NS32	Supply of Fanless Embedded Industrial Grade PC with all accessories such as connector, keyboard, mouse, antivirus etc., similar to VBOX, MOXA. This includes supply of UPS for 2hrs back-up and Monochrome LaseRjet Printer (Inspection by Consignee)	Set	1	392673.03	392673.03
NS33	Supply of Commercial Grade VDU of size 55 inch - Full HD (Inspection by Consignee)	Set	1	205312.75	205312.75
NS34	Providing and laying in position cement concrete of specified proportion including cost of cement, centering and shuttering with 1:3:6 composition (1 cement : 3 sand : 6 graded stone aggregate 20mm nominal size) on already excavated trenches	Cum	1000	12863.96	12863960.00

NS35	Supply of Polyolefin cable channel of size width 240/340 mm, height 155/230 mm internal/external,length 1 meter (+/- 10 mm),Weight per meter 8kg produced of polylefin with Fire Protection class K-1 in accordance with DIN 53438 Part II for laying signalling/telecom cables as per RDSO Technical specification STS /Cable - laying practices Vol -IV ,Dt 09.05.2018 & DIN 53438 parts =II , channel attachable to each other with male female swallowtail connectors and having suitable detachable cover, with minimum weight = 08 KG & Load bearing strength=12 KN. (Inspection by RITES)	Nos.	1200	3238.34	3886008.00
NS36	Laying of Polyolefin cable channels of all sizes by digging of trench of the required size that top of the channel is not less than 0.5m below earth/ ground level	Mtrs	1200	546.46	655752.00
NS37	Supply of trunking and capping as per drawing No. Proj/SG/MS/ 55A/2006. (Inspection by RITES)	Nos	1000	1411.10	1411100.00
NS38	Placing of Trunking to a depth of 500 mm and capping. Excavation of trench to a depth of 500 mm and to a width suitable for accommodating the trunking and capping in all kinds of soil except hard rocky areas clearing of roots without causing damage to the existing cables, placing of RCC ducts (Trunking), plastering the inner spacing between ducts.	Nos	1000	321.36	321360.00

NS39	Engaging unskilled manpower for segregation of Telecom & Signalling Cables, Digging Coil pits and lifting of cables along with GI pipes, Protecting cables at both the end of Girders, Releasing of apparatus cases and loading and unloading of materials, Segregation of Telecom & Signal materials. This includes stacking of stores materials lying both inside and outside premises of stores, coiling, tagging, painting, cleaning in Shed No. (1), (2) and (3) i.e. Relays, Batteries, Battery Chargers, Transformers, Relay Racks, Equipment Racks, Wire Coils, Generators, Roof Materials, Battery Stand, Line Wire materials, T&P Materials, Cable Drums, Tables & Chairs and other vital items. These materials are to be stacked to the nominated area as directed by Railway Official incharge. This work also includes cleaning of the stores shed and surrounding area, loading and unloading of cables/materials for transportation.	Man-days	435	821.99	357565.65
NS40	Supply, Installation, Testing and commissioning and Modification of Data logger embedded software when a station master fails to set the point against the occupied line within stipulated time after arrival of the train (this includes LED indication system with 6 indication, Buzzer, Acknowledgement button with interface facility to existing Data logger(up to 6 line station) (Inspection by Consignee)	Nos	2	71467.50	142935.00

NS41	Supply, Installation and Wiring of Bolt type 32 A HRC fuse base and carrier with 4/6/10/16/32 A fuse as per the load condition at location boxes, cable huts etc. as per approved circuit diagram. This work also includes painting of particulars of wiring in the places as instructed by railway representative at site. (HRC fuse block, fuses, wires, Cu lugs and all other miscellaneous materials required for the work shall be supplied by the contractor.) (Inspection by Consignee)	Set	480	484.44	232531.20
NS42	Supply and installation of Eight channel Earth leakage detector Multi channel to specification No. RDSO/ SPN/256/2002 or latest with 6 digital counter in 19" sub rack with insulated tester and test probes. All the materials required for the work shall be supplied by contractor. (Inspection by RDSO).	Set	10	134375.43	1343754.30
NS43	Supply of Digital Insulation tester (Megger) 50V-500V/1000 mega ohm battery operated similar to Rishabh make model No. Rish Insu 10 or better with all complete accessories. (Inspection by Consignee)	Nos	5	16594.93	82974.65
NS44	Supply of Digital AC/DC clamp meter cable of measuring low currents in mA range as well as high current up to 100A in AC and DC similar to model No. DCM39A of Motwane make or better. (Inspection by Consignee)	Nos	5	32090.55	160452.75
NS45	Supply of High density polyethylene pipes (HDPE) of 110mm outer dia. 10mm wall thickness along with one coupler for every six meters as per specification No: IS 4984:2016 with latest amendments and material Grade: PE80 (Inspection by RITES)	Mtrs	5000	817.92	4089600.00

NS46	HDD boring including insertion of High density polyethylene pipes (HDPE) of size 110 mm outer dia drilled along with coupler required . pulling of different size of signalling cables through HDPE duct by machine as instructed by Rly ref (boring trench should be minimum 1.2 m to 2m below the platform, track and yard/mid section. radio or any other detection system should be used for avoiding damage to existing underground utilities, Minimum horizontal distance of 50m to 100m should be taken up the launching point. Transportation of HDD machine, fuel and other materials required for boring and pulling of cables etc (Supply of HDPE DUCT not included in this schedule)	Mtrs	5000	3149.16	15745800.00
NS47	Drawing of signalling/power/telecom cables inside DWC/HDPE pipe this work includes conducting necessary duct integrity test	Mtrs	20000	22.19	443800.00
NS48	Supply and provision of normal joint using Thermo shrink jointing kit (RDSO specs No TC/77/2012 (Rev.3) with amendment No.1&2 or latest.& jointing kit) for 4/6 quad cable normal joint. The work includes excavation of joint pit of size 1mX1.5mX1.5m and closing the same after completion of cable joint as per the instruction of Railway representative at site. (Inspection by Consignee)	Nos	50	3950.09	197504.50

NS49	Supply, Installation, Testing and commissioning of 10KW of OFF grid solar power plant system for charging 110V battery bank of 55 Nos of 2V/300Ah LMLA/VRLA cells with all required accessories. The solar panel should have a performance warranty of 25 years with MNRE approved. The solar panel should be 320Wp with MS Galavanised anti rust mounting structure with Lightning arrestors and Railway earthing system to suit RDSO standard. The charge controller should be of capacity 110V/80A minimum. 4 Sq.mm Cu DC cable to be used for connection between the solar panel to Array junction boxes. The work to be carried out as instructed by site incharge. a. 320Wp poly crystalline solar panel-32 Nos. b. 80A solar Charge controller with MPPT- 1 No. c. Array Junction Box with SPD- 1 No. (Consignee Inspection)	Set	1	1181085.00	1181085.00
NS50	Supply & fixing of solar panel 24V DC 320W with all accessories. The solar panel to be procured as per RDSO spec No IRS:S:84/92(Amend 2) . The solar panel should have a performance warranty of 25 years with MNRE approved. The solar panel should be 320Wp with MS Galvanised anti rust mounting structure with Lightning arrestors and Railway earthing system to suit RDSO standard.(Inspection by Consignee)	Set	1	39775.88	39775.88
NS51	Supply and installation of STOP BOARD (Inspection by Consignee)	nos	1	9056.59	9056.59
NS52	Supply of Goods Warning Board (Inspection by Consignee)	nos	3	8080.15	24240.45
NS53	Supply and Installation of calling on board. This work involves supply and installation of 3mm prismatic retro reflective sign board.(Inspection by Consignee)	Nos	3	7024.56	21073.68

NS54	Supply of FTOT board (cable termination Rack) with 500 way terminals.(Inspection by Consignee)	Nos	10	65930.89	659308.90
NS55	Supply and fixing of 20 pair CT box for termination at locations as per the instructions of Railway Engineer. (Inspection by Consignee)	Nos	50	5807.09	290354.50
NS56	Supply and Laying of permanently solid lubricated HDPE pipes (33mm inner dia, 40 mm outer dia)as per specification No. RDSO/SPN/TC/45/2013 with revision 2 or latest with accessories including adequate No. of plastic couplers. (Inspection by RITES)	Mtrs	15000	103.52	1552800.00
NS57	Blowing/Drawing of OFC cable in Permanently solid lubricated HDPE telecom pipe (33 mm inner Dia)	Mtrs	15000	25.75	386250.00
NS58	Supply and installation of OFC joint closure conforming to TEC Spec. and splicing of Optic Fibre Cable (24 Fibres) and testing of fibre for 1310 & 1550nm.(Inspection by Consignee)	Nos	8	15746.69	125973.52
NS59	Supply and fixing of wall mounting loaded with 24 port FC-PC or SC-PC connectors interface type FMS suitable for 24F armoured OFC cable similar to RPG,3M, D link, Amphenol makes or better suitable for splicing and front patching for 24F cable with all accessories and terminating the optical fiber cable and front patching in FMS in the equipment room(Pigtails and all other materials required for splicing are to be supplied by the contractor.(Inspection by Consignee)	Nos	10	36600.43	366004.30

NS60	Supply of surge protection device (Type 1+2) for single phase with unique feature of the progressive indication of the arrestor. I(imp)(10/350US) (L-N)=25KA.I(imp)(10/350US) (L-PE)=52KA, In(8/20US)(IN=60KA, In(8/20US)(L-PE=100KA), Voltage protection level(L-N)=1.2KV, Voltage protection level(N-PE)=1.5KV with potential free contacts.(Inspection by Consignee)	Nos.	10	29426.09	294260.90
NS61	Supply of Portable Cable Fault Locator (Metallic Time Domain Reflectometer) suitable in RE/Non RE Railway territory with all accessories for locating faults such as loop and break in various twisted pair cable such as underground telecom Quad cables, signaling cables, telephone jelly filled cables, LANetc., Instrument to be supplied with protective nylon carrying bag and operator's manual. Make/Model: Radio detection Riser Bond Model 3300 or Make /Model: EC-RT(TDR) MRPC/Rail 2018 or latest equivalent along with Either OEM or OEM authorised with documentary proof. (Inspection by Consignee)	Nos.	3	213444.64	640333.92
NS62	Supply of HIGH Availablity (HA)SSDAC System with Entry and Exit end Dual track Sensor devices conforming to RDSO specification No: RDSO/SPN/177/2012 Ver 3 or Latest.(Inspection by RDSO)	Set	1	1163722.61	1163722.61

NS63	Installation, testing and commissioning of HIGH Availability (HA)SSDAC System duly supervised by the Engineer of the original equipment Manufacture by jointly signing the checklist issued by RDSO in connection with installation, testing and commissioning of SSDAC.(Supply of HASSDAC is not covered in this schedule. All other materials required for installtion,testing and commissioning shall be supplied by the contractor.	Set	1	64324.90	64324.90
NS64	Supply of Tool Kit for HASSDAC including portable data Analyser.(Inspection by Consignee)	Set	1	251818.90	251818.90
NS65	Supply and Provision of Earthing and Bonding System as per RDSO Spec No:RDSO/SPN/197/2008 or Latest. (Miscellaneous materials required for commissioning shall be supplied by the contractor). (Inspection by RDSO)	Nos	30	38008.15	1140244.50
NS66	Supply, installation and commissioning of station master's block panel for Single line-SSBPAC(D) as per RDSO /SPN/175/2005 or latest along with supply of block phone as per RDSO/SPN/191/2005 or latest. (Inspection by RDSO)	Set	1	177843.68	177843.68
NS67	Supply, installation and commissioning of microporocessor based SSBPAC(D) for single line including wiring relay rack without Relays as per RDSO /SPN/175/2005 or latest .(Inspection by RDSO)	Set	1	1147288.00	1147288.00
NS68	Supply of Surge Protection Devices for 24 VDC, Class - D for SSBPAC. (Inspection by Consignee)	Set	4	29581.50	118326.00
NS69	Supply of Surge Protection Devices for Data Lines for SSBPAC.(Inspection by Consignee)	Set	4	23138.06	92552.24

NS70	Supply of following relays1) QNNI 4F/4B railway signalling relay-4 Nos, 2) QNA1 8F/8B Relay -10Nos, 3)QLI 11F 4B Relay-4 Nos, 4)QN18F/8B relay-4 Nos.(Inspection by RDSO)	Set	1	168067.20	168067.20
NS71	Supply of Auto changeover card which includes one voice modem circuit and one E1 converter circuit (Inspection by consignee) (1 set =2 Nos)	Set	1	81984.00	81984.00
NS72	Design, Supply, Installation, Testing and Commissioning of Multi section Digital Axle Counters (MSDAC) complete system as per RDSO/SPN/176/2013 version 3 or with latest amendments. Tenderer shall design the scheme for provision of required number of evaluators, Trackside junction boxes, detection points, and track clearance relays etc.. Design should have facility to reset track section both automatic and manual resetting system with cooperative type resetting features. (Inspection by RDSO) This includes supply of all the track side junction boxes, required number of Evaluators, Detection points, Track Clearance Relays (Q series relays), Reset Panels, LV boxes, Communication equipments/interface equipments for connecting evaluators, Reset Panels and LV boxes. Provision of atleast 10% expansion slot in mother board all other accessories, including Multiplexers, Modems, Cards, Modules etc , and any other miscellaneous materials required for the work shall be supplied by the contractor. This also includes supply of inbuilt cable for Axle Detector length - upto 15m. The Reset Panels and LV boxes shall have the facility to work in Quad / OFC cables.	Numbers	18	383838.75	6909097.50

	<p>The rates of various modules equipments, sub-assembly and other stores, if any should be quoted individually with unit rate in a separate Annexure in FIN.OFFER.TAB only. (Railways will provide 230VAC/110V DC/24V DC supply for the working of the MSDAC system). (Underground Quad and OFC cables will be supplied by Railways.) Total cost shall be given against the schedule. See Technical conditions for MSDAC for Full description (Any other materials not quoted in the breakup and/or any increase in quantities listed in the break up but found necessary while commissioning should be supplied free of cost by the contractor.) All the MSDAC equipment to be provided with efficient lightning and surge protections which also to be supplied along with the system (Supply and Provision of Earthing is not included in this schedule). The connectivity between Evaluators to Evaluators, Reset box & LV box at different location/station shall be through OFC and QUAD cable with Automatic changeover arrangements for redundancy purpose.</p>				
	<p>Note: Two sets of MSDAC manuals, Trouble Shooting guidelines and related documents to be supplied for each AutoSection. Necessary underground cables for these purposes will be provided by Railways. Maximum care shall be taken to place the Evaluators in station buildings. If necessary barest Minimum Evaluators to be kept in PODATTURPETTAI Yard MSDAC room, (Quantity Numbers=Number of DPs and</p>				

	Track sections= No.of DPs - 1)(Inspection by RDSO)				
NS73	Supply of 5% of essential spares (minimum of 1 no.) subject to a fractional quantity rounded off to next higher number for PODATTURPETTAI. (Inspection by RDSO)	LS	1	448163.94	448163.94
NS74	Design, Supply, Installation, Testing and Commissioning of Multi section Digital Axle Counters (MSDAC) complete system as per RDSO/SPN/176/2013 version 3 or with latest amendments. Tenderer shall design the scheme for provision of required number of evaluators, Trackside junction boxes, detection points, and track clearance relays etc.. Design should have facility to reset track section manual resetting system with cooperative type resetting features. (Inspection by RDSO) This includes supply of all the track side junction boxes, required number of Evaluators, Detection points, Track Clearance Relays (Q series relays), Reset Panels, LV boxes, Communication equipments/interface equipments for connecting evaluators, Reset Panels and LV boxes. Provision of atleast 10% expansion slot in mother board all other accessories, including Multiplexers, Modems, Cards, Modules etc , and any other miscellaneous materials required	Numbers	58	383838.75	22262647.50

	for the work shall be supplied by the contractor. This also includes supply of inbuilt cable for Axle Detector length - upto 15m.				
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	<p>The Reset Panels and LV boxes shall have the facility to work in Quad / OFC cables. The rates of various modules equipments, sub-assembly and other stores, if any should be quoted individually with unit rate in a separate Annexure in FIN.OFFER.TAB only. (Railways will provide 230VAC/110V DC/24V DC supply for the working of the MSDAC system). (Underground Quad and OFC cables will be supplied by Railways.) Total cost shall be given against the schedule. See Technical conditions for MSDAC for Full description (Any other materials not quoted in the breakup and/or any increase in quantities listed in the break up but found necessary while commissioning should be supplied free of cost by the contractor.) All the MSDAC equipment to be provided with efficient lightning and surge protections which also to be supplied along with the system (Supply and Provision of Earthing is not included in this schedule).</p>				
	<p>The connectivity between Evaluators to Evaluators, Reset box & LV box at different location/station shall be through OFC and QUAD cable with Automatic changeover arrangements for redundancy purpose. Note: Two sets of MSDAC manuals, Trouble Shooting guidelines and related documents to be supplied for each AutoSection. Necessary underground cables for these purposes will be provided by Railways. Maximum care shall be taken to place the Evaluators in station buildings. If necessary barest Minimum Evaluators to be kept in NAGARI Yard MSDAC room, (Quantity Numbers=Number</p>				

	of DPs and Track sections= No.of DPs -1) (Inspection by RDSO)				
NS75	Supply of 5% of essential spares (minimum of 1 no.) subject to a fractional quantity rounded off to next higher number for NAGARI. (Inspection by RDSO)	LS	1	448163.94	448163.94
NS76	Supply of Tool Kit for installation and maintenance of MSDAC as per OEM requirement comprising of 1) Portable Data Analyser for downloading event logger data for analysis and report generation - 1 No. 2)True RMS Digital Multimeter of reputed make as recommended by OEM - 1 No 3)Dummy wheel - 1 No. 4) Set of Spanners and Screw drivers including soldering iron - 1 Set 5)Adjustable Torque wrench - 1 No. 6) Marking jig for drilling-1 no Any other specialised tools and measuring equipments as per OEM requirement. (Inspection by Consignee)	Set	1	205635.98	205635.98
NS77	Training of Railway personnel in MSDAC by OEM. The contractor shall provide training for Railway official in Hardware and software to enable him to install.	Man Days	95	1246.76	118442.20

NS78	Supply of Co2 fire extinguisher 4.5 Kgcapacity conforming to ISI5683 with ISI mark provided with all fitting and accessories. Make:Safex/Bharat or similar. (Inspection by Consignee) (Inspection by Consignee)	Nos.	20	23881.40	477628.00
NS79	Supply of Split Core Structure, Non Contact Measurement, Real In-Time Testing , High Accuracy , High Stability ,Resistance Range 0.01 100, Resolution 0.001, Accuracy $\pm 2\%$ rdg ± 3 dgt , Working Temp. & Humidity -20 55, 20% RH 90% RH, Detector Light and Sound Alarm , IP-54 protection , RS- 485 Communication, with extended 4 digit LCD. Display can be mounted up to 2 Mtr distance from detector unit. (Suitable for Transmission Line/ Railway facilities/Communication/Sub Station/Electrical equipment Grounding. Consists of (Model No.KOBLE 2800KB VER 3.0 or similar) : (a) Main detector Unit - 01 No., (b) LCD Enclosure fitted with Aviation Plugs-01 No. (c) Set of Detector to LCD enclosure connecting two cables each 2 mtr. length fitted with Aviation connector-01 Set (d) Rs-485 Connector with 0.5 Mtr Cable-01 No. (e) RMCU with PFC -01 No. (INSPECTION BY CONSIGNEE)	Set	3	87561.64	262684.92
NS80	Installation of Split core, real time earth monitoring equipment with all required accessories for installation	Set	3	14723.00	44169.00
NS81	Supply and Installation of covered 19inch Racks of size 2200mm x 600mm x 600mm (HCL/Vero President/Rittal/Puncom Make) complete with all fittings including DC Fans (48V) - 2nos, separator sheet/plate to keep testing equipment - 1No and AC power distribution panel (Horizontal Fitting) with Power sockets and Fuse Protection (Minimum 6 Nos	Nos	2	54536.90	109073.80

	of 230V -15A/5A combines) and other accessories (Inspection by Consignee)				
NS82	Supply of Modular Terminal Block of 2.5sq.mm 2 IN 2 OUT type disconnect type of Wago/Phoenix make or similar along with following accessories as per RDSO SPN No RDSO/SPN/189/2004. The current capacity of 16A and more. The terminals should have marking at center to view description from front (Inspection by Consignee)	Nos	1500	178.32	267480.00
NS83	Supply of FUSE terminal block with LED indication upto 2.5sq.mm screw type 1 IN 1 OUT (Suitable 400mA, 630mA, 1A, 1.6A, 2A, 4A, 6.3A & 10A) as per RDSO/SPN/189/2004 (Without Fuse) (Inspection by Consignee)	Nos	300	190.32	57096.00
NS84	Supply of DIN channel for the terminal (Inspection by Consignee)	Mtrs	250	315.30	78825.00
NS85	Supply of END plates for modular terminal block (Inspection by Consignee)	Nos	110	33.31	3664.10
NS86	Supply of END clamp for modular terminal block (Inspection by Consignee)	Nos	110	23.74	2611.40
NS87	Supply of Shorting Link insulated Grey in colour (Inspection by Consignee)	Nos	110	19.25	2117.50
NS88	Supply of operating tool, screw driver and stripper (Inspection by Consignee)	Nos	2	11201.66	22403.32
NS89	Supply of FUSE Links of (400mA, 630mA, 1A, 1.6A, 2A, 4A, 6.3A & 10A (Inspection by Consignee) (Per Unit = Per Fuse)	Nos	250	56.17	14042.50

NS90	Fixing of Modular terminal block/fuse block along with accessories with provision of fixing holes on hylam sheets/side angles of Loc Box and fixing by galvanised nuts and bolts. This includes fixing of DIN channel for cable termination on modular terminal.	Nos	1800	26.25	47250.00
NS91	Supply of 10way Annunciator with Push button switches and having conference facility. Model No AM-10 similar to Epsilon, Telelinks or better (Inspection by Consignee)	Set	3	16273.60	48820.80
NS92	Supply of Handheld Digital Insulation Resistance Tester of Model No 505A of Stanlay make or better. (Inspection by Consignee)	Nos	3	46086.84	138260.52
NS93	Supply and installation of class A Franklin rod type lightning protection system 1) This work includes supply and installation of air terminal Franklin rod of size 9.5 mm dia solid rod of 1 mtr length. 2) supply and installation of 3 mtrs GI pipe 40 mm dia with anchoring wire and clamps. this work includes concreting of foundation of size 300mm x 300mm x 1000mm with 1:3:6 ratio concrete for installation of GI pipe. (all the materials required for the above work shall be supplied by the contractor (Inspection by Consignee)	Set	3	62978.83	188936.49
NS94	Supply and Installation of Copper tape of size 25mm x 3mm for Down conductor from Franklin Rod to Maintenance free earth. This work includes installation of insulated stand-offs at every 1 Mtr. interval for fixing the Copper tape. This work also includes Exothermic welding of Copper tape to the Franklin rod and the maintenance free earth for high conductivity. (All the materials required for the above work shall	Mtrs	400	644.44	257776.00

	be supplied by the Contractor (Inspection by Consignee)				
NS95	Supply & Provision of Surge Protection Device (Lightning and transient surge protection for power line) and the system shall have stage1 (class B) and Stage 2 (class C) against Lightning electromagnetic impulse configuration. The protection of Type 1 and 2 against Lightning electromagnetic Impulse (LEMP) and other high surges, shall be provided at the incoming of the power line at the stations before the power equipments as per the instructions of Engineer in charge at site.(The surge protection devices as per as per RDSO spec No. RDSO/SPN/144/2006 or latest and technical specification attached with tender documents and shall be of approved make like ZOTUP, OBO, DEHN, PHOENIX, LPI etc ., and other miscellaneous materials required for the work shall be supplied by the contractor) (Inspection by Consignee)	Set	4	38504.87	154019.48
NS96	Supply, installation and wiring of 230/24V - 1A transformer rectifier conforming to RDSO spec. IRS S 91/2014 with latest Amendment in power room for LVR (Inspection by Consignee)	Nos	2	9915.88	19831.76

NS97	Supply, fabrication and provision of power equipment stand at stations/Hut/ power room at stations as per drawing No. Proj/SG/MS/54/2008 (Inspection by Consignee)	Set	3	24005.17	72015.51
NS98	Supply, installation and wiring of 230V/110V -3KVA Transformer confirming to RDSO spec. No. IRS:S.72/88 Amendment 2 or latest (Inspection by RDSO)	Nos	3	25444.80	76334.40
NS99	Supply, installation and wiring of Voltage Stabilizer 230V/3KVA as per RDSO specification IRS:S.74-89 Amendment 6 or latest Ferro Resonant type Automatic AC Voltage Regulator. (Inspection by RDSO)	Nos	6	70863.24	425179.44
NS100	Supply and provision of Half Split DWC duct of standard make 120mm outer dia and 103.5 mm inner dia in already excavated trenches.(Inspection by RITES)	Mtrs	32000	141.75	4536000.00
NS101	Supply of Digital Multimeter similar to Stanley Make Model 195M or better with accessories (Inspection by Consignee)	Nos	5	24456.10	122280.50
NS102	Identification of signalling/power/telecom cables going to old FTOT and re-routing to Location Box/Junction Box. The work includes excavation of trench and identify the cables and re-route to Location box by cutting the cable without damaging. Termination is covered under SOR schedule (Per Unit = Per Cable)	Per Unit	60	2343.60	140616.00
NS103	Supply of Ethernet LAN Cable - CAT 5e/6e (Inspection by Consignee)	Metre	2000	32.55	65100.00
Total Annexure A3					98174096.87
Annexure A4					

NS104	SUPPLY OF PVC INSULATED ARMoured, UNSCREENED UNDERGROUND RAILWAY SIGNALLING CABLE OF ALUMINIUM POWER CABLE OF SIZE 2C X 25 Sq mm AS PER SPECIFICATION No. IRS:S-63/2014 AND IS :1554 (PART- 1) [REV 4.0] OR LATEST (INSPECTION BY RDSO).	Metre	10000	158.00	1580000.00
NS105	SUPPLY OF PVC INSULATED, ARMoured, UNSCREENED, RAILWAY SIGNALLING copper CABLE OF SIZE 24C X 1.5 Sq mm as per RDSO SPECIFICATION No. IRS:S-63/2014 [REV 4.0] OR LATEST (INSPECTION BY RDSO)	Metre	92000	438.87	40376040.00
NS106	SSUPPLY OF PVC INSULATED, ARMoured, UNSCREENED, UNDERGROUND RAILWAY SIGNALLING COPPER CABLE OF SIZE 12C X 1.5 Sq mm AS PER RDSO SPECIFICATION NO IRS:S-63/2014 [REV 4.0] OR LATEST (INSPECTION BY RDSO)	Metre	90000	259.69	23372100.00
NS107	SUPPLY OF TELECOM CABLE OF SIZE 24 FIBRE ARMoured OPTICAL FIBRE CABLES AS PER RDSO SPECIFICATION ON IRS:TC 55/2006 REV.1 AMDT. NO 3 OR LATEST (INSPECTION BY RDSO)	Metre	33000	101.14	3337620.00
NS108	SUPPLY OF TELECOM CABLE 6 QUAD UNDERGROUND RAILWAY JELLY FILLED TELECOM QUAD CABLES FOR SIGNALLING AND TELECOM INSTALLATIONS AS PER SPECIFICATION NO. IRS : TC/30/2005 (VER.1), AMENDMENT NO. 5 OR LATEST. THE SIZE OF CONDUCTOR IS 0.9 mm dia (INSPECTION BY RDSO)	Metre	70000	377.21	26404700.00

NS109	SUPPLY OF TELECOM CABLE POLYTHENE INSULATED, POLYTHENE SHEATED JELLY FILLED TELEPHONE CABLE WITH POLY AL MOISTURE BARRIER 10 PAIR X 0.63 mm AS PER RDSO SPEC. NO. IRS: TC 41/97, AMENDMENT NO 3 OR LATEST (INSPECTION BY RDSO)	Metre	6000	155.43	932580.00
NS110	SUPPLY OF PVC INSULATED ARMoured, UNSCREENED UNDERGROUND RAILWAY SIGNALLING COPPER CABLE OF SIZE 2C X 2.5 Sq mm AS PER RDSO SPECIFICATION NO IRS:S-63/2014 (Rev. 4.0) or latest (INSPECTION BY RDSO)	Metre	20000	91.89	1837800.00
NS111	Supply of POLYTHENE INSULATED SHEATHED JELLY FILLED TELEPHONE CABLE 20 PAIR X 0.63 MM WITH POLY- AL MOISTURE BARRIER AS PER SPECIFICATION NO. IRS: TC - 41/97 WITH AMENDMENT NO. 1 TO 3 OR LATEST (INSPECTION BY RDSO)	Metre	3000	186.44	559320.00
NS112	Supply of Fonzel Almirah Steel shelving cabinets(Fonzel Make) (Inspection by Consignee)	Nos	6	32085.24	192511.44
NS113	SUPPLY AND COMMISSIONING OF SMPS BASED INTEGRATED POWER SUPPLY FOR INTERLOCKING / EI STATION FOR 6 TO 10 LINES IN RE AREA AS PER SPECIFICATION NO. RDSO /SPN/ 165/2012 VER.3.0 OR LATEST AND AS PER DRAWING NO.SDO/IPS/PI-6L/RE/004/ALT.2 . ALONG WITH LMLA BATTERY BANK AND TECHNICAL DETAILS ENCLOSED. ALL DC-DC CONVERTERS SHOULD BE PROVIDED WITH SPDs (INSPECTION BY RDSO)	Nos	3	1360934.08	4082802.24

NS114	SUPPLY OF MAIN LED SIGNAL 2 ASPECT SET CONSISTING OF ONE RED, ONE YELLOW TO WORK ON 110V AC RETROFITTABLE IN EXISTING CLS HOUSING AND COMPATIBLE WITH AC LED ECR AS PER RDSO SPECIFICATION NO.RDSO/SPN/199/2010 (REV 1.1) OR LATEST (RDSO INSPECTION)	Nos	10	19075.88	190758.80
NS115	SUPPLY OF MAIN LED SIGNAL 3 ASPECT SET CONSISTING ONE RED, ONE GREEN, ONE YELLOW TO WORK ON 110 V AC RETROFITTABLE IN EXISTING CLS HOUSING AND COMPATIBLE WITH AC LED ECR AS PER RDSO SPECIFICATION NO.RDSO/SPN/153/2011 (REV 4.1) OR LATEST (RDSO INSPECTION)	Nos	11	28564.85	314213.35
NS116	SUPPLY OF MAIN LED SIGNAL 2 ASPECT SET CONSISTING OF ONE RED, ONE GREEN TO WORK ON 110V AC RETROFITTABLE IN EXISTING CLS HOUSING AND COMPATIBLE WITH AC LED ECR AS PER RDSO SPECIFICATION NO.RDSO/SPN/199/2010 (REV 1.1) OR LATEST (RDSO INSPECTION)	Nos	10	19495.57	194955.70
NS117	Supply of SMPS based Integrated power supply system as per RDSO spec No. RDSO/SPN/165/2012(ver 3.0) or latest with ammendments for Interlocked LC gate in RE/Non-RE area as per drawing no. SDO/IPS/LC/007 vide Annexure II-F of RDSO specification with all accessories. (Inspection by RDSO)	Set	1	935197.20	935197.20

NS118	Supply of Route LED Lighting Unit 110v AC Retrofittable in nexisting CLS housing and compatible with AC LED ECR as per RDSO spn RDSO/SPN/153/2011 Rev.4.1 or latest (Inspection by RDSO)	Nos	80	6510.00	520800.00
NS119	Supply of AC immunized plug in type "QNA1K" DC neutral line Relay 24V, 1000 ohms, 6F/6B contacts. Front contacts Metal to Carbon and Back contacts Metal to Carbon complete with plug board retaining clips and connectors conforming to BRS 931, IRS S@ 58<44@ IRS S@ 58"44@ IRS S:23 & RDSO specification. (Inspection by RDSO)"	Nos	100	5990.88	599088.00
NS120	Supply and provision of 2 Ton 5-star High wall split make AC Voltas,Ogeneral,Mitsubishi or similar(Inspection by Consignee)	Nos	2	81160.00	162320.00
Total Annexure A4					105592806.73
Total Annexure A5					
NS121	Supply of Aspiration type smoke detector. Highly sensitive smoke aspiration system for monitoring of rooms and equipment's for earliest possible fire detection For Relay rooms as per RDSO spec No.RDSO/SPN/217/2021 Ver.3.0 or latest. (Inspection by RDSO)	Numbers	3	674353.93	2023061.79
NS122	Supply of single Loop Analog addressable Fire Alarm system with loop capacity of connecting maximum 50 devices. The panel shall have a built in power supply and battery charger.RDSO Spec.RDSO/SPN/217/2021 Ver.3.0 or latest. (Inspection by RDSO)	Numbers	3	285919.67	857759.01
NS123	Supply of Multi Sensor detector Dual Optical/Thermal with rotaries and back boxes including base. RDSO Spec.No.RDSO/SPN/217/2021 Ver.3.0 or latest. (Inspection by RDSO)	Numbers	50	14716.24	735812.00

NS124	Supply of Addressable Single action indoor manual call point with back box (RED) and also including key. RDSO Spec. No. RDSO/SPN/217/ 2021 Ver.3.0 or latest. (Inspection by RDSO)	Numbers	3	8709.61	26128.83
NS125	Supply of Sounder having range of 81 dbA to 92 dbA. RDSO Spec. No.RDSO/SPN/217/2021 Ver.3.0 or latest.(Inspection by RDSO)	Numbers	6	10476.68	62860.08
NS126	Supply of Intelligent addressable Monitor module having facility. RDSO Spec. No.RDSO/SPN/217/2021 Ver.3.0 or latest. (Inspection by RDSO)	Numbers	15	8709.61	130644.15
NS127	Supply of Intelligent addressable control Module RDSO/SPN/217/2021 Ver.3.0 or latest.(Inspection by RDSO)	Numbers	6	8709.61	52257.66
NS128	Supply of 2core 1.5sq.mm FRLS Copper unarmored cable with necessary clamps and fittings. RDSO Spec. No. RDSO/SPN/217/2021 Ver.3.0 or latest.(Inspection by RDSO)	Metre	1400	282.79	395906.00
NS129	Supply of LHS Cable RDSO Spec.No.RDSO/SPN/ 217/2021 Ver.3.0 or latest. (Inspection by RDSO)	Metre	350	2060.42	721147.00
NS130	Supply of LHS control module. RDSO Spec. No.RDSO/SPN/217/2021 Ver.3.0 or latest. (Inspection by RDSO)	Numbers	6	142794.30	856765.80
NS131	Supply and Installation of Air sampling CPVC Pipes with all required accessories for Aspiration system.(Inspection by RDSO)	Lumpsum	6	69011.18	414067.08
NS132	Supply of Relay Module for connection with Datalogger as per RDSO Spec No. RDSO/SPN/217 /2021 ver 3.0 or latest.(Inspection by RDSO)	Numbers	6	9448.12	56688.72
NS133	Supply and Installation of Incabinet Automatic Fire Suppression System(ICAFSS) for Electronic Racks as per RDSO specification RDSO/SPN/218/2016 Ver 1.0 - d2 or latest. Refer Deatiled guidelines for	Set	2	2447370.00	4894740.00

	Specifications(Inspection by RDSO)				
NS134	Installation, testing and commissioning charges of fire alarm system including programming of devices and fire alarm panel etc., supplied vide NS- 121 to 133	Station	6	91364.08	548184.48
NS135	Supervision, programming ,installation, testing and Commissioning of Aspiration smoke detection supplied vide NS- 121	Numbers	6	78162.29	468973.74
NS136	Supply of Field IOT Devices with Basic Functioning of capturing the parameters from the field gears like DC track Circuit, AFTC, Signals,point Machines, LC Gate, with communication hardware to transmit the data to the station gateway system in any variant or combinations of channels in FTU 's/ Field IOT Devices with sum of combinations of all channels of various FTU's / Field IOT Devices across the station yard (Field IOT device shall support minimum 8 channels) confirming to FRS RDSO/RDPM/FRS/2021 dates 06.05.2021 or latest.(Inspection by RITES)	Per Unit	520	4942.46	2570079.20
NS137	Supply of non intrusive type current sensors Variant : 0-1 Amp DC/0-10 Amp DC /0-1A AC as per RDSO/RDPM/FRS/2021 dates 06.05.2021 or latest.Note: The sensors can be external or can be mounted/integrated in the IOT Device. (Inspection by RITES)	Nos	210	4832.70	1014867.00

NS138	Supply of galvanically isolated voltage transducers or voltage sensor or voltage sensing channel with high impedance and minimum circuit loading (in no case shall be more than 5 mA Variant : 0-10 V DC/ 0-50 V DC/ 0-150 V DC, 0-150 V AC as per RDSO/RDPM/FRS/2021 dates 06.05.2021 or latest.Note: The sensors or Voltage sensing channel can be external or can be mounted/integrated in the IOT Device.(Inspection by RITES)	Nos	320	4819.44	1542220.80
NS139	Supply of station gateway equipment system with Edge Computing to receive data from various IOT Devices in field and Relay Room/Equipment Room as per RDSO/RDPM/FRS/2021 dates 06.05.2021 or latest.(Inspection by RITES)	Nos	2	276830.85	553661.70
NS140	Supply of IOT device for sensing 110V DC Battery bank parameters including current and voltage transducers as per RDSO/RDPM/FRS/2021 dates 06.05.2021 or latest.(Inspection by RITES)	Nos	2	198955.80	397911.60
NS141	Supply of A) Desktop Application for Local Console b)GPS based Maintenance Information system c)Mobile application (IOS & Android) d) provision for cloud access,UI,configuration ,database &report generation along with integration of Remote Diagnostic & Predictive Maintenance System including tools for alerts analysis & System generated Maintenance schedule. (Inspection by RITES)	Nos	2	444513.31	889026.62
NS142	Provision of Cloud based WEB Portal for monitoring of preventive maintenance of signalling gears of yard.	Nos	2	163833.57	327667.14

NS143	Supply of Diagnostic Tool Kit :1* Leakage clamp meter of reputed make,1 * Multimeter of reputed make,1* Android tablet of reputed make,1 * Label Printer,10* caste for label Printer. (Inspection by RITES)	Stn	2	109681.22	219362.44
NS144	Supply of 4 Channel serial interface for Monitoring of Axle Counter Error codes through reset boxes/Datalogger/EI .(Inspection by RITES)	Nos	2	51331.89	102663.78
NS145	Supply and installation of LRS i5 /4GB/256GB SSD/Windows 10/Intel Integrated Graphics,32inch Display of Reputed Make & UPS 600VA.(Inspection by RITES)	Nos	2	85070.18	170140.36
NS146	Installation, Testing and Commissioning of FTU's/ Field IOT Devices across the station yard totaling per channels of current/ Voltage/ Frequency. [Required wiring materials , sealing compound and all other required miscellaneous materials shall be supplied by the contractor.All underground cable will be supplied by the Railways.]	Nos	520	163.99	85274.80
NS147	Installation, Testing and Commissioning of FTU's/ Field IOT Devices across the station yard totaling per channels of DAC.[Required wiring materials , sealing compound and all other required miscellaneous materials shall be supplied by the contractor.All underground cable will be supplied by the Railways.]	Nos	2	14117.58	28235.16
NS148	Installation, Testing and Commissioning of IOT device for sensing 110V DC Battery bank parameters including current and voltage transducers as per RDSO/RDPM/FRS/2021 dates 06.05.2021 or latest[Required wiring materials , sealing compound and all other required miscellaneous materials shall be supplied bythe contractor.All	Nos	2	27525.75	55051.50

	underground cable will be supplied by the Railways.]				
Total Annexure A5					20201158.44
ANNEXURE-A6					
AMC					
<p>The value of AMC Schedule shall be taken into consideration for evaluation of the tender but shall not form part of the Contract Agreement for the work. The AMC Contract Agreement shall be executed separately with the Division and only after the Contract Agreement for AMC is executed, Security Deposit shall be released to the Contractor.</p> <p>The Tenderers are requested to quote single percentage on the total value of Annexure-A6 Comprehensive Annual Maintenance contract for Electronic interlocking systems supplied against the schedule no. NS2 & NS6 of Annexure A2 as per technical specifications after the expiry of maintenance period.</p>					
NS149	1st Year AMC for Nagari (Inclusive of GST)	Station	1	1455000.00	1455000.00
NS150	2nd Year AMC for Nagari (Inclusive of GST)	Station	1	1595000.00	1595000.00
NS151	3rd Year AMC for Nagari (Inclusive of GST)	Station	1	1745000.00	1745000.00
NS152	4th Year AMC for Nagari (Inclusive of GST)	Station	1	1917500.00	1917500.00
NS153	5th Year AMC for Nagari (Inclusive of GST)	Station	1	2124400.00	2124400.00
NS154	1st Year AMC for Podatturpettai (Inclusive of GST)	Station	1	650000.00	650000.00
NS155	2nd Year AMC for Podatturpettai (Inclusive of GST)	Station	1	700000.00	700000.00
NS156	3rd Year AMC for Podatturpettai (Inclusive of GST)	Station	1	750000.00	750000.00
NS157	4th Year AMC for Podatturpettai (Inclusive of GST)	Station	1	800000.00	800000.00
NS158	5th Year AMC for Podatturpettai (Inclusive of GST)	Station	1	850000.00	850000.00
Total Annexure A6					12586900.00

Instructions for Quoting Rates in Financial rates/percentage :

SL No.	Schedule	Scope	Instruction/Remarks
1.	Schedule –A1	Non SOR Items (S&T)	Detailed schedule has been uploaded on IREPS web site www.ireps.gov.in Tenderer has to submit percentage above/below /par for Schedule- A1,A2,A3,A5,A6 individual rate in INR for each item in A4.
2.	Schedule – A2,A3,A4,A5&A6	Non SOR Items (S&T)	

Note:

- 1) Schedule of works and supplies available in Chapter-4 is to facilitate the tenderer to understand the scope of work and for reference only. However, rate shall be quoted in IREPS web portal only.
- 2) Refer Detailed Guidelines Chapter-4A for description about the schedules and Inspection clause.
- 3) There is no Volume-I&II in this tender
- 4) All rates must be submitted in the tab for financial offer only on the E-tendering portal. The financial bid will be opened subsequently (on a date which will be notified later) for the tenderer who fulfil the laid down technical and financial eligibility criteria. The offers which are found techno-commercially ineligible will be dismissed.
- 5) Rates of stores, materials and works are to be quoted according to the (online web portal) proforma of “Schedule of work and supplies” (Financial Bid). Rates in the offer should be in Indian Rupees only. Offers in foreign currency will not be accepted.
- 6) Tenderer has to submit percentage above/below /par for Schedule-A1, A2, A3, A5 &A6 individual rate in INR for each item in A4 in the Financial Bid in IREPS online web portal only.
- 7) The tenderer shall quote the complete rate for all items of works given in the schedule of works and supplies in the Financial Bid in IREPS portal only to complete entire scope of

work and make system completely functional. Offer received for only part of schedule will not be considered and bid shall be rejected.

INSPECTION OF EQUIPMENTS/MATERIALS

Supply of materials as per the scope of schedule of works shall be with inspection as detailed below:

I) WITH RDSO INSPECTION :

1. NS-2 - Supply of Microprocessor based Distributed EI System.
2. NS-4 - Supply of ESSENTIAL spares.
3. NS-7 - Supply of Microprocessor based Centralized EI System.
4. NS- 9 - Supply of ESSENTIAL spares @10%
5. NS-11 - Supply of Modular Power Supply arrangement for EI System
6. NS-12 - Supply of Modular Power Supply arrangement for EI System.
7. NS-17 - Supply of Relay based Emergency Panel.
8. NS-18 - Supply of Datalogger.
9. NS-24 - Supply of Earthing arrangements for EI cabin.
10. NS-42 - Supply of Eight channel Earth leakage detector
11. NS-62 - Supply of HIGH Availability (HA)SSDAC System.
- 12.NS-65 - Supply of Earthing and Bonding System.
- 13.NS-66 - Supply of station master's block panel
- 14.NS-67 – Supply of microporocessor based SSBPAC
- 15.NS-70 - Supply of following relays QNNI 4F/4B railway signalling relay-4 Nos
- 16.NS-72 - Supply of MSDAC
- 17.NS-73 - Supply of 5% of essential spares for MSDAC.
- 18.NS-74 - Supply of MSDAC
- 19.NS-75 - Supply of 5% of essential spares for MSDAC.
- 20.NS-98 - Supply of 230V/110V -3KVA Transformer.
- 21.NS-99 - Supply of Voltage Stabilizer 230V/3KVA
- 22.NS-104 - Supply of Railway Signalling Cable Size 2C X 25Sq mm
- 23.NS-105 - Supply of Railway Signalling Copper Cable of size 24C X 1.5 SQ
- 24.NS-106 - Supply of Railway Signalling Copper Cable of size 12C X 1.5 Sq mm
- 25.NS-107 - Supply of Telecom Cable of size 24 Optical Fibre Cables
- 26.NS-108 - Supply of Telecom Cable 6-Quad Underground Telecom Cable
- 27.NS-109 - Supply of Telecom Cable 10 Pair X 0.63 mm.
- 28.NS-110 - Supply of Railway Signalling Copper Cable of size 2C X 2.5 Sq mm
- 29.NS-111 - Supply of Telephone Cable 20pair
- 30.NS-113 - Supply of SMPS based Integrated Power Supply
- 31.NS-114 - Supply of Main LED Signal 2Aspect Set.
- 32.NS-115 - Supply of Main LED Signal 3Aspect Set.
- 33.NS-116 - Supply of Main LED Signal 2Aspect Set.
- 34.NS-117 - Supply of SMPS based Integrated power supply system

- 35.NS-118 - Supply of Route LED Lighting Unit.
- 36.NS-119 - Supply of AC immunized plug in type "QNA1K" DC Relay
- 37.NS-121 - Supply of Aspiration type smoke detector.
- 38.NS-122 - Supply of single Loop Analog addressable Fire Alarm system
- 39.NS-123 - Supply of Multi Sensor detector Dual Optical/Thermal with rotaries.
- 40.NS-124 - Supply of Addressable Single action indoor manual call point
- 41.NS-125 - Supply of Sounder.
- 42.NS-126 - Supply of Intelligent addressable Monitor module having facility.
- 43.NS-127 - Supply of Intelligent addressable control Module.
- 44.NS-128 - Supply of 2core 1.5sq.mm FRLS Copper un armoured cable.
- 45.NS-129 - Supply of LHS Cable.
- 46.NS-130 - Supply of LHS control module.
- 47.NS-131 - Supply and Installation of Air sampling CPVC Pipes.
- 48.NS-132 - Supply of Relay Module.
- 49.NS-133 - Supply and Installation of Incabinet Automatic Fire Suppression System(ICAFSS) for Electronic Racks

II) WITH RDSO / RITES INSPECTION:

1. NS-35 - Supply of Polyolefin channel width 240/340 mm, height 155/230 mm
2. NS-37 - Supply of trunking and capping.
3. NS-45 - Supply of High density polyethylene pipes (HDPE)
4. NS-56 - Supply and Laying of permanently solid lubricated HDPE pipes.
5. NS-100 - Supply and provision of Half Split DWC duct.
6. NS-136 - Supply of Field IOT Devices.
7. NS-137 - Supply of non intrusive type current sensors.
8. NS-138 - Supply of voltage transducers or voltage sensing channel
9. NS-139 - Supply of station gateway equipment system with Edge Computing.
- 10.NS-140 - Supply of IOT device for sensing 110V DC
- 11.NS-141 - Supply of Desktop Application for Local Console.
- 12.NS-143 - Supply of Diagnostic Tool Kit :1* Leakage clamp meter.
- 13.NS-144 - Supply of 4 Channel serial interface.
- 14.NS-145 - Supply and installation of LRS i5.

III) WITH CONSIGNEE INSPECTION :

1. NS-13 - Supply of Modular Power supply arrangement
2. NS-14 - Supply of Isolated Ripple Free Battery Charger
3. NS-20 - Supply of Dual Card RS232 to E1 converter
4. NS-21 - Supply of Protocol Converter to seamlessly interface
5. NS-22 - Supply of Fault Analysis Terminal for analysis for Datalogger
6. NS-23 - Supply of Laser Color Printer for Fault Analysis Terminal
7. NS-27 - Supply and Installation of work space as per enclosed

8. NS-28 - Supply and Fabrication of Table
9. NS-29 - Fabrication and Supply of wall mounted maintainers Tool kit
10. NS-30 - Supply of Data concentrator along with one Dual card Modem
11. NS-32 - Supply of Embedded Industrial Grade PC with accessories
12. NS-33 - Supply of Commercial Grade VDU of size 55 inch - Full HD
13. NS-40 - Supply of Data logger embedded software
14. NS-41 - Supply of Bolt type 32 A HRC fuse base and carrier
15. NS-43 - Supply of Digital Insulation tester (Megger) 50V-500V/1000Mohm
16. NS-44 - Supply of Digital AC/DC clamp meter cable of measuring low
17. NS-48 - Supply of normal joint using Thermo shrink jointing kit
18. NS-49 - Supply of 10KW of OFF grid solar power plant system.
19. NS-50 - Supply & fixing of solar panel 24V DC 320W with all accessories.
20. NS-51 - Supply and installation of STOP BOARD
21. NS-52 - Supply of Goods Warning Board
22. NS-53 - Supply and Installation of calling on board
23. NS-54 - Supply of FTOT board
24. NS-55 - Supply and fixing of 20 pair CT box
25. NS-58 - Supply of OFC joint closure
26. NS-59 - Supply of wall mounting loaded with 24 port FC-PC or SC-PC
27. NS-60 - Supply of surge protection device
28. NS-61 - Supply of Portable Cable Fault Locator
29. NS-64 - Supply of Tool Kit for HASSDAC including portable data Analyser
30. NS-68 - Supply of Surge Protection Devices for 24 VDC, Class - D
31. NS-69 - Supply of Surge Protection Devices for Data Lines for SSBPAC.
32. NS-71 - Supply of Auto changeover card.
33. NS-76 - Supply of Tool Kit for installation and maintenance of MSDAC.
34. NS-78 - Supply of Co2 fire extinguisher 4.5 Kg capacity
35. NS-79 - Supply of Split Core Structure.
36. NS-81 - Supply of covered 19inch Racks of size 2200mmx600mmx600mm.
37. NS-82 - Supply of Modular Terminal Block of 2.5sq.mm 2 IN 2 OUT type
38. NS-83 - Supply of FUSE terminal block with LED indication up to 2.5sq.mm
39. NS-84 - Supply of DIN channel for the terminal
40. NS-85 - Supply of END plates for modular terminal block
41. NS-86 - Supply of END clamp for modular terminal block
42. NS-87 - Supply of Shorting Link insulated Grey in colour.
43. NS-88 - Supply of operating tool, screw driver and stripper.
44. NS-89 - Supply of FUSE Links (400mA, 630mA, 1A, 1.6A, 2A,4A, 6.3A,10A
45. NS-91 - Supply of 10way Annunciator with Push button switches.
46. NS-92 - Supply of Handheld Digital Insulation Resistance Tester.
47. NS-93 - Supply of class A Franklin rod type lightning protection System.
48. NS-94 - Supply of Copper tape of size 25mm x 3mm
49. NS-95 - Supply of Surge Protection Device
50. NS-96 - Supply of 230/24V - 1A transformer rectifier.
51. NS-97 - Supply, fabrication and provision of power equipment stand.

- 52. NS-101 -Supply of Digital Multimeter similar to Stanley Make
- 53. NS-103 - Supply of Ethernet LAN Cable - CAT 5e/6e.
- 54. NS-112 - Supply of Fonzel Almirah Steel shelving cabinets.
- 55. NS-120 - Supply of 2 Ton 5-star High wall split make AC

Note: Guidelines on latest Public Procurement Policy & other related orders regarding
“Make in India “issued by Government of India shall be scrupulously followed.

TECHNICAL CONDITIONS FOR ELECTRONIC INTERLOCKING

1. Scope of work:

Design, Supply, installation, wiring, testing and commissioning of Hot standby Distributed electronic Interlocking System with seamless change over as per RDSO Spec No. RDSO/SPN/192/2019 version 2.0 or latest at Nagari and Centralized electronic Interlocking System with seamless change over as per RDSO Spec No. RDSO/SPN/192/2019 version 2.0 or latest at Podaturpettai.

Arrangement of the system:

- i. Distributed EI with Hot-Standby configuration having main EI at central cabin of Nagari station and Hut at Podaturpettai side of Nagari station.
- ii. Centralized EI with Hot-Standby configuration for Podaturpettai station.

General conditions:

- (a) The Certificates and Documents confirming RDSO approval for software and hardware versions shall be submitted after award of contract.
- (b) The specifications mentioned in the schedule or tender document are to be followed.
- (c) Latest drawings and guidelines are to be followed while execution of work.
- (d) Tenderer has to submit the Undertaking that equipment for EI shall be procured from RDSO approved sources and installation, testing and commissioning of EI shall also be got done from the same source including after sales support required during the warranty period
- (e) After the award of contract, Tenderer shall get MOU with RDSO approved source covering supply of equipment for EI, Installation, Testing and commissioning of EI by the same RDSO approved source including after sales support required during the warranty period, before supply of equipment is undertaken.

Further, tenderer shall ensure that, in the MOU, the original manufacturer shall

- (i) Offer technical support for supply, installation and commissioning of the equipment.
- (ii) Undertake verification and certification of pre-commissioning checklist as per RDSO guidelines.
- (iii) Sign on the Application for Technical System approval by RDSO/CSTE to ensure that the installation is as per the RDSO stipulations.
- (iv) Impart training to Railway officials at their factory premises and at site.
- (v) Supply of all the required spares as per **NS-4 & NS-9** of tender schedule before commissioning of EI system and clarification on the

list of essential spares are essentially required for the maintenance of EI.

- (vi) Guarantee to support till commissioning of all stages and 12 months thereafter.
- (vii) Offer Warranty for equipment's for a period of one year from the date of commissioning.
- (viii) Guarantee to supply spares for a minimum period of 20 years from the date of commissioning.
- (ix) Support Railways for entering into AMC after the expiry of warranty period.
- (x) Shall give list of Modules, cards, Accessories, connectors, etc. and its break up cost of each of them.

The tenderer shall submit the breakup of quantity and cost of the individual items after issue of LOA. (i.e., EI Cards, EI Racks, Relay Racks, Operator VDU, Maintenance VDU, Embedded PC, OFC/Media Converters, wiring, communication equipment, testing, commissioning etc.) as required for commissioning of EI as per enclosed tentative sketch of **Nagari** and **Podaturpettai** station. Any increase in quantity of items quoted or any requirement of additional items other than that shown in the breakup, but is required for commissioning the system as per the tentative SIP, should be supplied by the contractor free of cost.

2. Technical requirements

- (a) Compatibility: The EI system to be provided shall be compatible with the existing Outdoor/any other equipment in use such as MSDAC, HASSDAC, UFSBI etc. Any interface required to be connected to the existing equipment to make the system functional shall be procured and installed by the tenderer. No changes in the existing system will be undertaken by railways for the purpose of commissioning of EI system.
- (b) The interface equipment / device to the field signalling gears and operators VDUs should be complete and compatible with the signalling equipment existing at site in the stations. Any equipment/work required to make the interface equipment match with outdoor signalling equipment shall be done by the tenderer without any extra cost. Railway will not undertake any change in outdoor signalling equipment nor shall bear any extra cost on account of changes/ addition required for ensuring compatibility of interface devices with outdoor signalling equipment.
- (c) The EI system shall be installed and commissioned with dual VDUs for operations of points, signals, LC gates etc. The station is proposed to be commissioned with RDSO-based circuit practice. The design of bit chart shall

be as per guidelines of Southern Railway. The operators' VDUs shall be interfaced with EI.

- (d) Station Master is to be provided with dual VDUs systems with changeover facility. Where SM room and equipment room are situated in two different building, augmented surge protection/ Optical Interface shall be provided by EI manufacturer.
- (e) CIU to be placed in the Central Relay room and OCs shall be placed in EI hut located at Podaturpettai side of Nagari yard. For communication between CIU and OCs, OFC arrangement with redundancy shall be provided. All necessary connectors and interface equipment for OFC connectivity shall be provided by tenderer.
- (f) EI system shall comply with Instructions issued by RDSO in terms of Technical Advisory Notes and improvements.
- (g) Various communication modules required for communication between EI, operator VDUs, maintenance terminal, object controller and Data logger are to be supplied and installed by the Tenderer as per schedule of works. All communication modules shall be of industrial grade.
- (h) The EI equipment/ Communication modules shall be compatible with OFC Single Mode, with RDSO Spec IRS:TC-55/2006. Any further media required as per OEM shall be provided by the tenderer free of cost.
- (i) Protocol converters and media convertors as required for connecting the EI system to Data loggers shall be provided by the contractor as per Schedule of works. Data loggers with required number of Digital and Analog inputs shall be supplied by the tenderer as per schedule of works. Networking of Data logger to the control room also to be carried out by the Contractor.
- (j) The time clock of EI system should be updated/ synchronized with data logger and it shall be possible to log the events in chronological order in case of use of single/ multiple EI with Data logger through CMU(central monitoring unit), if provided in network, otherwise through protocol converter.
- (k) External data logger shall be connected in such a way both for logging of analog/ digital inputs of external functions and for EI modules inherent diagnostics
- (l) All the inputs and outputs of OCs shall be isolated.
- (m) The terminals through which common positive or negative supply is provided to EI, must be duplicated, this shall also require duplicated power supply cables from power supply source to EI.
- (n) Input and Output interface relays (QECX, QN1, QNAI, QL1 & QBCAI) of different operating voltages and other special relays as per OEM requirement shall be supplied and installed by the tenderer. Paralleling of Contacts should be done in all relays to the extent possible.
- (o) The system shall have at least 20% additional (spare) input/output ports shall be catered in the installed system hardware for facilitating minor alterations without any hardware additions.

- (p) The system shall be equipped with and have provision for expansion to accommodate additional 25% of I/O cards.
- (q) Relay racks shall also have the provision for expansion of 20% additional (spare) input/output ports and 25% of spare slots for I/O cards.
- (r) The above spare percentages are applicable for central cabin and EI hut individually.
- (s) The EI system should have working vital input bits and working vital output bits as per SIP and spare bits. In addition, it should have 20% spare input and 20% spare output bits each in central cabin and hut separately. Spare slots to the tune of 25% of the total installed cards (including working and spare bits) to be available in supplied system

5. Power supply requirements for EI:

- (a) 110V DC for EI has been catered in IPS at Central cabin & EI hut. Tenderer has to supply DC-DC converters, inverters as per schedule of works.
- (b) Details of power supply arrangements proposed for EI along with provisional load calculations shall be submitted during execution of work.
- (c) The DC- DC Converters used for EI shall be provided in N+1 configuration with a safety factor of 1.5. Segregation between the DC-DC Converters for system A & B shall be made such that failure of DC-DC convertor for System A shall not affect System B and vice versa. DC-DC converters shall be of make as recommended in RDSO Specification/Technical Advisory notes. DC-DC converters shall be capable for working in non-air conditional environment and ambient temperature range between -10C to 70 C and relative humidity up to 95% at 40 C.
- (d) The power cables and the terminals supplying power to EI system shall be duplicated with minimum 16 Sq. mm Copper cables so as to provide redundancy.
- (e) Availability of pure DC supply (harmonics and ripples free) for working of different modules/ cards shall be the responsibility of the contractor.
- (f) Individual set of DC-DC convertors should be used for driving EI equipment and receiving field inputs.
- (g) The required protection shall be provided to protect from any malfunctioning due to false/ spurious feed.
- (h) Suitable surge protection (Preferably Indicative Type) and proper earthing arrangement shall be provided to protect against transient voltages, lightning & spikes etc.

- (i) Power supply arrangement for individual processor should be such that, in case of fault in power supply of one processor, all processors should not cease to function simultaneously. It should be possible to switch off and take out faulty processor for repairing/replacement without affecting working of the balance system.

6. Designs, drawings and documents:

- (a) Any drawing/ document required can be obtained from the Executive Signal and Telecom. Engineer/CN&MTP/Chetpet., Southern Railway.
- (b) Sketches of **Nagari and Podaturpettai** station yards are enclosed.
- (c) Tenderer shall prepare and submit floor drawings, scheme of the system, equipment layout drawings, power supply arrangement scheme, cable plan and any other drawings required for execution of work and shall get them approved by Railways.
- (d) Approved Signal Interlocking Plans (SIPs), Table of Control (TOC) and typical circuits will be issued in due course, and within **6 weeks** of supplying the above documents contractor is required to submit Application Logic Circuit and Interface Circuit to Railway for approval.
- (e) Contractor has to submit TSAA documents and drawings certified by OEM to process TSAA.

7. Technical details of EI Scheme to be designed:

- (a) The signals are 110VAC Lit and LED type as per concerned RDSO specification with latest amendment. Aspect checking relays are 'Q' Series LED ECRs.
- (b) Point Machines are universal type 110 V DC operated (with 400 V AC immunity in case distance from relay room is more than 1 km).
- (c) Track circuit relays are of "Q" Series QTA2/QBAT with QSPA1 repeater at field location boxes.
- (d) Axle Counters are HASSDAC or MSDAC Type.
- (e) All equipment installed by tenderer should suit to 25 KV, 50 Hz, AC electrified (RE) territory.
- (f) The input and outputs of the system may be derived as per Southern Railways' practice.
- (g) Railways will supply Approved Signal Interlocking Plan and Table of Control.
- (h) If a relay of any style that is not used in Railways is required to be used, then prior approval of Railways shall be obtained by the Contractor for its usage and the cost shall be borne by the contractor.
- (i) The interface required to drive the field gears will be relay interface.

- (j) In addition to the input bits of track circuit; input, output & reset bits pertaining to MSDAC shall also be considered while designing EI system hardware.

8. Design Requirements:

- (a) The whole interlocking of a yard shall be controlled by central operation. The system shall be capable for working in non-air-conditioned environment and ambient temperature range between -10 c to 70 c and relative humidity upto 95% at 40°C. EI shall have user-friendly graphic based design tool to generate station specific application software to carry out future yard modifications. It shall be possible for Railway to carryout minor yard modifications without the help of firm and the training shall be imparted to Railway maintenance staff for the same as per agreement with the Railway.
- (b) The medium of communication between OC and CIU will be OFC provided on a ring basis. In case of communication failure between CIU & OC, all the outputs shall be brought to safe state whenever two consecutive event communications are not received in stipulated time period.
- (c) SM Key contact shall be taken as Vital input to Electronic Interlocking with Interface Relay. To avoid possibility of single cause failure, the SM key having at least double independent contacts shall be used. These two contacts shall be taken to EI in different input cards (if possible, in different OCs) and in application logic these final SM key bit shall be programmed to pick-up if any of these two inputs are available as per RDSO Lr No STS/L/SSI/General/ Vol-1/198 Dt 17.05.2019
- (d) The system shall have facility of monitoring of internal variables as well as status of I/O. Through the maintenance terminal and data logger network of the Railway.
- (e) In case any peripheral equipment (such as VDU, MT, Data Logger etc.) Needs to be connected to the EI through serial ports and then EI system shall be isolated from the peripheral systems using suitable isolators for connecting the peripheral devices.
- (f) The response time of the system for the longest/ complex route of a particular station shall be less than 5 seconds if Points are in favourable condition in that route. The response time indicated is the time from which command is given for operation of signal to receipt of signal aspect on VDUs.
- (g) The response time of the system for the longest/ complex route of a station shall not be more than prescribed time limit set by Railways/RDSO if the points are in favourable condition in that route. Cycle time and response time to read and process the input shall be fast enough to ensure safety and avoid any apparent delay. Cycle time and response time of the system shall be clearly indicated.
- (h) System must work in hot standby with seamless changeover. Hardware and software architecture shall be provided with facility of automatic changeover.
- (i) Train operation shall not be affected during changeover of the system. It should also be ensured that the fault, which affected the main processor/ system, does not affect the hot standby processor/ system.

- (j) The object controllers may be required to be provided at different locations in the yard as per outdoor requirement. The EI system shall be designed to suit the same. The outdoor functions shall be driven by the nearest object controller as decided by Railways. The details of output functions each object controller is driving shall be submitted by the contractor.
- (k) Input/ output functions of Object controller shall be selected in such a way that failure of one object controller shall not paralyze the entire yard.
- (l) The next level signal control circuits like cascading of signal aspects, red lamp protection etc., shall be achievable through software only or as per Southern Railway practice.
- (m) For all vital inputs/ outputs, going out of EI room's double cutting arrangement shall be provided including paralleling of contacts.
- (n) The audio-visual alarm shall be available for approach locking, power failure, signal blank, button stuck up etc. for corresponding Command held high for more than a specified duration in EI as specified by Railways.
- (o) It shall be possible to extract crank handles in case of total shut down of system also.
- (p) Relay room at central cabin and EI hut should be provided with double lock arrangements. Opening and closing Relay Rooms at central cabin and EI hut shall be wired and monitored through the Datalogger.
- (q) The system shall be designed with the concept of "graceful degradation" i.e., failure of any component shall not paralyze the entire system.
- (r) The healthiness of both main and standby communication and all object controllers shall be displayed on VDUs continuously.
- (s) In case of failure of system at S&T Hut due to power supply failure or any other reason, it shall be possible to reset the systems at S&T Hut from central EI itself and bring back the entire system to normal working status.
- (t) In case of locking of any sub -route or signal, an indication shall appear on VDUs indicating the sub route/ signal which has got locked.
- (u) In case of failure of the system, if all or few of the sub routes get locked, it shall be possible to clear all the sub routes at one go, not requiring clearing each route separately.

9. Operator VDU and Maintenance Terminal:

- (a) Embedded PCs for Operator VDUs and Maintenance Terminal shall conform to RDSO specification No. RDSO/SPN/192/2019 Version 2.0 and RDSO Technical advisory note No. STS/E/TAN/3007 ver.1.0 dated 02.11.2012 or latest.
- (b) Dual VDUs shall be provided for operation of signals, points, LC gates and any other functions as recommended by engineer-in-charge. 55"(minimum) industrial grade displays shall be provided for VDUs and MT. Necessary fixing arrangements for VDUs/MT shall be done by the contractor. VDU/MT Shall

have required level of security features & access control for the operator/maintainer. VDU/MT Shall have keyboard and mouse operation. Key boards shall be provided with tactile membrane and displays shall be provided with anti-glare screen protector. The anti-glare screen filter is intended to relieve strain on the eyes of operator.

- (c) A flashing indication shall be provided on the VDUs to indicate healthy condition of the main system, communication channel. Three dot markers in red, blue & green colours respectively shall also be displayed prominently at conspicuous location on the VDU terminal to indicate that the colour monitor is healthy, and all the three colours (red, blue & green) are present in right proportion. It shall be possible to display the status of the yard by distinguishing with two different colours (i.e., system active and system inactive).
- (d) It shall be possible to display the complete yard layout including the block section on VDUs and MT. The extent of functions of block section to be displayed in VDUs shall be as per the requirement of Railway. It shall also have facility for displaying a portion of the yard or section in an enlarged mode or with scrolling arrangement, if required. The current position/ status of various field equipment and track circuits shall be displayed on the VDUs using different colours/ symbols, as instructed by Railway. Availability of communication channel shall be indicated by a constantly flashing indication. Whenever the communication channel goes faulty, a suitable error message shall be displayed on the terminal. Blocking of functions (points, signals, track circuits etc.) shall be possible through VDUs. The blocking operations shall be achieved in fail-safe manner. Operation of signal gears shall not be possible simultaneously through both VDUs. Switching over of VDUs in hot standby with seamless changeover is required as per Railway requirements. Operator's VDUs shall be provided with hard SM Key to prevent unauthorized operation in addition to password protection.
- (e) MT shall be used to diagnose problems/ events related to hardware and software of EI and shall have facility for automatic serial data transfer to a central monitoring unit. The common protocol for this communication shall be as per data logger specification no. IRS: S-99 or latest version for interface only.
- (f) All the required software with proper licenses as per OEM guidelines shall be loaded in the system with due backups by the contractor. The soft copy of signaling circuits/ manuals provide at the station shall also be loaded on MT as ready reckoner for ESM. MT shall be user friendly and the displays on MT shall be self-guiding type for identifications of faults as well as for maintenance of system.

10. Long Term Availability of Spares and System Support:

The Contractor shall submit the OEM's assurance of continuous support for 20 years from the date of commissioning of the system for maintenance, modifications, and repairs of the system. The manufacturer shall guarantee that spare parts for the system shall be available for life cycle period i.e., 20 years. The tenderer shall give an undertaking to supply on payment all maintenance spares, defect-rectification calls, tools etc required for the equipment during that period. In case of any plan to discontinue any equipment or components from the manufacturing process, at least one-year notice shall be given to the Railway before they are discontinued or phased out to enable Railways to order sufficient quantity of spares prior to stoppage of manufacture.

11. Execution of the work:

- (a) EI works as specified in the scope shall be executed in close coordination with the other contract works being executed by other agencies. The contractor shall arrange for competent personnel at site at each active work spot for close liaison with other agencies involved in work.
- (b) The sketches of **Nagari and Podaturpettai** stations are attached and are tentative and are to give only a geographic view of the workplace. Extra routes/functions may be required to be designed and as per approved plan over enclosed Plan.
- (c) Railways reserve the right to make any alterations during the course of execution of the work, if considered necessary, in the drawings/ plans issued including approved signalling plan. No compensation in any form will be admissible on this account. Contractor(s) will have to execute the work as per final plans at the rates quoted by him/ them.
- (d) The commissioning support by OEM for all items supplied by tenderer shall be ensured at least one month before and after commissioning. All teething troubles post commissioning (up to 1 month) must be attended within 1 Hrs.
- (e) Any special type of Measuring Instruments and accessories required for installation, testing and commissioning of EI are to be arranged and brought to site by the contractor at his cost.
- (f) Modifications:
 - i. The contractor shall supply any additional equipment without extra cost for any alterations of the works due to any discrepancies, errors or omissions in the drawings or other particulars supplied by him, whether such drawings/ particulars have been approved by the Railway or not due to inaccurate information or particulars furnished to the Contractor on behalf of the Railway. Such alterations should be done at no extra cost.
 - ii. RDSO technical system approval shall be arranged by the tenderer & necessary corrections to comply with the same have to be made by the tenderer. No extra payment will be made for such corrections involving hardware/ software changes.

- iii. Sketch enclosed along with the tender document is tentative in nature. In case additional hardware is required for commissioning the station based on the Approved SIP & TOC, then cost of additional hardware, based on the break-up provided, will be considered for extra payment
- iv. The logic design should be started based on the approved SIP and TOC. Additional software work due to change in scope of signal Interlocking plan during execution of the work shall be carried out by the contractor without any extra cost in case of minor alteration. However, if hardware augmentation is involved for such changes, then cost of hardware, based on the break-up provided, will be considered for additional payment. This applies up to commissioning of station but not in the warranty period.
- (g) Installation, wiring and interfacing of Operator VDUs, maintenance terminal and embedded PC with EI shall be got done by the tenderer through OEM only. Connectivity to the EI shall be on optical fiber cable. External isolation for serial ports to be provided by contractor.
- (h) Pre-commissioning check list of supplied equipment duly certified by OEM shall be provided by the contractor before commissioning.
- (i) Tenderer shall deploy adequate number of competent and trained personnel for work and for maintenance of the system during warranty period as per instructions of Engineer in charge of Railways. Staff nominated for maintenance will be scrutinized and the selected staff only will be permitted for maintenance. The staff should carry their own tools for maintenance.
- (j) The Contractor has to supply minimum 10% of essential spares of cards, modules, PCBs, Relays etc., against **NS-4 & NS-9**. Contractor should clearly list out all the spares along with quantity. In working out 10% spares for each station, any fraction of the item shall be treated as one.
- (k) All the supplied and installed materials shall be warranted for a Period of 12 Months from the date of commissioning.

12. TRAINING: Contractor shall impart

- (a) Training of Railway personnel in installation, commissioning, testing, trouble shooting and in diagnosing the faults using diagnostic tools/ flow charts with supply of soft and hard copies of documentation for period as mentioned in the schedule. All logistical support required for training shall be arranged by the contractor.
- (b) Training on application software for designing, change in the logics and converting it suitable for system and loading the program into the working system for alteration of SIP/TOC. The training should be comprehensive with complete document for period as mentioned in the schedule man days. All logistical support required for training shall be arranged by the contractor.
- (c) The quality of training should be of such that at the end of the training, the Railway Personnel should be able to install/ commission the equipment in similar

or modified layout, do the necessary software and hardware changes required in future, and also organize, locate and rectify the faults besides maintenance. They shall be trained in all aspects of system design, engineering, inspection, testing, execution, commissioning, fault diagnosis operation and maintenance of the system as whole and also all constituent equipment.

- (d) Training of Railway Personnel nominated by **XSTE/CN&MTP/MSC** has to be arranged in proper meeting hall of a clean, elegant and good-class hotel. Classroom Training to be planned with provision of lunch & light refreshment to the participants.
- (e) The training courses should, apart from formal classroom training, include hands on practical experience and visits to working installation.
- (f) Tenderers to indicate the adequacy or otherwise the duration, place of training, coordination required
- (g) One round of training for EI to be arranged before the physical execution of the work. The important points of RDSO Specification vis-a-vis the Make being supplied, detailed architecture particulars, current contract details, floor plans, maintenance aspects, major installations carried out besides other items to be covered.
- (h) Another round of training has to be arranged after installation and energization of system. This would brief system architecture, detailed maintenance instructions, preventive maintenance guidelines, trouble-shooting flow chart/steps, failure attention, major failures encountered in other installations.
- (i) Further it should cover the steps to be followed for EI alterations, usage of tools, compilation, loading of software. Demonstration of same has to be done.
- (j) The presentation has to be shared to Railways with Maintenance Guide and Trouble-shooting Guide also to be shared.

13. Testing of EI system:

- (a) The Tenderer shall submit a detailed testing and commissioning schedule for Railway's approval and full record of tests conducted shall be maintained by the Tenderer and handed over to the Railway along with the installation.
- (b) Factory Acceptance Test (FAT) and Site Acceptance Test (SAT) to be conducted automatically and manually as per Southern Railway practice and RDSO' s guidelines.
- (c) On receiving Head Quarter approved Drawings, Internal FAT, including square sheet testing to be conducted by the Tenderer. Qualified team and clear documentary proof/Log to be maintained for the same. The certification for completion of the same to be submitted to Railways. On completion of Internal FAT, Railway Engineers will conduct FAT at manufacturer premises or at any other location decided by Railways.
- (d) SAT will be conducted at site by the officer nominated by **XSTE/CN&MTP/MSC**. Contractor shall arrange simulation setup for same.

- (e) All the software tools required for carrying out the alterations including the Editor, Compilation tools, all convertors, VDU Logic files, VDU logic editor, FAT setup, Simulation tool, etc. shall be supplied to railways

14. Commissioning of EI and Associated Equipment/System

- (a) The EI equipment shall be installed, tested, and commissioned by OEM only.
- (b) Pre-commissioning check list of supplied equipment duly certified by OEM shall be provided by the contractor before commissioning.
- (c) The EI installation shall comply with all items specified in the pre commissioning check list for EI' s issued by RDSO from time to time and items specified in technical system approval by RDSO. OEM shall certify the installation as specified by RDSO.
- (d) Contractor is responsible for certification of OEM that EI equipment have been installed as per OEM and RDSO check list.
- (e) The commissioning support by OEM for all items supplied by contractor shall be ensured at least one month before and after commissioning.
- (f) All teething troubles during post commissioning (up to 1 month) must be attended within 1Hr.

15. Earthing of the Main Cabin and Hut:

- (a) Maintenance free ring earthing arrangements along with the protection against Electromagnetic and Electrostatic interference for the equipment and to the S&T Rooms respectively shall be provided by the contractor as per RDSO spec. RDSO/SPN/197 Version 1.0 and RDSO Technical advisory note No. STS/E/TAN/3006 Ver.1.0 dated 02.11.2012 or latest.
- (b) A minimum of 8 earth pits in ring manner around the building shall be provided at Central cabin and at Hut also. If the earth resistance prescribed by the RDSO is not achieved, additional earth pits shall be provided on additional payment basis vide NS28. Requirements of earthing and lightening protection as laid down in relevant clause in RDSO/SPN/192/2019 version 2.0 or latest.
- (c) Equi-potential earth busbar, its connections to equipments and surge protection devices, the bonded ring connector (BRC), exothermic welding etc in the EI room and IPS room as per RDSO typical bonding connections drawing No. SDO/RDSO/E&B/002 and RDSO TAN No.STS/E/TAN/3006 version 1.0 dated 02.11.2012 or latest is also included

16. Class A Protection:

- (a) Supply and installation of class A Franklin rod type lightning protection system
 - 1) This work includes supply and installation of air terminal Franklin rod of size 9.5 mm dia solid rod of 1mtr length as per NFPA 780 standards.
 - 2) Supply and installation of 3 mtrs GI pipe 40 mm dia with 10mm base-plate of size 300mmX300mm welded, anchoring wire and clamps etc.
 - 3) This work includes concreting of foundation of size 300mm x 300mm x 1000mm with 1:3:6 ratio concrete for installation of GI pipe. All the materials required for the above work shall be supplied by the contractor.
- (b) Supply and Installation of Copper tape of size 25mm x 3mm for Down conductor from Franklin Rod to Maintenance free earth.
- (c) Down conductor shall be in duplicate for each air terminal of Franklin Rod lightning protection system.
- (d) This work includes installation of insulated stand-offs at every 1 Mtr. interval for fixing the Copper tape. This work also includes Exothermic welding of Copper tape to the Franklin rod and the maintenance free earth for high conductivity. All the materials required for the above work shall be supplied by the Contractor.
- (e) This maintenance-free earth must in turn be connected to the ring Earth System described in previous para. Supply and installation of this maintenance free earth will be vide NS28.

17. Automatic FAT and Square Sheet Testing

Testing the Interlocking Logic designed by OEM as per the Table of Control (TOC) through software based systems and creating evidence of the Tests conducted and their results. Document proof of all test results to be submitted to Railways for verification and scrutiny.

The following tests are to be carried out:

- i. Negative Test as per TOC
- ii. Route Release Test for light engine and long train
- iii. Route hold Test
- iv. Route Locking Test
- v. Approach Locking Test
- vi. SM lock effectiveness Test
- vii. Point track Locking Test
- viii. One signal - One train Test
- ix. 5 Sec delay test for Starter Signals
- x. Square Sheet test
- xi. Other tests specified by Railways.

Note: The tests carried out shall be exhaustive and cover all possible combinations of negative tests to identify the issues in TOC or Logic Design.

Test Results shall be submitted in the following proforma:

Test Name	Operation Attempted [with time stamp]	Expected Result [status of relays/ soft bits]	Actual Result [status of relays/ soft bits with time stamp]	Success

- a. If any deviation to TOC is found as a result of Test, the same has to be set right by the contractor through the EI OEM. The specific test shall be repeated after setting right of the interlocking by the contractor free of cost.
- b. Printed copies of Test Results – 2 sets and soft copies of Test Results in USB – 3 Nos. have to be submitted by the Contractor.

18. Automatic SAT and Square Sheet Testing

Testing the Interlocking Logic designed by OEM as per the Table of Control (TOC) through software based systems and creating evidence of the Tests conducted and their results. Document proof of all test results to be submitted to Railways for verification and scrutiny.

The following tests are to be carried out:

- i. Negative Test as per TOC
- ii. Route Release Test for light engine and long train
- iii. Route hold Test
- iv. Route Locking Test
- v. Approach Locking Test
- vi. SM lock effectiveness Test
- vii. Point track Locking Test
- viii. One signal - One Train Test
- ix. 5 Sec delay test for Starter Signals
- x. Square Sheet test
- xi. Other tests specified by Railways.

Note: The tests carried out shall be exhaustive and cover all possible combinations of negative tests to identify the issues in TOC or Logic Design.

Test Results shall be submitted in the following proforma:

Test Name	Operation Attempted [with time stamp]	Expected Result [status of relays/ soft bits]	Actual Result [status of relays/ soft bits with time stamp]	Success

- a. If any deviation to TOC is found as a result of Test, the same has to be set right by the contractor through the EI OEM. The specific test shall be repeated after setting right of the interlocking by the contractor free of cost.
- b. Printed copies of Test Results – 2 sets and soft copies of Test Results in USB – 3 Nos. have to be submitted by the Contractor.

19. Dataloggers:

- (a) The Datalogger supplied by the contractor should seamlessly interface with the existing Datalogger network. Data loggers shall conform to RDSO Spec No.STS. S.99/2006 or latest. Data loggers are proposed to be provided in EI central cabin and in EI hut. Data loggers are to be networked on OFC/quad cable, laid by the Contractor.
- (b) The dataloggers must be networked and real-time data to be available at CMU in control. Network protection against medium failures shall be catered by bi-direction data flow, i.e., data of each Data logger shall reach both end station data loggers. Modem link status shall be displayed visually at CMU for real-time monitoring of network status.
- (c) Track circuit/ axle counter, LC gate, points, signals, Keys, PFCs and Analog status shall be shown in the CMU in simulation.

20. Fault Analysis Terminal For Datalogger:

S.No.	Description	Parameter
1	Make/Model	Dell Optiplex 7480 AIO or similar
2	Processor	Intel
3	Processor Generation	10 or higher
4	Processor Description	Intel Core i7 or higher
5	Operating System	Windows 10 Professional
6	RAM	16 GB DDR4 or higher

7	Speed	2.9 GHz or higher
8	Storage	1 TB (SSD) or higher
9	Display	23.8 Inches or higher
10	Resolution	1920 x 1080 or higher
11	On Site OEM Warranty	3 years

21. Laser Printer for Fault Analysis Terminal.

S.No.	Description	Parameter
1	Make/Model	Canon MF244dw or similar
2	Type	Multifunction Machine
3	Printing	Mono
4	Cartridge	Composite
5	Paper Size	A4
6	RAM	512 MB or higher
7	Minimum Speed	27 or higher
8	Network Interface	Ethernet/Wi-Fi
9	Scanning Feature	Yes
10	Print Technology	Laser
11	On Site OEM Warranty	3years

22. Supply and installation of Workspace for Operator: Mandatory Requirements:

- i. Ventilation of the workspace: Rear shutters of each console should have provision of Airflow opening for cooling and heat dissipation effect.
- ii. Service light should be provided inside the cabinet enclosure for maintenance of equipment which should switch on with opening of back panel automatically with optional provision of manual on/off switch.

- (ii) The internal wiring of the panel and the signaling cables coming from Relay Room shall be terminated on WAGO terminals through SPD as per OEM practice and instructions of the Engineer-in-charge of the work. Wiring of VDUs, Network Switch, power Supply etc. dressing, bunching & latching must be neat and clean with such that rodents or outside interference are avoided
- (iii) Two chairs (Godrej PCH7002DX or superior as approved by officer in charge) should also be supplied
- (iv) Two sets of Cushioned bench of about 122 cm x 42 cm x 41 cm should also be supplied
- (v) One good quality executive table of size 1650 x 900mm and 750mm height and extended storage unit of size 900 x 400mm and height 750mm with drawers (Godrej Interio Aristo 1650 main desk with ERU or better) should also be supplied

SOURCES FOR SPECIFICATIONS / DRAWINGS

1. IRS Drawings and Specification including RDSO Specific – Director General, R.D.S.O., Lucknow.
2. Standard Specifications (BSS & ISS, etc.) – Indian Standard Institution, 9, Mathura Road, New Delhi.
3. Railway Publications such as Railway Rules, Codes and Practices, etc. – Government of India, Ministry of Railways, Rail Bhawan, New Delhi.
4. Central Government Laws and Acts – Government of India, Ministry of Information, Publications Division, Tilak Road, New Delhi.
5. Manual of Instructions for Installation of S&T Equipment 25KV 50 Hz, single phase Electrified section – Director General, R.D.S.O., Lucknow.
6. General and Subsidiary Rules of Indian Railways and Southern Railways
7. S&T SOR-2011

Note: For bidding the list is not exhaustive and any specification /drawings as required can be obtained on request from office of XSTE/CN&MTP/MSC

Uploaded Separately in IREPS

- 1) GENERAL CONDITIONS OF CONTRACT April 2022 and Advance correction slip No 1, 2, 3, 4, 5 & 6.
- 2) Nagari Tentative SIP
- 3) Podatturpettai Tentative SIP
- 4) TAN EI Cyber security
- 5) TAN EI specifications
- 6) MSDAC Specifications
- 7) PVC Clause
- 8) Drawings
- 9) Penalty for Cable cut JPO
- 10) Tender document

*****End of the Document*****