



# RAILTEL CORPORATION OF INDIA LIMITED

2<sup>nd</sup> Floor, B-Block, Rail Nilayam, Secunderabad – 500 071.

## TENDER DOCUMENT

**TENDER NO:** RailTel/Tender/OT/SBC improvement works/2015-16/95 to 98 Dt.20.01.2016

### Name of Works:

- i. Rectification of Back Bone cable and protection arrangement over bridges in the ghat section of Donegal to Subramanya stations between Hassan –Mangalore section.
- ii. Provision of Maintenance free earthing for equipments and Electrical earthing for POPs at Hassan,sakaleshpura,Kabakaputtur,Arsikere,Tiptur, Birur, Davangere, Haveri, Maddur, Penukonda, Hindupur, Doddaballpur, Yeswanthpur,, Bayyappanahalli, Bangalore cant and Akkihebbalu
- iii. Provision of pale fencing for the POPs at Hassan, sakaleshpur, Kabakaputtur, Arsiekere, Tiptur, Birur, Davangere, Haveri, Ghataprabha, Kuduchi, Doddaballpur and Maddur.
- iv. Provision of Stabilizers to AC plants in 24 RailTel POPs in Bangalore Territory

As per the Schedule of work and specifications given in this Tender Document.

**Tender Document Sold to : M/s.**



# RailTel Corporation of India Limited

*A Government of India (Ministry of Railways) Undertaking*

Southern Region Head Quarters, Second Floor, B-Block, Rail Nilayam, Secunderabad-500071 (AP)  
visit [www.railtelindia.com](http://www.railtelindia.com), Tel: 040-27821134 Fax: 27820682,  
Corp.& Regd.Office: 10<sup>th</sup> Floor, Bank of Baroda Building, 16-Parliament Street, New Delhi-110001.

## **NOTICE INVITING TENDER**

**Tender Notice No. RailTel/Tender/OT/SBC improvement works/2015-16/95 to 98 Dt.20.01.2016**

RailTel Corporation of India Ltd., Secunderabad invites sealed tenders from established contractors with proven experience for the work of “

- i. Rectification of Back Bone cable and protection arrangement over bridges in the ghat section of Donegal to Subramanya stations between Hassan –Mangalore section.
- ii. Provision of Maintenance free earthing for equipments and Electrical earthing for POPs at Hassan,sakaleshpura,Kabakaputtur,Arsikere,Tiptur, Birur, Davangere, Haveri, Maddur, Penukonda, Hindupur, Doddaballpur, Yeswanthpur,, Bayyappanahalli, Bangalore cant and Akkihebbalu
- iii. Provision of pale fencing for the POPs at Hassan, sakaleshpur, Kabakaputtur, Arsiekere, Tiptur, Birur, Davangere, Haveri, Ghataprabha, Kuduchi, Doddaballpur and Maddur.
- iv. Provision of Stabilizers to AC plants in 24 RailTel POPs in Bangalore Territory

As per the Schedule of work and specifications given in this Tender Document.

SI No	Section	Tender No	Estimated Cost (In Rs)	EMD (In Rs)
1A	Rectification of Back Bone cable and protection arrangement over bridges in the ghat section of Donegal to Subramanya stations between Hassan – Mangalore section as per specification			
1B	Provision of Maintenance free earthing as per specification enclosed at Annexure for equipments and Electrical earthing for POPs atHassan,Sakaleshpura,Kabakaputtur,Arsikere, Tiptur,Birur,Davangere,Haveri,Maddur,Penukonda, Hindupur,Doddaballpur,Yeswanthpur, Bayyappanahalli, Bangalore cant and Akkihebbalu as per specification	RailTel/Tender/OT/ SBC improvement works/2015-16/ 95 to 98	30,15,286/-	60,306/-
1C	Provision of pale fencing for the POPs at Hassan, sakaleshpur, Kabakaputtur, Arsiekere, Tiptur, Birur, Davangere, Haveri, Ghataprabha, Kuduchi, Doddaballpur and Maddur as per specification			
1D	Provision of Stabilizers to AC plants in 24 RailTel POPs in Bangalore Territory as per specification			

a)	Sale of Tender Documents.	From: 25.01.2016
b)	Closing of sale of Tender Documents	26.02.2016 at 12.30 hrs (by hand)
c)	Submission of tender documents.	26.02.2016 on or before 15.00 hrs.
d)	Opening of tender documents.	26.02.2016 at 15.30 hrs.
e)	Earnest Money (EMD) per section as specified above will be payable by Bank Draft / F.D.R in favour of <b>RailTel Corporation of India Limited, Secunderabad</b>	
f)	Cost of Tender Document for Tender # is. Rs. 5725/- inclusive of VAT @14.5% (Rs.6300/- if required by post incl. of VAT 14.5%) payable by Bank Draft in favour of RailTel Corporation of India Limited. Secunderabad from any scheduled bank (Non-Refundable)	

**Eligibility Criteria:** Not applicable.

Cost of Tender Document shall be paid in the form of Demand Draft drawn in favour of **RailTel Corporation of India Limited, Secunderabad** from any scheduled bank. Tender document can be purchased from the Office of The Regional General Manager (Southern Region), RailTel Corporation of India, Secunderabad, on any working day or can be downloaded from the web site [www.railtelindia.com](http://www.railtelindia.com). Documents down loaded from web site shall accompany the payment for the cost of the document in the form of D.D as mentioned at clause “f” above during the submission of Tender document. Documents received without the cost of tender will summarily be rejected#. **The tender document should be sealed in a cover duly superscripted tender No., and name of the work** and shall be dropped in the Box kept in the office of Regional General Manager (Southern Region), RailTel, Second floor, B-Block, Rail Nilayam, Secunderabad, as mentioned at clause “c” above. RailTel is not responsible for delay or loss in transit. The tenderer may be present at the time of opening of tenders, if they desire. The tender offers are deemed to be valid for acceptance for a period of 90 days from the date of opening of the tender. Late/delayed/ incomplete tenders and tenders with insufficient EMD\* will be summarily rejected.

# Small Scale Units registered with NSIC under single point registration scheme shall be exempted from the cost of tender documents. However, postage charges of Rs. 500/- would have to be paid by them, in case they need tender document by post.

\* EMD for NSIC registered firm:

# \* Please refer clause no.1.2.5 under instructions to tenderers and conditions of tendering

Tender Notice and Tender Document are also available at our website [www.railtelindia.com](http://www.railtelindia.com)

Sd/-  
RGM/SR

## 1.0 INSTRUCTIONS TO TENDERERS

### 1.1 NAME & SCOPE OF THE WORK:

- i. Rectification of Back Bone cable and protection arrangement over bridges in the ghat section of Donegal to Subramanya stations between Hassan –Mangalore section.
- ii. Provision of Maintenance free earthing for equipments and Electrical earthing for POPs at Hassan,sakaleshpura,Kabakaputtur,Arsikere,Tiptur, Birur, Davangere, Haveri, Maddur, Penukonda, Hindupur, Doddaballpur, Yeswanthpur,, Bayyappanahalli, Bangalore cant and Akkihebbalu
- iii. Provision of pale fencing for the POPs at Hassan, sakaleshpur, Kabakaputtur, Arsiekere, Tiptur, Birur, Davangere, Haveri, Ghataprabha, Kuduchi, Doddaballpur and Maddur.
- iv. Provision of Stabilizers to AC plants in 24 RailTel POPs in Bangalore Territory

As per the Schedule of work and specifications given in this Tender Document.

### 1.2 TENDERING INSTRUCTIONS:

- 1.2.1 The tender document in original along with the schedule filled in and **duly signed and stamped on each page**, complete in all respects shall be enclosed in an envelope. The Tenderer shall also enclose in his offer that they accept all the RailTel's terms and conditions and have not offered any counter clauses. This envelope shall then be sealed and following shall be superscripted on the envelope:-

**“TENDER NOTICE No.: RailTel/Tender/OT/SBC improvement works/2015-16/95 to 98,  
Dt.20.01.2016”**

- 1.2.2 Tender cover should be addressed to **The Regional General Manager, Southern Region, RailTel Corporation of India Ltd, II floor, ‘B’ Block, Rail Nilayam, Secunderabad-500071**. The Tender should be deposited in the Tender Box in the office of the Regional General Manager, Southern Region, RailTel Corporation of India Ltd. before **closing of the tender box at 15.00 hrs. on 26.02.2016**
- 1.2.3 Tender sealed and super scribed as mentioned above can also be sent by Registered Post with acknowledgement due, to the above mentioned Office. The Tenders which are received after the time and date specified above shall not be considered. For delays by Department of Posts/courier agency RailTel will not be responsible.
- 1.2.4 **Offer:** The tenderers are required to quote percentage **rate for** the Schedule both in figures and words as indicated in the schedule. If there is any discrepancy in the quoted rates both in figures and words, the rates quoted in words will be taken as final. The tenderer has to quote for complete work
- 1.2.5 **EARNEST MONEY**  
The tenderer shall deposit earnest money as mentioned in the preamble along with the tender in favour of **“RailTel Corporation of India Limited” payable at Secunderabad**

in the form of **Demand Draft/FDR** of any Nationalized/Scheduled Bank. Bank Guarantee for earnest money is not accepted. Tenders without earnest money will be summarily rejected. The earnest money of successful tenderer will be retained as part of retention money for due and faithful fulfillment of a contract. The earnest money of the other tenderers shall be returned to them. No interest will be payable on the earnest money deposit.

\* For Small Scale Units registered with NSIC under single point registration scheme and participating in this tender, following exemptions shall be available

- (i) They shall be exempted from cost of tender documents. However, postage charges of Rs. 500/- would have to be paid by them, in case they need tender document by post.
- (ii) They shall also be exempted from depositing Earnest money.

These exemptions shall be applicable provided units are registered with NSIC for tendered item and registration is current and valid. Firms claiming these exemptions are required to submit along with their offer, a copy of their current and valid NSIC registration certificate for the tendered item/items, otherwise their offer would not be considered.

The EMD details are as follows:

Sl No	Section	Tender No	Estimated Cost (In Rs)	EMD (In Rs)
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1B	Provision of Maintenance free earthing as per specification at Annexure-2 for equipments and Electrical earthing for POPs at Hassan,Sakaleshpura, Kabakaputtur, Arsikere, Tiptur, Birur, Davangere, Haveri, Maddur, Penukonda,Hindupur,Doddaballpur,Yeswanthpur, Bayyappanahalli, Bangalore Cant and Akkihebbalu as per specification			
1C	Provision of pale fencing for the POPs at Hassan, sakaleshpur, Kabakaputtur, Arsiekere, Tiptur, Birur, Davangere, Haveri, Ghataprabha, Kuduchi, Doddaballpur and Maddur as per specification			
1D	Provision of Stabilizers to AC plants in 24 RailTel POPs in Bangalore Territory as per specification			

### 1.3 **DOCUMENTS TO ACCOMPANY THE OFFER:**

The following documents as laid down hereunder are to be attached with their offer.

- 1.3.1 Tender document including schedule of work duly signed and stamped in each page.

1.3.2 Earnest Money Deposit (DD/FDR)

1.3.3 Work done/Experience certificate(Not applicable for this tender)

1.3.4 Turn over certificate (Not applicable for this tender)

1.4 **GENERAL**

1.4.1 All corrections and over-writing must be attested.

1.4.2 The Tenderer should read the conditions carefully and also see the schedule of work/supply before submitting the offer.

1.4.3 No counter conditions for the clauses laid down will be permitted.

1.4.4 The Tenderer must confirm to the specifications/special conditions.

1.4.5 Tenderer while quoting , may specifically note the following :-

- a) The offer shall be inclusive of all taxes / duties as applicable at present.
- b) Any statutory variation in taxes / duties, shall be to RailTel account and shall be admissible on production of valid documentary evidence. Tenderer must submit the taxes / duties structure considered by him while quoting the rates in a separate sheet including contractor percentage for each line item and it is mandatory.
- c) Octroi duty / Municipal taxes, if any, shall be borne by the Contractor.
- d) RailTel will deduct income tax at source as per rates in vogue.

**1.5 AUTHORITY OF ACCEPTANCE/EVALUATION OF OFFERS:** The authority for the acceptance of the tender rests with the Purchaser. The tenders received will be evaluated by the Purchaser to ascertain the best acceptable tender in the interest of the Purchaser. However, the purchaser shall not be bound to accept the lowest or any tender or to assign any reason for non-acceptance or rejection of a tender. The purchaser reserves the right to accept any tender in respect of the whole or any portion of the work specified in the tender paper or to sub-divide the work among different Tenderers or to reduce the work or to accept any tender for less than the tendered quantities without assigning any reason whatsoever

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## **GENERAL TERMS AND CONDITIONS OF CONTRACT**

### **1. DEFINITION OF TERMS:**

The words and terms specified in this section or pronouns in their stead, shall unless repugnant to the meaning or context thereof for the purpose of this contract and the specifications thereof, have the meanings as given below:

- 1.1 "RAILTEL" shall mean "RailTel Corporation of India Ltd, Southern Region, Secunderabad", issuing the tender and order and shall include its successors and assigns, as well as their authorized officers/representatives including consultants, if any, to the said "RAILTEL"
- 1.2 The "PROJECT" shall mean the entire work as described in the contract or LOA.
- 1.3 "CONTRACTOR" shall mean the successful BIDDER whose Bid has been accepted by RAILTEL and on whom the 'Contract' or 'Order' is placed by RAILTEL and in this contract it is the aforesaid contractor and shall, unless repugnant to the context, include their heirs, legal representatives, successors and permitted assigns
- 1.4 "SUB-CONTRACTOR" shall mean the person or firm named in the 'Contract' or 'LOA' to whom the work has been sublet by the CONTRACTOR with the prior consent in writing of RAILTEL and shall include their heirs, legal representatives and successors
- 1.5 "MANUFACTURER" refers to a person or firm who is the producer and supplier of material or designer and fabricator of equipment to be supplied to RAILTEL or the CONTRACTOR or both under the Contract or LOA.
- 1.6 "INSPECTOR" shall mean the authorized representative(s) appointed by or on behalf of RAILTEL for the purpose of inspection of materials / equipment / works
- 1.7 "SITE" shall mean the actual places in the proposed "Project" as detailed in the 'Specification' or other places where work has to be executed under the Contract
- 1.8 "MONTH" shall mean English calendar month
- 1.9 "SPECIFICATIONS" shall mean all directions, various technical specifications, provisions and requirements attached to the contract, as originally agreed and as modified from time to time by RailTel subject to price adjustments mutatis mutandis which pertain to the method and manner of performing the work or works to the quantities and qualities of the work or works and the materials to be furnished under the contract for the work or works as may be amplified or modified by RailTel-In-Charge during the performance of the contract in order to provide for unforeseen conditions or in the best interest of the work or works. It shall also include the latest edition including all addenda / corrigenda of relevant Bureau of Indian standard specifications and other relevant codes governing a particular activity or facility. The term shall include the specifications specified in the contract in respect of each type of material/goods to be used in the execution of contract.

- 1.10 "BID" or "TENDER" shall mean the proposal/document that the BIDDER submits as his offer with price and conditions in the requested and specified format as detailed in 'Specifications' / 'Tender documents
- 1.11 "BILL OF QUANTITIES" means the priced and completed bill of quantities forming part of the bid / tender.
- 1.12 "PLANT" or "EQUIPMENT" and "WORK" or "WORKS" shall mean the goods to be supplied, work to be executed and services to be provided by the Contractor under the 'contract' or 'LOA'
- 1.13 "LETTER OF INTENT" or "LETTER OF ACCEPTANCE" means the formal, acceptance by RAILTEL of the bid / tender of the bidder
- 1.14 "CONTRACT" shall mean the agreement under these presents between RAILTEL and the Contractor for the execution of works, including all the schedules contained in the agreement and all the documents, such as Tender Documents, General Conditions of Contract, Job Specifications, the accepted Schedule of Rates, General Requirements, Time Schedule for completion of the job, Drawings, Letter of Intent, agreed variations, if any, etc.,
- 1.15 "CONTRACT PRICE" shall mean either the lumpsum price named in the Contract / LOA subject to the provision contained hereof or the total amount payable to the Contractor for the entire execution and full completion of the work as calculated from quoted unit rates and estimated or measured quantities for various items of work as set out in the Schedule of Quantities attached to the Contract / LOA
- 1.16 "DATE OF CONTRACT" shall mean the calendar date on which RAILTEL and Contractor have signed the 'Contract', "EFFECTIVE DATE OF CONTRACT" shall mean the calendar date on which RAILTEL shall have issued to the Contractor the 'Letter of Intent' or as otherwise mutually agreed to between RAILTEL and the Contractor
- 1.17 "CONTRACTUAL COMPLETION PERIOD" shall mean the time period agreed for completing the execution of and passing the tests on completion of the works or any section or part thereof as stated in the contract (or as extended subsequently) calculated from the commencement date. The 'Contract' shall be executed as agreed between the Contractor and RAILTEL in the Letter of Intent / Contract / LOA.
- 1.18 "TESTS ON COMPLETION" means the tests specified in the Contract or otherwise agreed by RAILTEL and the Contractor which are to be made by the Contractor, to the satisfaction of RAILTEL before the works or any section or part thereof are taken over by RAILTEL
- 1.19 "APPROVED" and "APPROVAL" where used in the specification / tender shall mean respectively approved by and approval by RAILTEL. When the words 'Approved', 'Approval', 'Subject to Approval', 'Satisfactory', 'Equal to', 'Proper', 'Requested', 'As directed', 'Where directed', 'When directed', 'Determined by', 'Accepted', 'Permitted', or words and phrases of like import are used, the approval, judgment, direction, etc., is understood to be a function of RAILTEL or its designated representative qualified technically to the respective acts.
- 1.20 "CONTRACTOR'S WORKS" or "MANUFACTURER'S WORKS" shall mean and include land and other places which are used by the Contractor or his sub-Contractor for the manufacture of 'Equipment' or performing the 'Works'
- 1.21 "VIRTUAL COMPLETION" shall mean all work is completed as directed and the 'Site' is cleared to the satisfaction of RAILTEL; but prior to and conditional on / subject to the issuing of "Completion Certificate", or "Final Certificate
- 1.22 WORDS importing persons shall include Firms, Companies, Corporations and other Bodies, whether incorporated or not
- 1.23 WORDS importing singular shall also include the plural and vice versa, where the context requires
- 1.24 "DRAWINGS" shall mean: All drawings new or revised furnished by RAILTEL forming part of tender as a basis for proposals and forming part of Contract / LOA and made part thereof
- 1.25 "ACT OF INSOLVENCY" shall mean any Act of Insolvency, as defined by the Presidency Towns Insolvency Act, or the Provincial Insolvency Act or any amending statute
- 1.26 Wherever FIGURES are given in the Contract under the word "ELEVATION" or any abbreviation of it, or where figures representing elevations are given, unless otherwise stated, shall mean the ELEVATION

- relative to the permanent Bench Mark fixed by RAILTEL for the particular work, located as shown on site plan or a datum level established by RAILTEL
- 1.27 "WRITING" shall include any manuscript, typewritten or printed statement issued under or over signature of RAILTEL and / or Contractor / vendor with seal
- 1.28 "RAILTEL-IN-CHARGE" shall mean the person nominated by "RAILTEL" from time to time and shall include those who are expressly authorized by RAILTEL to act for and on its behalf for all functions pertaining to operation of this contract / LOA.
- 1.29 "NOTICE IN WRITING" or "WRITTEN NOTICE" shall mean a notice in written, typed or printed characters sent (unless delivered personally or otherwise proved to have been received) by registered post to the last known private or business address or the address of the registered office and shall be deemed to have been received when in the ordinary course of post it would have been delivered.
- 1.30 "CONSTRUCTIONAL PLANT" shall mean all appliances or things of whatsoever nature required in or about the execution, completion or maintenance of the works or temporary works (as defined hereinafter) but does not include materials or other things intended to form or forming part of the permanent work
- 1.31 "TEMPORARY WORKS" shall mean all temporary works of every kind required in or about the execution, completion or maintenance of the works
- 1.32 "THE COMPLETION CERTIFICATE" shall mean the certificate to be issued by RAILTEL or RAILTEL-In-Charge when the works have been completed to their satisfaction and in accordance with the criteria stipulated in the Contract. This certificate shall only be tentative and subject to the final certificate as below
- 1.33 "THE FINAL CERTIFICATE" in relation to the work, shall mean the certificate regarding the satisfactory compliance or otherwise of the various provisions of the contract, which is issued by RAILTEL, after the period of liability is over
- 1.34 "THE PERIOD OF LIABILITY" in relation to a work shall mean the specified period from the date of issue of the completion certificate up to the date of issue of final certificate, during which time the Contractor stands responsible for rectifying all defects, at its own cost, rate and responsibility.
- 1.35 "HOLD BACK" shall mean the amount of money deducted from a Contractor's request for payment for works completed. It shall be retained by RAILTEL until such time as established in the contract: to guarantee full and satisfactory performance. No interest shall be paid to the Contractor on this money
- 1.36 "PRICE VARIATION CLAUSE" shall be that written formula, which sets out how a given price(s) in the tender and contract documents can be modified during the course of contract. It shall be mutually agreed to by all the parties at the outset of the project, and shall be so deemed
- 1.37 ALL REFERENCES TO ANY NOTICES, MODIFICATIONS, CLARIFICATIONS, INSTRUCTIONS, APPROVALS, AGREED, MUTUALLY AGREED, ACCEPTANCES, DEMANDS, ASSURANCES, INTIMATIONS and the like and / or their alternative forms wherever appearing shall mean such acts IN WRITING signed by the authorized representative, unless otherwise specified
- 1.38 "GOODS" shall mean the materials to be supplied by the Contractor to be used in the execution of the contract or LOA and such goods or materials shall conform to the specifications incorporated in the tender or bid
- 1.39 "FIRST QUALITY" shall mean the level of quality available as "the best in the market" at the material time, as the term in quotes is generally understood in respect of such brand / make / model etc., as the appropriate consultant may recommend / have recommended
- 1.40 "ACCEPTING OFFICER" is officer authorized by RAILTEL to accept the contract and modify/change/alter the terms thereof who shall be the final authority in respect of any disputes that may arise under this contract.
- 1.41 WORK: The works to be executed on the basis of the LOA issued by RAILTEL from time to time in accordance with the contract or part thereof as the case may be and shall include extra, additional, altered or substituted works as required for purpose of the contract.

- 1.42 CONSTRUCTION EQUIPMENT: All appliances and equipment of whatsoever nature for the use in as for the execution and completion of the works under the contract.
- 1.43 CONTRACT DOCUMENTS: Collectively the Agreement with all its schedules and annexures, if any, the tender document, Quotations designs, drawings, specifications, special and general conditions of contract, letter of acceptance, agreed variations if any and such other documents constituting the tender and acceptance thereof as specifically agreed and incorporated in the letter of acceptance.
- 1.44 ENGINEER-IN-CHARGE (EIC)/ RAILTEL-IN- CHARGE: The representative of RAILTEL at site acting under the orders of RAILTEL to supervise the work and in other matters
- 1.45 DEFECTS LIABILITY PERIOD: The period from the date of virtual completion up to the date of expiry of specified maintenance period during which the Contractor is responsible for rectifying defect, if any, that may appear in the works at free of cost. The liability period shall exists, RAILTEL issues a LOA file closing certificate
- 1.46 SECURITY DEPOSIT: The deposit held by RailTel as security for due fulfillment of the contract.
- 1.47 ACCEPTANCE and ACCEPTANCE DATE: shall mean the acceptance by RAILTEL in writing after following the procedure. Such acceptance certificate shall be given by RAILTEL only upon receiving invoice from the Contractor, which shall be treated as acceptance. Acceptance Date shall mean the date on which the Final bill amount paid to Contractor by RAILTEL.
- 1.48 READY FOR SERVICE: shall mean the delivery of the materials, the Installation, the corresponding interconnection, the successful completion of the Field Acceptance Tests.
- 1.49 DOCUMENTATION: shall mean the As-Constructed Plans, general instruction, drawings, diagrams and other written material as well as electronic material (such as in the form of CD-ROM or Floppy) that the Contractor is required to provide to RAILTEL under this Contract.
- 1.50 MATERIAL: shall mean all the Hardware that are included in the scope of Supply as detailed in a specific Order placed and confirmed hereunder and conforming to the respective Specifications.
- 1.51 SUPPLY PRICE: shall mean the aggregate price payable by RAILTEL to the Supplier for the material supplied and delivered at site. The pricing information must be detailed as specified in the contract.
- 1.52 FIELD ACCEPTANCE TESTING: shall be considered accomplished, after the Site Acceptance Tests are satisfactorily completed, if the system meets all the specifications detailed in the contract.
- 1.53 INFORMATION: shall mean technical, financial and commercial information and data relating to Party's respective businesses, finances, planning, facilities, products, techniques and processes and shall include, but is not limited to, discoveries, ideas, concepts, know-how, techniques, designs, specifications, drawings, blueprints, tracings, diagrams, models, samples, flow charts, data, computer programs, disks, diskettes, tapes, marketing plans, customer names and other technical, financial or commercial information and intellectual properties, whether in written, oral or other tangible or intangible forms.
- 1.54 INSTALLATION: shall mean the assembling of the materials, the loading, unloading, the testing and the successful operation of the system, in accordance with the defined technical characteristics and with the installation and security rules in effect under the laws of India and, as applicable, in the various states of India.
- 1.55 LOA shall mean the Initial Order and the subsequent orders issued by RAILTEL specifying the scope of the work to be done by the Contractor periodically.
- 1.56 PARTY OR PARTIES: shall mean RAILTEL or the Contractor(s).
- 1.57 PROPOSAL OR THE OFFER: shall mean the document prepared by the Contractor in response to the tender of RAILTEL, including any modifications, clarifications requested and accepted by RAILTEL.
- 1.58 PROJECT MANAGEMENT: means the Contractor(s) will use well established Project Management techniques to meet the scheduled dates and time frames, and fulfilling all obligations as specified in Division of Responsibilities.
- 1.59 SCOPE OF SUPPLY: shall mean the totality of the supplies that the Contractor(s) is obliged to provide to RAILTEL.

- 1.60 SERVICES: shall mean the system design & engineering (as applicable for access network), installation, supervision and training that the Contractor(s) is required to provide to RAILTEL under the Contract.
- 1.61 SERVICES CONTRACT PRICE: shall mean the aggregate price payable by RAILTEL to the Contractor for the Services provided hereunder.
- 1.62 SYSTEM: shall mean the Outside Plant cable network or a part thereof, as the case may be, to be implemented by the Contractor and operated by RAILTEL in the Territory.
- 1.63 TERRITORY: shall mean the geographical area specified in India by RAILTEL
- 1.64 TIME SCHEDULE: shall have the meaning set forth in the LOA in terms of this contract.

**2. SEVERABILITY:**

If any provision of this document is invalid or unenforceable or prohibited by law, this document shall be considered divisible as to such provision and such provision shall be inoperative and shall not be part of the consideration moving from either party to the other and the remainder of this document shall be valid and binding and of like effect as though such provision was not included herein.

**3. DENIAL OF PARTNERSHIP / JOINT VENTURE:**

It is hereby expressly agreed and declared that:

- 3.1.1 These presents do not create any partnership or joint venture or associations of persons between the parties hereto.
- 3.1.2 Each of these parties hereto has undertaken obligations and has rights specified herein on their own account and is principal to principal and not on behalf of, or on account of or as agents of any of them or of anyone else

Nothing contained in this document shall be deemed to constitute a party as agent of the other party for any reason or purpose whatsoever.

**4. SCOPE OF CONTRACT / LOA:**

- 4.1 It is understood and agreed by the **Contractor** that the work described shall be complete in every detail, even though every item necessarily involved is not particularly mentioned. Each component of the works that is provided must meet all its intended functions over the expected or stated service life.
- 4.2 The **Contractor** shall carry out the work or complete the system in every respect, in accordance with the contract / LOA and accompanying drawings and in accordance with the directions and to the satisfaction of RailTel-In-Charge.

**5. CONTRACTOR TO ACQUAINT HIMSELF AS TO THE CONDITIONS OF WORK / SUPPLY:**

- 5.1 The **Contractor** shall make allowance for all contingencies in the contract price and shall not raise any claims or objections against **RAILTEL** in any matters which include but not limited to the nature of work, site conditions, right of way, surface and water conditions, local conditions and all other related issues.
- 5.2 The acceptance and execution of the contract shall be construed as evidence that such an examination was made and later claims for labour, equipment or materials required for difficulties encountered shall not be allowed.
- 5.3 The prices quoted by the **Contractor** are and shall be construed to be based on his own knowledge and judgment of the conditions and hazards involved.
- 5.4 The **Contractor** shall be deemed always to have satisfied himself as to the correctness and sufficiency of the Tender and of the Rates and Prices stated in the Schedule of Quantities all of which, shall except in so far as it is otherwise provided in the Contract, cover all his obligations under the Contract.

**6. MATERIALS:**

- 6.1 **RailTel** will not supply any material.
- 6.2. Materials supplied / provided by the Contractor:**
- 6.2.1 All materials supplied or used shall be as per RAILTEL's specifications and shall be new and of first quality approved by Bureau of Indian standards. RAILTEL shall the right to accept or reject the same. Where foreign or partly foreign equipment or materials are offered or intended to be used, the fact must be specifically stated and brought to the notice of **RAILTEL** for prior written approval.
- 6.2.2 Unauthorized substitution of materials delivered in error or to wrong description or quality, or supplied in excess of the quantity ordered, or rejected goods, shall be returnable only at the expense of the **Contractor**. The **Contractor** shall bear among other things relevant charges, handling, transportation and insurance expenses.
- 6.2.3 It shall be the **Contractor's** responsibility to safeguard all materials against theft, loss, damage or whatsoever.
- 7. DESPATCH:**
- 7.1 The goods, if any, to be supplied by the **Contractor** shall be dispatched and delivered well in time to suit the completion period specified in the contract, or as per completion schedule mutually agreed upon.
- 7.2 Failure to meet the stipulated completion periods for inadequate supply of goods, or for any other reasons, shall be subject to the provisions of "**Liquidated Damages**" under this agreement.
- 8. SUB-CONTRACTS:**
- 8.1 The **Contractor** shall not sub-contract any part or the whole of the work, without the prior consent of RAILTEL. The **Contractor** may sub-contract parts of the contract, if necessary and in the interest of the project and only to sub- Contractors approved in advance in writing by RAILTEL. The **Contractor** shall be responsible for transmitting specifications and pertinent data to sub- Contractors and ensuring full compliance by them. In such cases even if written permission is given, it shall not relieve the **Contractor** from his obligations under the contract and he shall be fully responsible for all supplies / work done by his sub-Contractors. The **Contractor** shall also be exclusively responsible for the effective planning and co-ordination of the work from sub-Contractors. to ensure proper integration with all works.
- 8.2 It shall be as per the specifications of **RAILTEL** and **RAILTEL** shall have sole discretion to withdraw its consent and have the remaining part performed or executed by any other party of RAILTEL's choice.
- 8.3 Notwithstanding anything contained herein, RAILTEL shall have sole discretion to nominate sub-contractors for specialized activities/works or even for part of specified works, before or during the course of Work, wherever required in the opinion of RAILTEL on account of slow progress, poor quality or Contractor's lack of sufficient mobilization.
- 9. REJECTION:**
- 9.1 The **Contractor** will notify **RAILTEL** well in advance when an item of work is taken up requiring its prior clearance, such as recording of levels, measurement or shuttering before pouring concrete, or when samples are required to be taken by it for testing during the progress of work. The **Contractor** will provide all assistance to **RAILTEL** in fulfillment of its duties. In the event that the goods or the works are defective or non-conforming to the specifications and standards, **RAILTEL** shall exercise its right of rejection or rectification of the defects / shortcomings and charge the **Contractor** for all expenses incurred thereby. All goods supplied or procured shall be factory tested and duly passed by RAILTEL.
- 9.2 Further, **RAILTEL** shall also be entitled to reject the goods and work executed by the **Contractor** which may not be conforming to specifications, within a reasonable time after installation or first use of the said goods and materials, if testing or inspections subsequently prove these to be non-conforming and charge the **Contractor** for all expenses, direct and consequential incurred thereby.

## 10. **SECURITY CLAUSE**

- 10.1 The technical information, drawings, specifications and other related documents forming part of the tender or the contract are the property of **RAILTEL** and shall not be used for any other purpose, except for execution of the contract. All rights including rights based on prior user, copyrights and rights in the event of grant of a patent and registration of designs are reserved exclusively by RAILTEL.
- 10.2 In the event of any breach of this provision, the **Contractor** shall indemnify **RAILTEL** from any loss, cost or damage or any other claim whatsoever from RAILTEL's collaborators and / or any other parties claiming from or through them or from any other party in respect of such breach.

## 11. **RAILTEL'S INSTRUCTIONS:**

- 11.1 RAILTEL may, in its absolute discretion, from time to time, issue further drawings and / or instructions, details, directions, modifications, variations, specifications and explanations etc; which are collectively referred to as RAILTEL's INSTRUCTIONS

## 12 **CHANGES IN THE WORK:**

- 12.1 If it becomes necessary or desirable to modify the contract and the specifications and the drawings etc; which may result in quantity variation **beyond plus 100% or minus 25 %** of the original scope, **RAILTEL** may, without invalidating the contract, direct that changes shall be made accordingly and **no increase in Rates** shall be given.
- 12.2 The rates for quantity variations, substituted items and new items of work shall be based on the following in the order indicated:
- i) If a rate exists in the contract for an item having the same or similar specifications as proposed in the revised specifications, the Contractor shall carry out the work at the same rates as already existing in the contract.
  - ii) If the rates cannot be determined as at (i) above, or do not exist, the rates shall be derived from the rates for a similar class of work in the contract.
  - iii) If the rates cannot be determined as at (i) and (ii) above, the **Contractor** shall be paid after negotiation based on market rate and contractors profit not more than 10%.
- 12.3 Except for minor modifications in the work, not involving extra cost and not inconsistent with the purposes of the work and except on an emergency endangering life or property, no extra work or change shall be made unless in pursuance of a written order from **RAILTEL** authorising the extra work or change and no claim for any addition to the contract amount shall be valid unless so ordered.
- 12.4 During course of execution of the main work, if any new works to be carried over in the same LOA, Contractor need to execute the same on issuing of LOA amendment or any deviation note or LOI for the same.
- ## 13 **CONTRACTOR'S OBLIGATIONS**
- The **Contractor** shall proceed with execution of the contract in the best and most expeditious manner by engaging qualified careful and efficient workers and complete the work strictly in conformity with the plans, drawings schedules and RAILTEL instructions.

## 14 **SUPPLY OF TOOLS, EQUIPMENT AND OTHER MATERIALS**

- 14.1 For full completion of the work the **Contractor** shall, at his own expense, procure all necessary tools and equipment, depending on the type of work awarded for securing quality, safe conduct and rate of progress of work. The **Contractor** shall also provide all protective measures for safety and storage of equipment under such conditions.
- 14.2. The Contractor shall ensure that all the tools, equipment and other materials required for the work are mobilized and are available. RAILTEL shall have the right to mobilize any / all Equipment as may be required so as to make them available for the work. Expenses / Charges incurred by RAILTEL in respect here of shall be reimbursed by the Contractor or adjusted in the payments to be made to the contractor by RAILTEL
- 14.3 The **Contractor** shall not dispose of, transport or withdraw any tools, tackles, equipment and material provided by him for the contract without taking prior written approval from **RAILTEL**, who at all times shall have right to refuse such permission, if in **RAILTEL** opinion, the same will adversely affect the safe, efficient or expeditious completion of the project.

## 15. **PROGRAM AND CONSTRUCTION SCHEDULE**

- 15.1 Upon award of contract and before commencement of the work, the **Contractor** shall prepare a detailed and comprehensive work completion schedule, for review and approval by RAILTEL. The **Contractor** shall also submit to RAILTEL, a CPM / Bar chart for the works at the works / project site within one (1) week from effective date of contract. These "approved" schedule and procedures shall form the basis of all the works to be performed by the Contractor and shall be adhered to by the Contractor subject to modification by RAILTEL
- 15.2 The **Contractor** will inform and present in person to RAILTEL, the name, designated Project Manager along with his Organizational structure, site engineers / staff for assessment of their suitability & capability in handling the Works, awarded by RAILTEL. In case the designated representative of RAILTEL is not satisfied with suitability or capability of the Contractor's staff, the **Contractor** shall locate and present an alternative person for assessment of staff to RAILTEL. However the **Contractor** shall deploy only those particular staff, who have been assessed and approved by RAILTEL representative for handling the Works awarded by RAILTEL. Even during the course of the Work, if RAILTEL observes and passes instructions to the **Contractor** to replace a particular staff or employee / sub contractor, the **Contractor** shall abide by RAILTEL instructions in this matter at no extra cost to RAILTEL and take immediate steps to minimize the delay in execution of the Work.
- 15.3 Failure to respect the completion dates stipulated in the LOA or instruction shall entitle **RAILTEL** to the application of the "Liquidated Damages" under this Contract

## 16. **EXECUTION OF WORKS.**

- 16.1 All site works are to be protected with diversion signs, barricades, danger signs, warning tapes etc.
- 16.2 Prior to excavation, the existing cable / pipe etc., belonging to other utilities must be located so as to avoid damage to these utilities by taking trial pits at appropriate distances. Any damage to other utility shall be informed to **RAILTEL** and shall be made good by the Contractor to the entire satisfaction of the affected utility or as per existing law at his own cost.
- 16.3 While trenching Contractor shall do shoring wherever required.

- 16.4 Any damage to checkered tiles / granites / structures belonging to shops or other establishments shall be informed to **RAILTEL** and shall be made good by Contractor to the entire satisfaction of the affected utility or as per existing law at his own cost.
- 16.5 The **Contractor** at all times shall work in co-ordination with RAILTEL's representative / supervisory staff and offer them all reasonable facilities to become familiar with the erection, operation and maintenance of the equipment.
- 16.6 In respect of observations of local rules and regulations, administrative orders, working hours and the like the **Contractor** and his personnel shall fully cooperate with **RAILTEL** and follow **RAILTEL** instructions. The **Contractor** shall be responsible for compliance with all statutory requirements including personnel related matters.
- 16.7 In the event of the **Contractor** being prevented by causes not attributable to him from proceeding with the work, before he temporarily withdraws from the site he will obtain permission of **RAILTEL**, and shall hand over to **RAILTEL** for safe keeping during his absence such contract material that he is unable to use / erect and **RAILTEL** will furnish a receipt for material so handed over. However, such storage of material by **RAILTEL** shall be at the risk of the **Contractor**.
- 16.8 The **Contractor** shall not sell, assign, mortgage, hypothecate or remove equipment or materials which have been installed or which may be necessary for the completion of the contract, without the prior written consent of RAILTEL
- 16.9 The **Contractor** shall, throughout the execution and completion of the works and the remedying of any defects therein, take all reasonable steps to protect the environment on and off the site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of his methods of operation and shall be exclusively liable and responsible for the same
17. **TEST & INSPECTION:**
- 17.1 The **Contractor** shall provide for the purpose of inspection, ladders, lighting and equipment for testing, necessary instruments etc., at his own cost. He shall make these available to RAILTEL, if requested, at no cost.
- 17.2 Any work not conforming to the drawings, specifications, or codes for execution shall be rejected forthwith and the **Contractor** shall carry out the rectification at his own cost and within the time specified for the completion of that type of work
- 17.3 All results of inspection and test will be recorded in the inspection reports. Performa of which shall be approved by RAILTEL. These reports shall form part of the completion documents.
18. **EXAMINATION OF WORK BEFORE COVERING UP:**
- 18.1. The **Contractor** shall give advance notice to **RAILTEL** or its representative whenever any work or materials are intended to be covered up in the earth, in bodies or walls or otherwise to be placed beyond the reach of measurement, in order that the work may be inspected or that correct dimension may be taken before being so covered, placed beyond reach of measurement. In default of such notice, the same shall, at the option of **RAILTEL** or its representative. be uncovered and measured at the **Contractor's** expenses. The work shall again be covered up at the **Contractor's** expense.
19. **EXAMINATION OF FINISHED WORK:**
- When finished work is taken down for the purpose of inspection the Contractor shall bear all the expenses incidental thereto in the event that the said work is found to be defective. **RAILTEL** shall pay the cost

incidental thereto in the event there is no default of notice and if it is also in accordance with the specifications

**20. PROTECTION TO EXISTING PLANT AND EQUIPMENT**

- 20.1. During construction of the project, any existing plant and equipment may be operated in and around the vicinity of the project site. In such cases, the **Contractor** shall protect all existing plant, structures, piping, conduits, equipment and facilities against damage during his construction operations
- 20.2. **RAILTEL** shall not be responsible or held liable for any damage to person or property consequently upon the use, misuse or failure of any construction tools and equipment of **RAILTEL** used by the **Contractor** or any of his sub- Contractors, even though such construction tools and equipment may be furnished, rented or loaned to the **Contractor** or any of his sub-Contractors. The **Contractor** accepts all responsibility in this connection and agrees to indemnify and save harmless **RAILTEL** from any and all claims for said damages arising out of or resulting from said use, misuse or failure of such construction tools and equipment
- 20.3. Adequate lighting at and near all the storage, handling, fabrication, pre- assembly and erection sites for properly carrying out the work and for safety and security shall be provided and maintained by the **Contractor**. If the **Contractor** fails to provide all the above listed facilities, **RAILTEL** may provide such facilities as it may deem necessary and charge the cost thereof to the **Contractor**. In any case, the **Contractor** shall be liable for all damages and consequences arising out his neglect in this regard.

**21. STORING CONTRACTOR'S MATERIALS & CLEAN UP OF WORK SITE**

- 21.1 All soil, filth or other matter taken out of any trench, sewer, drain, cesspool or other place shall not be deposited on the surface, but shall at once be carted away by the Contractor from the site of work, for suitable and proper disposal as directed by **RAILTEL**.
- 21.2 During erection, the **Contractor** shall, without any additional payment. at all times keep the working and storage areas used by him free from accumulation of loose or combustible material, waste materials, or rubbish. If the **Contractor** fails to comply with these requirements, **RAILTEL** will proceed to clear those areas and the expenses incurred by **RAILTEL** in this regard shall be payable by the **Contractor**.
- 21.3 The **Contractor** shall be responsible for the safe and secure storage of any material or equipment.

**23. OFFICES. TOOL ROOM. STORES. WAREHOUSE ETC.,**

The **Contractor** shall be fully responsible for storage of all materials covered in his scope and also of those issued by **RAILTEL** and shall acquire necessary site storage space as may be required at his own cost. Similarly it is the responsibility of the **Contractor** to establish his own site office / tool room. No space for storage, office or for any other purpose would be provided by **RAILTEL**. The Contractor has to establish Warehouse and Security at appropriate site in order to store materials issued by **RAILTEL**. Security of all materials 24 hours a day is the sole responsibility of the Contractor and the Contractor has to engage a Professional and registered Security Agency for the same.

**24 STATUTORY APPROVALS:**

- 24.1 It shall be the **Contractor's** responsibility to furnish all particulars and furnish necessary application forms to the concerned authorities on behalf of **RAILTEL**, if so required, and satisfy all requirements and obtain approval.
- 24.2 The **RAILTEL** shall provide any assistance possible and shall arrange for payments to be made to various Agencies upon submission of the required estimates.

**25. DAY/NIGHT WORK:**

- 25.1** The **CONTRACTOR** is normally expected to work during night time only and is required to complete the work in all respects as stipulated elsewhere. However, day work may be stipulated by the **RailTel** or permitted in exigencies, with prior approval of the RailTel.
- 25.2 Sufficient lights must be provided by the contractor to safeguard the workmen and the public and to afford adequate facilities for properly placing and inspecting the materials and work when the night work is in progress.
- 25.3 Where night work is in progress, all excavated areas shall be barricaded and shall be provided with red lights at the cost of Contractor and all other work areas shall be well illuminated to prevent accidental falls etc.



**26. WORK IN MONSOON AND DEWATERING:**

- 26.1. The construction and erection work entails working in monsoon conditions, which will affect productivity and require additional effort to protect the works. The **Contractor** must maintain an adequate labour force and appropriate equipment, as may be required for the project and plan and execute the work according to the prescribed schedule. No extra rate will be considered for such work in monsoon.
- 26.2. During monsoon and at all times during construction, it shall be the responsibility of the **Contractor** to keep the construction site free from accumulation of water at his own cost. Prior to any concreting, the prepared excavations must be totally free of water and the **Contractor** must have on hand the necessary pumping equipment to maintain the works dry. Standby equipment shall also be on site prior to start of concreting.

**27. CONTRACT PRICE**

- 27.1 Contract price shall include all traveling expenses to and from the site, allowances, living expenses, wages, salaries, overtime, benefits and all compensations to be paid for the **Contractor's** skilled and unskilled workmen, supervisors, clerical staff, watch and ward staff, store-keepers etc. It shall also include insurance carried by the **Contractor** for his workers, workmen's compensation, tools and tackles, plants and aids, third party liability and any other insurance as called for in General & Special Conditions of this contract. As well, the price includes cost of all licenses and permits, cost of procurement, loading, transport and unloading of all his material, tools and tackles, instruments and construction aids to and from the site, cost of providing office, tool room, quarters, canteen workshops and all facilities at site as may be required, cost of supply of all material required under the Contract, applicable taxes (ST, WCT etc.) and duties, performance of all services as required under the Contract and satisfactorily executing the complete work under the Contract. If any fees are to be paid to the statutory authorities for testing, inspection or calibration, these shall be considered by the **Contractor** and included in his pricing and if not so done, the same shall be the **Contractor's** responsibility.

- 27.2 Income Taxes on Contractor's / Sub-Contractor's Staff / Employees: The Contractor's staff, personnel and labour will be liable to pay personal income taxes in respect of such of their salaries, wages and allowances, as may be applicable. The **Contractor** shall ensure that all such taxes are duly paid on time by its personnel and indemnify RAILTEL in this connection.

**28. BREAKDOWN OF UNIT PRICES:**

The **Contractor** may be required to furnish an item wise breakdown of Materials, manpower, consumables, overhead etc. showing quantities and proportional contract prices of the physical units included in the Contract, if so requested by **RAILTEL** for their accounts. In addition **RAILTEL** may request unit prices for works not fully defined in the Contract; but which might be necessary during the execution of the project.

**29. GUARANTEE PERIOD & OBLIGATIONS DURING THAT PERIOD:**

- 29.1 A minimum of twelve (12) calendar months from the date of completion of clearing all deficiencies, unless otherwise agreed in writing by **RAILTEL**, shall be deemed to be the Guarantee Period. The Project Technical Specifications may impose more stringent warranty periods, for specific elements of the project. In such case the latter shall govern. The contract shall not be considered as completed until **RAILTEL** has certified in writing that works have been completed and the Guarantee Period shall commence from the date of such certificate. In case any defects in the system/work due to bad materials, and/or bad workmanship develop before the expiry of the above period, the **Contractor**, on notification by **RAILTEL**, shall rectify or remedy the defects at his own cost, by making his own arrangements to provide materials, labour, equipment and any other appliances required in this regard. Should the **Contractor** propose any substitutions to rectify the problem that deviate from what was initially installed; prior approval from the **RAILTEL** shall be required in writing.
- 29.2 The retention amount will be returned to the Contractor only after the expiry of this Guarantee period or on provision of Bank Guarantee. In case even on due notification by **RAILTEL**, the Contractor fails to rectify

or remedy the defects, **RAILTEL** shall have the right to get this done by the other agents and recover the cost incurred by deductions from the Security Deposit amount due to the Contractor, in case this cost is within the value of the security amount, and if not, the Contractor shall be liable to pay to **RAILTEL** the balance amount with all attendant costs including interest as may be worked out by **RAILTEL**.

29.3 The guarantee period shall be extended by the length of time required to make any adjustments, changes or repairs necessary to fulfill the guarantee.

29.4 The **CONTRACTOR** shall obtain similar guarantees from each of his SUB- **CONTRACTORS**. However, the overall responsibility shall lie with the **Contractor** to provide these to the **RAILTEL** along with full contract documentation during closing out of each site.

### **30. RELEVANCE OF WORK SCHEDULES**

The Work Schedules are intended to direct the progress of work and have no bearing on the payments to be made to the **CONTRACTOR** by **RAILTEL**, which shall be consistent with the agreed Payment Schedule notwithstanding anything set out elsewhere. The release of funds shall be as in the following clauses.

### **31. TIME AND ORDER OF COMPLETION AND LIQUIDATED DAMAGES:**

**31.1** If the Contractor has not started the work within 7 days from the date of issue of LOA date / LOI date / **RAILTEL** Schedule / ROW permissions/ issue of Materials whichever is later, **RAILTEL** shall be entitled to cancel the LOA / Contract.

31.2 Both the parties agree that in respect of obligations undertaken by each of them under this Agreement, **time is the essence**.

31.3 **Completion time** / period indicated in the LOA / Contract shall be deemed to be of the essence of the Contract. No necessity for an extension of time is anticipated, but if untoward or extraordinary circumstances should arise beyond the control of the **Contractor**, which, in the opinion of **RAILTEL**, should entitle the **Contractor** to a reasonable extension of time, such extension may be refused or granted, but shall not operate to relieve the **Contractor** of any of his obligations, under the contract.

31.4 If this Contract is delayed at any time in the commencement, or during the progress of the work by any act, delay or neglect of **RAILTEL** or their employees, or by any other **Contractor** engaged by **RAILTEL**, or by changes ordered in the work by **RAILTEL**, or by Force Majeure, the time of completion shall be extended by a reasonable period as may be mutually agreed upon application from the **Contractor** at the time of such special circumstances occurring and not later than 7 days of occurring.

31.5 In the event that provision of Service is delayed beyond the dates specified in the LOA or agreed timelines duly signed by Contractor in kick off meeting, for any reasons attributable to the **Contractor**, then the **Contractor** shall pay to **RAILTEL** liquidated damages for such delay, calculated on the basis of the total price of the LOA value at the rate of **0.5%** per week of delay in completion of Project subjected to a maximum of 10%.

### **31.6 PENALTIES:**

**i. Poor Response:** If the Contractor fails to respond within 24 hrs from the receipt of communication from the Site Engineer, **RAILTEL** would initiate necessary action and impose penalty up to an amount of Rs.10,000/= (Rs.Ten thousand only) for each case.

**ii. Non-standard of working practice:** As per Government conditions the Contractor is supposed to use caution boards, DG sets, barricading stands, stone dust etc. If the Contractor is failed to mobilize the above equipment/materials in time, **RAILTEL** will not allow the Contractor to execute the job further.

Any penalties levied by the local/Statutory Authorities on RAILTEL shall be borne by the Contractor, an additional amount of Rs.10,000/= (Rs.Ten thousand only) per day will be charged as penalty for non-mobilizing basic requirements and towards the delay in completion of the job.

- iii. **Public Sensitivity Issues:** If the contractor fails to respond within 12 Hrs for any public sensitivity issue. RAILTEL will take necessary action for rectifying/attending to the grievance of general public, what ever the cost incurred for rectification by RAILTEL, will be deducted from the Contractor. In addition to this an equal amount will be deducted as RAILTEL service charges and or up to a value of Rs.5 Lakh which ever is lower.
- iv. **Poor Performance:** If the Contractor fails to deliver/ fail to follow the schedule of work or time lines as agreed by both the parties. In such cases RAILTEL will terminate the work / contract to that extent, a communication shall be sent to Contractor stating the failures. The balance work shall be allotted to other Contractor and completes the Project. In case of termination the following payment procedure shall be adopted:

*While settling the bill, RAILTEL will impose penalty up to 10% of the value of the contract. Further, an amount of 15% of bill value will be retained for one year towards defects liability period. All these charges shall be deducted from pending payments / any and all BG'S / Securities.*

- v. **Poor Supervision:** If the Contractor fails to arrange adequate supervisors at Site, RAILTEL will do the supervision and deduct Rs.1,000/= (Rupees One thousand only) per person per shift as supervision charges.

31.7 **RAILTEL shall have absolute right at its sole discretion to encash any / all Bank Guarantee(s) provided by the Contractor, under this or any other Contract(s) with RAILTEL or forfeit Security Deposit in the event of:**

- i. The LOA issued by **RAILTEL** is not executed by the Contractor to the satisfaction of **RAILTEL** within the time specified by **RAILTEL** and or
- ii. The Contractor fails to rectify any / all damages during the course of work even after directions from **RAILTEL** to do so and or
- iii. The Contractor fails to perform his obligations under this Contract and or
- iv. **RAILTEL** is put to loss, damage, what so ever in view of RAILTEL.

and **RAILTEL** shall have right to Cancel the LOA or the Contract besides encashing the BG / s or Earnest Money Deposits which ever is available with **RAILTEL** or may proceed against the **Contractor** for recovery of the said penalty.

32. **Deleted**

33. **DELAY AND EXTENSION OF TIME:**

33.1 If in the opinion of RAILTEL, the work is delayed for justifiable reasons, **RAILTEL** shall make a fair and reasonable extension of time for completion of the Contract Works. Such justifiable reasons shall include:

- i. force majeure , or
- ii. by reason of proceedings taken or threatened by or disputes with adjoining or neighboring RAILTEL's or public authorities, or
- iii. by the works or delays of other Contractors or Tradesman engaged by RAILTEL ,or
- iv. by reason of "RAILTEL's instructions", as per relevant clause indicated elsewhere in this agreement, or

- v. for delays in RAILTEL supply of basic materials.
- 33.2 In all cases, the Contractor shall prove how such factors affected the works and to what extent.
- 33.3 In case of strike or lockout, the **Contractor** shall, as soon as possible, give written notice thereof to RAILTEL, but the **Contractor** shall nevertheless constantly use his endeavors to prevent delay and shall do all that may reasonably be required to the satisfaction of **RAILTEL** to proceed with the work. However, extension of the time shall be without prejudice to **RAILTEL** invoking any of the other conditions/stipulations in these General Conditions of the Contract. No extension of time shall be granted for monsoon conditions.
- 34. SUSPENSION:**
- 34.1 The **Contractor** shall, on the order of RAILTEL, suspend the progress of the works or any part thereof, for such time or times and in such manner as **RAILTEL** may consider necessary and shall during such suspension, properly protect and secure the works so far as necessary in the opinion of the RAILTEL. Such suspension is warranted when:
- i. Provided for in the contract; or
  - ii. Necessary for the proper execution of the works, or by reason of weather conditions; or
  - iii. Necessary for the safety of the works or any part thereof; or
  - iv. Necessary by some default on the part of the **Contractor**.
- 34.2 The **Contractor** shall not be entitled to extra costs (if any) incurred by him during the period of suspension of the works; but in the event of any suspension ordered by **RAILTEL** for reasons other than aforementioned then **RAILTEL** shall have the right to grant such extension of time of completion of the works as **RAILTEL** may consider proper.
- 34.3 If the progress of works or any part thereof is suspended on the order of the **RAILTEL** for more than three months at a time, the **Contractor** may serve a written notice on **RAILTEL** requiring a permission within fifteen (15) calendar days from receipt thereof, to proceed with the works or that part in regard to which progress is suspended. If such permission is not granted within that time, the **Contractor** may, but is not bound to, treat the suspension where it affects part only of the works, as a deletion of such part, or where it affects the whole of the works, as an annulment of the Contract by RAILTEL.
- 34.4 No Idling charges will be paid to the Contractor in case of suspension of work due to local problems/delays, supply of material, issue of drawings etc. from RAILTEL
- 35. TERMINATION OF CONTRACT BY RAILTEL:**
- 35.1 **RAILTEL** shall be entitled to interrupt and terminate the contract at any time should, in **RAILTEL's** opinion, the cessation of work become necessary, owing to paucity of funds of the **Contractor**, the **Contractor's** apparent inability to perform, or from any other cause whatsoever. In such case, the value of approved materials utilized at site and of certified and accepted work done to date by the **Contractor** shall be paid for in full at the rates specified in the Contract subject to the clause of Liquidated damages contemplated herein. All such materials become the property of the **RAILTEL**.
- The amounts held in the "hold back" account shall likewise be released, within a reasonable time after making the adjustments if any, payable by the Contractor. Notice in writing from the **RAILTEL** of such termination and the reason thereof shall be conclusive evidence of taking over of works from the Contractor.
- 35.2 The **Contractor** shall have no claim for any payment or compensation or otherwise howsoever on account of any anticipated profits or advantages which he did not derive from the execution of the work in full.
- 35.3 **RAILTEL** shall also be entitled to terminate the contract at any time, If in the opinion of **RAILTEL**, the **Contractor** or any person acting through / under him attempts to or does any or all of the following acts.
- a) has obtained the contract by paying or agreeing to pay a consideration/ commission

- b) has obtained the contract as a result of ring tendering.
- c) Offer or give any person in **RAILTEL** any gift or consideration.

35.4 **RAILTEL** may, in its opinion if so warranted, choose to rescind the Contract,

If the **Contractor** -

- a) Becomes bankrupt or insolvent; or is proceeded against for winding up, insolvency or bankruptcy; or for any offences involving moral turpitude, or its accounts are frozen by any statutory body or court order;
- b) Makes an arrangement with or assignment in favour of his creditors, or agrees to carry out the contract under a Committee of inspection of his creditors; or
- c) Being a Company or Corporation, goes into liquidation (other than a voluntary liquidation consented by **RAILTEL** for the purpose of amalgamation or reconstruction); or
- d) Assigns the contract or any part thereof otherwise than as provided in clause "SUB-CONTRACTS" of these conditions; or
- e) Makes substitutions to materials, to designs, or to sequencing of works, without the prior approval of **RAILTEL**; or
- f) Abandons the contract as previously defined; or
- g) Disregards the written instructions of the **RAILTEL**, or contravenes any provision of the contract; or
- h) fails to adhere to the agreed program of work; or
- i) fails to remove materials from the site or to pull down and replace work, after receiving from **RAILTEL**, notice to the effect that the said materials or works have been condemned or rejected, as mentioned elsewhere in these conditions; or
- j) fails to take steps to employ competent or additional staff and labour, as required elsewhere in these conditions; or
- k) fails to afford **RAILTEL** or **RAILTEL**'s Representatives proper facilities for inspecting the works or any part thereof, as required elsewhere in these conditions; or
- l) promises, accepts, offers or gives either himself or through his partners, agents or servants, any bribe, commission, gift or advantage to any officer or employee of **RAILTEL**, or to any person on its or on their behalf, in relation to the execution of this Contract; or
- m) is deemed to have done or omitted to do one or more of the above.
- n) fails to adhere to the agreed quality and specifications.
- o) fails to fulfill any condition under this contract
- p) and for any other reasons at the sole discretion of **RAILTEL**.

35.5 Providing that reason has been established for rescinding, then and in any of the aforementioned cases, **RAILTEL** may serve the **Contractor** with a notice in writing to that effect. If the **Contractor** does not respond within seven (7) calendar days after the delivery to him of such notice, proceed to make good the default, in so far as the same is capable of being made good and carry on the work or comply with such directions as aforesaid, to the entire satisfaction of **RAILTEL**, then **RAILTEL** shall be entitled, after giving forty eight (48) hours notice in writing, under the hand of the **RAILTEL**, to rescind the contract in whole or in part or parts (as may be specified in such notice) and adopt either or both in the following courses:

- a) Carry out the whole or part of the work from which the **Contractor** has been removed, by the employment of the required labour, equipment and materials. The cost of such works shall include but not be limited to: handling and lifting at site, freight, transport and execution insurance, supervision and all incidental charges.
- b) Measure up the whole or part of the work from which the **Contractor** has been removed and get it completed by another **Contractor**. The manner and method in which such work is completed shall be to the entire discretion of **RAILTEL**, whose decision shall be final.

- 35.6 In both cases (a) and (b) mentioned above, the **RAILTEL** shall be entitled (1) to appropriate the whole or such portion of the Bank Guarantee's as it may consider fit, and (2) to recover from the Contractor the cost of carrying out the work in excess of the sum which would have been payable according to the certificate of the **RAILTEL** to the Contractor, had the works been carried out by the Contractor under the terms of the contract, such certificate being final and binding upon the Contractor. However, such recovery shall be made only when the cost incurred by **RAILTEL** is in excess of the Bank Guarantee's forfeited from the Contractor and shall be limited to the amount by which the cost incurred exceeds the Bank Guarantee's thus forfeited.
- 35.7 The amounts thus to be forfeited or recovered may be deducted from any moneys then due or which at any time thereafter may become due to the **Contractor** by the **RailTel** under this or any other contract or otherwise.
- 35.8 In such an event as contemplated herein above:
- a) The **Contractor** shall have no claim for compensation for any loss sustained by him by reason of his having purchased or procured any materials, or entered into any commitments, or made any advances on account of or with a view to the execution of the works or the performance of the contract. The **Contractor** shall not be entitled to be paid any sum for any work thereto actually performed under the contract, unless and until **RAILTEL** shall have certified the performance of such work and the value payable in respect thereof and the **Contractor** shall only be entitled to be paid the value so certified.
  - b) **RAILTEL** or the **RAILTEL**'s representatives shall be entitled to take possession of any materials, tools, implements, machinery and buildings on the works or on the property on which these are being or ought to have been executed and to retain and employ the same in the further execution of works or any part thereof until the completion of the works without the **Contractor** being entitled to any compensation for the use and employment thereof or for wear and tear or for destruction thereof.
  - c) **RAILTEL** shall not be liable to pay the **Contractor** any moneys on account of the contract until the expiry of the period of warranty and thereafter until the final costs of completion, maintenance damages for delay in completion (if any) and all other expenses incurred by **RAILTEL** have been ascertained and the amount thereof certified by **RAILTEL**. The **Contractor** shall then be entitled to receive only such sum or sums (if any) as **RAILTEL** may certify would have been due to him upon due completion by him, after deducting the said amount. If such amount shall exceed the sum which would have been payable to the **Contractor**, then the **Contractor** shall upon demand, pay to **RAILTEL** the amount of such excess and it shall be deemed a debt due by the **Contractor** to the **RAILTEL** and shall be recoverable accordingly.

36 **ASSIGNMENT:**

36.1 The agreement shall be binding on and ensure for the benefit of **RAILTEL** and the **Contractor**. The **Contractor** shall not assign or transfer any rights, duties, obligations or benefits conferred under this agreement, to any person without prior consent in writing from **RAILTEL**. Any such assignment, if permitted, shall not relieve the **Contractor** of any of its obligations or liabilities under the Agreement, and if so required by **RAILTEL**, the **Contractor** shall procure that any such assignee shall enter into a deed of warranty in favour of **RAILTEL** in terms, which are satisfactory to **RAILTEL**. However, **RAILTEL** shall without the prior permission of **Contractor**, assign or transfer the benefits or liabilities of the whole or any part of the Agreement.

37 **Deleted**

38 **COMMUNICATIONS TO BE IN WRITING:**

All notices, communications, references and complaints made by the **RAILTEL** or his representative or the **Contractor** inter se concerning the works shall be in writing. Notices, communications, references or complaints not in writing shall not be recognized.

39 **COMPLIANCE WITH STATUTORY LAWS/REGULATIONS:**

- 39.1 The **Contractor** warrants that all goods/systems supplied and work done under the contract shall conform to all applicable City, State and Central laws, ordinances and all relevant statutory regulations. Further, the **Contractor** shall indemnify, keep indemnified and defend and save **RAILTEL** harmless for loss, cost or damage by reason of any actual or alleged violation thereof.
- 39.2 The **Contractor** shall ensure compliance with all relevant statutes, laws, rules and regulations of the Central or State Government or any other authority such as the Workmen's Compensation Act, Payment of Wages Act, Minimum Wages Act, Employees State Insurance Act, Employees Provident Fund Act, Apprentices Act, Contract Labour Regulation and Abolition Act, Child Labour (Prohibition and Regulation) Act, etc., and any / all other applicable statutes and all modifications thereof , in connection with labour/employees engaged by him or his sub-**Contractors** in the work. The **Contractor** shall furnish to **RAILTEL** all necessary documents, challans etc., in respect of payments towards Provident Fund/ Employees State Insurance and under other statutes on periodical basis as required by **RAILTEL**.
- 39.3 **Contractor** must follow all norms and set procedures of Indian Labour Laws and regulations in the execution of the Works. The **Contractor** shall not engage minors/children under minimum age as specified in the applicable Indian Labour Laws.
- 39.4 The **Contractor** shall conform to the provisions of Indian Boiler Regulation, Indian Factory Rules, Indian Electricity Act and any other acts of legislature relating to the work and to the regulations and bylaws of any authority and of any water, lighting and other companies and/or Authorities with whose systems the Project is proposed to be connected and shall, before making any variations from the Drawings or specifications that may be necessitated, give to **RAILTEL** written notice, specifying the variations proposed to be made and the reason for making it apply for instructions thereon.
- 39.5 The **Contractor** shall indemnify **RAILTEL** in respect of all actions, suits, claims and demands brought or made against **RAILTEL** by the workmen of the **Contractor**, or any other person or persons whomsoever, in connection with the works, or in respect of any matter or thing done or omitted to be done by the **Contractor** in the execution of or in connection with the works, notwithstanding that all reasonable and proper precautions may have been taken by Contractor. He shall also indemnify against any loss or damage to **RAILTEL** in consequence of any action or suit or proceedings (civil and/or criminal) being brought against **RAILTEL** for anything done or omitted to be done in connection with the execution of the work. The indemnity given by the **Contractor** as aforesaid shall extend to making good all claims and demands proceedings (civil and /or criminal) arising out of losses/damages to property of every description and kind, the infringement of any legal right, as well as injury or accident to any person resulting in death or otherwise.
- 39.6 The **Contractor** agrees to and does hereby accept full and exclusive liability for compliance with all obligations imposed by the Employees State Insurance Act 1948 and the **Contractor** further agrees to defend, indemnify and hold **RAILTEL** harmless from any liability or penalty which may be imposed by the Central, State or Local Authority by reason of any asserted violation by the **Contractor** or sub-**Contractor** of the Employee's State Insurance Act 1948, and also from all claims, suits or proceeding that may be brought against **RAILTEL** arising under, this Contract, whether brought by Central or State Government authority or any political sub-division thereof.
- 39.7 The **Contractor** agrees to file with the Employee's State Insurance Authorities, the declaration form and all forms which may be required in respect of **Contractor's** or sub-**Contractor's** employees, and who are employed in Work provided for under this Contract as required under the said Act. The **Contractor** shall deduct and secure the agreement of the sub-Contractors to deduct the employees contribution as per the first schedule of the Employees State Insurance Act from wages and affix Employee's contribution cards at wages payment intervals. The **Contractor** shall remit and secure the agreement of sub-Contractor to remit to the concerned Bank, Employee's State Insurance Corporation Account, the employees contribution's required by the said Act.

- 39.8 The **Contractor** agrees to maintain all cards and records as required under the Act in respect of employees and payments and the **Contractor** shall secure the agreement of the sub-Contractor to maintain such records. Any expenses incurred for the contribution, making contributions or maintaining records shall be to **Contractors** or sub-**Contractors** account. **RAILTEL** shall have all the right to retain such sum as may be deemed fit and necessary from the Contract Price, until the **Contractor** shall have submitted documentary proof relating to payment of all its contributions under Employees State Insurance Act, Provident Fund Act, etc.
- 39.9 The **Contractor** shall maintain and ensure that all their personnel and its sub-Contractor's personnel involved in the Project, where necessary identity cards and shall also maintain/ cost to be maintained by its sub-Contractors all necessary records in respect of its personnel and its sub-Contractor's personnel as required in Law. The **Contractor** shall be responsible for all expenses that may be incurred in this connection.
- 39.10 Neither the **Contractor** nor the **Contractor's** permitted sub-**Contractors** nor the employees of any of them shall be deemed for any purpose to be employees of **RAILTEL**. Accordingly, neither the **Contractor** nor the **Contractor's** Sub-**Contractor** nor their employees shall be entitled to any of the benefits under any employee benefit plan **RAILTEL** presently has in effect or may hereafter put into effect.
- 39.11 The **Contractor** shall ensure that no employee of the **Contractor** or of any **Sub-Contractor** or Sub-supplier engaged by the **Contractor** is treated in law as an employee of **RAILTEL** and the **Contractor** shall fully indemnify **RAILTEL** in this regard.

#### **40 STATUTES, REGULATIONS AND JURISDICTION:**

All matters relating to the Validity, meaning and performance of the contract shall be decided in accordance with the laws and statutes of Republic of India and shall be subject to and be referred to the Courts of Law situated in Hyderabad.

#### **41 CONTRACTOR TO INDEMNIFY RAILTEL**

- 41.1 The **Contractor** shall indemnify **RAILTEL** and every member, officer and employee of **RAILTEL**, as also the **RAILTEL's** site **RAILTEL-in-Charge** against all actions, proceedings, claims, demands, costs and expenses whatsoever arising out of or in connection with Damage to Property and all actions, proceedings, claims, demands, costs and expenses which may be made against **RAILTEL** for or in respect of or arising out of any failure by the **Contractor** in the performance of his obligations under the Contract.
- 41.2 **RAILTEL** shall not be liable and cannot be held liable for or in respect of any demand or compensation payable by law in respect of or in consequence of any accident or injury to any workmen or other person in the employment of the **Contractor** or his sub-**Contractor** and the **Contractor** shall indemnify and keep indemnified **RAILTEL** against all such damages and compensations and against all claims, damages, proceedings, costs, charges and expenses whatsoever in respect thereof or in relation thereto.

#### **42 PATENT INDEMNIFICATION**

- 42.1 In the event any designs, drawings, plans or diagrams or any of the construction methods or processes furnished/ followed by the **Contractor** for the construction of the portion of project or for the operation of the project, constitute infringement of patent or any of the protected rights and use thereof restrained. The **Contractor** shall procure for **RAILTEL** at no cost to the latter, the right to constitute using the same or to the extent it is possible, replace the same with non infringing work approved by **RAILTEL**, or modify them so that they become non-infringing, but such modifications shall otherwise be to the entire satisfaction of **RAILTEL**.
- 42.2 The provisions of this paragraph shall survive the completion, expiration or termination of the Contract.

#### **43 PAYMENT OF CLAIMS AND DAMAGES:**

- 43.1 Should **RAILTEL** have to pay any money in respect of any claims or demands whatsoever, as aforesaid , as described herein inclusive of the amount so paid and the costs incurred by **RAILTEL** in respect of any

damage or loss to any property belonging to third party or to any public utility service, shall be charged to and paid by the **Contractor** and he shall not be at liberty to dispute or question the right of **RAILTEL** to make such payments on any ground whatsoever, notwithstanding the same may have been made without his consent or authority, or in law or otherwise to the contrary.

43.2 In every case in which by virtue of the provisions of Section 12, sub-section (1) of Workmen's Compensations Act, 1923 or other applicable provision of Workmen's Compensations Act or any other Act, **RAILTEL** is obliged to pay compensation to workmen employed by the **Contractor** and/or his sub **Contractor's** in execution of Work, **RAILTEL** shall be entitled to recover from the **Contractor** the amount of compensation so paid, and without prejudice to the rights of **RAILTEL** under Section 12, sub-section (2) of the said Act.

43.3 **RAILTEL** shall be at liberty to recover such amount, or any part thereof, by deducting it from the Security Deposit or from any sum due to the **Contractor** whether under this Contract or otherwise. **RAILTEL** shall not be bound to contest any claim made under Section 12, sub-section (1) of the said Act except on written request of the **Contractor** and upon his giving to **RAILTEL** full security for all costs for which **RAILTEL** might become liable in consequence of contesting such claim. **RAILTEL** shall have lien on the amount due to the **Contractor** in respect of any amount that may be claimed by **RAILTEL** and/or payable by the **Contractor** under any of the provisions of the Contract.

#### **44 INSURANCE & RISK**

44.1 Third Party Liability Insurance Policy:

The **Contractor** shall take Insurance Policy to cover third party liability (claims arising out of injury and / or property damage) for LOA, value (per event / aggregate limit i.e. 1:1) including cross liability. The validity of this insurance shall be till the completion of Maintenance Period.

44.2 **Workmen's Compensation Policy:**

The **Contractor** shall maintain/cause to be maintained a Workmen's Compensation Insurance Policy in accordance with Workmen's Compensation Act, 1923 or any other applicable statutory requirements from time to time covering all the employees engaged by the **Contractor** (including sub-**Contractor's** employees) in the performance of the contract. The policy availed by the **Contractor** shall incorporate the following endorsement: "**the principal's interest protected**".

44.3 **Additional Clauses**

The policy shall contain a suitable clause whereby **RAILTEL** shall be named as 'co-insured' under the policy. The policy shall contain a suitable clause whereby **RAILTEL** shall be named as the 'loss-payee' under the policy.

44.4 The insurance policies will be effective during the entire duration of the contract. The **Contractor** shall ensure the satisfactory payment of premia and other charges payable under the above policies and shall be responsible for satisfactory and expeditious compliance of all procedures, formalities and other terms and conditions relating to the initiation and maintenance of the policy including any claim there under.

44.5 All costs on account of insurance liabilities covered under contract will be on **Contractor's** account and will be included in contract price.

44.6 The **Contractor** shall not cancel or terminate or curtail the insurance policies in any manner without the prior express approval of **RAILTEL**.

44.7 **Contractor** has to submit Labour License copy issued by the Labour Commissioner-Central, before starting the work.

**NOTWITHSTANDING ANYTHING TO THE CONTRARY CONTAINED ABOVE, the following terms are agreed to in addition to those that are set out above.**

45 **INDEMNIFICATION:**

45.1 The **Contractor** hereby releases and shall indemnify, defend and hold harmless the **RAILTEL** and its subsidiaries and affiliates and their officers, agents, employees, successors and assignees and authorized representatives against any and all suits, actions, legal or administrative proceedings, claims, demand, damages, liabilities, interest, attorney's fees, costs and expenses of whatsoever kind or nature, including those arising out of damage to property and injury to or death of persons, whether arising during or after completion of the work hereunder and in any manner directly or indirectly caused, occasioned, or contributed to in whole or in part, or claim to be caused, occasioned, or contributed to in whole or in part, by reason of any act, omission, fault or negligence whether active or passive of the **Contractor**, **sub-Contractors** or of anyone acting under its direction or control on its behalf in connection with or incidental to the performance of this contract.

45.2 The **Contractor** shall pay and meet all expenses including legal costs incurred by **RAILTEL** in responding to and defending all such claims and the **Contractor** shall meet and pay all damages awarded against **RAILTEL** and keep **RAILTEL** harmless and indemnified to the fullest extent.

45.3 There will not be any claim against **RAILTEL** for any claim not recovered and/or short recovered from the insurance company such amount shall be borne by the **Contractor** himself.

45.4 In the event **RAILTEL** is required to pay any royalty, penalty or other sum by whatever name known, to any of its contracting partners or agencies, either on account of time runs or the project not being made operational in full by the **Contractor**, or suffering any other disability, loss, damage or other inconvenience, on account of any delays or lapses in executing the project and rendering it fully operational, for any reasons not attributable directly to **RAILTEL**, the **Contractor** agrees and under takes to indemnify, keep indemnified and save harmless **RAILTEL** from all such costs, damages, expenses, disability, in such manner that at the first instance itself.

45.5 **Risk Purchase:**

45.5.1 In the event the **Contractor** fails to execute the Work as per agreed productivity / Quality Norms of works issues related to Public sensitivity / safety does not perform as per specification / fails to fulfill his obligations as mentioned elsewhere in this Contract and time lines, **RAILTEL** after giving 7 days notice to the **Contractor** shall have the right to get the balance / defective Work executed / re-executed through any other **Contractor** / sub **Contractor** / agency as **RAILTEL** deems fit and proper at the costs and expenses of the **Contractor**, provided however that if the estimated cost for execution of such work as certified by **RAILTEL**'s representative shall be less than the proportionate Contract Price, the benefit there from shall be to **RAILTEL**'s account. And if the same shall be estimated more than the proportionate Contract price, the excess amount incurred by **RAILTEL** in this connection shall be reimbursed by the **Contractor** which may be adjusted by **RAILTEL** against any outstanding dues payable to the **Contractor** under this contract or shall entitled to recover from the **Contractor**. In such an event, **RAILTEL** shall have the right to retain and hold in its custody and possession of all requisite equipment, materials, tackles, machinery etc., belonging to the **Contractor** in connection with the Work, as it deems necessary so as to put them in use. **RAILTEL** shall be at liberty to sell the materials belonging to the **Contractor** if in the opinion of **RAILTEL**, it is necessary to avoid any loss /hardship/ damages that may be incurred by **RAILTEL** on account of the **Contractor**'s failure to execute the Work to the satisfaction of **RAILTEL**. However, the Risk Purchase Clause shall be applied if the **Contractor** is behind schedule for more than 40% of the Value of the Work that has been awarded and if the delay is more than 20 % in time Parameters.

46 **TIME SCHEDULE:**

46.1 Time is the essence of the contract.

Time is the essence of the contract. The **Contractor** shall provide a detail Time Schedule including the key activities related to the implementation of the network described in this Contract. Each site or group of sites should have its own schedule, which is a part of the overall implementation schedule.

46.2 The Time Schedule should include as a minimum information, the following activities:

- a) Issue of LOA
- b) Project kick-off meeting
- c) Detail engineering
- d) Receiving ROW permissions
- e) Mobilization
- f) Civil Work
- g) Cable Works
- h) OSP inspection
- i) Testing and DEL delivery schedule
- j) **RAILTEL** Inspection
- k) Certificate of Acceptance

46.3 In addition, the **Contractor** shall identify the project team structure with job responsibilities and description including the quantity of employees in each field of expertise and the quantity of installation teams, he plans to use for this project.

46.4 The **Contractor** has to discuss and sign off in detail the Time schedule & other resource deployment plan with **RAILTEL** and get the **RAILTEL**-in-charge approval before proceeding with the work.

46.5 For each job description, the **Contractor** shall provide the average quantity of years of experience that the individuals have in this particular field of work.

47 **INSPECTION, TESTING AND ACCEPTANCE:**

47.1 After completion of installation at each route, the OSP system thereof shall be tested by the **Contractor**. The **Contractor** shall notify **RAILTEL** in writing prior to the commencement of such tests. **RAILTEL** may, at its discretion, be present and witness such tests or waive in writing the performance of these tests in which case such systems shall become accepted, upon putting into Commercial service or, in the absence of written notice of rejection given to the **Contractor** after completion of installation whichever occurs first.

47.2 **RAILTEL** will provide the **Contractor** with an inspection and acceptance test schedule for the Operation system, which shall be carried out by the **Contractor**. Upon achieving satisfactory results of such tests, **RAILTEL** shall issue a Final Acceptance Test Certificate on the completion of the test in respect of the route concerned.

47.3 **MANDRILL:** until the specified mandrill is passed and certified by Engineer in Charge and in case if there is any problem in passing specified mandrill no payment shall be paid to the Contractor for that stretch. Further, after rectification of the duct the Contractor has to pass the mandrill again in all the ducts. The cost of ROW charges/ penalties if any raising out of this will be debited from the Contractor's bill as mentioned in Article 6 of Schedule B.

47.4 In the event that the OSP system at the Site concerned does not satisfactorily pass the tests, the **Contractor** shall rectify the defects and the procedure referred to above in this Article shall be repeated as many times as is necessary, in order for testing and Acceptance to be satisfactorily completed.

48 **WARRANTIES AND REPLACEMENT OF MATERIALS**

48.1 The **Contractor** assures and guarantees that the cables or all other related materials installed in the project which fall under Contractor scope in terms of the contract will be new, unused when installed and will be free from defects in materials and workmanship and will function substantially in accordance with the applicable technical specification during the warranty period of twelve (12) months from Virtual Completion Date/ Final Acceptance Date.

48.2 The **Contractor** undertakes to promptly remedy all defects discovered in the system for the scope of work covered by him within the warranty period and notified to the **Contractor** by either repairing or replacing, at its option, the defective product or its defective part or subassembly or unit at his own cost and expense. Repaired or replaced units and subassemblies shall have a new warranty period of twelve (12) months from date of rectification.

**49 STORAGE AT SITE:**

- 49.1 The **Contractor** shall be fully responsible for storage of all materials covered in his scope and shall acquire necessary site storage space as may be required, for timely completion of the project. **RAILTEL** will deliver the materials covered in its scope to the **Contractor** at **RAILTEL**'s warehouse point and it will be sole responsibility of the **Contractor** to transport such materials to his designated storage places or sites and safeguard the same against theft, loss or damage whatsoever. No additional cost shall be payable on this account.
- 49.2 Any tax implications including Octroi etc., during the transport within the territory shall be the responsibility of the **Contractor**. During the currency of the contract the **Contractor** shall be responsible for the safe custody of such materials delivered by **RAILTEL** till the final installation and will make good any shortages/damages, which occur during transportation to the site/storage at its cost. The **Contractor** shall also furnish a weekly report of consumption of **RAILTEL** supplied materials to enable **RAILTEL** Logistics to monitor the progress and arrange to supply additional quantity of such materials covered in the scope of **RAILTEL** as and when required.

**50 MATERIAL RECONCILIATION:**

- 50.1 It shall be the effort of the **Contractors** to reduce wastage at every level.
- 50.2 At the end of the specified work as per LOA, **RAILTEL** would under take a joint reconciliation of all materials issued. The maximum allowable wastage for the various items is indicated below.
- a) PVC Conduits wastage not greater than 1%.
  - b) Cables wastage not greater than 0.5%
  - c) Accessories wastage not greater than 1%
  - d) HDPE ducts wastage not greater than 1%. Less than 50 Mts.  
HDPE ducts lengths will be treated as wastage.
- 50.3 Any shortfall would be to the **Contractors** account calculated on the basis of the cost incurred by **RAILTEL** for procuring these items and would be deducted from the final bill.

**51. MISCELLANEOUS:**

- 51.1 No party shall publish any press release or otherwise publicly disclose the existence of this Contract or any of its Terms and Conditions, without the express prior written consent of the other Party, following advance review by consenting Party of the text of the press release or other public disclosure.

In the event of any changes, amendments, modifications in the provision and other terms and conditions of the **Contractor**, the same shall be executed and implemented by a way of Supplementary document duly signed by both the parties.

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## SPECIAL CONDITIONS OF CONTRACT

### 1.0 TENDER DOCUMENTS

1.1 The goods and services required, bidding procedure and contract terms are prescribed in the tender documents. The set of tender documents issued for the purpose of bidding includes the following together with any addendum and corrigendum thereto.

Section-I: Preamble along with schedule of requirements, annexure etc.

Section-II: I) Instructions to tenderers and conditions of tendering.

II) Special conditions of contract.

III) Forms of Tender and annexure etc.

Section-III: Technical specifications and drawings etc.

1.2 If the Tender submitted by a Tenderer is accepted and the contract awarded to the Tenderer the various works coming under the purview of the contract shall be governed by tender documents mentioned above.

1.3 Any special conditions stated by the Tenderer in the covering letter submitted along with the tender shall be deemed to be a part of the Contract to such extent only as have been explicitly accepted by the RailTel.

### 2.0 AGREEMENT

The successful Tenderer shall within 15 days after having been called upon by notice to do so be bound to execute an agreement based on accepted rates and conditions, in such form as the RailTel may prescribe, and lodge the same with the RailTel together with the conditions of contract, specifications and Schedule of prices referred to therein duly complete.

2.1 The RailTel reserves the right to reject or alter any part of the work executed by the contractor which in the judgment of RailTel does not comply with the requirements of these specifications. The decision of the RailTel shall be final and conclusive for all purpose.

### 3.0 RATES

The tenderer are required to quote percentage rate for the Schedule for complete work both in figures and words. If there is any discrepancy in the quoted rates both in figures and words, the rates quoted in words will be taken as final.

3.1 The offer shall **be inclusive of all taxes / duties** as applicable at present. Proof of payment or declaration that all duties and taxes have been paid for the material being supplied to RailTel/Secunderabad to be enclosed.

3.2 Any statutory variation in taxes / duties shall be to RailTel account and shall be admissible on production of valid documentary evidence.

### 4.0 SECURITY DEPOSIT:

4.1 On Receipt of the Letter of Acceptance of Tender from the RailTel, the successful Tenderer shall within a period of 15 days deposit an amount equal to 5% of contract as Security deposit for due fulfillment of the contract.

- 4.2 The Earnest Money already paid by the successful Tenderer may at the discretion of the successful Tenderer be adjusted towards payment of this Security deposit and the additional amount shall be paid in any one of the following forms:
- (a) Bank draft
  - (b) Irrevocable Bank Guarantee issued by any scheduled/nationalized bank
  - (c) Deposit Receipt
- 4.3 The Security Deposit will bear no interest.
- 4.4 The Instruments for security deposit should be valid for three months beyond the defects liability period of one year (Warranty / Maintenance period) and issue of FAC. On successful completion of defect liability period and on certification of concerned RailTel engineer, the security deposit will be refunded or Bank guarantee released to the contractor after adjustment of any dues payable by the contractor.
- 5.0 **CONTRACT PERFORMANCE GUARANTEE (PBG)**
- 5.1 On receipt of the Letter of Acceptance of Tender from the RailTel, the successful Tenderer should give a Performance Guarantee in the form of irrevocable bank guarantee from any Nationalized Bank or Scheduled Bank in the Form given in Tender document amounting to **5% of the contract value.**
- 5.2 The Performance Guarantee should be furnished by the successful contractor after letter of acceptance has been issued, but before signing of the agreement. The agreement should normally be signed within 15 (fifteen) days after issue of LOA and Performance Guarantee should also be submitted within this time limit. The Instruments for Performance Guarantee should be valid for three months beyond the completion period.
- 5.3 Performance Guarantee shall be released after satisfactory completion of the work, issue of PAC and on certification of RailTel engineer.
- 5.4 Wherever the contracts are rescinded, the security deposit shall be forfeited and the Performance Guarantee shall be en-cashed.
- 5.5 The balance work shall be got done independently without risk and cost of the original contractor.
- 5.6 The original contractor shall be debarred from participating in the tender for executing the balance work. If the failed contractor is a Joint Venture (JV) or a partnership firm, then every member/partner of such a firm would be debarred from participating in the tender for the balance work either in his/her individual capacity or as a partner of any other JV/partnership firm.
- 6.0 **Deduction of Income Tax at source:**  
Income Tax and any other tax such as work contract tax etc, at the prevailing rates during the period of contract shall be deducted at source on all the payments. The contractor should quote the PAN, Sales & Service Tax Registered number should be mentioned on the bill for arranging payment.
- 7.0 Eligibility Criteria Technical / Financial: Not applicable for this tender**
- 7.1 Technical Capability: Not applicable for this tender**
- 7.1.1 Similar Work Defined: Not applicable for this tender**
- 7.2 Financial Capability: Not applicable for this tender**

- 7.3 **Contractor's Engineer:**  
The Contractor shall constantly keep one competent Engineer who will be responsible for carrying out the works during its progress.
- 8.0 **Workmen, Tools, Plant & Machinery**  
The contractor shall make his own arrangements for all plant, machinery, equipment and Tools including spare parts, fuel and consumable stores all labour required during execution of work.
- 9.0 **Maintenance Period:** Maintenance period is **one year** from the date of completion of the work certified by the concerned RailTel Engineer and issue of Provisional Acceptance Certificate. During this period, the contractor has to be make good of any deficiencies arising from defective workmanship/material at free of cost.
- 10.0 **Warranty/Guarantee:**  
Besides other warranty/guarantees required the Contractor shall warranty/guarantee the work in general for one year. All required guarantees shall be submitted to the RailTel's Engineer by the Contractor. For all brought out items supplied by the contractor, organized warranty/guarantee certificates from the manufacturer shall be in the name of the employer and handed over to the employer after completion of the works.
- 11.0 **RailTel's Engineer Instructions:**  
Contractor shall forthwith comply with and duly execute the work true to the instructions issued to him by the RailTel's Engineer or his authorized representative.
- 12.0 **Schedule of Work/Supply**  
The Schedule of Work/Supply given in the Schedule is provisional and is meant to indicate the intent of the work and to provide a uniform basis for tendering. The Employer reserves the right to increase or decrease any of the quantities or to totally omit any item of work and the Contractor shall not claim any extras or damages on these grounds. Hence the Contractor is expected to quote his rates keeping this in mind, as no claims of any sort for variations in quantities or deletion of items will be entertained under any circumstances.
- Any error in description or in quantity or omission of items from the contract document shall not vitiate this Contract but shall be treated as a variation.
- 13.0 **Visit:**  
Before tendering, the Contractor shall visit and examine the site and satisfy himself as to the correct dimensions of the work and the facilities for obtaining any special articles and shall obtain generally his own information on all matters affecting the continuation and progress of the works. Further, the Contractor shall be deemed to have examined the existing site details before tendering.
- 14.0 **AGREEMENT**  
The successful Tenderer shall after having been called upon by notice to do so, be bound to execute an agreement based on accepted rates and conditions, in such form as the RailTel may prescribe, and lodge the same with the RailTel together with the conditions of contract, specifications and Schedule of prices referred to therein duly completed.
- 15.0 **TERMS OF PAYMENT**
- 15.1: **On Account Payment: 90%** Running accounts payment will be allowed based on the certification and measurements by RailTel engineer-in-charge for value of the work/services

indicated in the Schedule after the works/services are completed to full satisfaction of RailTel

**15.2 Final Bill:** 5% payment shall be paid after successful completion of work and based on the certification and measurements and on issue of PAC by RailTel engineer-in-charge.

**15.3 Balance 5%** of contract shall be paid after completion, on the certification of RailTel engineer-in-charge and issue of FAC.

**15.4 Documents to be submitted along with bills:**

- a) Delivery Challan for supply items.
- b) Warranty certificate
- c) Material reconciliation statement along with final bill
- d) No claim certificate along with final bill

34.1.2 Payment will be made through NEFT/RTGS and Income tax will be recovered from the bill as per Income tax rules in vogue Bills should be submitted with the **following / applicable details printed on bill itself** without which payment will not be arranged

- a. Income Tax PAN (if not furnished 20% TDS will be deducted)
- b. Service Tax Registration Number (if not furnished ST claim will not be reimbursed – but reverse charge of ST will be deducted as per ST rules)
- c. VAT/CST registration numbers
- d. WCT – Location, State and percentage of WCT applicable (with a copy of Registration certificate) (if not provided, highest percentage applicable will be deducted)
- e. Bank Account Number
- f. Name of the Bank and branch with full address
- g. IFSC/NEFT CODE of the Bank/Branch

**15.5 FINAL SETTLEMENT**

On expiry of the defects liability /maintenance/warranty period, the SD will be released to the contractor after adjustment of any dues payable by the contractor.

**15.6 DEDUCTION FROM BILLS**

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

**16.0 TAXES**

Deduction of Income Tax at source as per provisions of Finance Act and Income Tax in force shall be made from the Contractor/Sub-Contractor and the amount so deducted will be credited to the Central Government. Settlement of Income Tax should be made with Income Tax authorities.

Wherever the law makes it statutory for the Purchaser to deduct any amount towards Sales 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 Purchaser will not accept any liability for the same.

- 17.0 **Provisional Acceptance Certificate:** After completion of provisional acceptance tests and if no problems are noticed during observation period of 15 days, Purchaser's Engineer shall issue a Provisional Acceptance Certificate for successful completion of work and connectivity of whole system covering all materials and services included in the Schedule of Works, after the acceptance test as per the approved test procedure have been completed and the performance has been found to meet the specifications. RailTel's decision in this respect shall be final.
- 18.0 **Final Acceptance Certificate:** FAC shall be issued after successful completion of defects liability period/maintenance period/guarantee period of one year from the date of issue of PAC.
- 19.0 Bill passing officer is GM/SBC and Bill paying officer is GM/Finance/SR.
- 20.0 PAN / Sales & Service Tax Regd.No./ VAT TIN No. should be mentioned on the bill for arranging payment.
- 21.0 **TIME OF COMPLETION:**  
Time is the essence of the contract. Total period of completion is **120 days** from the date of issue of acceptance letter.
- 22.0 **SETTLEMENT OF DISPUTE AND ARBITRATION**
- 22.1 Any dispute or difference whatsoever arising between the parties out of or relating to the construction, meaning, scope, operation or effect of this contract or the validity or the breach thereof shall be settled by arbitration in accordance with the Arbitration and Conciliation Act, 1996 as amended and the award made in pursuance thereof shall be binding on the parties. The venue of such arbitration or proceedings thereof shall be Secunderabad
- 22.2 All arbitration proceedings shall be conducted in English. Recourse against any Arbitral award so rendered may be entered into court having jurisdiction or application may be made to such court for the order of enforcement as the case may be.
- 22.3 The Arbitral Tribunal shall consist of the sole Arbitrator appointed by mutual agreement of the parties.
- 22.4 Each of the parties agree that notwithstanding that the matter may be referred to Arbitrator as provided herein, the parties shall nevertheless pending the resolution of the controversy or disagreement continue to fulfill their obligation under this Agreement so far as they are reasonably able to do so.
- 23.0 **QUANTUM OF WORK AND VARIATION IN QUANTITIES**
- 23.1 Quantities indicated in Schedule of Requirements are approximate and purport to convey the tenderer an idea of the magnitude of the work. The Contract value may vary within + / -25% of grand total of schedule of requirements as included in the Letter of Acceptance to tender as per site requirement, incase of variation in quantities the contractor shall be bound to carry out the work at the rates agreed in the schedule up to the limit of +/-25%

variation in the value of contract and shall not be entitled to any claim or any compensation whatsoever.

23.2 The quantities quoted in the Schedule are not firm and may be varied.

24 **FORCE MAJEURE CLAUSE**

If at any time during continuance of this Contract, the performance, in whole or 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, 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 event) then provided notice of the happening of any such, event is given by either party to the other within twenty one 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 damage against the other in respect of such non-performance or delay in performance, and the obligations under the Contract shall be resumed as soon as practicable after such event has come to an end or ceased to exist, PROVIDED FURTHER that if the performance in whole or part of any obligation under this contract is prevented or delayed by reason of any such event beyond a period as mutually agreed to by the RailTel and the Contractor after any event or 60 days in the absence of such an agreement whichever is more, either party may, at its option, terminate the Contract provided also that if the contract is so terminated under this clause the RailTel may, at the time of such termination, take over from the Contractor at prices as provided for in the contract, all works executed or works under execution.

25 All the terms & conditions stipulated are binding on the contractor. In all matters of dispute, the decision of General Manager, Southern Region, Secunderabad shall be final.

26 All items required for satisfactory execution of the work contemplated are covered in the schedules. If contractor feels that any item is required for satisfactory completion of the work over and above the schedules, he may quote for the same duly giving necessary justification for the same.

All the works should be carried out as per the instructions of RailTel Engineer-In-Charge at site.

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## Schedule of Requirement (1A)

### Tender No. RailTel/Tender/OT/SBC improvement works/2015-16/95 to 98

Name of work: Rectification of Back Bone cable and protection arrangement over bridges in the ghat section of Donegal to Subramanya stations between Hassan -Mangalore.

Sl. No	Description	Unit	QTY	Rate	Amount
1	Excavation of jointing pit without damaging the fiber and provision of joint chamber of 1.2 mtr dia , 60 Cm height and 50 mm thickness with two piece top cover and bottom cover with holes for drainage and cable entry(The reinforcement drawing enclosed).This includes backfilling and ramming of the trench after placing the joint closure and cable loop in the chamber without causing any damage to the same and consolidation of soil as well as disposal of soil as per plan and as advised by RailTel Representative.	no.	10	3154	31540
2	Concreting is to be done in rocky areas where OFC is to be protected and to keep the route marker in position. At bridges and culverts to protect OFC on approaches and wherever necessary as directed by RCIL Engineer. The proportion of cement sand and metal the ratio is 1:3:6 (1 - cement, 3 - stone 3/8", 6 - sand) curing and ensuring proper setting. The depth is 0.15 mtrs and width is 0.3 mtrs. The OFC to be drawn through HDPE or G.I Pipe or half cut RCC as per site conditions and as directed by RCIL Engineer.	cu.m	10	3292	32920
3	Supply, transport of 50 mm dia GI Pipe IS1239 medium grade with holes drilled as an anti-theft measure with threads on either end for coupling to be provided to protect OFC and laying on RCC bridges/trenches with CC at every 1m as directed by RCIL Engineer	mts	320	387	123840
4	Trenching in normal soil to a depth of 1.2 meter and 300mm wide and backfilling after laying OFC as per specification.	mts	100	72	7200
5	Laying of OFC/ QUAD Cable/HDPE Duct in already made trench and through HDPE/GI/RCC pipes where ever necessary.	no.	500	7	3500
6	Supply & Provision of Mid-Section OFC Joint including Splicing (24 Fiber) inside already prepared jointing pit. This does not include provision of Joint chamber, top plate & back filling. The joint Enclosure shall be as recommended in the Technical specification.	no.	10	10302	103020

7	Rectification and splicing of existing mid-section OFC joints. This includes supply and provision of thermo shrink sealing on cable entry ports & closure dome or as required.	no.	10	6480	64800
8	Supply and fixing of MS-C channels of size 100mmX50mmx5mm of 1.2 mts length for girder bridges with suitable MC clamps	no.	250	2100	525000
9	Trenching to a depth of 1 mtr below rail level, placing Gi pipe (IS1239) 50 mm dia in the trench made, back filling and ramming.	mts	5	768	3840
<b>In words: Eight Lakhs Ninety Five Thousand Six Hundred and Sixty Only.</b>			<b>TOTAL</b>		<b>895660</b>


  
**RAILTEL**

**Schedule of Requirement (1B)**

**Tender No. RailTel/Tender/OT/SBC improvement works/2015-16/95 to 98**

**Name of work:** Provision of Maintenance free earthing for equipments and Electrical earthing for POPs at Hassan,sakaleshpura,Kabakaputtur,Arsikere,Tiptur, Birur, Davangere, Haveri, Maddur, Penukonda, Hindupur, Doddaballpur, Yeswanthpur,, Bayyappanahalli, Bangalore cant and Akkihebbalu

Sl. No.	Description	Unit	QTY	Rate	Amount
1	Supply & Provision of earthing arrangement with 50 mm dia class c, Gi pipe as per drawing and with cement concrete earth pit having 300x300x3 mm as per spec and drawing. The earth pit can be constructed either by brick masonry having 80 mm or with RCC having 50 mm wall thickness. Earth resistance values with date should be painted on the respective earth pit.	no.	16	3100	49600
2	Extension of Earth continuity from earth pit by 6 SWG GI wire	mts	640	14.5	9280
2	Provisioning of maintenance free ring earth arrangement by using exothermic welding as RDSO.RDSO/SPN/197/2008	no.	16	25122	401952
3	supply of Lightening and surge arrester of class B and C suitable for single phase supply in TT network as per RDSO spec.no.RDSO/spn/1665 /2004 admit .5 or latest & as recommended by RDSO vide letter no.STS/S/IPS/Genl. Dt.27.01.2006.	no.	16	16000	256000
4	Installation & commissioning of class B and C arrestors as supplied. These din rail mountable devices along with a 63 amps HRC input fuse & fuse base shall be fixed in a wall mountable cabinet of size 450 mm x 250 mm x 150 mm made MS steel of 20 gauge or better with IP31 protection and powder coating. All the internal power wiring shall be made using 10 sq. mm copper cable. The PF contacts of the class C arrestors shall also be wired using cable thickness of 2.5 sq.mm & terminated on a suitable terminal block. The earth cable shall be connected to the equipotential bus bar using an insulated cadmium bronze cable of 3/16", as per RDSO spec. IRS:S:103-2004 for redundancy using exothermic welding. All the materials used for exothermic welding shall be of RDSO approved make. All the materials required for the above work shall be arranged by the contractor.	no.	16	1934.00	30944
	<b>In Words: Seven Lakhs Four Thousand Seven Hundred Thirty Six Only.</b>			<b>TOTAL</b>	<b>747776</b>

### Schedule of Requirement (1C)

**Tender No. RailTel/Tender/OT/SBC improvement works/2015-16/95 to 98**

**Name of work:** Provision of pale fencing for the POPs at Hassan, sakaleshpur, Kabakaputtur, Arsikere, Tiptur, Birur, Davangere, Haveri, Ghataprabha, Kuduchi, Doddaballpur and Maddur.

Sl. No.	Description	Unit	QTY	Rate	Amount
1	Manufacturing, supplying and erecting pre-cast RCC pale fencing including RCC poles of size 2.40x00.15 mts Plan No. B/GL/653 and as per IS code of practice and detailed specifications using 12.5 mm graded granite stone aggregate with M20 mix as directed by the engineer-in-charge with contractor's supply of cement, steel and shuttering required and duly providing additional posts for change of direction of fencing at junctions etc., including all lead and lifts from the casting spot to situ and earth work, labor, consumables including concrete 1:4:8 mix for fixing the pale fencing posts, with white washing, color washing, etc., as directed by the Engineer-in-charge.	mts	280	2400	672000
2	Supply and installation of channel gates approximately 235 kg per gate.	kgs	1880	100	188000
3	Hiring of JCB for removing Debris	Hrs	10	1025	10250
<b>In Words: Eight Lakhs Seventy Thousand Two Hundred Fifty Only.</b>			<b>TOTAL</b>		<b>870250</b>

### Schedule of Requirement (1D)

**Tender No. RailTel/Tender/OT/SBC improvement works/2015-16/95 to 98**

**SUB: Provision of Stabilizers to AC plants in 24 RailTel POPs**

Sl. No	Description	Unit	QTY	Rate	Amount
1	Supply of V guard or similar Branded make (If similar make is supplied, approval to be obtained in advance from RailTel) Stabilizer of Electronic type of 10 KVA capacity. Single Phase, Range I/P 160V -300V and O/P 220 V +/- 2%, Voltmeter to know the I/P and O/p voltages, Over Load protection, High voltage cut-off ensuring prot. from voltage surges.	no.s	24	19000	456000
2	Installation of stabilizer( This includes supply to each location)	no.s	24	1900	45600
<b>In Words: Five Lakh One Thousand Six Hundred Only.</b>			<b>TOTAL</b>		<b>501600</b>

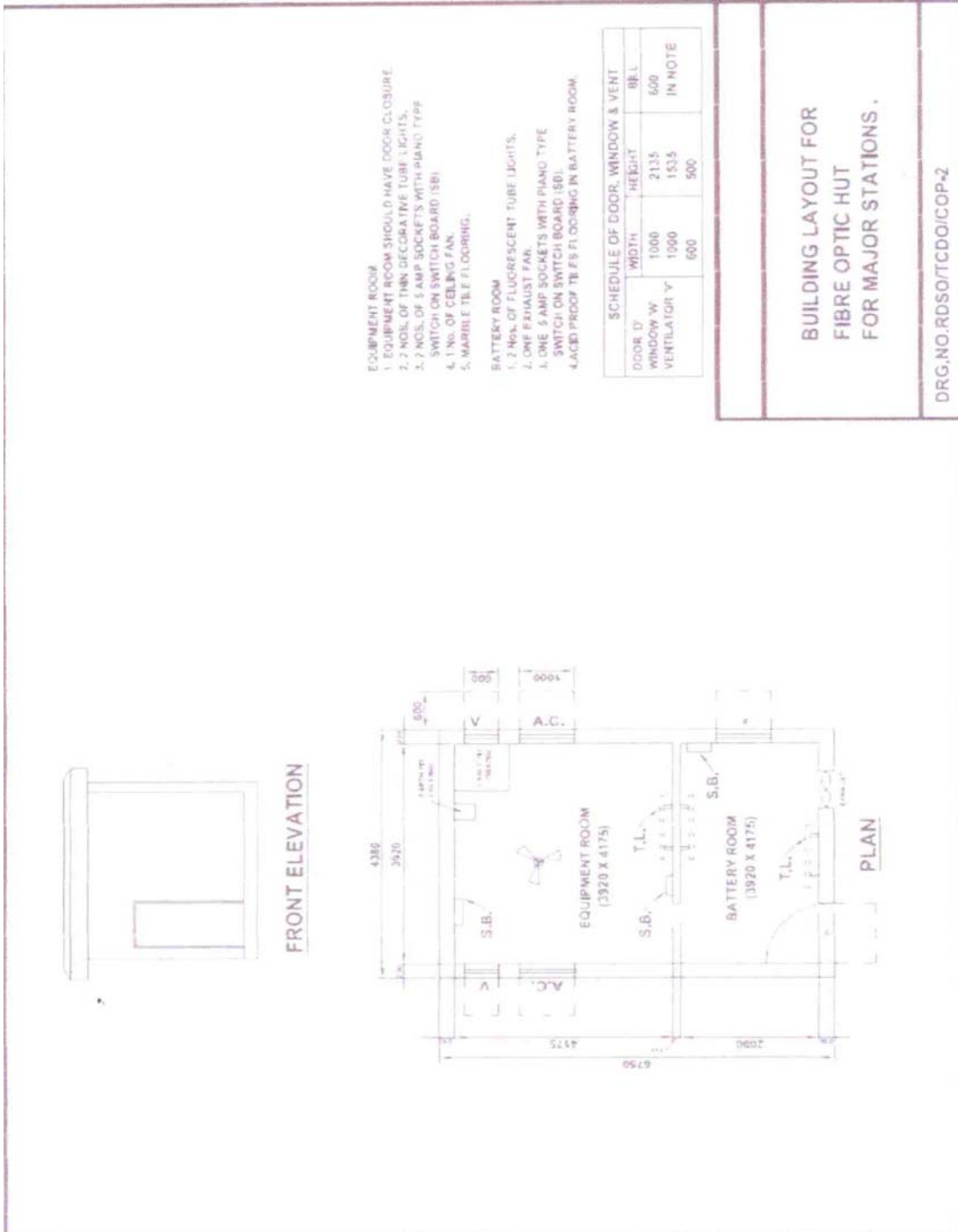
**Schedule of Requirement Summary sheet where Contractor/Tenderer has to quote Percentage % offer**

SI No	Annexure	Estimated Amount	Total Estimated Amount	Contractor Quoted Percentage on total estimated amount in Figure & words	Final Amount
1	Schedule of Requirement (1A)	895660.00	<b>30,15,286</b>	<b>at Par/ Below/ Above</b>	
2	Schedule of Requirement (1B)	747776.00			
3	Schedule of Requirement (1C)	870250.00			
4	Schedule of Requirement (1D)	501600.00			
<b>Contractor Final Amount in Words:-----</b>					

**Contractor Signature & Seal**

RAILTEL

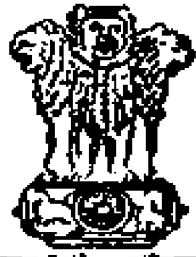
# Drawing & Specifications



**Technical specification for provision of earth**

**1. Introduction**

The earthing arrangement is required to provide one earth for DG set & other earth for AC supply. The earth resistance should be less than 1 ohm.



**CODE OF PRACTICE**

**FOR**

**EARTHING AND BONDING SYSTEM**

**FOR SIGNALLING EQUIPMENTS**

**RDSO SPECIFICATION NO. RDSO/SPN/197/2008**

**SIGNAL DIRECTORATE**

**RESEARCH, DESIGNS & STANDARDS ORGANISATION**

**LUCKNOW – 226011.**

## **CODE OF PRACTICE FOR EARTHING AND BONDING SYSTEM FOR SIGNALLING EQUIPMENTS**

### **1. Scope**

This document covers earthing & bonding system to be adopted for signaling equipments with solid state components which are more susceptible to damage due to surges, transients and over voltages being encountered in the system due to lightning, sub-station switching etc. These signaling equipments include Electronic Interlocking, Integrated Power supply equipment, Digital Axle counter, Data logger etc.

### **2. References**

IS 3043	<i>Code of practice for earthing.</i>
ANSI/UL 467	<i>Grounding &amp; bonding equipment.</i>
IEEE 80	<i>IEEE guide for Safety in AC sub-station grounding.</i>
IEEE 837	<i>Standard for qualifying permanent connections used in sub-station grounding.</i>
IEC 62305	<i>Protection against lightning.</i>

### **3. Importance of Earthing**

The installation and maintenance of an effective low resistance earthing system is essential due to the following -

- Efficiently dissipate heavy fault currents and electrical surges, both in magnitude and duration, to protect equipment being damaged so as to minimize down time, service interruption and replacement cost.
- Provide a stable reference for electrical and RF circuits at the installation to minimize noise during normal operation.
- Protection of personnel who work within the area from dangerous electric shock caused due to “step potential” or “touch potential”.

### **4. Characteristics of good Earthing system**

- Excellent electrical conductivity
  - Low resistance and electrical impedance.
  - Conductors of sufficient dimensions capable of withstanding high fault currents with no evidence of fusing or mechanical deterioration.
  - Lower earth resistance ensures that energy is dissipated into the ground in the safest possible manner.
  - Lower the earth circuit impedance, the more likely that high frequency lightning impulses will flow through the ground electrode path, in preference to any other path.
- High corrosion resistance

The choice of the material for grounding conductors, electrodes and connections is vital as most of the grounding system will be buried in the earth mass for many years. Copper is by far the most common material used. In addition to its inherent high conductivity, copper is usually cathodic with respect to other metals in association with grounding sites, which means that it is less likely to corrode in most environments.

- Mechanically robust and reliable.

## 5. **Location for Earth**

- Low lying areas close to the building or equipment are good for locating Earth Electrodes.
- The location can be close to any existing water bodies or water points but not naturally well-drained.
- Dry sand, lime stone, granite and any stony ground should be avoided.
- Earthing electrode should not be installed on high bank or made-up soil.

## 6. **Acceptable Earth Resistance value**

The acceptable Earth Resistance at earth busbar shall not be more than 1 ohm.

## 7. **Components of Earthing & Bonding system**

The components of Earthing & Bonding system are-

Earth electrode, Earth enhancement material, Earth pit, Equi-potential earth busbar, connecting cable & tape/strip and all other associated accessories.

## 8. **Design of Earthing & Bonding system**

### 8.1 **Earth Electrode**

- The earth electrode shall be made of high tensile low carbon steel circular rods, molecularly bonded with copper on outer surface to meet the requirements of Underwriters Laboratories (UL) 467-2007 or latest. Such copper bonded steel cored rod is preferred due to its overall combination of strength, corrosion resistance, low resistance path to earth and cost effectiveness.
- The earth electrode shall be UL listed and of minimum 17.0mm diameter and minimum 3.0mtrs long.
- The minimum copper bonding thickness shall be of 250 microns.
- Marking: UL marking, Manufacturer's name or trade name, length, diameter, catalogue number must be punched on every earth electrode.
- Earth electrode can be visually inspected, checked for dimensions and thickness of copper coating using micron gauge. The supplier shall arrange for such inspection at the time of supply, if so desired.

### 8.2 **Earth Enhancement material**

Earth enhancement material is a superior conductive material that improves earthing effectiveness, especially in areas of poor conductivity (rocky ground, areas of moisture variation, sandy soils etc.). It improves conductivity of the earth electrode and ground contact area. It shall have following characteristics-

- Shall mainly consist of Graphite and Portland cement. Bentonite content shall be negligible.
- Shall have high conductivity, improves earth's absorbing power and humidity retention capability.
- Shall be non-corrosive in nature having low water solubility but highly hygroscopic.
- Shall have resistivity of less than 0.2 ohms-meter. Resistivity shall be tested by making a 20cm. cube of the material and checking resistance of the cube at the ends. The supplier shall arrange for such testing at the time of supply, if so desired. Necessary certificate from National/ International lab for the resistivity shall also be submitted.
- Shall be suitable for installation in dry form or in a slurry form.
- Shall not depend on the continuous presence of water to maintain its conductivity.
- Shall be permanent & maintenance free and in its "set form", maintains constant earth resistance with time.
- Shall be thermally stable between -10 °C to + 60 °C ambient temperatures.
- Shall not dissolve, decompose or leach out with time.
- shall not require periodic charging treatment nor replacement and maintenance.
- Shall be suitable for any kind of electrode and all kinds of soils of different resistivity.
- Shall not pollute the soil or local water table and meets environmental friendly requirements for landfill.
- Shall not be explosive.
- Shall not cause burns, irritation to eye, skin etc.
- Marking: The Earth enhancement material shall be supplied in sealed, moisture proof bags. These bags shall be marked with Manufacturer's name or trade name, quantity etc.

### **8.3 Backfill material**

The excavated soil is suitable as a backfill but should be sieved to remove any large stones and placed around the electrode taking care to ensure that it is well compacted. Material like sand, salt, coke breeze, cinders and ash shall not be used because of its acidic and corrosive nature.

### **8.4 Earth Pit**

#### **8.4.1 Construction of unit earth pit:** Refer typical installation drawing.

- A hole of 100mm to 125mm dia shall be augured /dug to a depth of about 2.8 meters.
- The earth electrode shall be placed into this hole.
- It will be penetrated into the soil by gently driving on the top of the rod. Here natural soil is assumed to be available at the bottom of the electrode so that min. 150 mm of the electrode shall be inserted in the natural soil.
- Earth enhancement material (minimum approx. 30-35 kg) shall be filled into the augured/dug hole in slurry form and allowed to set. After the material gets set, the

diameter of the composite structure (earth electrode + earth enhancement material) shall be of minimum 100mm dia covering entire length of the hole.

- Remaining portion of the hole shall be covered by backfill soil, which is taken out during auguring /digging.
- A copper strip of 150mmX25mmX6mm shall be exothermically welded to main earth electrode for taking the connection to the main equi-potential earth busbar in the equipment room and to other earth pits, if any.
- Exothermic weld material shall be UL listed and tested as per provisions of IEEE 837 by NABL/ ILAC member labs.
- The main earth pit shall be located as near to the main equi-potential earth busbar in the equipment room as possible.

#### **8.4.2 Construction of loop Earth by providing multiple earth pits**

- At certain locations, it may not be possible to achieve earth resistance of  $\leq 1\text{ohm}$  with three earth electrodes /pits due to higher soil resistivity. In such cases, provision of loop earth consisting of more than one earth pit shall be done. The number of pits required shall be decided based on the resistance achieved for the earth pits already installed. The procedure mentioned above for one earth pit shall be repeated for other earth pits.
- The distance between two successive earth electrodes shall be min. 3mtrs and max. upto twice the length of the earth electrode i.e. 6 mtrs. approx.
- These earth pits shall then be inter linked using 25X2 mm. copper tape to form a loop using exothermic welding technique.
- The interconnecting tape shall be buried at depth not less than 500mm below the ground level. This interconnecting tape shall also be covered with earth enhancing compound.
- Main Equi-potential Earth Busbar (MEEB) of size 300X25X6 mm copper strip shall be installed to the wall of prefab/room on suitable insulators.
- For connecting earth pit and Main Equi-potential Earth Busbar (MEEB) 16 Sq.mm dia multi-strand single core PVC insulated copper cable with suitable copper lugs and stainless steel nuts and bolts shall be used. This cable shall be protected with GI pipe with clamping while entering into the prefab.
- The MEEBs shall have pre-drilled holes of suitable size for termination of bonding conductors. The MEEBs shall be insulated from the building walls. Each MEEB shall be installed on the wall with low voltage insulator spacers of height 60mm. The insulators used shall have suitable insulating and fire resistant properties for this application. The MEEBs shall be installed at the height of 0.5m from the room floor surface for ease of installation & maintenance. All terminations on the MEEBs shall be by using copper lugs with spring washers.

### **1.4.3 Measurement of Earth resistance**

The earth resistance shall be measured at the Main Equipotential Earth Busbar (MEEB) with all the earth pits interconnected using Fall of Potential method as per Para 37 of IS: 3043.

### **1.4.4 Inspection Chamber**

- A 300X300X300 mm (inside dimension) concrete box with smooth cement plaster finish shall be provided on the top of the pit. A concrete lid, painted black, approx. 50 mm. thick with pulling hooks, shall be provided to cover the earth pit.
- Care shall be taken regarding level of the floor surrounding the earth so that the connector is not too deep in the masonry or projecting out of it.
- On backside of the cover, date of the testing and average resistance value shall be written with yellow paint on black background.

### **8.5 Equipotential Earth Busbar and its connection to equipments & Surge protection devices in the Equipment room:** Refer typical bonding connections drawing no.SDO/RDSO/E&B/002.

#### **8.5.1 Equi-potential earth busbars**

There shall be one equi-potential earth busbar for each of the equipment room i.e. IPS/Battery charger room and EI/Relay room. The equi-potential earth busbars located in individual rooms shall be termed as Sub equi-potential busbars (SEEB). The equi-potential earth busbar located in the IPS /Battery charger room and directly connected to Class 'B' SPDs and the main earth pit shall be termed as Main equi-potential earth busbar (MEEB).

The EEBs shall have pre-drilled holes of suitable size for termination of bonding conductors. The EEBs shall be insulated from the building walls. Each EEB shall be installed on the wall with low voltage insulator spacers of height 60mm. The insulators used shall have suitable insulating and fire resistant properties for this application. The EEBs shall be installed at the height of 0.5m from the room floor surface for ease of installation & maintenance. All terminations on the EEBs shall be by using copper lugs with spring washers.

#### **8.5.2 Bonding Connections**

To minimize the effect of circulating earth loops and to provide equi-potential bonding, "star type" bonding connection is required. As such, each of the SEEBs installed in the rooms shall be directly connected to MEEB using bonding conductors. Also, equipment/racks in the room shall be directly connected to its SEEB. The bonding conductors shall be bonded to their respective lugs by exothermic welding.

#### **8.5.3 All connections i.e. routing of bonding conductors from equipments to SEEB & from SEEBs to MEEB shall be as short and as direct as possible with min. bends and separated**

from other wiring. However, connection from SPD to MEEB shall be as short as possible and preferably without any bend.

**8.5.4** Materials and dimensions of bonding components for connection of individual equipments with equipotential bus bar and earth electrode shall be as given below.

<b>Component/Bonding</b>	<b>Material</b>	<b>Size</b>
Main equipotential earth busbar (MEEB).	Copper	300X25X6 mm (min.)
Sub equipotential earth busbar (SEEB).	Copper	150X25X6 mm (min.)
Individual equipments to SEEB using copper lugs with stainless steel nut and bolts.	Multi-strand single core PVC insulated copper cable as per IS:694	10 Sq.mm
SEEB to MEEB using copper lugs with stainless steel nut and bolts.	Multi-strand single core PVC insulated copper cable as per IS:694	16 Sq.mm
Surge protection devices (SPD) to MEEB using copper lugs with stainless steel nut and bolts.	Multi-strand single core PVC insulated copper cable as per IS:694	16 Sq.mm
MEEB to main earth electrode.	Multi-strand single core PVC insulated copper cable as per IS:694 (Duplicated)	35 Sq.mm
Main earth pit to other earth pit in case of loop earth.	Copper tape	25X2 mm

**9. Drawing of earthing & bonding system**

The complete layout with dimensions of the earthing & bonding system shall be submitted by the supplier after commissioning.

**10. Warranty**

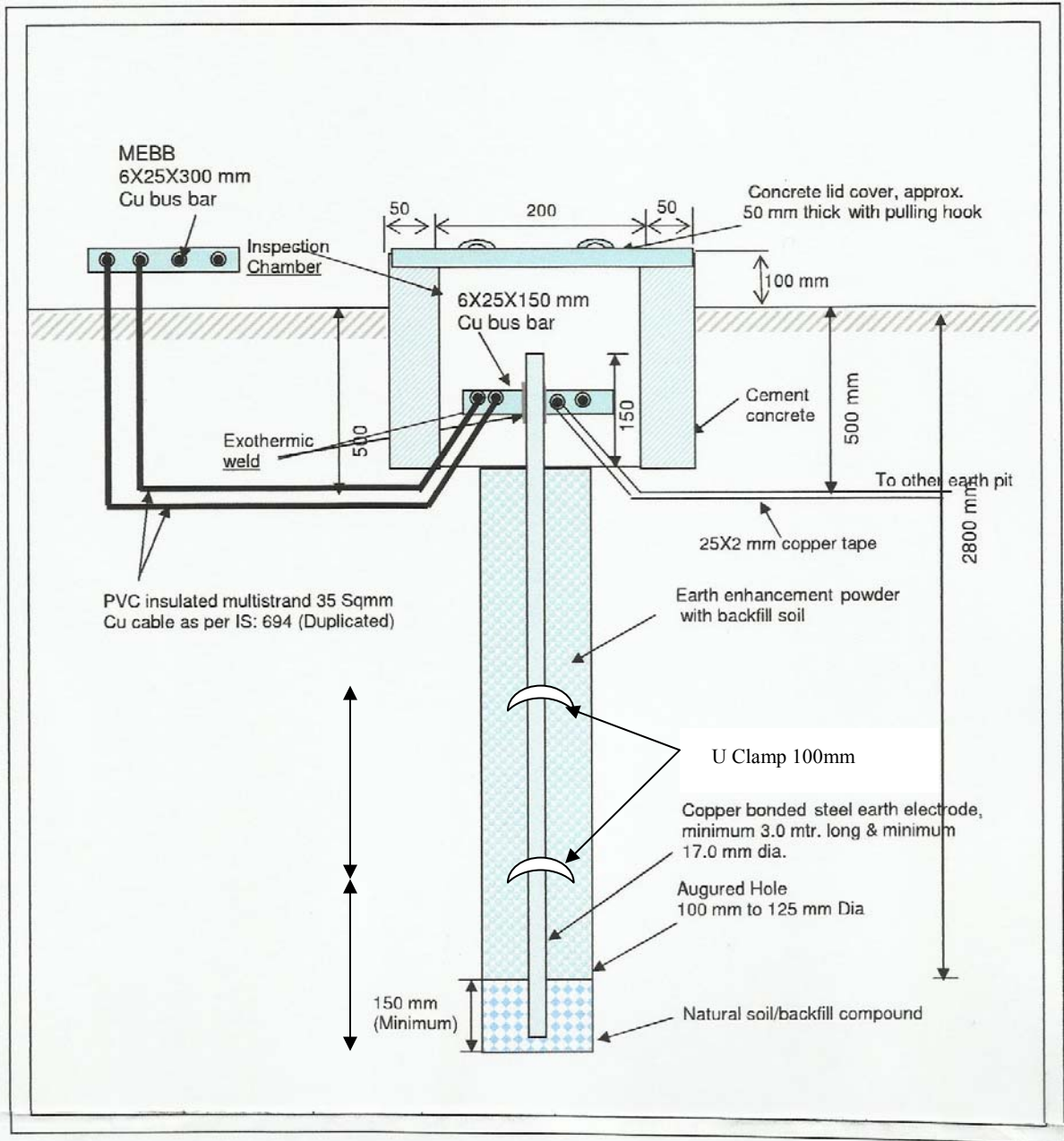
The supplier shall be responsible for complete supply, installation & commissioning of the earthing & bonding system. The warranty of such system shall be 60 months from date of commissioning. During this period, any failure of earthing system due to improper materials & bad workmanship shall be attended free of cost by the supplier.

**11. Maintenance of earthing & bonding system**

The maintenance schedule should cover verification of earthing system conductors and components, verification of electrical continuity, measurement of earth resistance, re-fastening of components and conductors etc.

\*\*\*\*\*

### Drawing for Earth



RAILTEL

## SPECIFICATION FOR CABLE LAYING

Specification for High Tension and Low Tension under ground cables and cable trenches, cable laying etc.

1. SCOPE: This specification covers supply of low tension and high tension under ground cables and laying of cables in the cable trenches running of cables along the structures, wall, steel frame work, trusses, etc. with connected materials indicators etc.

### 2. LT UG CABLE:

2.1: power cables shall be suitable for 440/435 V 3 phase with neutral earthed system and for heavy duty use.

2.2: The cable shall be of 1100 Volts grade, 4 core, PVC insulated and PVC sheathed, aluminum conduct red, cores laid up, surrounded by comma covering inner sheath applied either by extrusion or by wrapping of a filling material containing un vulcanized rubber or thermo-plastic material applied with Proofed or plastic tape and armored with galvanized steel round wire flat strip and outer sheathing with PVC.

2.3: The conductors shall be of stranded aluminum wires, sizes conforming to class-2 of table 13 of IS – 8130/76 or latest.

2.4: The PVC insulated and PVC sheathed LTUG cables shall conform to IS-1554 (Part I)/1976 or latest.

### 3. CABLE TRENCHES (ORDINARY):

Excavation of cable trenches of different sizes in all types of soils. The bottom of trench is leveled freed from stones, and sharp edges of rock. A layer of 10 cms thick sand is laid at the bottom of trench after laying the cable, it is covered once again with 10 cms thick sand and covered with well burnt country bricks at the rate of 9 to 10 bricks per metre depending upon width of brick for each cable without leaving any gap between so as to prevent damages to the cables due to crow bars etc.(during any excavation at a later date ) and one brick to be placed in between the cables at every one metre of regular interval and duly filling the trench with earth after positioning the cable markers ramming well in stages to bring the surface in level with original surface.

If two separate feeders are to be laid in the same trench horizontal interval spacing is advisable in order to reduce the effect of mutual heating and also to ensure a fault occurring on the cable will not damage the adjacent one.

If single core cables are used for forming a three phase circuit, the three cables are laid in triangular formation (trefoil).

The sizes and cable trench details are shown in the drawing No. RailTel/SR/SC/Power Cable/2/2004.

4. ROAD CROSSING: Cutting of roads, excavation of the cable trench of different sizes and laying of RCC Hume pipes and jointed with collars in an approved manner. The pipes are required to be laid so as to keep the cable at one metre below the ground level. The pipes shall be extended up to 2 meters on either side of the road, measured from the edge of the road. The pipes shall be positioned so as to maintain a slope of about 1 in 30, to allow drainage of seepage water. No bricks or sand are required to be placed at such places. A number of pipes are laid for number of cables, if are required to be laid. The cable trench can be closed with the excavated earth and ramming well in stages to bring the surface in level with the original and making the road as earlier.

The cable can be drawn through pipes without disturbing the traffic when once the above arrangement is made.

The cable markers can be placed on either side of the road so as to identify the cable route.

The sizes and road crossing details are shown in the Drg.No.RailTel/SR/SC/Power Cable/2/2004 enclosed.

5. Track crossings: Removing of existing ballast, excavation of the cable trench of different sizes under the track and laying of RCC Hume pipes and jointed with collars in an approved manner. The pipes are required to be laid so as to keep the cable at minimum one metre below the track or formation level. The pipes shall be laid up to the railway boundary at both ends or up to the point as prescribed by the Railway. The pipes used shall be of long lengths and the pipes shall be positioned so as to maintain a slope of about 1 in 30 to allow drainage or seepage water. No bricks or sand are required to be placed at such places. A number pipes are laid for number of cables if are required to be laid. The cable trench can be closed with the excavated earth and ramming well in stages to bring the formation/cutting as per the original and replacing the removed ballast as earlier.

The cables can be drawn through pipes without disturbing the traffic, when once the above arrangement is made.

The cables markers can be placed on either side of the track at a convenient place so as to identify the cable route.

The size and the track crossing details are shown in the Drg.No./SR/SC/Power Cable/2/2004 enclosed.

6. Laying of cables on Racks and Cleats:

Inside buildings, workshops, sheds, sub-stations etc. it is sometimes necessary to lay the cables on racks or brackets, spaced at regular intervals or some times they are required to be clamped/cleated directly on the walls/trusses/beams or M.S. structures fixed on walls.

The cables are laid direct upon trays with or without spacers some times instead of using metal trays the cables are required to be supported and clamped on brackets spaced at such regular intervals so as to prevent under sag.

For horizontal runs, brackets or supports made from angle iron are grouted in the walls and they are arranged in a single place when only a few cables are involved. When large numbers of cables have to be laid over the same route the brackets are fixed as per formation.

For horizontal run of one or two cables can be clamped/cleated directly on walls beams preferably with the non-magnetic materials like aluminum, wood etc. For vertical runs, the cables are clamped/cleated on walls/columns or on MS flats or on angle irons fixed on walls and they are required to be spaced at such intervals so as to prevent beakling of cables and creepage of load.

All steel work shall be painted with two coat of Red Oxide and finished with suitable colour anti corrosive paints.

#### 7. Cables along with structures:

The GI pipes shall be fastened to the structures up to 2.5 mtrs. From ground level by suitable MS clamps at an interval of not more than one metre with suitable bolts, nuts, washers, etc. the cable shall be drawn through the GI pipe. Both the ends of GI pipe shall have a PVC/Wooden bushes to avoid abrasion to the cable. in addition the top end shall be sealed with cable compound to arrest ingress of rain water.

The cable shall be run above pipe level up to cable termination end through suitable teak wood cleats duly clamped to the structure by suitable clamps, bolts, nuts, washers, etc.

#### 8. Cable laying in the masonry trench:

Inside the substations, repair sheds, work shops etc. suitable sizes of masonry trenches will be constructed by the Railways.

The cable shall be laid in the trenches and covered with RCC slabs/MS sheet/Aluminium chequered plates as per the schedule and instructions of Engineer at site.

9. Bends: the cable trench shall be straight as far as possible without bends and at places where obstacles are encountered, there shall be no abrupt bends or sharp, corners, such bends if unavoidable, the cable shall be laid with minimum bend as per following specification.

9.1: Bending radius for PVC cables while installing/ laying PVC cables the following minimum bending radius should be observed in order that the cables, especially insulation may not undergo damage.

For 1.1 KV cables:

- (a) Single core cables –  $15 \times D$  (where D is the overall diameter of cable)
- (b) Multi core cables –  $12 \times D$

#### 9.2 Bending Radius for XLPE cables:

While installing/laying XLPE HT cables the following minimum bending radius should be observed so that the cable end especially the insulation is not damaged.

## Voltage Grade of cable

## Recommended minimum bending radius

- |                |  |
|----------------|--|
| a) Up to 11 KV | 15 x D   |
| b) Above 11 KV | 15 x D for multicore cables<br>20 x D for single core cables |

Where D – is overall diameter of cable.

10. Slope: The slope of the cable trench according to the formation of the land shall be made so as to keep the bend of the cable minimum as stated in item 10 above.

### 11. Looping of cable:

11.1 : the cable at the foot of the structures shall be looped to the lengths of 5 metre to allow for the future requirement the coil diameter shall be not less than minimum bending radius as stated in item 10 above. The excavation at structures shall be done suitably and covered with sand, bricks and earth as detailed under item 4 above.

11.2: At each end termination near the panel board a 5 metre loop shall be kept as an allowance and loop ring shall be formed circular and as recommended by the cable manufacturers.

### 12.0: Accessories/Materials:

12.1: Cable Route Indicators: Cast Iron Cable Indicators/markers manufactured as per the Drg.No.RailTel/SR/SC/Cable Route Marker/3/2004 enclosed. The cable markers shall be positioned, fixed firm and cemented in a manner acceptable to the Engineer at site. The M.S. Item's shall be dipped in hot tar and dried before they are fixed. The cable marker shall be painted with 2 coats of red oxide, one coat before providing at site and another after positioning and cementing. The spacing of the markers shall be not more than 6 metre in straight runs.

### 12.2: Country Bricks:

12.2.1: GENERAL: Country bricks must free from cracks large chipped surfaces and broken corners stones and lumps inclusions of burnt kankar if of small extended may be permitted. The brick surface should be so hard as not to get scratched by the finger nail. Franchres surface should not have cava ties to any appreciable extent and the texture should be as even as possible. The country bricks when struck with a piece of steel should give a fairly ringing and not a dull earthy sound. It should not absorb more than 25% of its own dry weight of water. When dropped on ground from a height of 1 metre, it should not crack or break.

12.2.2: Quality and size: Country bricks may be slightly over burnt but not under burnt in any case. The Colour may be dull red or even reddish yellow, provided it is not due to under-burnt material and is only a feature of the type of moldings clay used. The normal size of country brick should be 225mm x 115mm x 75mm. The size of the frog in the upper face should be same as per first or second class bricks.

12.3: Sand: the sand shall be preferably of river sand or as per the quality required by the Engineer at site. The sand shall be free from lumps of earth, clay, etc. and screened.

12.4: RCC Hume Pipes: RCC Hume pipes supplied shall be of size 150 mm internal dia and 210 mm external dia to the standard lengths. Necessary collars for joining the above pipes shall also be supplied. The pipes and collars shall be conforming to relevant latest ISS and same should be approved by the Engineer at site before laying in the trenches.

12.5: Clamps, bolts, etc: Clamps shall make out of Aluminium or M.S.Flat. The bolts used shall be of suitable dia and of sufficient lengths. One M.S.Hex nut and a check nut with one spring washer between two nos. of flat washers shall be used for tightening the bolts. The M.S.Clamps shall be painted with one coat of Red Oxide and 2 coats of Aluminium paint.

12.6: GI Pipes: the GI Pipes shall be of 'B' Class of 50 mm dia/100mm 3.4mm dia thickness to the standard lengths. Necessary collars bends etc. for joining the above pipes shall also be supplied. The pipes and accessories shall be conforming to relevant latest ISS and same should be approved by the Engineer at site before use.

12.7: HT Cable end boxes/kits to use with 11 KV earthed system XLPE Cables:

12.7.1: Out door end termination: the kit should essentially contain the following contents:

1. Required quantity of cable joining compound.
2. Required quantity of hardener
3. Plastic mould
4. Mould adhesive cum-solvent
5. Earth continuity connection
6. Stress grading paste
7. Self bonding insulating tape
8. Insulators
9. Copper binding wire
10. Aluminium Oxide tape
11. Nylon stringer cutting XLPE insulation
12. Polyester tape
13. Semi conducting self bonding tape
14. M.Seal (Fast setting)epoxy putty
15. Instruction sheet

12.7.2: Indoor end terminations: The kit should essentially contain the following contents.

1. Required quantity of cable jointing compound
2. Required quantity of hardener
3. Plastic mould
4. Mould adhesive cum solvent
5. M.Seal (fast settings)epoxy putty
6. Earth continuity connection
7. Stress grading paste
8. Self bonding insulating tape
9. Copper binding wire
10. Aluminium oxide tape
11. Nylon string for cutting XLPE insulation
12. Semi conducting self bonding tape
13. Instruction sheet

12.8:LT Cable end boxes/kits to use with 1.1 KV PVC Cables:

For indoor & outdoor end terminations: The kit should essential contain the following contents.

1. Required quantity of cable jointing compound
2. Required quantity of hardener
3. Plastic mould
4. Mould adhesive cum solvent
5. M.Seal(fast settings) epoxy putty
6. Earth continuity connection
7. Spacer
8. Instruction sheet

12.9: WP Junction Boxes: These shall be made out of MS Sheet iron with weather proof arrangements type with suitable terminals, locking arrangements knock out cable entry holes etc. The box shall be painted with one coat of red oxide and two coats of aluminum paint. These shall be made & provided as per the instructions of the Engineer at site.

12.10: Cable gland: The cable gland shall be of brass with fixing check nuts etc. The correct size of gland shall be used for the particular size of cable. The glands to be used should be approved by the Engineer at site.

12.11: (Cable jointing lugs): These shall be made of aluminum, crimping type (i.e. solder less) and bolted type and also shall have adequate current carrying capacity. The lugs to be used should be approved by the Engineer at site.

12.12: Cable markers for track crossings: These shall be made of cast iron the design shall be approved by the Railway. The following information shall be clearly marked on the marker.

1. Electric cable : Volts
2. Number : Cables
3. Danger : In English, Hindi and the vernacular of the Dist.
4. Depth of cable : Below track level
5. Depth of cable : Below ground level between the toc of bank and Railway fencing.

12.13: Cable markers used where no. of feeders involved:

These shall be made of cast iron; the design shall be approved by the Rly. The following information shall be clearly marked on the marker.

- a) Electrical cables, volts
- (b) No. & sizes of cables
- c) Length of cable
- (d) origin & destination of cable.

13: General:

13.1: Test Certificates shall be produced for the cables supplied from the manufacturers:

13.2: Kit materials/accessories supplies should have approval of site Engineer before using the same.

13.3: The method of laying the cables shall be generally as indicated in Drg.No.SC./SR/SC/Power Cable/2/2004.

13.4: The cable routes shall be actually measured at site and the requirement accessed before the supplies are affected. No joints in straight runs will be permitted. Measurement for cables will be taken as straight runs and from gland to gland. Covering of trenches shall be carried out only after measurements are taken and recorded. Insulation resistance tests shall be repeated after laying the cable and before the terminations are made in the presence of the Engineer-in charge at site.

13.5: While connecting the cables to OH Mains/switch panels the cable end boxes shall be used as per the directions of Engineer at site, required to be laid in existing trenches within the unit substations/shop bays, the contractor shall ensure that this is done by removing the existing slabs and replacing the same after laying, duly cleaning the trench wherever warranted.

13.6: Wherever the cables enter or leave the buildings they shall be through walls in 150mm. Dia RCC pipes, GI pipes with collar as directed by the Engineer-in charge at site including civil works.

13.7: The cables shall be treated through RCC pipes at all road and rail line crossings and at all other service line crossings like drain pipes, sewage and water-mains as per instructions of the Engineer- in charge at site.

13.8: Where track crossings are involved in two cable markers shall be fixed at both ends of the underground crossing as directed by the Engineer at site.

13.9: Where we have to deal with No. of feeders like workshops, repair shops, sub-stations etc.

Approved type C.I Cable route indicators shall be grouted in concrete along the route of the cable at intervals of 50 metre in straight runs and at every diversion point and at every entry and exist paints of buildings, sheds etc. These shall be used along with other types of cable markers as directed by the engineer at site.

13.10: All cables ends shall be provided with cable glands and each lead provided with crimped aluminum shoes of suitable sizes.

13.11: Any foundation drainage/walls/masonry structure will be remade with a good mason after passing the cable, by the contractor. Pipes will be provided by the contractor.

#### 14: CABLE TERMINATIONS:

14.1: All the exposed cable runs in shop, floors, particularly being terminated on SDBs, Fuse boxes, shall be encased in a suitable size of GI Pipe and secured to the pillars/columns by means of clamps.

14.2: Termination of cables shall be carried out using approved crimping type “dowels: aluminum lugs and approved type of crimping tools.

14.3: The method of termination shall be as per the procedure laid down in the relevant manufacturer’s literature.

14.4: The prices quoted shall include all the necessary supply of materials such as glands, lugs, consumables etc.

14.5: Every piece of cable shall be tested before taking up the termination work and after completion of the same and the results of such tests shall be recorded.

14.6: All testing shall be carried out in the presence of the Engineer-in-charge at site.

NOTE: Any Required Drawings Can Be Obtained From RailTel Engineer In Charge

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### **TECHNICAL SPECIFICATION FOR GI PIPE EARTHING**

Earthing shall be with “C” class GI pipe with normal bore of 50MM, wall thickness of 4.5mm and mass of 6.19 KG./Mt with tolerance of – 10% in thickness and +1- 10% for weight confirming to IS 1239 I Part I/1990. The earthing arrangement shall be provided as per the drawing with the following.

- A. GI wire of size 6 SWG for LT earthing, including interconnection of 2 earths, shall be used From earth electrode.
- B. Earth wires shall be protected against mechanical damages.
- C. There should not be any joint for extension of connection from earth electrode to equipment.
- D. The earth resistance should not exceed 8 ohms respectively.
- E. The earthing schedule includes supply of all materials, digging of pits and providing with Cement. The earth plinth shall be painted with block paint all around. All civil Works in this connection shall be done by the contractor.
- F. Individual earthing shall be tested with earth megger in presence of supervisor in charge and Earth resistance values with date should be painted on the respective earth pit.
- G. The earth pit can be constructed either by brick masonry having 80 mm or with RCC having 50 mm wall thickness.

### **List of Materials**

The make of materials shall be any one of the following south Western Railway approved makes or any make having ISI approved /ISI marked or any make/manufacture having ISO or any make featuring in approved list of neighboring Railways.

GI Pipe make ZENITH, KHANDELWAL.

Note: any other make for the above items should have prior approval.

**OFFER LETTER**

To  
RailTel Corporation of India Limited,  
2<sup>nd</sup>. Floor, B\_Block, Rail Nilayam,  
Secunderabad\_500 071.

I/We \_\_\_\_\_ have read the various conditions detailed in tender documents attached here to and hereby agree to ABIDE BY THE SAID CONDITIONS. I/We also agree to keep this tender open for acceptance for a period of **90 days** from the date fixed for opening the same and in default thereof, I/We will be liable for forfeiture of my/our Earnest Money. I/We offer to execute the work of

“i. Rectification of Back Bone cable and protection arrangement over bridges in the ghat section of Donegal to Subramanya stations between Hassan –Mangalore section.

ii. Provision of Maintenance free earthing for equipments and Electrical earthing for POPs at Hassan,sakaleshpura,Kabakaputtur,Arsikere,Tiptur, Birur, Davangere, Haveri, Maddur, Penukonda, Hindupur, Doddaballpur, Yeswanthpur,, Bayyappanahalli, Bangalore cant and Akkihebbalu

iii.Provision of pale fencing for the POPs at Hassan, sakaleshpur, Kabakaputtur, Arsiekere, Tiptur, Birur, Davangere, Haveri, Ghataprabha, Kuduchi, Doddaballpur and Maddur.

iv. Provision of Stabilizers to AC plants in 24 RailTel POPs in Bangalore Territory as per the Schedule of work and specifications given in this Tender Document” and hereby bind myself/ourselves. I/We also hereby agree to abide by the Various Conditions of Contract and to carry out the supplies according to the Specifications for materials and works laid down by the RailTel for the present contract.

2. A sum of Rs. \_\_\_\_\_ as an Account Payee Demand Draft No. \_\_\_\_\_ dt. \_\_\_\_\_ issued by \_\_\_\_\_ in favour of RailTel Corporation India Ltd. Secunderabad is herewith forwarded as “Earnest Money”. The full value of Earnest Money shall stand forfeited without prejudice to any other rights or remedies if, I/We withdraw or modify the offer within validity period to that effect.

SIGNATURE OF CONTRACTOR with Seal

Date:

SIGNATURE OF WITNESS CONTRACTOR (S) ADDRESS

1.

2.

GUARANTEE BOND PROFORMA FOR SECURITY DEPOSIT  
(On Stamp Paper of requisite value)  
(To be used by approved Scheduled Banks)

1. In consideration of the RailTel Corporation of India Limited., SECUNDERABAD (Herein after called RailTel) having agreed to exempt ----- (Hereinafter called "the said Contractor(s)") from the demand, under the terms and conditions of an LOA No----- dated ----- made Between Regional General Manager, RailTel Corporation/ Southern Region, Secunderabad and for (hereinafter called " the Said Agreement") of security deposit for the due fulfillment by the said Contractor (s) of the Terms and conditions contained in the said Agreement, or production of a Bank Guarantee for Rs. only. We ----- (indicate the name of the Bank) herein after referred to as "the Bank") at the request of ----- contractor(s) do hereby undertake to pay the RailTel an amount not exceeding Rs.----- Against any loss or damage caused to or suffered or would be caused to or Suffered by the RailTel by reason of any breach by the said Contractor(s) of any if the terns Or conditions contained in the said Agreement.
2. We, -----Bank do hereby undertake to pay the amounts due and payable under this Guarantee without any demur, merely on demand from the RailTel starting that the amount is claimed is due by way of loss or damage caused to or would be caused to or suffered by the RailTel by reason of breach by the said Contractor(s) of any of terms or conditions contained in the said Agreement or by reason of the Contractor(s) failure to perform the said Agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs-----
3. We,-----Bank undertake to pay to the RailTel any money so demanded notwithstanding any dispute or disputes raised by the Contractor(s) Supplier(s) in any suit or proceedings pending before any court or Tribunal relating thereto our liability under this present being, absolute and unequivocal. The payment so made by us under this Bond shall be a valid discharge of our liability for payment there under and the Contractor(s) / Supplier(s) shall have no claim against us for making such payment.
4. We,-----Bank further agree that the Guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the RailTel under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till RailTel certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges this Guarantee Unless a demand or claim under the Guarantee is made on us in writing on or Before the (1) We shall be discharged from all liability under this Guarantee thereafter-----
5. We,----- (Name of the Bank), Further agree with the RailTel that the RailTel shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the Agreement or to extend time of to postpone for any time or from time to time any of the powers exercisable by the RailTel against the said Contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension to the said Contractor(s) or for any forbearance, act or omission on the part of RailTel or any

indulgence by the RailTel to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have affect of so relieving us.

- 6. This Guarantee will not be discharged due to the change in the Constitution of the Bank or the Contractor(s) Supplier(s).
- 7. -----(name of the Bank lastly undertake not to revoke this Guarantee during its currency except with the previous consent of the RailTel in writing.

Dated \_\_\_\_\_ day of \_\_\_\_\_ 2015

For -----  
(Name of the Bank )

Witness:

- 1. Signature  
Name
- 2. Signature  
Name

5. We ..... Bank further agrees that the guarantee herein contained shall not be effected by any change in the constitution of the said contractor.

Dated .....day of .....

for.....Bank

**ACCEPTED**

For on behalf of the President of India.

**PROFORMA FOR STATEMENT OF DEVIATIONS**

(1) The following are the particulars of deviations from the requirements of the tender specification.

Clause	Deviation	Remarks (including justification)

(2) The following are the particulars of deviations from the requirements of the instructions to Tenderers, General and Special Conditions of contract-

Clause	Deviation	Remarks (including justification)

**Signature and seal of the Contractor/  
Tenderer**

Note: Where there is no deviation, the statement should be returned duly signed with an endorsement indicating "No Deviations".

Details of Contractor to be filled as per format given below:

<b>1</b>	<b>Region(Mandatory)</b>	<b>Southern Region</b>
<b>2</b>	<b>Supplier Name (Mandatory)</b>	
<b>3</b>	<b>Bank Name(Mandatory)</b>	
<b>4</b>	<b>Bank Branch Name(Mandatory)</b>	
	<b>Bank Account Number(Mandatory)</b>	
<b>6</b>	<b>IFSC Code(Mandatory)</b>	
<b>7</b>	<b>Site Name(Mandatory)</b>	
<b>8</b>	<b>Registered Address1(Mandatory)</b>	
<b>9</b>	<b>Address2</b>	
	<b>Address3</b>	
<b>11</b>	<b>City</b>	
<b>12</b>	<b>State</b>	
<b>13</b>	<b>Excise Reg No.</b>	
<b>14</b>	<b>CST No</b>	
	<b>TIN No.</b>	
<b>16</b>	<b>Reg No.</b>	
<b>17</b>	<b>Service Tax No.</b>	
<b>18</b>	<b>TDS Vendor Type(Mandatory)</b>	
<b>19</b>	<b>TDS Section Mandatory)</b>	
	<b>TDS Rate(Mandatory)</b>	
<b>21</b>	<b>PAN No(Mandatory)</b>	
<b>22</b>	<b>TAN No</b>	
<b>23</b>	<b>Ward No.</b>	
<b>24</b>	<b>WCT registration num for state wherever applicable</b>	
	<b>ACT &amp; ESI registration No.</b>	
<b>26</b>	<b>Mobile Number</b>	
<b>27</b>	<b>Mobile Number(2)</b>	
<b>28</b>	<b>Email ID</b>	
<b>29</b>	<b>Contact Person(Mandatory)</b>	
	<b>Service Type (In Case of Execution, services)(Mandatory)</b>	
<b>31</b>	<b>Item Description (in case of Material)(Mandatory)</b>	
<b>32</b>	<b>OEM/Trader(In case of Material)</b>	
<b>33</b>	<b>Working Area (Name of State under Region)(Mandatory)</b>	