RAILTEL CORPORATION OF INDIA LIMITED
(A Govt. of India Enterprise)
Southern Region Headquarters
2nd floor, B-Block, Rail Nilayam,
Secunderabad

TENDER DOCUMENT

FOR

Deployment of Maintenance Teams for Preventive Maintenance and fault rectification of Access Network i.e. U/G & Aerial OFC in MAS City Access

TENDER NO: RailTel/Tender/OT/MAS Access-II/2016-17/53

INDEX

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, Tel: 040-27821134 Fax: 27820682,
Corp.& Regd.Office: Plot no 143, Institutional Area, Sector-44, Gurgaon-122003.

OPEN TENDER NOTICE

Tender Notice Nos. RailTel/Tender/OT/MAS Access-II/2016-17/53 Dt. 22.03.2017

RailTel Corporation of India Ltd., Secunderabad invites sealed tenders from established contractors with proven experience for the work of Deployment of Maintenance Team for Preventive Maintenance and fault rectification of Access Network i.e. U/G and Aerial OFC for a period of Three years as detailed below

S. No.	Sectional HQ	Section Details	Length of Sec. (KM)	Estimated Tender Value for three years **(Rs.)**	Earnest Money (@ 2% of total tender value (Rs)

Details of sections which are being tendered is as enclosed

a)	Commencement of Sale of Tender Documents	25.03.2017
b)	Closing of sale of Tender Documents	24.04.2017 at 12.00 hrs.
c)	Last date and time for submission of tender documents.	24.04.2017 up to 15.00 hrs.
d)	Opening date and time of tender documents.	24.04.2017 at 15.30 hrs.
e)	Validity of offer	60 days from the date of opening of tender.
f)	Address for availability of tender document	Executive Director, Southern Region RailTel Corporation of India Ltd.,
g)	Web address for availability of tender document	Detailed tender notice and tender document are also available at our website www.railtelindia.com.
h)	Cost of Tender document by hand/downloaded from RCIL site (Including VAT and surcharge) #	Rs. 5725/-(In the form of Bank Draft in Favour of Railtel corporation of India Ltd. Payable at Secunderabad)
i)	Cost of Tender document if required by post (including VAT, surcharge and postage charges of Rs. 500) #	Rs. 6225 /-(In the form of Bank Draft in Favour of Railtel corporation of India Ltd. Payable at Secunderabad)
j)	If the tender document is downloaded from the website then the cost of tender document as stated above have to be submitted along with the offer in the form of Bank Draft in favour of RailTel Corporation of India Ltd. payable at Secunderabad	

k)	The rates should be inclusive of taxes, However all the taxes charged by the bidder shall be shown separately. The tenderer has to submit the breakup of all taxes at the time of submission of their "on account bills" also. The tenderer has also to submit their TIN No., PAN No. & Service Tax No. at the time of submissions of their "on account bills. In addition to it, the contractor should submit copy of WCT registration certificate for the states wherever applicable. PF Act & ESI registration no. should also be available with the contractor. All the statutory provisions have to be made by the contractor.

Documents received without the sufficient cost of tender/EMD will summarily be 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.

* Please refer clause no.10.1 under preamble

Tender Notice and Tender Document are also available at our website **www.railtelindia.com**

The offers shall be opened on above said date in the presence of those bidders who choose to be present. If the above said date happens to be a holiday the same shall be opened on the next working day.

Sd/-
Addl. GM/Proj/SR
For and on behalf of RailTel Corporation of India Limited

Details of sections for which tenderer has to quote

S. No.	Section HQ	Section Details (Access Network covered under cities/locations)	Length of Sec. (KM)	Estimated Tender Value for Three years (Rs.)	Earnest Money (@ 2% of total tender value rounded to nearest 10 (Rs)	Type of OFC
1	Chennai Egmore	MMC-BBQ-Mogappair-Olympia Tech-Valasaravakkam-Porur-Kundrathur, OMR IT Corridor Road-Siruseri-Sholinganallur etc (Access UG-145.6kms , Access Aerial-40.9kms & 17.5Kms)	204	76,81,824/-	1,53,640/-	UG & Aerial

 Signature of Tenderer with Seal

Preamble

Tender No: RailTel/Tender/OT/MAS Access-II/2016-17/53 dt. 22.03.2017

1. **Name of work:** Deployment of Maintenance Team for Preventive Maintenance and fault rectification of Access Network i.e. U/G OFC and Aerial OFC for a period of Three years
2. **SUBMISSION OF TENDER BID:**
   2.1 The tender bid shall be submitted **as** below**:**

   The bids shall be sealed in an envelope which should bear the Tender No., its description, section name and date of opening. The complete Tender Bid shall be addressed to:
   The Executive Director,
   Southern Region
   RailTel Corporation of India Limited,
   2nd floor, B Block, Rail Nilayam
   Secunderabad-500071

3. Last Date of receipt of tenders: Sealed tenders for the Tender No. RailTel/Tender/OT/Southern Region will be received in the office of the Executive Director, RailTel, up to 15:00 hrs IST of Date mentioned in the tender notice and will be opened at 15:30 hrs on same day. If the above said day happens to be a holiday, the tender shall be opened on the next working day at the given time.

4. **ELIGIBILITY CRITERIA:**
   The bidder/tenderer should have the following Technical & Financial capabilities for **each tender/section** that the tenderer is quoting

4.1 Technical Capability:

a. Tenderers should have performed Access (Aerial / UG) OFC route maintenance for a more than 100 Km (One Hundred kilometres) in single contract for a minimum period of 6 months in the past three years before the date of opening of tender either in Govt. /PSUs/ reputed Telecom Service providers/reputed Infrastructure providers.

Or

b. Should have executed aerial OFC drawing on poles and termination for a stretch of 100 Km (One Hundred Kilometre) in single contract for Govt. /PSUs/ reputed Telecom Service providers/reputed Infrastructure providers in the past three years before the date of opening of tender

c. Certificates to this effect shall be enclosed along with the tender document while quoting for establishing credentials. MOU's will not be considered for eligibility.

4.2 Financial Capability: a) The tenderer must have received total contract value of 150 % of the advertised value of tendered sections for which they are participating, in the past three financial years & current year before the date of opening of tender.

b) The tenderer should produce:

(i) Copy of latest Income Tax returns& PAN

(ii) Audited Balance Sheet of all the Preceding three financial years i.e. 2013-14, 2014-15 & 2015-16

4.3 Tenderer can quote for one or both two tenders/sections deleted

5. **Currency of the Contract**: The currency of the contract shall be Three years from the date of issue of LOA extendable by further period of one year depending on the performance of the contractor on the same rate, terms & conditions of the contract. However, the Contract may be terminated by giving one month's notice as and when required by RailTel.
6. The tenderer shall produce along with tender paper the documentary support for their experience. The tenderer also state the number of fully equipped teams, which shall be placed fully under the disposal of RailTel. Documentary support for the possession of vital equipment such as OTDR, Splicing Machine, Power meter & Millimeter, road vehicle, telephone, experienced staff etc. shall be submitted along with the tender papers. The offer document should be serially numbered.
7. All tenders must be accompanied with Schedule of work attached as SOR duly filled in and signed complete with technical details. No unsealed tenders will be accepted.
8. The RailTel Corporation is not bound to accept the lowest or any tender nor assign any reason for doing so and RailTel Corporation reserves the right to accept any tender in respect of whole or any portion of the items specified. RailTel also reserves the right to add or delete any maintenance section. However, payment will be made on pro – rata basis on accepted rate.
9. Tender Cost: Cost of the tender document is Rs. 5725/- inclusive of VAT@14.5% by person and Rs. 6225/- by post. The payment for the cost of the tender document shall be made as Demand Draft on any Scheduled Bank/Nationalized bank of RBI in favour of RailTel Corporation of India Ltd., payable at Secunderabad as the case may be. Cost of the tender document is not refundable. pl. see note below for NSIC registered firms
10. **EMD**: A sum of Rs. 2% of total tender value for respective tendered section should be deposited as earnest money in favour of RailTel Corporation of India Ltd., payable at Secunderabad in the form of Demand Draft on any Scheduled Bank/Nationalized bank of RBI. The validity of Demand draft will be at least 60 days beyond opening of tender. No interest is allowed on this Deposit and RailTel Corporation reserves the right to forfeit this Deposit if the successful tenderer fails to submit the Security Deposit/Performance Bank Guarantee required by the terms and conditions of the tender. Tenders not accompanied by Earnest Money will be summarily rejected.

10.1 Note: <u>For NSIC registered firm</u>:

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 calming 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.

10.2 No interest is allowed on this Deposit

10.3 If a tenderer withdraws its tender during the period of tenders validity i.e. 60 days after opening of tender The earnest money may be forfeited

10.4 The earnest money of unsuccessful tenderer will be returned within reasonable time to the unsuccessful tenderer but the RailTel shall not be responsible for any loss or depreciation that may happen to the security for the due performance of the above

stipulation to keep offer open for the period specified in the tender documents or to the Earnest Money while in their possession nor be liable to pay interest thereon.

10.5 If the tender is accepted, the amount of Earnest Money will be held as part security deposit for due and faithful fulfillment of contract.

11 The quoted rates in the SOR should include all the materials to be provided for the work to be done by the contractor as described in the tender document and the schedule attached. Tenderer's special attention is invited to the fact that no material shall be arranged /supplied by RailTel except OFC & HDPE Duct (if required) in various sections for Preventive Maintenance and fault rectification of OFC. All materials including the materials covered under the Schedule of Requirement and those required to achieve the end objective and any special protection materials needed are to be supplied by the contractor.

12 **For rectification of OFC cuts during the AMC,** OFC and HDPE Duct will be supplied by RailTel. All other materials like Joint enclosure, RCC chambers, Route markers, sand, cement, GI pipe, flexible PVC pipe, RCC pipes, etc should be borne by Contractor. **No extra payment will be made for these OFC cut rectification works**

13 The Unit/Percentage prices should be quoted by the Contractor as an all inclusive price, after taking all the relevant factors into consideration and these should be firm and all inclusive without any variation clauses. These shall include all taxes & duties such as sales tax, works contract tax, service tax & Octroi, entry tax etc. as payable under the law of land as also any charges arising under VAT system and RailTel shall not accept any liability for the same after award and acceptance of contract. **The breakup of taxes may be furnished on the tender offer and same should be reflected in the bills so that any input credit can be availed by RailTel**.

14 The team should be deployed within 15 days from the date of issue of Letter of Acceptance.

15 The tenderer shall keep the offer open for a minimum period of sixty days from the date of opening of the tender within which period the tenderer cannot with draw his offer. Any contravention of this condition will make tenderer liable for forfeiture of his earnest money deposit.

16 Before quoting, the Tenderers are advised to ascertain the nature of work involved. If required site inspection can be undertaken.

17 Tenderer should go through the tender document in detail regarding **penalty clauses, Payment clauses, CRT & rectification clauses, manpower & equipment requirement** before quoting the rate in SOR-A

18 Tender should be submitted for the entire work.

19 The submission of tender will be deemed to imply that this memorandum and all documents enclosed have been studied and understood and the tenderer is aware of the full scope of the work to be done and the conditions affecting the execution.

20 The tenderer shall not increase the quoted rates in case RailTel Corporation negotiates for reduction in rates. Such negotiations shall not amount to cancellation or withdrawal of the original offer and the rates originally quoted will be binding on the tenderer. The enclosed Tenderer data sheet should invariably be filled and submitted along with the offer. Otherwise, the offer will be deemed to be summarily rejected

21 If the tenderer deliberately gives wrong information in his tender or creates such circumstances for the acceptance of his tender the RailTel Corporation reserves the right to reject such tender at any stage.

22 The successful tenderer shall sign an agreement for the execution the work as tendered by him and accepted by RailTel Corporation within seven days of issue of LOA.

23 The length of Aerial OFC shown in SOR-A is approximate value and actual figure will be given in LOA. The contract value will be as per pro-rata basis of rate quoted per KM.

24 The length of OFC under maintenance is variable month to month as per customer base and same will be intimated time to time.

25 Total length of the section is not fixed. However for addition/deletion of length pro-rata amount will be paid as per actual. The Max variation will be +/- 50% of the total length awarded

26 Performance Bank Guarantee (PBG): The successful tenderer shall give a performance guarantee amounting to 5 % of contract value within 21 days from the date of issue of LOA. Extension of time for submission of PBG beyond 21 days and up to 60 days from the date of issue of LOA may be granted subject to the conditions that a penal interest of 15 % per annum of the amount of BG shall be charged for the period of delay beyond 21 days i.e. 22st day after date of issue of LOA. In case the successful tenderer is not able to submit PBG, the tenderer will have options to submit this amount in the form of Demand draft. PBG (DD in lieu) shall be released after satisfactorily completion of the work and on expiry of warranty period.

27 The Security Deposit for each work shall be 5% of contract value. The Earnest Money (2% of total tender value) of the successful tenderer shall be adjusted towards the same.
Balance amount towards SD of 5% of contract value shall be recovered from the contractor's "on account" bills as under:

(a) The rate of recovery should be at the rate of 10% of the bill amount till 5 % contract value is achieved.

(b) Security Deposit shall be returned to the contractor after the complete physical completion of the work as certified by the competent authority.

(c) No interest will be payable upon the Earnest Money and Security Deposit.

(d) Wherever the contract is rescinded, security deposit shall be forfeited and PBG shall be en-cashed.

28 If more than one OF Cable i.e. Aerial / UG exists in the same route/trench, the length of the section will be considered for length of each OF cable and CRT will also be considered accordingly.

29 The Penalty imposed on account of various reasons / Slippages in accordance with the conditions stipulated in this document may go up to 50% of Bi-Monthly billed amount for the billing period (maximum penalty will be 50%). In case an agency is repeatedly touches the maximum level of penalty in consecutive billing periods, it will be treated as default and the contract may be terminated (The idea is to discharge the work in accordance with the contract efficiently rather than having major lapses and keep paying penalty repeatedly).

30 Please quote a percentage (both in figure & words) 'above/below' the rates given by RailTel against 'SOR-A -.
If needed, separate Work Order will be issued by RailTel for execution of some of the items against 'SOR-B' as per rates indicated by RailTel .Confirm your acceptance of the same by signing on SOR-A, SOR-'B'. In case contractor feels that the rate indicated against SOR-B items is not at par. He may keep enough margin while quoting against SOR-A, it may be noted that the quantity of work to be executed against SOR-B will be kept within the financial limit of 30% of SOR-A value per annum. The tenderer shall quote percentage (Above/below) for SOR-A. For execution of items against SOR-B, no minimum work can be indicated, however, the maximum amount against SOR-B will normally be kept at 30% of SOR-A per annum.

31 Updated as built drawing (ABD) of whole section will be submitted in soft copy every 6 months & hard copy every year

TENDERER DATA SHEET

General:

1	Name of the Organization	
2	Name of the Authorized Person Submitting the Tender Documents (Submit the proof of authorizing the person to sign the tenders by the company on its behalf)	
3	Main line of Business	
4	Years of Experience	
5	Location (indicate address, telephone No., fax) and the year from which they are operating in that location	
6	Name of Contact person	
7	Address	
8	Tel. No.	
9	Fax No.	
10	E-mail ID	

Technical Capability:

S1. No	Conditions	Enclosed (Yes/No	Page No
1	Tenderer Should have performed Access / Aerial OFC route maintenance of 100 (One hundred) Kms or more in single contract for minimum 6 months in the past 3 years before the date of opening of Tender for Govt. /PSUs/ reputed Telecom Service providers/reputed Infrastructure providers		
	Or		
1	should have executed OFC drawing on poles and termination of OFC for a stretch of 100 Km (One hundred Kilometre) in single contract in the past 3 years before the date of opening of Tender for Govt. /PSUs/ reputed Telecom Service providers/reputed Infrastructure providers		

Financial capability:

Sl. No	Conditions	Enclosed (Yes/No)	Page No
1	The tenderer must have received total contract value of 150 % of the advertised value of tendered sections for which they are participating, in the past three financial years & current year before the date of opening of tender. Please indicate the Annual Turnover for the last preceding three years duly enclosing the charted Accountant /Auditor /Authorized certified documentary evidence:		
	Annual Turnover for year 2015-16: Rs		
	Annual Turnover for year 2014-15: Rs		
	Annual Turnover for year 2013-14: Rs		
2	Copy of Latest Income Tax returns/PAN Number		
3	Documentary support for equipment		
4	Documentary support for man power		
5	EMD as per item 10 of preamble of Tender document		

 Signature of Tenderer with Seal

(Signature of the Tenderer with Seal)

OFFER LETTER

From

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To
Executive Director,
RailTel Corporation of India Limited
Southern Region, Rail Nilayam,
B-Block, II Floor,
SECUNDERABAD-500 071.

Sub:- Deployment of Maintenance Team for Preventive Maintenance and fault rectification of Access Network i.e. U/G & Aerial OFC in MMC-BBQ-Mogappair-Olympia Tech-Valasaravakkam-Porur-Kundrathur, OMR IT Corridor Road-Siruseri-Sholinganallur etc (Access UG-145.6kms , Access Aerial- 40.9kms & 17.5Kms) for a period of Three years.

Ref: Tender Notice No. RailTel/Tender/OT/MAS Access-II/2016-17/53 dt. 22.03.2017

I/We the undersigned hereby offer to execute the agreement for the above work within seven days from the date of issue of letter of acceptance of the tender in strict compliance within the provision detailed in the tender paper attached.

I/We agree that this tender shall not be restricted or withdrawn and shall remain opened for acceptance for and during the period of sixty days from the date of opening of the tender.

I/We fully understand the terms and conditions as contained in the tender paper and we agree that the same shall apply to My/Our tender and I/We shall be bound by them.

Earnest money deposit of **Rs……** (Rupees **……..** only) drawn in favour of RailTel Corporation of India Ltd., payable at Secunderabad.

The full value of the earnest money shall be forfeited without prejudice to any other right or remedies if: -

I/We do not execute the contract document within 7 days after the receipt of notice by the RailTel Corporation that such documents are ready.

I/We do not commence work within 14 days from the date of issue of letter of acceptance.

Until a formal agreement is prepared and executed, acceptance of this offer letter shall constitute a binding contract between us subject to modification as may be mutually agreed to between us and indicated in the letter of acceptance of my/our offer.
I enclosed herewith the following documents in support of my credential:-

1. Demand draft/Pay Order No……., dated…… issued by…… for Rs…… ……(Rs. …….. only) as earnest money.

2. Name and Qualification of supervisor, Technician and Splicer.

3. List of the Equipments, Make, Model No in working condition for each section of Works.

Description	Make	Model No	Quantity	Documentary proof enclosed (Yes/No)	Page No
Fusion Splicing Machine					
Power Meter					
OTDR					
Live Fiber detector					
GPS Instrument with Sub-Meter accuracy					
Road–O–meter					
Vehicle for Transportation					
Multimeter					
Tools Kit					
Tent					
Lighting Arrangement					
Fibre Spool					
Spare Battery for Splicing Machine					

4. No of support staff, which will be kept for maintenance: . ……
5. Vehicle details along with its registration no: ……
6. Details of the Telephone, internet connections available.: …….

Shortcomings in the above, if any, will be made good and section wise full details shall be furnished for each section to be awarded, before award of the contract by RailTel.

Yours Sincerely,

Signature of the Tenderer
Seal of the Tenderer
Place: -
Date: -

Witnessed by: -

1. Signature:
   Name:
   Address:

2. Signature: -
   Name: -
   Address: -

INTRODUCTION

1.0 RailTel is responsible for leasing out bandwidth on commercial basis to Railways and external agencies over RailTel's own telecom network. For the same, RailTel has obtained Category II, IP1, IP2, NLD and ISP licenses in the Telecom Sector.

1.1 RailTel has over 40,000 Km length of OFC route commissioned along with Railway track and an integrated dedicated telecom network is in operation.

1.2 OFC in city aria: 12/24/48 armored UG OFC and 6/12/24 fiber armored/unarmored aerial OF Cable along the road are also exists for customer POPs.

1.3 To maintain high availability of services along its telecom networks, RailTel intends to engage agencies for maintaining the Optical Fiber Cable (OFC) laid between one node to other node over a section. The node is the place where OFC is terminated and equipments are installed.

1.4 ENGINEER-IN-CHARGE (EIC) shall mean Executive Director of RailTel or his authorized representative. He is responsible for ensuring that all field works covered by the contract are carried out in accordance with approved designs, drawings & specifications and conditions of contract as agreed to.

2. JURISDICTION: The jurisdiction of maintenance of OFC covers the RailTel's OFC routes in railway aria and access cable (LMC) underground/Aerial OFC laid within the cities and towns from the Railway stations to the customer sites. The details of the jurisdiction of OFC sections are available at **Annexure-A**.

3. **Description of work:**

3.1 RailTel intends to award a OFC maintenance contract to reputed contractors who are financially and technically meeting the eligibility criteria to undertake various activities required to maintain & ensure OFC connectivity in the physical layer for different hops/POPs where customer sites are situated in city aria.

3.2 The CONTRACTOR shall be responsible for the maintenance of the said OFC network in the physical layer to ensure the OFC Network availability of highest order, considering there is no failure in the equipment level of the network. This shall include but not limited to undertake all required preventive measures of the OFC route, rectification of faults and restoration jobs required achieving the OFC link availability of highest order.

3.3 The contractor shall carry out any OFC related works like additional protection works, splicing, termination, tightening of nuts/bolts, provision of complete clamps for supporting the protected work over culverts/bridges and as directed by the RailTel's Engineer - in – charge.

3.4 The maintenance contractor is planned to be hired for a period Three years extendable by further period of one year depending on the performance of the contractor on same the rate, terms & conditions of the contract. However, the Contract may be terminated by giving 30 days notice before the expiry of contractual completion period in case performance of the contractor is not found satisfactory or as and when required by RailTel.

4. **Detailed Scope of work:** The scope of work shall include but not limited to the following for the maintenance of Underground (UG) & Aerial OFC Access network in the physical layer (up to the TX/RX port of the OFC equipment) of RailTel's telecom network.

4.1 Preventive Maintenance for cable Protection: The CONTRACTOR shall undertake all preventive measures with information to respective EIC for maintaining the end-to-end continuity of OFC cable, which shall include but not limited to the following:

4.1.1 Regular patrolling and surveillance of aerial OFC route to have proactive check to prevent OFC link disruptions. It will be done by dedicated and exclusive team who will not be assigned any other work.

4.1.2 **Patrolling** of the entire section has to be done at least **thrice a week during day time**. If any activity is observed which may affect the OFC, the patrolling team should prevent any damage to the OFC. The matter must be reported to the RailTel officials. The time-to-time movement of the patrolling team shall be kept informed on daily basis so that they can be contacted during emergencies.

4.1.3 Monitoring of jobs undertaken by other agencies in the vicinity of RailTel's fibre network to ensure the safety of RailTel's OFC cable shall also be done by the contractor.

4.1.4 Attending to / safe-guarding against any signs of damage or potential damage of RailTel's OFC network, which come to light during patrolling.

4.1.5 Collecting information & accordingly coordinate with other agencies before the execution of work, who shall carry out any work in the vicinity of RailTel's OFC route, to safe-guard against the damages to RailTel's OFC cable. The contractor shall effectively co-ordinate with other agencies working along the RailTel's OFC route to prevent damage to OFC link and the contractor shall be held accountable for any cut of the link by other agencies.

4.1.6 Liasioning also shall be maintained with other department like Electrical, NHAI, Municipal corporations, Nagarpalikas, urban development authorities etc regarding the permission being given or shall be given to other parties for any type of construction works along the RailTel OFC route.

4.1.7 Additional patrolmen, if required for Road widening/Pipe line/HT Ele Cable laying/Metro Rail works shall be deputed by the contractor without any extra cost.

4.2.0 Planned repairs to existing joints/Terminations:
The preventive maintenance should be carried out with prior approval and during planned shutdown period generally during night time between 00:00 to 5:00 hrs. The additional shutdown is not guaranteed, as number of customer traffic will be in operation.

4.2.1 Contractor shall also carry out testing of existing joints and OFC repairs along with testing of OFC route for improvement in the performance with link margin as per national/international standards and instruction of EIC with consumable material such as heat shrink sleeve, fibre & patch cords cleaning material etc. No extra charges will be payable for this schedule maintenance except maintenance charges as per SOR.

4.2.2 Testing of OFC & Preventive maintenance: All measurements for preventive maintenance shall be carried out as per prior agreed time schedule which is given by the RailTel's in-charge engineer. The testing of all fibers (48/24/12/6 nos.) shall be done, as **once in four month for each section** and reports shall be submitted. Any defects observed in the OF cable or in any of the associated equipments shall be attended in consultation with the RailTel's Engineer in charge at site. RailTel's maintenance supervisor will also accompany the teams as and when required.

4.2.3 Testing consists of OTDR reading and power meter reading of all spare fibers. POP to POP testing is required for spare fibers terminated in both the directions. Run through fibers may be tested from end to end only. While testing, working fibers shall not be disturbed. The periodicity of testing is once in four month for all sections, in case the agency fails to complete the measurement schedule and measurement report, **penalty of Rs.5000/- will be imposed.**

4.2.4 **Reports:** The reports consists of (a) Section-wise tabulation of all events reported by OTDR of more than 0.2 dB over the section fiber wise for all fibers tested in the given Performa in print and in Excel worksheet, (b) Tabulation of power loss from A-B & B-A direction, average and loss per km in both 1310 /1550 nm. for all the fibers tested. The OTDR traces should be submitted in both soft and hard copy.

4.2.5 In a situation, where in the vicinity of RailTel's OFC network any major construction / road widening projects are going on or are to start and necessitates rerouting through a new safe route of OFC to avoid damage, Contractor shall explore feasibility of alternate

routes & provide detailed route plan for new location, where re-routing is proposed. The job of shifting & laying of UG/Aerial OFC may be carried out at the discretion of RailTel if required **which are covered under SOR -B of the contract.**

4.3 Fault restoration Services:

4.3.1 The Contractor shall provide the OFC maintenance service to keep but not limited to the following provisions on round the clock basis for attending & rectifying the OFC fault in minimum downtime (including travel time) from the time of lodging the complaint to the representative of Contractor at their designated office / Head Quarter. In addition to end to end optical fibre link maintenance contractor shall provide all assistance including providing man power, transportation of men and materials etc. if required in the event of link failure due to any other reason.

4.3.2 Deployment of Maintenance Team to be located at Secunderabad. The Maintenance team shall comprise of manpower, logistics, required tools/tackles/machinery & equipments etc, as mentioned in Annexure-B.

4.3.3 Providing Conveyance facilities for Maintenance, for transporting the manpower, tools/tackles, Test/Measuring equipments and Consumables like: OFC cable, HDPE duct, Joint enclosures, RCC Jointing Pit, couplers, etc. Tata Sumo or equivalent vehicle shall be available round the clock with each of the maintenance team. Since Ladder is the essential tool for aerial OFC maintenance, the vehicle should contain fixed stand on the top OR rear trolley covered suitably for keeping essential Eqpt and ladder. The model of the vehicle should not be prior to year 2012

4.3.4 Providing communication facilities like: Landline phone, Cell/Mobile phone with Android software (smart phone**)** to Maintenance teams for the purpose of contacting on the urgent need basis as mentioned in Annexure-B.

4.3.5 Carrying out maintenance activities like identification of OFC fault/cut, obtaining permission from local authorities if required, laying of required length of OFC with protection wherever required, splicing of OFC, installation of Jointing pit & back filling of pit with Sand, supply and installation of RCC route marker and joint marker as per specification, testing of OFC and updating of OFC as-built drawing etc.

4.3.6 Provisioning of Logistics arrangement like AC/DC power source, lighting arrangement, DG sets etc, which may be required during the execution of maintenance job at site as mentioned in Annexure-B.

4.3.7 Insurance for workmen compensation. Contractor shall take insurance for all the workmen engaged under this contract and as per labour laws applicable from time to time.

4.4 Methodology for fault restoration/Fiber cuts: Under OFC link cut condition, the following minimum activities shall have to be taken up by the CONTRACTOR for the restoration of OFC cut/fault for the end-to-end restoration of the network.

4.4.1 On receipt of information of fault in OFC the team stationed at the team HQ shall move immediately for locating and rectifying fault as per the response time given below. The working fibers shall be restored first. Sufficient labour shall be engaged for speedy restoration. Adequate care shall be taken not to damage any cable of other Telecom Operators if laid in the same trench

4.4.2 For the identification of exact fault location on immediate basis, the OTDR measurement of available fibre shall be made from the nearest node. For better clarity, the OTDR measurement on spare fibre shall be taken at nodes / nearest OFC joint situated at both ends of cut and using dummy fibre spool, in case required.

4.4.3 As-built drawing of UG OFC shall be referred and the physical site of fault on ground shall be located. It may be possible that data in as- built document may not be correct for the accuracy purpose. As-built drawing shall be taken as reference only. No claim of contractor will be entertained on account of this. Accordingly, locating the OFC fault, the job of excavation in all types of soil, identification of OFC, pulling of cable from both ends if feasible, construction of jointing pits, splicing of OFC, back filling of trench & jointing-pit shall be taken up as per the standard procedure as briefly indicated in Para 7. Further, RCC marker at the jointing pit has to be provided for identification

of route as well as jointing pit. This should be incorporated in the cable route plan also. The splicing of fibres are to be carried out in line with the installed fibre i.e. G.652 and measurements are to be taken on spare fibres. In case the active fibres are to be used, precautions are to be taken with regard to the power launched on to the fibre. Restoration of site shall be done to the entire satisfaction of Engineer- in-charge

4.4.4 In case of OFC cut where it is not possible to pull the cable from either end, the contractor has to make two splicing joints. Required length of OFC supplied by RailTel has to be put in between two joints. The spacing of joints shall be depending up on situation at site and shall be as decided by site Engineer. Remaining OFC has to be coiled and tied on poles for Aerial cable and in both the pits for UG cable. Further, joint stone markers at each jointing pit have to be provided for identification of route as well as jointing pit. This should also be incorporated in the cable route plan.

4.4.5 After the completion of site activities, the CONTRACTOR shall ensure the restoration of the traffic from the respective Network Operations Center (NOC) and there after fresh OTDR measurement & traces (for 1310 nm / 1550 nm) shall be taken for Spare fibres & submitted to RailTel.

4.4.6 After the completion of site activities & hop test, the As-built drawing of UG Cable shall be updated by incorporating the new details like OFC loop used, Joint-pit location, etc. Position of OFC should be shown from the center of the nearest POP in as built drawing and the length of loop in joint pit after fault restoration shall be incorporated in as built drawings After attending the fault & permanent restoration a Fault-Rectification report, jointly signed by RailTel & CONTRACTOR, shall be generated for the closure of the complaint.

4.4.7 In case the site condition is not favorable for the immediate restoration of the fault, the temporary restoration of the service fibers shall be taken up immediately with the approval of EIC. Permanent restoration work will not be considered in break down time unless there is again link break during restoration job. Permanent restoration of joint pits is to be carried out by contractor within 48 hrs from time of fault /OFC cut. In case the site is not conducive for permanent restoration some arrangement of manpower has to be done by contractor for safeguarding exposed OFC till permanent restoration. No extra payment shall be given to contractor on account of deployment of additional manpower. In case of further cuts at exposed OFC location contractor will be accountable for this additional downtime of OFC link.

4.4.8 OFC issued by RailTel to the contractor for use at OFC fault locations, should be checked & tested before use at site.

4.4.9 Contractor shall be responsible for obtaining approval at his own cost from statutory authorities like Municipal Corporation, Development Authorities, Electricity Department PWD, NHAI and any other concerned authority as required for carrying out the repair.

4.4.10 Drains, pipes, cables, overhead wires and similar services encountered in the course of the works shall be guarded by the contractor at his own cost, so that they may continue in full and uninterrupted use to the satisfaction of the Owners thereof

4.4.11 Should any damage be done by the CONTRACTOR to any AC Power mains, utility pipelines cables or lines (whether above or below ground etc) whether or not shown on the drawings, the CONTRACTOR must make good or bear the cost of making good the same without delay to the satisfaction of the Engineer-in-Charge.

4.4.12 CONTRACTOR shall have at all times during the performance of the WORK, a competent supervisor on the site. Any instruction given to such Supervisor shall be considered as having been given to the CONTRACTOR.

4.4.13 The CONTRACTOR shall employ as many personnel as required to comply with the local rules and administrative orders governing the Working Hours of Employment. The contractor shall be responsible for compliance with all statutory requirements including personnel related matters.

4.4.14 Night Work: The contractor shall also work during night time and is required to complete the work in all respects within the stipulated time. Sufficient lighting

arrangements and precautionary steps shall be provided to safeguard the workmen, public and the Railway assets and to afford adequate facilities for properly placing and inspecting the material and the work when the night work is in progress.

4.4.15 In case of partial damage of the cable or development of high loss in the working and spare fiber or cable cut at any time (day/night) by miscreants or by any agency, the responsibility of repairing the defective fiber lies with the contractor and included in the Schedule of Rate (SOR) - A.

4.4.16 Examination of Finished Work: When finished work is taken down for the purpose of inspection for any reason, the contractor shall bear the entire expenses incidental thereto in the event that the said work is found to be defective. This situation may be applicable to both planned work as also to emergency restoration.

4.5 Mean-Time-To-Restore fiber cuts (MTTR) & Quality of work:

4.5.1 Response Time: The maximum response time is 15 minutes from the time RailTel informs the team about the failure. Within this time the maintenance team should move towards the location of fault.

4.5.2 Restoration Time:

a) The restoration time is inclusive of response time plus travel time including localization, splicing.
b) The team in – charge should have mobile phone of operator whose coverage is available in the section and it should be always be on.

4.5.3 RECORD OF FAULT REPAIR TIME:

Time taken by the Contractor from the time of lodging the complaint to the representative of Contractor at their designated office/Head Quarter up to the time of restoration of end-to-end traffic after rectification of OFC cut(s)/fault(s) including the traveling time. The Repair time of any fault occurred shall be calculated by NOC of RAILTEL. After restoration of the link, a fault report is to be generated by contractor and obtained joint signature with RAILTEL site representative for records.

i. During the maintenance or fault rectification work, should any damage occur to the other Telecom Operator /Railway QUAD / other cables, contractor is liable to pay compensation as demanded by the concerned authorities.

4.5.4 **Warranty:** All material supplied/used and the work done by the contactor shall be guaranteed against the defective manufacture/workmanship for a period of six months from the date of completion of the contract.

4.5.5 **Monitoring & maintenance at equipment locations:** During every visit to the POP for OTDR measurements, the contractor staff shall monitor the equipments and its surroundings shall be kept clean by the contractor. In case any discrepancies are observed, the matter should be brought to the notice of the RailTel's engineer- in-charge**.**

4.6 **Maintenance Plan:** The Tenderer as part of his Tender has to submit a detailed plan for the maintenance of the network including the details of the man-power(skilled/unskilled) and equipments proposed to be located at site. The successful Tenderer shall mobilize the maintenance team & the equipment within 14 days from the date of Letter of Intent.

Entry pass shall be issued to the authorized representatives of the contractor by RAILTEL for handling all maintenance work customer /Railway locations.

Submission of monthly & emergency report as desired by EIC in the Performa specified by RailTel will also be a part of maintenance contract.

4.7 **Supply of OFC and HDPE duct:** For making good of any break/loss in fiber only OFC and HDPE Duct shall be supplied by RailTel to the contractor at the nearest

RailTel depot. All other materials including splicing enclosure, RCC Chamber, RCC Route Marker, GI Pipe/RCC pipe, CC etc shall be arranged by contractor on their own cost. The OFC and HDPE duct shall be picked up by the contractor in advance from nearest RailTel's depot and shall be accounted with reference to the specific incidence of fiber cuts.

4.7.1 Supply of consumables/items like Joint enclosure/box, clamps for holding OFC over pole etc meeting the specifications as detailed under the Technical specification of the tender document shall be done only after approval of Dy GM/ GM in charge of the section. Contractor has to keep minimum stock of above items up to the satisfaction of EIC. Joint enclosures of make of **3M/Raychem/AFS/R&M/or any make approved by RailTel** shall be used

4.7.2 The material issued to the contractor and remaining unutilized after completion of the job shall be returned back to RailTel's designated stores at the end of contract period. A monthly material statement shall be submitted to EIC by the contractor.

4.7.3 Wherever new joint is provided for UG cable or existing joint is attended for rectification during the maintenance period, joint shall be buried to the depth of 1.2m from the ground level in joint chamber

4.8 **Taking over the section for maintenance**:

4.8.1 The contractor shall complete the OTDR measurement of all the sections for all the 48/24/12/6 fibers and submit a joint statement duly signed by the contractor and RailTel officials indicating the faults to be attended for making good of all the non-working fibers. This process shall be completed within 30 days from the date of deployment.

4.8.2 The Engineer-in-charge shall then advise the contractor of the faults to be attended to make the fibers good at the cost of RailTel. This shall be done in 30 days from the date of advice by the officer of RailTel.

4.8.3 In case the contractor fails to submit the joint report indicating the faults to be attended within 30 days from the date of deployment of maintenance team, a penalty of Rs. 2500/- per week or part thereof beyond one month from the date of deployment of the team will be imposed. Subsequently the maintenance of all the 48/24/12/6 fibers shall be the sole responsibility of the contractor.

4.8.4 On completion of the contract, the OTDR measurement shall be carried out on spare fibers to ascertain the condition of cable, which should be same or better than the condition of the cable taken over by the contract at the beginning of the contract period.

5 CONDITIONS OF CONTRACT

5.1 While quoting, it is advisable that the prospective Tenderer shall make themselves fully conversant with the locations, OFC routes and types of jobs in details to be carried out therein as per the tender requirement, so that they clearly understand the scope of work and assess the requirement of resources to complete the work in scheduled time.

5.2 The CONTRACTOR is deemed to have understood the conditions of existing OFC routes like terrains, various crossings, access details, on-route RailTel's maintenance bases etc., by visiting the sites and collecting first hand information before submission of the offer. In case of any doubt, the clarification may be taken from the RailTel before submission of the offer.

5.3 The CONTRACTOR shall be totally responsible for the successful execution of the OFC route maintenance contract.

5.4 **The Contractor shall not sub-contract whole or any part of the work.**

5.5 The data provided in the Tender document shall be used by the Tenderer for reference and information purpose only. It shall be the Tenderer's responsibility to verify the data & satisfy himself in regard to accuracy of data.

5.6 The responsibility of the CONTRACTOR shall include provision of preventive measures of OFC routes to avoid damage and cut, deployment of manpower, supply of required materials, erection, installation, testing, documentation, including the related civil

works necessary for ensuring the complete end-to-end OFC connectivity in physical layer as described in the tender document at no extra cost to RailTel.

5.7 The material used & workmanship shall satisfy the applicable standard Specifications.

5.8 RailTel shall be entitled to reject the goods, materials and work executed by the contractor, which may not be conforming to the specifications within a reasonable time of installation of the said goods and materials and charge the contractor for all expenses direct and consequential, incurred thereby.

5.9 The CONTRACTOR shall be totally responsible for the calibration & functionality of test equipment to be used at site. All the tools & Test instruments shall be duly certified by the authorized agency. Contractor should not shift the test instruments from the site and is liable for penalizing if found so.

5.10 The Contractor to provide safety appliances like: dust masks, safety belt, safety shoes, helmet, hand gloves, safety goggles, rain gears etc to their personnel working.

5.11 During any construction work in public places, all precautionary caution boards, barricading sheets as per standard laws & rules to be used by the Contractor.

5.12 During the course of execution of the work, if any discrepancy or inconsistency, error or omission in any of the provisions of the contract is discovered which needs to be clarified, the matter shall be referred to Executive Director of RailTel, Southern Region who shall give his decision in the matter and his decision shall be final and conclusive.

5.13 The contractor should ensure that the team employed by him shall not move or trespass to areas other than the site(s) required for the execution of the work. Under no circumstances the Contractor not carry out the work which hamper the Operations and Safety of the Road/Railway movements and damage assets. The contractor is whole responsible for the safety of team members while executing the work.

5.14 The Contractor shall submit along with the offer the list of the number of personnel who will be available permanently for the maintenance works of RailTel. This should include details of technical qualification & minimum experience.

5.15 The work is subjected to inspection at all times by RailTel officials. The CONTRACTOR shall carry out all instructions given by him or his representatives during inspection.

5.16 Any work not confirming to the execution plans, standard specification codes or engineering practices shall be rejected forthwith and the CONTRACTOR shall carry out the rectification at his own cost.

5.17 Inspection and acceptance of the work shall not relieve the CONTRACTOR from any of his responsibilities under this contract.

5.18 With the offer, the CONTRACTOR shall provide the complete details of planning for items/materials, test/measuring instruments, tools/tackles & manpower to be deployed.

5.19 The CONTRACTOR shall observe in addition to codes specified in respective specification, all national and local laws, ordinances, rules and regulations and requirements pertaining to work and shall be responsible for extra costs arising from violations of the same, which shall be borne by the Contractor.

5.20 By entering into the maintenance contract with RailTel, the contractor shall agree to maintain the secrecy of all documents/information/drawings etc provided by RailTel during the period of contract and shall handover all the documents back immediately after the termination of the contract.

5.21 In case if EIC feels that the contractor is not able to execute the work to the satisfaction of RailTel, EIC shall at his own discretion can engage other agencies to ensure the smooth execution of the job at the risk & cost of the Contractor.

5.22 The CONTRACTOR shall depute experienced / competent representative(s) at site during the execution of any job. Any instructions given to such representative(s) shall be constructed as having been given to the CONTRACTOR.

5.23 The CONTRACTOR shall be solely responsible for making available for executing the work, all-requisite construction equipment, special aids, tools, tackles and testing equipment and appliances. Such construction equipment etc. shall be subject to examination by the RailTel and approval for the same. Any discrepancies pointed out by the RailTel shall be immediately got rectified, repaired or the equipment replaced altogether, by the CONTRACTOR.

5.24 Within the RailTel's premises, the representative of the CONTRACTOR shall take care for not tampering with the RailTel 's installed equipments.

5.25 The accessing of RailTel 's facilities shall be allowed to authorized person from CONTRACTOR'S side with the prior intimation to RailTel 's Engineer-in-Charge.

5.26 All faults shall be intimated to the CONTRACTOR'S supervisor/ authorized person by either RailTel 's network management center or the Engineer-in-charge as indicated through telephonic communication, e-mail or through fax. For this the CONTRACTOR shall provide RailTel with the contact number, both landline and Mobile & e-mail address / Fax no. within 14 days from the award of the contract.

5.27 It is advisable that Tenderers must visit site to familiarize themselves with all constraints, restrictions, access requirements and available infrastructure. The CONTRACTOR shall not be eligible for any adjustment in cost and time, on account of any lack of data regarding above. The Contractor shall visit the OFC route and satisfy himself before quoting the rate.

5.28 While executing the job at site by the CONTRACTOR, penalty claimed against any damage caused to the infrastructure of RailTel & other parties shall be borne by the Contractor.

5.29 Tenderers are advised to submit their quotations strictly based on the terms, conditions, and specifications in the tender document and not to stipulate any deviations. Should any deviation become unavoidable, the Tenderers should mention it. RailTel reserves the right to evaluate offer containing deviations having financial implications after adding cost of such deviations as determined by RailTel.

5.30 **The CONTRACTOR becomes defaulter on the following conditions:**

5.30.1 If he fails to repair fault and make the OFC link available within 24 hours.

5.30.2 Improper maintenance resulting in down time / consumables / loss of parts.

5.30.3 Loss or damage to RailTel's property due to the acts of Contractor.

5.30.4 In the event RailTel receive notice from any statutory authorities or from external agencies on account of loss/damage to their property due to the acts of Contractor.

5.30.5 During the contract period, if the CONTRACTOR has defaulted more than once or the defaulting case of the Contractor is severe, then RailTel has the right to terminate the contract and forfeit the security deposit if deemed required as per RailTel's opinion.

5.31 **Termination of Contract**: RailTel reserves the right to interrupt and terminate the contract at any time after giving one month's notice, 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, non possession of equipments and tools required for the work or defective and mal-functioning equipments, non-availability of proper/nominated instrumentation, inability to provide men and material or for any other cause deemed reasonable . In such case, the value of approved materials utilized at site and of certified and accepted work done to date by the Contractor as per contract agreement 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. Notice in writing from the RailTel of such termination and reason thereof shall be conclusive evidence of taking over of works from the contractor. The security deposit will be forfeited in such case of termination if deemed required as per RailTel's opinion.

5.32 **INCOME TAX**: Income Tax at the prevailing rate as applicable from time to time shall be deducted from the CONTRACTOR's bills as per Income Tax Act and quoted Rates shall be deemed to include this.

5.33 **TAXES, DUTIES, OCTROI, LEVIES ETC**: The quoted prices shall be inclusive of all taxes, duties, Octroi, levies, service tax, work contract tax, VAT if any etc. till the completion of the contract and the CONTRACTOR shall not be eligible for any compensation on this account. The CONTRACTOR shall furnish the break up of taxes so that any credit if applicable can be claimed by RailTel.

5.34 **ESCALATION**: The maintenance charges quoted by the CONTRACTOR shall be kept firm till the completion of entire period of contract, and no Price Escalation shall be paid on any ground.

5.35 **LABOUR LICENSE**: Before starting of work, the CONTRACTOR shall obtain a license from concerned authorities if required under the Contract Labor (Abolition and Regulation) Act 1970.

5.36 **COMPLIANCE WITH LABOUR, INDUSTRIAL & ENVIRONMENTAL LAWS**: The Contractor shall at its expense, ensure due compliance with all applicable and governing Industrial, environmental and Labour Laws, Rules, Regulations and Bylaws both of the Central and State Govt. and all other local authorities and shall keep RailTel harmless and indemnifies in respect thereof. The CONTRACTOR shall ensure due compliance with the provisions of the relevant minimum Wage Act, payment of Wages, Contract Labour (Regulations & Abolition) Act, Employees Provident Fund Act and other industrial and environmental laws in force.

5.37 The contractor shall indemnify the Company against all losses or damages, if any, caused to it on account of acts of the personnel deployed by him. The contractor shall ensure regular and effective supervision and control of the personnel deployed by him and gives suitable direction for undertaking the contractual obligations.

5.38 **Force Majeure:** Both the parties agree that neither party shall be liable for each other for delay or non-performance of respective obligations in the event beyond the control of each party which can be termed as force major.

5.39 SETTLEMENT OF DISPUTE AND ARBITRATION:

5.39.1 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 a sole arbitrator in accordance with provisions contained in Arbitration and Conciliation Act, 1996.

5.39.2 The sole arbitrator shall be appointed by the Managing Director of RailTel Corporation of India Limited. It is expressly understood between the parties that no objection shall be raised at any time after execution hereof to the appointment of the arbitrator by the Managing Director of RailTel Corporation of India Limited including that the person appointing the arbitrator is connected to and /or employed with the RailTel Corporation of India Limited.

5.39.3 The Venue of the arbitration shall be at Secunderabad. The arbitration proceedings shall be conducted in English and cost of the arbitration shall be borne between the parties in equal proportion. The Arbitrator shall give a reasoned award, which shall be binding on the parties.

5.40 **Tenderer has to give following undertaking:**

I/we agree to do all items of SOR-B at the rates given by RailTel. I/we understand that these rates are for OFC route strengthening, the work order for which will be issued separately by RailTel. The actual quantity to be executed under SOR-B will be assessed jointly by the successful tenderer and authorized representative of RailTel after award of contract.

6 **PAYMENT TERMS:**

6.1 Payment terms for SOR – A

6.1.0 100% payment will be made by RailTel on certification of Engineer-In-charge. Bill passing Authority is GM/SC and Bill paying Authority is GM/Fin/SR

6.1.1 Even though the maintenance charges are worked out on a monthly basis. The CONTRACTOR shall be paid once in two months. During any financial year, the 6 identical billing cycles of 2 month period each will be considered. The period should be viz. April to May, June to July, Aug to Sept, October to November, December to January & February to March.

6.1.2 If the date of LOA is not coinciding with the beginning (1st date of the month) of any period(i.e. 1st April/1st june/1st August etc) , the first billing period from the date of issue of LOA will be taken till closure(last date of the month) of instant 2-month period. For example if LOA is issued on 10th April, the first billing cycle shall be from 10th of April to 31st May. Allowed CRT to be taken proportionately. Subsequently, the billing cycle will continue with the regular 2 Month billing period.

6.1.3 The maintenance charges for two months period subject to submission of permanent restoration certificate of fault occurred during the particular period jointly signed by RAILTEL & contractor representatives and on submission of test results of power, OTDR readings etc as required by the terms of the contract to the satisfaction of the EIC.

6.1.4 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

6.1.5 The length of OFC under maintenance is variable as per customer base and same will be intimated time to time and payment will be made as per actual on pro-rata basis.

6.2 **Payment terms f**or SOR-B: 100% payment on completion of work and as per terms & conditions specified in WO issued for execution of work.

6.3 -Deleted-

6.4 **Price Variation**: Price Variation will not be allowed during the currency of contract.

6.5 No advance payments will be made.

7. **TECHNICAL SPECIFICATIONS**

7.1 INSTALLATION OF JOINT CLOSURE & SPLICING OF OFC

7.1.1 Following types of techniques are used for splicing of fibers:

- **a) Mechanical Splicing**: -deleted-
- **b) Fusion Splicing**: This is accomplished by applying localized heating (i.e., by electric arc or flame) at the interface between two butted, pre- aligned fiber ends, causing them to soften and fuse together.

7.1.2 At all other locations and during initial installation of fiber optic cable, fusion splicing should be adopted.

7.1.3 The decision of Engineer-in-Charge shall be final and binding in this regard.

7.2 STRAIGHT JOINT FOR FIBRE OPTIC CABLE:

7.2.1 There are various types of joint enclosures available in the market. The procedure for assembly of joint closure is described in the installation manual supplied with straight joint closure. This includes the following:

a) Material inside joint closure kit.
b) Installation tools required.
c) Detailed procedure for cable jointing.
d) Procedure for re-opening the closure.

7.2.2 However, generally, the following steps are involved for jointing of the cable.

- Preparation of cable for jointing
- Stripping/cutting the cable
- Preparation of cable and joint closure for splicing
- Fibre splicing
- Organizing fibers and finishing joints
- Sealing of joint closure and Placing joint in pit.

7.3 PREPARATION OF CABLE FOR JOINTING

7.3.2 During the installation, a minimum of 5 meters of cable of each end is coiled in the jointing pit to provide for jointing to be carried out at convenient location as well as spare length to be available for future use in case of failures.

7.3.3 The cable is then coiled on the pole in the same position as required after the joint is complete. The marking is done on all the loops so that it will be easier to install it later.

7.3.4 The distance from the last centre to the end of the cable must be at least 1.0 meter. This is being the minimum to be stripped for preparation of joint.

7.3.5 Sufficient cable at each end up to the jointing vehicle/enclosure is then uncoiled from the pit for jointing.

7.4 STRIPPING/CUTTING OF THE CABLE

7.4.1 The cable is stripped of their outer and inner sheath with each sheath staggered approximately 10mm from the one above it.

7.4.2 Proper care must be taken when removing the inner sheath to ensure the fibers are not scratched or cut with the stripping knife or tool to prevent this, it is best to only score the inner sheath twice on opposite sides of the cable, rather than cut completely through it. The two scores marking on either side of the cable are then stripped of the inner sheath by hand quite easily.

7.4.3 The fibers are then removed from cable one by one and each fibre is cleaned individually using Kerosene to remove the jelly.

7.5 PREPARATION OF CABLE JOINT CLOSURE FOR SPLICING

The type of preparation work performed on the cable prior to splicing differs on the type of joint closure and fiber organizer used. However, the following steps are usually common:

7.5.1 The strength members of each cable are joined to each other and/or the central frame of the joint closure.

7.5.2 The joint closure is assembled around the cable.

7.5.3 The heat shrink sleeve is applied to the cables and closure or prepared for application after splicing is complete.

7.5.4 The fibers are protected (usually with plastic tubing) in their run from the cable core to the fiber organizer trays (particularly if cable construction is slotted core type).

7.5.5 Tags which identify the fibers nos. are attached at suitable locations on the fibers.

7.5.6 Splice protectors are slipped over each fiber in readiness for splicing over the bare fiber after splicing.

7.6 STRIPPING AND CLEAVING OF FIBRE

7.6.1 Prior to splicing each fiber must have approximately 50mm of its primary protective U.V. cured coating removed, using fiber stripper which are manufactured to fine tolerances and only score the coating without contacting the glass fiber.

7.6.2 The bare fiber is then wiped with a lint free tissue doused with ethyl alcohol.

7.6.3 Cleaving of the fiber is then performed to obtain as close as possible to a perfect 90 face on the fiber.

7.7 SPLICING OF THE FIBERS

As discussed above there are two types of methods, which can be used for fiber splicing. Some of the basic steps for both the type are as under:

7.8 FUSION SPLICING OF THE FIBER

Some of the general steps with full automatic micro processor control splicing Machines are as under:

7.8.1. Wash hands thoroughly prior to connecting this procedure.

7.8.2. Dip the clean bare fiber in the beaker of ethyl alcohol of the ultrasonic cleaver. Switch on ultrasonic cleaver for 5-10 seconds (some of the manufacturers does not prescribe the above cleaning).

7.8.3. Place the bare fiber inside 'V' groove of the splicing machine by opening clamp handle such that the end of fiber is app.1 mm. over the end of the 'V' groove towards the electrodes.

7.8.4. Repeat the same procedure for other fiber, however first insert heat shrink splice protector.

7.8.5. Press the start button on the splice controller.

7.8.6. The machine will pre fuse, set align both in 'X' and 'Y' direction and then finally fuse the fiber.

7.8.7. Inspect the splice on monitor if provided on the fusion splicing machine and assure no nicking, bulging is there and cores appear to be adequately aligned if the splice does not visually look good repeat the above procedure.

7.8.8. Slide the heat shrink protector over the splice and place in tube heater. Heat is complete when soft inner layer is seen to be 'oozing' out of the ends of the outer layer of the protector.

7.8.9. Repeat the same procedure for all the other fibers.

7.9 MECHANICAL SPLICING OF THE FIBER: - deleted-

7.10 ORGANISING FIBER AND FINISHING JOINTS

7.10.1 After each fiber is spliced, the heat shrink protection sleeve must be slipped over the bare fiber before any handling of fiber takes place, as uncoated fibers are very brittle and cannot withstand small radius bends without breaking.

7.10.2 The fiber is then organized into its tray by coiling the fibers on each side of the protection sleeve using the full tray side to ensure the maximum radius possible for fiber coils.

7.10.3 The trays are placed in the position.

7.10.4 OTDR reading taken for all splices in this organized state and recorded on the test sheet to confirm that all fibers attenuation are within 0.1 db per splice. This OTDR test confirms fibers were not subjected to excessive stress during the organizing process.

7.10.5 After this the joint can be closed with necessary sealing etc and ready for placement in the pit.

7.11 PLACING OF COMPLETED JOINT IN PIT

7.11.1 Joint is taken out from the vehicle and placed on the tarpaulin provided near the pit.

7.11.2 The cable is laid on the ground, loop the cable such that pen mark previously place on the cable line up. Tape these loops together at the top of the coil.

7.11.3 The joint can now be permanently closed and sealed by heating heat shrinkable sleeve etc. However, before closing, silica gel to be kept inside for moisture protection.

7.11.4 Now the joint closure is fixed to the bracket on the pit wall and pit is closed.

7.12 If required for attending to faults etc., manufacturers supply special kits for opening of the joint and the steps to be followed. However the general steps are as under:

7.12.1 Using suitable knife cut heat shrink sleeve longitudinally along its entire length.

7.12.2 Do not damage the smaller heat shrunk sleeve on the ends of the joint.

7.12.3 Apply heat to the cut sleeve until it begins to separate.

7.12.4 Gently remove the cut sleeve from the joint. Now the joint can be opened.

7.12.5 Protective sleeve/cover can be removed for attending to faults etc.

7.13 EXCAVATION AND BACK FILLING OF TRENCHES FOR ATENDTING TO FAULTS:

7.13.1 The back filling of trenches shall be done by tamping and consolidating the excavated soil in layers of 15-20 cm at time. All the soil that is excavated shall be put back to the trench and care shall be taken in consolidation to ensure that the back filling does not suffer any sinkage in monsoon. The left out earth if any within station limit has to be thrown out from Railway premises by the contractor at his own cost.

7.13.2 It is recommended that excavation of trench be done manually, since use of mechanical devices like JCB likely to damage existing Signal & Telecom cables carrying safety circuits and vital train control circuits.

7.13.3 However, use of mechanical devices like JCB can be permitted to a limited extent in mid-section with prior approval of Engineer-in-charge.

7.13.4 Use of mechanical devices like JCB in station sections is strictly prohibited.

7.13.5 The excavation shall include excavation of trial holes clearing bushes and roots of trees along the trenches.

7.13.6 During excavation of the trenches, the earth should not be thrown on the ballast. The earth should be thrown by the side of the trenches away from the track. Complete excavated earth shall be back filled in the trench after laying the cable and well rammed.

7.13.7 When the contractor comes across any other cable already laid, he shall first report the fact to the Engineer.

8. **Penalties:**

8.1.1 CRT vis-a-vis Penalty

Description of deficiencies	Penalty (Rs)
Cumulative Repair time (CRT)* per two month < or = 16 Hrs	Nil
If cumulative Repair time per two month > 16 Hrs or part thereof, For every 1 hr beyond 16 hrs.	1000

Parameters for considering the CRT calculation:

a. Only down time of circuit affected cases (dockets issued to customers) due to Aerial/UG OFC cuts of Access Network will be considered for CRT. If more circuits are affected / dockets issued by a cut in a section, the circuit/docket which has maximum down time will be considered for CRT calculation.

b. Even if docket issued, in case of linear path CRT will be considered only after 4 Hrs of docket opening/OFC cut.

c. In any case even if docket is not issued, in case of UG OFC, restoration time should not cross 12:00 Hrs per cut. if the restoration time crosses beyond 12:00Hrs, the extra period will be considered for CRT

d. Similarly, even if docket not issued, in case of Aerial OFC, the Restoration time should not cross 24:00 Hrs. If the restoration period crosses beyond 24:00Hrs, the extra period will be considered for CRT

8.1.2 Exceptions to the above at 8.1.1 a to d are, access denied by local authorities like Municipal or Electrical or Police authorities / damages due to natural calamity / fire accidents / any other accidents. Such cases need certification of AM/Manager concerned, clearly recording the reason for restoration time beyond 12/24 hours. It shall also be explicitly recorded by AM/Manager concerned, that the delay is not due to contractor. Format of Certificate is at Proforma-9.

8.1.3 In absence of such certification entire restoration time irrespective of circuit interruption shall be counted in CRT in total.

8.2.1 In case of absence of man power / non-availability of vital equipment / logistics, penalty will be imposed as listed at Annexure-C

8.2.2 In case of non-availability of vital equipment / logistics mentioned at items 1 – 19 of Annexure-B of tender document, penalty will be imposed as listed at Annexure-C.

8.3 Before deployment of maintenance team the contractor should furnish the details of personnel i.e. Name, technical qualification and experience along with attested signature.

8.4 Also Penalties as per para 4.2.3 & 4.8.3 for not taking OTDR traces shall be imposed

8.5 While submitting the bi-monthly bills of maintenance tender the contractor should also submit the following along with the maintenance bill.

* Payment receipt of each staff deployed
* Statutory payment to the government authorities like EPF, ESI etc.
* Certificate from each staff in regard to no due from his employer.
* proforma as per contract conditions.

The contractor should submit copy of WCT registration certificate for the states wherever applicable.

*****

Annexure-A

Jurisdiction of OFC Section

The OFC section shall have at least one maintenance team stationed at the team headquarters. List of maintenance section where the maintenance teams are to be deployed:

Tender No.	Section	Headquarters of the Team	appx.Length of the section(Km)
2016-17/53	MMC-BBQ-Mogappair-Olympia Tech-Valasaravakkam-Porur-Kundrathur, OMR IT Corridor Road-Siruseri-Sholinganallur etc (Access UG-145.6kms , Access Aerial-40.9kms & 17.5Kms)	Chennai Egmore	204 Km

Annexure – B

Minimum Man & Machine required to be engaged under one Maintenance team (For round-the-clock 365 days)

A. Manpower

1. Technical Supervisor (Degree/Diploma holder)
2. Splicer along with two helpers round the clock in two shifts (Splicers-2 members & Helpers-4 members).
3. Manpower for surveillance, liaison and bike patrolling – Four members.
4. Driver – 2 members

B. Machinery

1. Portable Generator set.
2. Fusion Splicing Machine.
3. Power meter
4. OTDR
5. Tata Sumo or equivalent vehicle with stand fixed on the top or Rear trolley to be covered for eqpts. and Ladder. The model of the vehicle should not be prior to year 2012.
6. Cable route detector
7. Live Fiber Detector
8. GPS Instrument with Sub-Meter accuracy
9. Dummy fiber spool.
10. Hot Air Gun / Blow lamp
11. Tent / Garden Umbrella
12. Mobile phones with Android software (smart phone) for monitoring movement for all persons i.e. supervisor, splicer, helper & patroller
13. Tool/Tackles kit, umbrella tent.
14. Road – O - meter.
15. Multimeter.
16. Lighting arrangement like emergency light/gas light etc.
17. All sorts of patch cords (Euro/FCPC, SCPC/FCPC, LCPC/FCPC) for the purpose of measurement.
18. Spare battery with charger for splicing machine.
19. Ladder for attending aerial OFC.

Note:

OFC test and measuring instruments must have been calibrated from an established testing organization.

Manpower and equipments should be available with the maintenance teams round the clock as listed above. However contractor can add more manpower & equipments for speedy maintenance & minimizing downtime without extra cost implications to RailTel.

Daily patrolling schedule shall be sent to the RailTel's Engineer-in-charge. Also, manpower shall be placed at all the places to coordinate the ongoing works of other agencies, to avoid damage/cut to RailTel 's OFC. A report on weekly basis about such works and action taken thereof shall be generated & sent to EIC.

In case the main Splicer of the team is on leave, standby Splicer must be arranged in advance by the contractor

Annexure-C

Penalty to be imposed for the non-compliance/deficiency in the maintenance of Access Network, under this maintenance contract:

Description of deficiencies	Penalty
Non-submission / non-modification of as built drawing (Only modifications made to be submitted)	Rs. 1,000/- per fault
Non-submission of OTDR traces to be taken before and after rectification of cable fault /cut (involving two joints).If OTDR traces is submitted within next billing cycle, the penalty will be returned back to the contractor.	Rs. 5000/- per section
Non-provisioning of Joint Pit as indicated by RailTel within 30 days of cut. In case joint pit is not provided in 60 days, penalty will be doubled and after 90 days, case will be considered for termination	Rs (accepted rate of respective SOR- B + 20 %)
Swapped fibers not restored (involving at least one joint).	Rs.5400/-
Cable laid temporarily over bridges / poles and leads to subsequent failure (involving two joint).	Rs 2 x (accepted rate of respective SOR – B + 20 %)
In case Cumulative repair time exceeds the prescribed restoration time for the section (16 Hrs Bi-monthly for access network i.e. UG/Aerial both OFC)	Rs 1000/- per hour or part thereof.
Unavailability of communication with maintenance team/patroller	Rs.500 per day
Non-Submission of OTDR reading and Power meter readings of all fibers (Once in a four month).	Rs.5000/- + Rs. 2500/- for every week or part thereof till the next periodical report falls due
Failure or non availability of Transport/Vehicle	i. At the time of failure, if vehicle is hired from other agency, Actual cost of hiring alternative vehicle+ Rs. 500 each trip from monthly bill. ii. If vehicle not available with team, Rs. 2000/- per day iii. If the vehicle is available/provided but not as per tender condition, Rs.2000/- per day
Non Submission of joint report indicating the fault to be attended within 30 days from Date of deployment of team	Rs.2500/- per week or part therefore.
Non Submission of bill for previously completed two months within 15 days of completion of billing period.	Rs. 500/- per week beyond 10 days up to next billing cycle, subsequently Rs. 1000/- per week

 Signature of Tenderer with Seal

Absence of Supervisor/Splicer/others Patrolmen from site. (Indicated in item (a) 1 to 4 of Annexure-B).	a. Rs. 1000/- per day each for supervisor & Splicer (If the person is under sanctioned leave then it should be in knowledge of Engineer in charge and contractor should deploy another person in place of absent person). b. Rs. 500/- per day for driver c. Rs.300/- each for others
Non availability of Vital equipments(indicated in item (b) of Annexure-B)	Rs. 1000/ per day per equipment for items (b) 1 to 8 and Rs. 200 per day per equipment for items(b) 9 to 19
If bike patrolling not done	Rs.600/- for one time-per section in a week i.e. if bike patrolling not done thrice in a week, the penalty per week imposed will be 3X600 = Rs. 1800/-
Non-execution of SOR–B work within 3 months	0.5% per week subject to maximum of 10 % value of the work **(**work communicated in writing by authorized representative of RailTel)
Non-submission of updated ABD in soft copy for every six months & hard copy every year	Rs. 5000/- for every month delayed till next billing cycle and there after Rs. 10000/- every month delayed

Schedule of Requirement

Name of the work: Deployment of Maintenance Team for Preventive Maintenance and fault rectification of Access Network i.e. U/G & Aerial OFC for a period of Three years.

Schedule of Rates: SOR –A
Tender No: **2016-17/53**
Section: MMC-BBQ-Mogappair-Olympia Tech-Valasaravakkam-Porur-Kundrathur, OMR IT Corridor Road-Siruseri-Sholinganallur etc (Access UG-145.6kms , Access Aerial- 40.9kms & 17.5Kms)
Hqrs: **Chennai Egmore**

SNo	**Description of work**	**Appx Length of Fiber in KM**	**Rate per Km for one month (Rs.)**	**Amount for one month (Rs)**	**Total Amount for Three years (Rs.)**
1	Maintenance charges for Access OFC cable network as per scope, terms and conditions given in the tender document (covering UG OFC 100Km+Aerial OFC 70Km+17.5Km)	204	1046	213384	7681824
	Contractor Quote Rate, % age **At Par/ above / below**				%

Note:

1. Rates inclusive of all Taxes, transport and fright charges In case of any discrepancy between the amount quoted in figures and words, the amount quoted in words will be considered as final
2. **Tenderer should quote inclusive of all taxes and break up of taxes should shown separately**

Signature & Seal of Tenderer

Schedule of Rates: SOR - B

Certain items may be required to be done for route strengthening, route diversion etc. The SOR for respective items to be executed in SOR-B are enclosed herewith. Along with the items, the rate for each item is also indicated. If the items are executed, the contractor shall be paid as per rate indicated in SOR-B. The rates indicated in SOR-B will not be taken into consideration while evaluating the offers. Separate Work order will be issued by competent authority as and when required for execution of work under SOR-B.

S. No	Item	Description	Unit	Rate/ unit (Rs)
1	Drawing of Armored OFC on the electrical poles	Drawing of Armored 12F OFC on the poles using suitable fixtures (as per the type of poles). After completion of drawing of OFC, all the 12 fibers should be tested. If any break/high loss event observed, the same shall be rectified by the agency without extra cost.	mtr	6.50
2	Releasing of OFC from poles	Releasing of O/H cable from electrical poles and depositing of material in store with proper reading.	mtr	4.0
3A	Splicing of 6 F	Splicing/Termination of 6F fiber OFC	Nos	1250
3B	Splicing of 12 F	Splicing/Termination of 12F fiber OFC	Nos	2500
3C	Splicing of 24F	Splicing/Termination of 24F fiber OFC	Nos	5000
3D	Splicing of 48F	Splicing/Termination of 48F fiber OFC	Nos	8000
4	Trenching	Excavation of soil up to 3 ft and duct laying as per instructions of RailTel engineer	Mtr	140
5	OFC Pulling	Pulling of OFC through already laid HDPE duct/GI pipe/DWC pipe	Mtr	12
6	PVC pipe/ Flexible	Supply and fixing of 25 mm dia PVC Pipe/Flexible pipe	Mtr	46
7	G.I Pipe under road /Railway Platform.	Supply & laying of G.I.Pipe (as per IS 1239 Pt.I& Pt.II) 50 mm dia. (inside) as per IES spec for protecting cables under roads/ Railway platform as per site condition. This includes supply of all materials and road/platform cutting charges.	Mtr	768
8	Concreting	Concreting is to be done in where OFC is to be protected and to keep the RCC route marker in position. 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	3292
9	RCC Chambers	Excavation of jointing pit without damaging the fiber and provision of joint chamber of 1 mtr dia , 0.5 Cm height and 5CM thickness with two piece top 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	3154
10	Top Plates	Supply, Transporting and fixing of top plates. Wherever the top plates are missing or damaged, they should be replaced without damaging the fiber. The descriptions of dimensions are as above as per drawings supplied.	No	652
11	RCC Route Marker	Supply, Transporting and fixing of cable route markers as per drawing given in tender document. Markers shall normally be provided at a distance of every 100mtrs on the cable route, at places/corners where the route of the cable changes, on either side of culvers, bridges, L.C.Gates, road cuttings etc. These shall be of standard RCC with letters “RCIL OFC’ “ engraved and suitably painted. They shall be painted with Green when placed near joint chambers and should be painted with orange at all other places. The engraved portion RCIL OFC should be painted with white.	No	242
12	Concreting of Route Marker	Concreting of route markers as directed by RCIL Engineer, route markers shall be concreted to keep it in vertical position. The concreting to be done 15cm above the ground level and 15cm below the ground level.	No	66

		Length and width are 30cm each as per drawing supplied at 1:3:6 ratios.		
13	GI Pipe	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	Mtr	387
14	Backfilling	Wherever a meniscus appearance formed along the trench due to improper backfilling or sinking of earth due to rain is to be backfilled with earth brought from neighborhood. The backfilling should be 30 cm above ground level after ramming of the earth. (Care shall be taken for not creating trenches in Railway area for taking out soil and the work shall be cared out in consultation with the Section engineer of Railways)	Mtr	24
15	Sand filling	Supply, transport and filling of the RCC joint chambers with dry sand mixed with anti-termite chemical as required in specification up to 400mm height and the cover is refixed in position.	N0s.	600
16	DWC Pipe	Supply and laying of quality with couplers as per drawing. DWC pipe 78/63 mm dia as per direction of site engineer	Mtr	90
17	Half cut RCC Pipe	Supply and laying of 150 mm dia Half cut RCC pipe	Mtr	107
18	OFC Inside Service Building	Repair of existing OFC Terminal Joint (24/48 Fibre).	No.	3600
19 A		Splicing / dropping of each fibre / pigtail from the terminal joint mentioned above.	No.	120
19B		Leading in arrangement for OF cable inside service building by providing large G.I. Band at Bottom & vertical G.I Pipe of 75 mm dia. The vertical pipe shall be taken 75mm above the floor level & the mouth of the pipe shall be covered by Plastic Cap. The floor shall be restored to the original condition.	1 job	1290
20	Horizontal Drilling	Horizontal Drilling by using m/c/ manually at a depth of 1/1.5m below the formation level of the earth as per decision of RailTel engineer.	Mtr	873
21	Laying/blowing of OFC	Laying / blowing of OFC/ QUAD Cable/HDPE Duct in already made trench and through HDPE/GI/RCC pipes where ever necessary.	Mtr	7
22	Cable Route tracing	OFC route tracing & submission of corrected cable route plan (soft copy in CD and two hard copies).Cable Route plan should contain LC gates, culverts/bridges, joint chambers, stations, repeated buildings, HT line towers, compound walls, offset, depth of cable at every 100 mtrs	KM	1685

Note: The above rates are fixed and inclusive of all taxes, duties & fright etc

Undertaking: We undertake to execute the Route strengthening and diversion works as per RailTel's requirement at the above fixed rates.

Signature & Seal of Tenderer

GURANTEE BOND FOR PERFORMANCE GUARANTEE
(On Stamp Paper of requisite value)
(To be used by approved Scheduled Banks)

1. In consideration of the RailTel Corporation of India Limited, (Herein after called RailTel) having its corporate office plat no 43, Institutional Area, Sector-44, Gurgaon-3 and Regional office at **2nd floor, B-Block, Rail Nilayam, Secunderabad** agreed to exempt…… (Hereinafter called " the said Contractor(s)") from the demand, under the terms and conditions of an LOA/Agreement No. …….dated……made between …….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. …….. (Rs. …….. only). We, …… indicate the name of the Bank) hereinafter 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 of the terms 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 stating 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, …… (indicate the name of 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. …….(indicate the name of Bank) lastly undertake not to revoke this Guarantee during its currency except with the previous consent of the RailTel in writing.

Dated ----------

for ……..

(indicate the name of the Bank)

Witness

1. Signature
   Name

2. Signature
   Name

Proforma – 1 & 2

Proforma for Splice loss/ dB loss Vs KM & OTDR measurements in section

Section: Date:
Fiber Length:

Fiber No.	Km	Loss (dB)	dB/Km	OTDR EVENTS								REMARKS
				Km	Km	Km	Km	Km	Km	Km	Km	
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												

Signature of RailTel
Engineer-In-Charge

Signature of Contractor
with seal

Proforma-3

Proforma for power Measurement:

Section: Date:
Fibre Length:

Fiber No.	Fiber length	dB Loss		Average	dB/Km	Remarks
		A-> B	B-> A			
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						

Signature of RailTel Engineer-In-Charge

Signature of Contractor with seal

Proforma-4 for Patrolling Reports:

Section: **For the month of:** _____

Sl. No.	Date	Name of Patroller	Section		Patrolled		Remarks	Signature
			From Station (Km.)	To Station (Km.)	From (Km.)	To (Km.)		

Signature of RailTel Engineer

Signature of Contractor with seal

Proforma-5

Proforma for Attendance:

Name Firm : _____
Address :_____

Attendance Sheet for the month of_____

Name	Designation	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

Signature of RailTel
Engineer-In- Charge with seal

Signature of Contractor
with Seal

Proforma-6

Proforma for Material to be given by RailTel :

Section: Date:

Date	Description	Material Received	Material Used	Balance on hand

Signature of RailTel Engineer-In-Charge

Signature of Contractor with Seal

Proforma 7

OFC Failure / Rectification Report

Section : Date:

Failure Rectification

Sl.	Description	Details
1	Name of the POP &/or Pole No. of the Fault and Optical distance from nearest RailTel /Railway node.	
2	Date & Time of receiving information about the failure (Name & Designation of informer).	
3	Time of Departure of the Team from head quarter.	
4	Time of testing by OTDR to localize the fault	
5	Station from where OTDR test has been done	
6	Time of reaching to the location of fault.	
7	Time of restoration of the fault.	
8	Details of reasoning for the occurrence of the fault.	
9	Type of restoration	Temporary / Permanent
10	If restoration is temporary give reason for temporary restoration.	
11	Reason for delay in restoration, for which contractor is not responsible (please give detailed break up of time). Separate sheet may be attached if required.	
12	Details of Rectification	
A	Period of block allowed	
B	Actual block period	
C	Reason for extension of block	
13	Details about ground work	
A	Length of excavation & refilling of trench.	
B	Depth of trench (should be 1.2 metre), if desired depth can not be achieved, give details of protection provided.	
C	No. of Joint closure used.	1 / 2 / Existing Joint Closure
	Details about Joint/splice	
D	Length of OFC of loop cable kept in the joint/splice – 1	

 Signature of Tenderer with Seal

E	Length of OFC of main cable kept in the joint/splice – 1	
F	Whether sealing of joint closure has been done properly	Yes / No
G	Length of OFC of loop cable kept in the joint/splice – 2	
H	Length of OFC of main cable kept in the joint/splice – 2	
I	Whether sealing of joint closure has been done properly	Yes / No
14	Item used during restoration / protection	
A	HDPE	
B	G.I Pipes	
C	Joint chamber	
D	Joint marker	
D	Sand filling in Joint Chamber - 1	
E	Sand filling in Joint Chamber - 2	
F	Concreting (width 30 cms, thickness 15 cms)	
15	Remark of the Team in Charge of the Section.	
16	Remark of the RailTel Representative at site.	

RailTel Representative at site.

Signature of Contractor with seal

Signature of RAILTEL
Engineer – In – Charge of the section.

Proforma – 8

Availability of Essential Equipment

Sr. No.	Essential Equipment	Workability	Availability for the whole period	Non availability /Non workability with period	Remarks
1	Portable Generator set.	Working / Not working	Yes / No	From ……. To……..	
2	Fusion Splicing Machine	Working / Not working	Yes / No	From ……. To……..	
3	Power meter	Working / Not working	Yes / No	From ……. To……..	
4	OTDR	Working / Not working	Yes / No	From ……. To……..	
5	Tata Sumo or equivalent vehicle	Working / Not working	Yes / No	From ……. To……..	
6	OFC cable route detector	Working / Not working	Yes / No	From ……. To……..	
7	Live Fiber Detector	Working / Not working	Yes / No	From ……. To……..	
8	GPS Instrument with Sub-Meter accuracy	Working / Not working	Yes / No	From ……. To……..	
9	Dummy fiber spool.	Working / Not working	Yes / No	From ……. To……..	
10	Hot Air Gun / Blow lamp	Working / Not working	Yes / No	From ……. To……..	
11	Tent / Garden Umbrella	Working / Not working	Yes / No	From ……. To……..	
12	Mobile phones with Android software (smart phone**)** for monitoring movement for all persons	Working / Not working	Yes / No	From ……. To……..	
13	Tool/Tackles kit, umbrella tent.	Working / Not working	Yes / No	From ……. To……..	
14	Road – O - meter.	Working / Not working	Yes / No	From ……. To……..	
15	Multimeter	Working / Not working	Yes / No	From ……. To……..	
16	Lighting arrangement like emergency light/gas light	Working / Not working	Yes / No	From ……. To……..	
17	All sorts of patch cords	Working / Not working	Yes / No	From ……. To……..	
18	Spare battery with charger for splicing machine.	Working / Not working	Yes / No	From ……. To……..	
19	Ladder for attending aerial OFC.	Working / Not working	Yes / No	From ……. To……..	

* Strike out which is not applicable

Signature of RAILTEL
Engineer – In – Charge.

Signature of Contractor
with seal

Proforma-9

Single cut restoration beyond 24 hours: Reasons for Delay

S.No.	Item	Description
1	City Access Network	
2	Name of Section Incharge	
3	Location of failure	
4	Failure No. give by NOC	
5	Date & Time of occurrence of failure	
6	Date & Time informed to team	
7	Date & Time of Team moved to spot	
8	Date & Time of restoration	
9	Duration for restoration	
10	Access permission issue	Yes / No (Strike out which ever not applicable)
	If Yes Reasons	Also certified that delay is not due to contractor
	If No, Reasons for delay	Certified that delay is due to negligence of contractor

For kind approval of GM/DGM in-charge of O&M.

Signature of the contractor **Signature of Manager / AM**

GM / DGM In charge