

Bharat Sanchar Nigam Limited
(A Government of India Enterprise)
Office of the General Manager Telecom District
Sambalpur-768001

E-Tender for
Optical Fiber Cable Laying
in Sambalpur SSA

No. W-111/ 2018-19 dated 07-05-2018

This Tender will be through “e-tendering process”.

Kindly visit our website at www.odisha.bsnl.co.in
And www.tenderwizard.com/BSNL

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Check List for the Bidders

| A. To be submitted in original by putting in envelop "A" duly sealed | | |
|---|--|-----------|
| 1 | (i) Bid security & (ii) cost of Bid Document | Yes/No |
| 2 | Affidavit for sole proprietorship and all declarations in original | NA/Yes/No |
| 3 | Original power of attorney in case the bid is signed by someone else on behalf of Proprietor/All Partner/Company director | NA/Yes/No |
| 4 | Original Solvency Certificate from the banker of the tenderer as per Bid Condition. The certificate should be original, photocopy not acceptable. (in case of tenderer participating in more than one Zone ,self attested photo copy to be attached mentioning the zone in which the original has been attached and the same will be accepted) | Yes/No |
| 5. | The bidder shall furnish a declaration on stamp paper of Rs. 10/- duly Notarized in original in his tender bid that no addition / deletion / Corrections have been made in the downloaded tender document being submitted and it is identical to the tender document appearing on the website. | Yes/No |
| | B. Signed Scanned copy of the documents required as per eligibility and complete Bid document(NIT) ,to be uploaded on www.tenderwizard.com/BSNL | Yes/No |
| | | |
| C. To be submitted in original on demand | | |
| 1 | Scanned documents uploaded on BSNL Tender Wizard along with completed Bid document and any other required document | Yes/No |
| | | |
| D. Other points to be checked | | |
| 1 | Complete bid document signed on each page. | Yes/No |
| 2 | All over writings/cuttings has been authenticated by the person signing the bid | Yes/No |
| 3 | All the conditions mentioned in clause 7 of tender document Section IV are complied | Yes/No |

SECTION I
BHARAT SANCHAR NIGAM LIMITED
(A GOVT OF INDIA ENTERPRISE)
OFFICE OF THE GMTD BSNLSAMBALPUR

Tender For Optical Fiber Cable Laying in Sambalpur SSA.

NIT No : - W-111/ 2018-19 dated.07-05-2018

On behalf of Bharat Sanchar Nigam Limited (BSNL), e-Tender is invited on two stage bidding system from Individuals/Companies/Firms registered in India fulfilling the eligibility conditions by GMTD Sambalpur from the eligible prospective contractors of BSNL for the following works:

1. Name of Work: **Tender For Optical Fiber Cable laying in different zones of Sambalpur SSA.**
2. Area of contract & Eligibility for contractors-

| Zone No | Zones under the jurisdiction of | Estt. Cost (Rs. In Lakhs) | EMD to be Deposited (Rs.) | Tender Document cost (Rs 1000+GST 12%) = Rs 1120/- |
|---------|---|---------------------------|---------------------------|--|
| 01. | SDO Phones – I, II, III Sambalpur SDOT Sambalpur/Rairakhol SDE TX Sambalpur | 80 | 1,60,000 | Rs 1120/- |
| 02. | SDO Phones Bargarh SDOT Bargarh SDOT Padampur SDE Attabira SDE TX Bargarh | 70 | 1,40,000 | Rs 1120/- |
| 03. | SDOT Deogarh SDO Phones – Jharsuguda SDOT Brajrjnagar/Belpahar SDE G/E Kuchinda SDE TX Jharsuguda | 90 | 1,80,000 | Rs 1120/- |
| | GRAND TOTAL | 240 | | |
| | | | | |

3. Period of contract: One year from the date of agreement.

4. Mode of payment

: Tender document can be downloaded from BSNL website www.odisha.bsnl.co.in or www.tenderwizard.com/BSNL and DD drawn of requisite cost of tender form in favour of AO(Cash) BSNL O/o GMTD Sambalpur to be submitted in envelope –A without which the bid document will not be valid,
. Tender Document containing terms and conditions can be downloaded from ‘Tender Free View’ of website www.tenderwizard.com/BSNL. For submission of the Bid visit www.tenderwizard.com/BSNL. Further details are also available at www.odisha.bsnl.co.in and printed on A-4 size papers. The tender, which is not accompanied by the requisite Bid Security & cost of tender document, shall be summarily rejected. Tender will not be accepted/received after expiry date and time. GMTD Sambalpur reserves the right to reject any or all tenders without assigning any reason what so-ever. Technical bid & financial bid should be submitted only on www.tenderwizard.com/BSNL during E-Tendering.

5. Time & last date of Submission of bid : Up to 17.00 Hrs of 12.07.2018

6. Time of Technical Bid Opening : 15.00 hrs. of 13.07.2018

7. E-Tender processing fee :(In favour of "ITI")

TERMS AND CONDITIONS OF THE TENDER

- A. **Purchase of Tender Document:** Tender document can be obtained by downloading it from the link of website www.odisha.bsnl.co.in or www.tenderwizard.com/BSNL
- B. The bidder has to pay the form fee & EMD in form of NEFT/RTGS etc on the accounts details submitted.
- C. The quantity stated above are estimated and BSNL reserves the right to vary the quantity to the extent of -50% to +50% of specified quantity at the time of award of the contract, without any change in unit price or other terms and conditions.

D. Place of opening of Tender bids:

O/o the AGM (Planning) 5th Floor O/o GMTD Sambalpur

- E. Tender bids received after due time & date will not be accepted.
- F. Incomplete, ambiguous, Conditional, unsealed tender bids are liable to be rejected.
- G. The bidder shall furnish a declaration on stamp paper of Rs. 10/- duly Notarized in original in his tender bid that no addition / deletion / Corrections have been made in the downloaded tender document being submitted and it is identical to the tender document appearing on the website.

Note 1: All computer generated documents should be duly signed/ self attested by the bidder/ Organization.

Note 2: The Tender document shall not be available for download on its submission /closing date.

The tenders which are not submitted in above mentioned manner (1 to 7) will be rejected.

Eligibility Conditions: Tenderer must submit attested copies of the following documents with the tender form attested by Gazetted officer/ Notary/self attested:

1. Bid Security in accordance to clause No. 02 of Section I.
The security (EMD) is required to protect the Purchaser's interests against the risk of bidder's conduct, which would warrant forfeiture of the bid security. The Earnest Money should be submitted through E payment like NEFT/RTGS etc or through DD/FDR/Bankers cheque in favour of Accounts officer (Cash) BSNL, O/o GMTD Sambalpur,; the e receipt or DD/FDR/Banker's cheque to be scanned & uploaded in tender portal.
2. Tender Document(s), in original, must be duly filled in and signed by tenderer or his authorized representative along with seal on each page. All corrections and overwriting must be initiated with date by the tenderer or his authorized representative.
3. The bidder should have experience for successful execution of OF Cable laying/Maintenance of OF Cable routes and associated works in last seven financial years (2011-12 to 2017-18) in BSNL/MTNL/DOT/Central Govt. /State Govt. /PSUs in anywhere in India with satisfactory completion of work as given below:
 - (a) One year experience of any one financial year for at least 80% of estimated cost of the zone bidding for.
OR
 - (b) Two year experience of any two financial years for at least 50% of estimated cost of the zone bidding for in each financial year.
OR
 - (c) Three year experience of any three financial years for at least 40% of estimated cost of the zone bidding for in each financial year.
4. The Experience Certificate in this regard must be issued by an officer not below the rank of JAG level or equivalent officer attested by the Gazetted Officer/Notary/self attested.

5. Photo copy (attested by Gazetted Officer/Notary/Self attested) of PAN card in the name of Firm/Company. In case of Proprietorship, the PAN in the name of Proprietor may be acceptable.
6. Proof for the registration of the firm (original affidavit duly notarized in case of proprietary firm, attested copy of partnership deed in case of partnership firm and attested MOU in case in Limited Company).(Attestation by G.O./Notary/self attested).
7. Original Solvency Certificate issued by Nationalized/Scheduled Bank of 40% of advertised tender value in favour of SSA Head. The Solvency Certificate shall not be older than the date of issue of NIT.
8. Valid at the time of agreement, Character Certificate issued by District Magistrate for Sole Proprietor in case of proprietorship firm/All Partners, in case Partnership Firm/All Directors in case of Limited Company .
9. Original "Power of Attorney" in case person other than the tenderer has signed the tender documents.
10. Photo copy (attested by Gazetted Officer/Notary/self attested) of GST Registration, EPF registration & ESI Certificates.
11. Declaration on prescribed proforma (at page 64) for NO NEAR RELATIVE in BSNL on stamp paper of Rs. 10/- duly Notarized in original.
12. A certificate on stamp paper regarding declaration that he has not been black listed OR debarred from participation in tender anywhere in BSNL/MTNL/DOT. An affidavit of this effect on the stamp paper of Rs. 10/- is required to be attached in original.
13. All documents enclosed with tender documents or uploaded on Tender wizard should be self attested by bidder or attestation by G.O./Notary.
14. Self attested copy of latest Income Tax Return should be attached.
15. The bidder must have total turnover for last three financial years (put together) ending on 31st March 2018 equivalent to 1.5 times of the estimated value of the bid for which tenderer is bidding. The turnover certificate enclosed must be issued by a Chartered Accountant
16. If any error found in tender nit/document may be intimated to AGM (Planning) within 7 days and after word it will not be considered for correction please.
17. The bidder should read the method for preparation of bid carefully mention of Section –IV sl.no.12 and follow the instructions accordingly.
18. If there is any difference/mismatch in the terms & conditions mentioned in the NIT & tender document, the terms and condition in the NIT will prevail.
19. The bidder who are registered holder of suitable certificate are exempted from payment of cost of document & EMD. The NSIC/MSME should be valid on the day of tender opening and should be submitted with a copy of renewed NSIC/MSME before the finalization of tender in case of laps of validity. The tendered item should be registered item in the NSIC/MSME. A copy of NSIC /MSME duly attested should accompany bid document for exemption
20. **Pre bid meeting has been fixed on dated 22-06-2018 at 15.00 Hr between Participating bidders at Conference Hall O/o GMTD Sambalpur for any clarification .**

Note-. The contractor shall obtain/provide at his own cost all easements, permits and licenses necessary to do work to obtain from local authorities, for which payments to the concern authorities shall be provided by the BSNL against the demand note/estimate raised by concern department. No extra charges will be paid to the contractor for pursuance of easement, permits etc from the different local authority.

It shall be responsibility of bidders to quote the rate of execution of work keeping in view of such aspects.

**AGM (Planning)
O/o GMTD Sambalpur**

SECTION II

BID FORM

NIT No: - W-111/ 2018-19

Dated: 07.05.2018

To, The AGM (Planning)
O/o GMTD SAMBALPUR

Dear Sir,

Having examined the conditions of contract and specifications including addenda No,..... .. the receipt of which is hereby duly acknowledged, we, undersigned, offer to execute the work of Tender For Tender For Optical Fiber Cable Laying in Sambalpur SSA in conformity with said drawings, conditions of contract and specifications as may be ascertained in accordance with the schedule of prices attached herewith and made part of this Bid.

We undertake, if our Bid is accepted, we will execute the work in accordance with specifications, time limits & terms and conditions stipulated in the tender document.

If our Bid is accepted, we shall submit the securities as per the conditions mentioned in the contract.

We agree to abide by this Bid for a period of 180 days from the date fixed for Bid opening (Qualifying Bid) and it shall remain binding upon us and may be accepted at any time before the expiry of that period.

Until a format Agreement is prepared and executed, this Bid together with your written acceptance Thereof in your notification of award shall constitute a binding contract between us.

Bid submitted by us is properly sealed and prepared so as to prevent any subsequent alteration and replacement.

Dated this day of (the year)

Signature of Authorised Signatory.....

In capacity of.....

Duly authorised to sign the bid for and on behalf of

Witness

Address

Signature

Signature of Bidder

SECTION III

TENDERER'S GENERAL PROFILE

Passport size
photograph of the
Tenderer / authorised
signatory holding
power of Attorney

1. Name of the tenderer / firm _____

2. Name of the person submitting the tender who's Photograph is affixed

Shri/Smt. _____

(In case of Proprietary/Partnership firms, the tender has to be signed by Proprietor/Partner only, as the case may be)

3. Address of the firm

.....
.....

4. Telegraphic Address

5. Tel no. (with STD code) (O) (Fax)[R].....

6. Registration & incorporation particulars of the firm :

- i. Proprietorship
- ii. Partnership
- iii. Private Limited
- iv. Public Limited

(Please attach self attested copies of documents of registration/incorporation of your firm with the competent authority as required by business law)

7. Name of Proprietor/Partners/Directors

8. Tenderer's Enlistment Certificate details

- a. Category _____
- b. Number _____
- c. Issuing Telecom Circle _____
- d. Issued on _____
- e. Valid upto _____

(An attested copy of the Enlistment Certificate may please be enclosed)

9. Tenderer's bank, its address and his current account number

10. Permanent Income Tax number, Income Tax circle

11. Infrastructural capabilities :

a. Capacity of trenching per day (in meters)

b. Capacity of pipe laying per day (in meters).....

c. Capacity of pulling cable through duct/pipe per day (in meters).....

d. Capacity of engaging mazdoors per day

e. Particulars of vehicles available with the tenderer :

Type of Vehicle(s)

Registration number

f. Particulars of other machines possessed by the contractor which can help in trenching pipe laying and cable pulling :

.....
.....
.....
.....

12. Details of Technical and supervisory staff:

I/We hereby declare that the information furnished above is true and correct Place:

Date:

Signature of tenderer/Authorised signatory

Name of tenderer

Seal of the tenderer

SECTION IV

Instruction to Bidders

A. INTRODUCTION:

1. DEFINITIONS

- a. **President of India:** The President of India means the President of India and his successors.
- b. **Government of India:** The Government or Government of India shall mean the President of India.
- c. **Department :** The department means the Department of Telecommunications/Department of Telecom Services, BSNL, BBNL or any other Department under the Ministry of Communications, which invites the tenders on behalf of the President of India. All references of:

Department

Chief General Manager

Principal General Manager

General Manager

Deputy General Manager/ Area manager/ Director / Telecom Distt Manager/Director (Projects)

Assistant General Manager/Divisional Engineer/Divisional Engineer (Projects)

Sub Divisional Engineer

Junior Telecom Officer

Chief Accounts Officer

Accounts Officer

Junior Accounts Officer

Including other officers in the Department, whatever designations assigned to them from time to time, who may be the in-charge of direction, supervision, testing, acceptance and maintenance including their successor(s) in the office appearing in various clauses shall be taken to mean the Department of Telecommunications under the Ministry of Communications, Government of India.

- d. l) **The GMTD Sambalpur** means the Head of SSA and his successors.
- e. **The jurisdiction of the GMTD Sambalpur:** The jurisdiction of the **GMTD Sambalpur** means Sambalpur, Bargarh, Jharsuguda & Deogarh which coincides geographically with (revenue District(s)).
- f. l) **Representative of the GMTD Sambalpur :** Representative of the **GMTD Sambalpur** means Officer and staff for the time being in "SAMBALPUR" deputed by **the GMTD Sambalpur** for inspecting or supervising the work or testing etc.

- g. **Engineer - in - charge:** The Engineer - in - charge means the Engineering Office nominated by the GMTD to supervise the work, under the contract. (Minimum Divisional Engineer/AGM level officer).
- h. **Site Engineer:** Site Engineer shall mean as SDE of the Department who may be placed by the **GMTD Sambalpur** , (Sambalpur SSA) as in charge of the work at site at any particular period of time.
- i. **A/T Unit :** A/T Unit shall be mean Acceptance and Testing unit of the Department
- j. **A/T Officer:** An officer authorised by the T & D Circle or Circle Office to conduct A/T.
- k. **Contract :** The term contract means, the documents forming the tender and acceptance thereof and the formal agreement executed between the competent authority on behalf of the President of India and the contractor, together with the documents referred to therein including these conditions, the specifications, designs, drawings and instructions issued from time to time, by the engineer in-charge and all these documents taken together shall be deemed to form one contract and shall be complementary to one another .In the contract, the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them. The expression works or work shall unless there be something either in the subject or context repugnant to such construction, be construed and taken to mean the works by or by virtue of the contract contracted to be executed whether temporary or permanent, and whether original, altered, substituted or additional.
- l. **Contractor :** The contractor shall mean the individual, firm or company, enlisted with Department of Telecom in accordance with procedure for enlistment of contractor, whether incorporated or not, undertaking the works and shall include the legal personal representative of such individual or the persons composing such firm or company, or the successors of such firm or company and the permitted assignees of such individual, firm or company.
- m. **Work :** The expression "works" shall unless there be something either in the subject or context repugnant to such construction be construct and taken to mean the works by or by virtue of the contract contracted to be executed whether temporary or permanent and whether original altered, substituted or additional.
- n. **Schedule(s):** Schedule(s) referred to in these conditions shall mean the relevant schedule(s) or the standard schedule or rates mentioned in the document.
- o. **Site:** The site shall mean the land/or other places on, into or through which work is to be executed under the contract or any adjacent land, path or street through which, the work is to be executed under the contract or any adjacent land, path or street which may be allotted or used for the purpose of carrying out the contract.
- p. **Normal time or stipulated time:** Normal time or stipulated time means time specified in the work order to complete the work.
- q. **Extension of Time:** Extension of Time means the time granted by the Department to complete the work beyond the normal time or stipulated time.
- r. **Date of Commencement of Work:** Date of Commencement of Work means the date of actual commencement of work or 7th day from the date of issue of work order, whichever is earlier.
- s. **Due date of completion:** Due date of completion shall be the date by which the work shall be completed at site including clearance of site.
- T. **Duration of completion of work:** the duration of completion of work or completion time shall be time specified in the work order plus extension of time granted, if any.
- u. **Excepted risk :** Excepted risk are risks due to war (whether declared or not), invasion, act of foreign enemies, hostilities, civil war, rebellion, revolution, insurrection, military or usurped power, any acts of Government damages from aircraft, acts of God, such as earthquake, lightening and unprecedented floods and other causes over which, the contractor has no control and the same having been accepted as such, by the Accepting Authority or causes solely due to use or occupation by the government of the part of the work, in respect of which a certificate of Completion issued.
2. **ELIGIBILITY BIDDERS :**
The invitation of bids is open to all enlisted contractors as per their eligibility mentioned in NIT of this tender document.

B. THE BID DOCUMENTS

3. BID DOCUMENTS:

3.1 The construction work to be carried out, goods required, bidding procedure and contract terms are prescribed in the Bid Documents. The Bid Documents include:

3.1.1 Qualifying Bid:

3.1.1.1 Notice Inviting Tender.

3.1.1.2 Bid Form

3.1.1.3 Tenderer's Profile

3.1.1.4 Instruction to Bidders

3.1.1.5 General (Commercial) Conditions of the contract

3.1.1.6 Special Conditions of Contract

3.1.1.7 Scope of Work and jurisdiction of the contract

3.1.1.8 OF Cable Construction Specifications

3.1.1.9 Material Security Bond Form.

3.1.1.10 Agreement (Sample)

3.1.1.11 Letter of Authorization for attending Bid Opening

3.1.1.12 List of Documents to be submitted along with the Qualifying bid.

3.1.1.13 Rates of Empty Cable Drums.

3.1.2 **Financial Bid**

3.1.2.1 **Schedule of rates - for construction**

3.2 The Bidder is expected to examine all instructions, forms, terms and specifications in the bid documents. Failure to furnish all information required as per the Bid Documents or submission of bids not substantially responsive to the Bid Documents in every respect will be at the bidder's risk and shall result in rejection of the bid.

4. **QUERIES ON BID DOCUMENTS:** A prospective bidder, requiring any clarification of the Bid Documents shall notify the Department in writing or by fax or cable at the department's mailing address indicated in the invitation for Bids. The department shall respond in writing to any request for clarification of the Bid Documents, which it receives not later than 7 days prior to the date for the opening of the bids. Copies of the query (without identifying the source) and the clarifications by the department shall be sent to all the prospective bidders who have purchased the bid documents and all such clarifications issued by the Department will form part of the bid document.

5. **AMENDMENT OF BID DOCUMENTS:**

5.1 At any time, prior to the date for submission of bids, the department may, for any reason whether so motto or in response to a clarification requested by a prospective Bidder, modify the bid documents by amendments.

5.2 The amendments shall be notified in writing or by telex, FAX, e-mail or SMS to all prospective bidders on the address intimated at the time of purchase of bid document from the department and these amendments will be binding on them.
However all Corrigendum/amendments will be issued on the website www.odisha.bsnl.co.in and www.tenderwizard.com/BSNL.

5.3 In order to afford prospective bidders reasonable time to take the amendments into account in preparing their bids, the department may, at its discretion, extend the deadline for the submission/opening of bids suitably.

C. **PREPARATION OF BIDS**

6. Cost of Bidding:

The bidder shall bear all costs associated with the preparation and submission of the bid. The department, will in no case, be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

7. **DOCUMENTS ESTABLISHING BIDDER'S ELIGIBILITY AND QUALIFICATIONS:** The bidder shall furnish, as part of his bid documents establishing the bidder's eligibility, the following documents:

(i) Bid Security in accordance to clause 6.

(ii) Tender documents in original must be duly filled in and signed by tenderers or his authorized representative along with seal on each page. All corrections and over writing must be initiated with date by the tenderer or his authorized representative.

(iii) The bidder should have experience for successful execution of OF Cable laying/Maintenance of OF Cable routes and associated works in last seven financial years (2011-12 to 2017-18) in BSNL/MTNL/DOT/Central Govt. /State Govt. /PSUs in anywhere in India with satisfactory completion of work as given below.

-One year experience of any one financial year at least 80% of estimated cost of the zone.

OR

- Two year experience of any two financial years at least 50% of estimated cost of the zone in each financial year.

OR

- Three year experience of any three financial years at least 40% of estimated cost of the zone in each financial year.

(iv) The experience certificate in this regard must be issued by an officer not below the rank of JAG/DGM level or equivalent officer attested by the Gazetted officer/Notary/self attested.

(v) Photo copy (attested by Gazetted officer/Notary/self) of PAN card in the name of Firm/Company. In case of Proprietorship, the PAN in the name of proprietor may be accepted. Latest income tax return should be attached with the tender documents.

(vi) Proof for the registration of the firm (original affidavit duly notarized in case of proprietary firm, attested copy of partnership deed in case of partnership firm and attested MOU in case of Limited Company). (Attestation by Gazetted officer /Notary/self attested).

(vii) Original Solvency Certificate issued by The Nationalized/ Scheduled bank of 40% of advertised tender value in favour of The GMTD Sambalpur. **The Solvency certificate shall not be older than the date of issue of NIT.** The certificate should be original, photocopy not acceptable. However in case the tenderer is participating in more than one Zone, he can attach the photo copy of the Solvency Certificate in the said Zone mentioning on the photo copy that original has been attached in Zone No and the same will be accepted.

(viii) Valid character certificate issued by District Magistrate for sole Proprietor in case of Proprietorship firm/All partners, in case of partnership Firm/All Directors in case of Limited Company.

(ix) Original "Power of Attorney" in case person other than the tenderer has signed the tender documents.

(x) Photo copy (attested by Gazetted Officer/Notary/Self) of GST Registration, EPF registration &ESI certificate.

(xi) Declaration on prescribed Proforma (at page 64) for NO NEAR RELATIVE in BSNL on stamp paper of Rs. 10/- duly notarized in original.

(xii) A certificate on stamp paper regarding declaration that he has not been black listed OR debarred from participation in tender anywhere in BSNL/MTNL/DOT. An affidavit to this effect on the stamp paper of Rs. 10/- is required to be attached in original.

(xiii) All documents to be enclosed with tender documents should be self attested or attested by Gazetted Officer. /Notary.

- (xiv) Self attested copy of latest Income Tax Return should be attached.
- (xv) The bidder must have total turnover for last three financial years (put together) ending on 31st March 2018 equivalent to 1.5 times of the estimated value of the bid for which tenderer is bidding. The turnover certificate enclosed must be issued by a Chartered Accountant

The bid security shall be forfeited:

- 8.7.1 If a bidder withdraws his bid during the period of bid validity specified in the bid document or .
- 8.7.2 If the bidder makes any modifications in the terms and conditions of the tender before acceptance of the tender, which are not acceptable to the department or
- 8.7.3 In case of a successful bidder, if the bidder fails:
 - i. to sign the agreement in accordance with clause 28, or
 - ii. to furnish Material Security in accordance with clause 27.
 - iii. Any document found forged at any stage of bid/agreement.

9. BID PRICES:

- 9.1 The bidder shall give the total composite price inclusive of all levies and taxes **but exclusive of GST**, packing, forwarding, freight and insurance in case of materials to be supplied and inclusive of all taxes and levies in case of works to be executed. The contractor shall be responsible for transporting the materials, to be supplied by the department (At the district Telecom Store) or otherwise to execute the work under the contract, to site at his/their own cost. The costs of transportation are subsumed in the standard schedule Rates and therefore no separate charges are payable on this account. The offer shall be firm in Indian Rupees.
- 9.2 Price shall be quoted by the bidder as percentage **below/above/at par** the schedule of rates given in schedule of rates (Financial Bid). Prices quoted at any other place shall not be considered.
- 9.3 The price quoted by the bidder shall remain fixed during the entire period of contract and shall not be subject to variation on any account. A bid submitted with an adjustable price quotation will be treated as non-responsive and rejected.
- 9.4 Discount, if any, offered by the bidders shall not be considered unless they are specifically indicated in the schedule or rates (financial Bid). Bidders desiring to offer discount shall therefore modify their offers suitably while quoting and shall quote clearly net price taking all such factors like Discount, free supply, etc. into account.

10. PERIOD OF VALIDITY OF BIDS:

- 10.1 Bid shall remain valid for 180 days from date of opening of the bid (Qualifying Bid). A BID VALID FOR A SHORTER PERIOD SHALL BE REJECTED BY THE DEPARTMENT AS NON- RESPONSIVE.
- 10.2 The department reserves the right to request the lowest 3 bidders as per read out list on the opening day to extend the bid validity for a period of further 120 days and the bidder has to necessarily extend the bid validity. Refusal to extend the bid validity will result in forfeiture of the bid security. A bidder accepting the request and extending the bid validity will not be permitted to modify his bid.

11. SIGNING OF BID:

- 11.1 The bidder shall submit, as a part of his bid, the bid documents (in original) duly signed on each and every page, establishing the conformity of his bid to the bid documents of all the works to be executed by the bidder under the contract.

(Note: The tenderer is advised to keep a photocopy (at his own cost) of the bid documents for his own reference.)

11.2 The bid shall contain no inter-lineation, erasures or overwriting except as necessary to correct errors made by the bidder in which case such corrections shall be signed with date by the person or persons signing the bid.

D. SUBMISSION OF BIDS- mention in NIT.

12. Method of preparation of bid:

Signed Scanned copy of the of complete Bid document along with other document required as per para 7 of Sec IV for each tender is to be uploaded on www.tenderwizard.com/BSNL within scheduled date and time, as per NIT. Bid Document cost, Bid security, Affidavit for sole proprietorship in original, Original power of attorney in case the bid has been signed by other than tenderer, Original Solvency certificate as per bid conditions ,should be submitted in **envelop** as per detailed below

| Envelope | Marked on the Cover | Contents of Envelope |
|------------|---------------------|---|
| Envelope-A | Bid Security | Containing Bid Document cost, Bid security as per NIT, Affidavit for sole proprietorship and all declarations in original, Original power of attorney in case the bid has been signed by other than tenderer, Original Solvency certificate as per bid conditions |

On this envelope the name of the firm and "Bid Security" must be clearly mentioned and should be properly sealed (with sealing wax/packing PVC tape). **The tenders which are not submitted in above mentioned manner shall be summarily rejected.**

12.1 The envelope-A must bear the following;
 "Tender For Optical Fiber Cable Laying in Sambalpur SSA"
NIT No: - W-111/ 2018-19 dated.07-05-2018

(Full Address of the Tendering Authority as "AGM (Planning), 5th Floor, Doorsanchar Bhawan, Kacherry Road, Sambalpur-768001 (Odisha) to be mentioned)

12.2 The tenderer will be bound by all terms, conditions & specifications as detailed in the tender documents.

12.3 Any tender with conditions other than those specified in the tender document is liable to be summarily rejected. No modification by the contractor in any of the conditions will be permitted after the tender is opened.

OR

1. The cost of tender document/EMD to be submitted online RTGS/NEFT through net banking in the Sambalpur SSA BSNL account mentioned below. The receipt of online transaction is to be submitted online through tender wizard.
2. Original document required to be submitted by bidder when asked, for while scanned copies may be uploaded on tender wizard along with tender documents.

| | |
|-----------------------------|--|
| Name of the Bank and Branch | UNION BANK OF INIDA, SAMBALPUR |
| Accounts Name | A.O(Cash), BSNL, O/o GMTD SAMBALPUR |
| Account Number | 365201010033050 |
| IFC Code | UBIN0536521 |
| Address of the Bank | NAYA SARAK, SAMBALPUR:768001, Odisha |
| MICR Code | 000026000 |
| Mail Id : | <i>email id : gmtdsbp13@rediffmail.com</i> |
| Contact No | Tel.No.0663-2521118 |

3. RTGS/NEFT should be done such that it should reflect in the collection account of BSNL Sambalpur (details as mentioned above) **before 17.00Hrs of 12.07.2018.**
4. Scanned and self attested copy of letter {addressed to AO (Cash) BSNL/O/o GMTD Sambalpur } on the letterhead of the firm mentioning the following details of transaction to be provided on the E-mail of Account Officer, O/o GMTD SAMBALPUR gmtdsbp13@rediffmail.com on or before **12:00 hrs on Date 13.07.2018.**
 - a. Name of Bank account holder :
 - b. Bank Name :
 - c. IFSC Code :
 - d. Account No. :
 - e. UTR no. generated and date of transaction for EMD:
 - f. UTR no. generated and date of transaction for Tender doc. Cost :
 - g. Name of Zone/Block :
 - h. E-mail ID :
 - i. Contact No. of bidder :
5. Above details received through the Email ID mentioned in the letter only as per point-4 above will be entertained for verifying the EMD and tender cost deposited in collection bank account.
6. Power of attorney is to be submitted online and this is to be provided in original at the time of execution of agreement by successful bidder.
7. **Technical bid of only bidder will be opened online whose payment of EMD & tender document cost is reflected in BSNL account before 12:00 hrs of date 13.07.2018 as mentioned in point 04.**
8. Bidders who are facing any difficulty to RTGS/NEFT, the DD/FDR/Banker's cheque for EMD in favour of **AO (Cash) BSNL, O/o GMTD Sambalpur** keeping inside Envelope-A as mentioned at 12 may be dropped in tender box available in O/o AGM Planning up to 17:00 hrs. of **12.07.2018.**

13. SUBMISSION OF BIDS :

13.1 Tender will be E-Tender. Envelop "A" only should be dropped in person in the tender box placed in the O/o AGM Planning, 5th Floor, Doorsanchar Bhawan before the closing (date & time) of tender, as mentioned in. **Qualifying/Technical Bid & Financial Bid should be submitted in www.tenderwizard.com/BSNL only.**

The tenderer is to insure the delivery of the bids at the correct address. The department shall not be held responsible for delivery of bid to the wrong address. The slit of the tender box will be sealed immediately after the specified time for receipt of tender. Any tender presented in person after the sealing of box will not be received by (the tendering authority) or by any of the subordinates or will not be allowed to be deposited in the tender box.

- 13.2 Postponement of Tender opening: Whenever it is considered necessary to postpone the opening date of tenders, quick decision must be taken and communicated to the tenderers who have purchased the tender documents and shall be at least one day before the original date of opening. The reasons for postponing the tender shall be recorded in writing. Such notice of extension of date of opening shall also be put up on the notice board and also published in the newspapers in which original NITs have been published. If the date of opening of bids is declared as holiday, the bids will be opened on the next working date at the same time and venue.
- 13.3 The Government of India if subsequently declares date fixed for opening of bids as holiday, the revised schedule will be notified. However, in absence of such notification, the bids will be opened on next working day, time and venue remaining unaltered.

14.0 LATE BIDS:

14.1 Tenders will not be received after the specified time of closing of the tender and the same shall be rejected and returned unopened to the bidder. It is the sole responsibility of the tenderer that he should ensure timely submission of tender.

15 MODIFICATIONS AND WITHDRAWAL OF BIDS:

15.1 The bidder may modify or withdraw his bid after submission and before opening, provided that the intimation is deposited by the bidder in a properly sealed envelope (With Wax)packing PVC tape) in the tender box, before the scheduled time & date for closing of tender.

15.2 No bid shall be modified subsequent to the deadline for submission of bids.

16 OPENING OF THE BIDS BY THE DEPARTMENT:

16.1 The Department shall open the bids in the presence of bidders or his authorized representative who choose to attend, at **15:00 Hrs** on due date. The bidder's representatives, who are present, shall sign an attendance register. The bidder shall submit authority letter to this effect before they are allowed to participate in the bid opening (A format is given in **SECTION - XI**).

16.2 A maximum of two (2) representatives for any bidder shall be authorized and permitted to attend the bid opening.

16.3 The Bids shall be opened in the following manner:

16.3.1 The bids opening committee shall count the number of bids and assign serial numbers to the bids. For example, if 10 tenders have been received the bids shall be numbered as 1 of 10, 2 of 10 etc. All the members shall initial on the outer envelopes of all the bids with date.

16.3.2 The envelopes containing the tender offer and not properly sealed, as required vide para 19.3.1 shall not be opened and shall be rejected outright. Closing the cover by gum will not be treated as sealed cover. The reasons for not opening such tender offers shall be recorded on the face of the envelope and all the members of bid opening committee shall initial with date.

16.3.3 The Committee will act in accordance with e-tendering process provided by M/S ITI.

16.3.4 The envelope "A" marked "**BID SECURITY**" shall be opened first and examined .

16.3.5 The bidders who have submitted proper bid security as per tender document, their "**QUALIFICATION BID**" shall be opened and papers/documents submitted by the bidder shall be examined and recorded by the TOC. After opening the qualifying bid, all the documents contained therein shall be serially numbered and signed by the bids opening committee member.

16.3.6 After recording of the "Qualifying Bid" the TOC will place all the Financials bids submitted by the bidder in an envelope and will properly seal it with wax or packaging PVC tape for keeping in safe custody.

16.3.7 The Financial Bid shall be opened in the following manner:

16.3.8 "Financial Bid," will be opened only for qualified tenders in "Qualifying bid".

16.3.9 The date and time of opening of "Financial bid" shall be conveyed to all the bidders who have qualified in Qualifying Bid and their representative shall be allowed to attend the financial bid opening.

16.3.10 After opening the "Financial Bid" the bidder's name, bid withdrawals and such other details as the Department, at its discretion, may consider appropriate; will be announced at the opening.

16.3.1 1 In case there is discrepancy in figures and words in the quote, the same shall be announced in the bid opening but the quote in words shall prevail.

17. CLARIFICATION OF BIDS BY THE DEPARTMENT:

To assist in examination, evaluation and comparison of bids, the Department may, at its discretion ask the bidder for clarification of its bid. The request for its clarification and its response shall be in writing. However, no post bid clarification at the initiative of the bidder shall be entertained.

18. PRELIMINARY EVALUATION:

18.1 Department shall evaluate the bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed and whether the bids are generally in order.

18.2 If there is discrepancy between words and figures, the amount in words shall prevail. If the Contractor does not accept the correction of the errors, his bid shall be rejected.

18.3 Prior to the detailed evaluation, pursuant to clause 21, the Department will determine the substantial responsiveness of each bid to the bid document. For purpose of these clauses a substantially responsive bid is

one which conforms to all the terms and conditions of the bid documents without deviations. The Department's determination of bid's responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.

18.4 A bid, determined as substantially non responsive will be rejected by the Department and shall not subsequent to the bid opening be made responsive by the bidder by correction of the nonconformity.

18.5 The department may waive any minor infirmity or non-conformity or irregularity in a bid which does not constitute a material deviation, provided such waiver does not prejudice or effect the relative ranking of the bidder.

19. **EVALUATION AND COMPARISON OF SUBSTANTIALLY RESPONSIVE BIDS**

19.1 The department shall evaluate in detail and compare the bids previously determined to be substantially responsive pursuant to clause 18.

19.2 The evaluation and comparison of responsive bids shall be on the percentage deviation (**above/below/at par**) offered and indicated in schedule of rates of the bid documents.

20. **CONTACTING THE DEPARTMENT:**

20.1 Subject to clause 17 no bidder shall try to influence the department on any matter relating to its bid, from the time of bid opening till the time the contract is awarded.

20.2 Any effort by the bidder to modify his bid or influence the department in the department's bid evaluation, bid comparison or the contract award decisions shall result in the rejection of the bid.

21. **AWARD OF CONTRACT:**

21.1 The department shall consider award of contract only to those eligible bidders whose offers have been found technically, commercially and financially acceptable.

22. **DEPARTMENT'S RIGHT TO VARY QUANTUM OF WORK:**

The Department, at the time of award of work under the contract, reserves the right to decrease or increase the work by up to 50% of the total quantum of work specified in the schedule of requirements without any change in the rates or other terms and conditions with extension of six month period and further extension of six months can be given on mutual agreement

23. **DEPARTMENT'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS:**

The department reserves the right to accept or reject any bid and to annul the bidding process and reject all bids, at any time to award of contract without assessing any reason what so ever and without thereby incurring any liability to the affected bidder or bidders on the grounds for the department's action.

24. **ISSUE OF LETTER OF INTENT:**

24.1 The issue of letter of intent shall constitute the intention of the department to enter in to the contract with the bidder. Letter of intent will be the issued as offer to the successful bidder.

24.2 The bidder shall within 21 days of issue of intent, give his acceptance along with material security in conformity provided with the bid documents.

25. **SIGNING OF AGREEMENT**

25.1 The signing of agreement shall constitute the award of contract on the bidder. The agreement with the successful bidder shall be signed by the department with in a week of submission of material security as per clause 24.2 above.

25.2 As soon as the tender is approved by the competent authority, the Bid Security deposited by the successful bidder shall be compulsorily converted in to the Performance security deposit, which will be held by the department till the completion of warranty period.

26. **ANNULMENT OF AWARD:**

Failure of the successful bidder to comply with the requirement of clause 28 shall constitute sufficient ground for the annulment of the award and forfeiture of the bid security, in which event, the department may make the award to any other bidder at the discretion of the department or call for new bids.

27. General policy of distribution

| (a) Number of bidders | L1 | L2 | L3 |
|-----------------------|------|-----|-----|
| To be approved | | | |
| 1(bidder) | 100% | NIL | NIL |
| 2(bidder) | 60% | 40% | NIL |
| 3(bidder) | 50% | 30% | 20% |

Work allotted to L2 will be carried out at L1 rate.

(b) Distribution of work in exact terms of percentage may vary and the decision of GMTD Sambalpur shall be final and binding up on bidders. Maximum two bidders will be selected for each zone.

SECTION V
GENERAL (COMMERCIAL) CONDITIONS OF THE CONTRACT

1. APPLICATION:

The General conditions shall apply in contracts made by the department for the execution of OF cable construction works.

2. STANDARDS

The works to be executed under the contract shall conform to the standards prescribed in the OF Cable construction practices.

3. PRICES:

3.1 Prices charged by the Contractor for the works performed under the Contract shall not be higher from the prices quoted by the Contractor in his Bid.

3.2 Price once fixed will remain valid for the period of contract. Increase and decrease of taxes/duties will not affect the price during this period.

4. SUB-CONTRACTS :

The contractor shall not assign, sub contract or subject the whole or any part of the works covered by the contract, under any circumstance.

5. SECURITY

i. Material Security:

a. Material Security: i) The successful tenderer will have to deposit material security subject to a minimum of 5% of the estimated cost zone wise only in the form of bank guarantee valid for 18 months i.e. up-to and including six months after the period of contract from a Scheduled Bank and in the material security bond form provided in the bid document at Section-IX.

Material Security can also be submitted in the form of Crossed Demand Draft drawn in favour of AO(Cash) BSNL,O/o GMTD Sambalpur issued by a schedule bank and payable at Sambalpur. The material Security will be a non interest bearing deposit, for any period what so ever.

- b. The contractor at any point of time will not be issued stores costing more than material security. If due to any reason more store has to be issued to the contractor, then the material security will be suitably enhanced. In this regard the decision of the GMTD Sambalpur shall be final and binding.
- c. Proceeds of the material security shall be payable to the department as a compensation for any loss resulting from the contractor's failure to handle properly the material issued to him under the contract.
- d. The material security shall be released / refunded within a fortnight from the date of the payment of the last final bill of the work under the contract or final settlement of material account whichever is later on production of "no dues certificate" from "Engineer-in- charge".

Performance Security:

- a. An amount of 10% of each running bill/final bill (for New works)of the contractor will be deducted from the billed amount as performance security deposit (SD) in addition to the sum already deposited as material security deposit. The proceeds of the performance security shall be payable to BSNL as compensation for any loss resulting from the contractors failure to complete its obligation under the contract.
- b. The proceeds of the performance security shall be payable to the department as compensation for any loss resulting from the contractor's failure to complete its obligation under the contract.
- c. The performance security deposit shall be refunded after expiry of warranty period of last work executed provided there are no recoveries to be made arising out of poor quality of work, incomplete work and/or violation of any terms and conditions of the contract as stipulated in the bid documents.
- d. No interest will be paid to the contractor on the security deposit.

6. ISSUE OF WORK ORDERS AND TIME LIMIT :

6.1 The work order shall be issued so as to include all items of works for the **SECTION** allotted to the contractor as put in the NIT.

6.2 The work orders shall be issued by the Divisional Engineer Planning centrally on written request from SDO/AGM concerned after examining the technical and planning details of the works to be executed.

6.3 If due to any reason partial work order is to be issued then the same shall be issued with the approval of an officer not below the rank of DE.

- 6.4 The Divisional Engineer shall mention the time limit to execute the work order after seeing the quantum of work and store availability position.
- 6.5 The department reserves the right to cancel or modify the scope of work stipulated to be carried out against the work order in the event of change of plan necessitated on account of technical reasons or in the opinion of work order issuing authority or the head of Sambalpur SSA, the contractor is not executing the work at the required place.

7. EXTENSION OF THE TIME LIMIT:

7.1 General

7.1.1 In each work order, the work order issuing authority shall specify the time allowed for completion of work consistent with the magnitude and urgency of work. The time allowed for carrying out the work is to be strictly observed by the contractor and shall be reckoned from seventh day from the date of issue of work order.

7.1.2 In as much as "the time being deemed to be the essence of contract", throughout the stipulated period of contract, the work is to be proceeded with all due diligence on the part of the contractor.

7.2 Application for Extension of the Time and Sanction of Extension of Time (EOT) :

7.2.1 There may be some hindrances, other than covered under force major, while execution of work and in such cases the contractor shall apply in writing in the prescribed Form (Part-A) to the engineer in-charge for extension of time (EOT), on account of which he desires such extension within three days of occurrence of hindrance. The Engineer-in-charge shall forward the request to the competent authority (an officer of the rank of JAG level in-charge of OF cable construction work) with his detailed report and photocopy of the hindrance register, in the prescribed Form (Part -B) within three days of receipt of

request from the contractor. The competent authority is empowered to grant extension of time for completion of work on certain conditions. He shall exercise such powers, if the following conditions are satisfied.

7.2.1.1 The application contains the ground(s), which hindered the contractor in execution of work.

7.2.1.2 The Engineer-in-charge is of the opinion that the grounds shown for extension of time are reasonable.

7.2.2 The competent authority shall consider the request keeping all the facts and circumstances in view and shall grant extension of time, if in his opinion, there are reasonable and sufficient grounds for granting such extension and the reasons for delay are not ascribable to the contractor.

7.2.3 The competent authority may also grant extension of time for completion of work in cases where reasons for delay are ascribable to the contractor, but such extension of time shall be with LD charges as per clause dealing with penalty for delays in execution of works. The extension of time with LD charges shall be issued under the signature of JAG level Telecom. Officer competent to grant the extension of time.

7.2.4 The competent authority shall grant EOT with time period for completion of work expressly mentioned. The sanction of the competent Authority of EOT shall be issued under the signature of the Engineer in-charge .

7.2.5 If the competent authority is of the opinion that the grounds shown by the contractors are not reasonable and sufficient and declines to grant the extension of time, the contractor cannot challenge the soundness of the opinion by reference to arbitration. The decision of the competent authority on period of extension of time or refusal for extension of time shall be final and binding on the contractor.

7.3 Grant of Extension of Time without Applications:

7.3.1 There are, at times, practical difficulties like non-availability of materials, delay in providing permissions/right of way etc. reasons of which are ascribable to the department. In such cases, the

Engineer-in -charge with the approval of competent authority to sanction EOT, may issue extension of time so motto without waiting for contractor to make an application for EOT. Entry of hindrances shall be made in the Hindrance Register. The Government will, however, not be liable to the contractor for any losses or damages, costs, charges or expenses that the contractor may in any way sustain/suffer due to delay in making the above available.

8. MEASUREMENT, INSPECTION, TESTING AND ACCEPTANCE TESTING

8.1 Measurement:

8.1.1 The measurement books are to be maintained by the officer in-charge of the work or his immediate engineering subordinate not below the rank of Junior Telecom Officer. The entry shall be made in ink. No entry shall be erased. If a mistake is made, it should be corrected by crossing out the incorrect words or figures and inserting the corrections, the corrections thus made shall be initialled & dated by the officer concerned.

8.1.2 **Responsibility of taking and recording measurements:** The measurement of various items of work shall be taken and recorded in the measurement book issued with each work order. The measurement shall be taken and

recorded by an officer not below the rank of Junior Telecom Officer, supervising the work. The Junior Telecom Officer/Sub Divisional Engineer, directly responsible for supervision of work, shall be responsible for accuracy of 100% of measurements. The Sub Divisional Engineer where Junior Telecom Officer is supervising officer shall be responsible for conducting test check of 50% of measurements. The Divisional Engineer shall be responsible for conducting test check of 10% of measurements.

8.1.3 **Method of recording of nomenclature of items** : Complete nomenclature of items, as given in the agreement need not be reproduced in the measurement book for recording the measurements but corresponding Item Code as provided, shall be used.

8.1.4 Method of measurements: The measurements of the work shall be done for activity wise as and when the item of work is ready for measurement. The methods of measurement of various items are enumerated as under:

Measurement of depth of trenches

The cable routes of one work order shall be divided into a number of segments each of maximum 200 meters length bounded by identifiable landmarks at both the ends of the segments. If landmarks are not available, length of segment may be maintained at 200 meters. The measurement of depth shall be recorded at each point of measurement (POM) in the measurement book in meters in the multiples of 5cms. For example 97 cms will recorded as 95 cms and 103 cms as 105 cms. The points of measurements shall be at a distance of 10 meters starting from 0 (Zero) Meter. For example, if the length of segment is 75 meters, the POMs shall be at 0 M, 10M, 20M, 30M, 40M, 50M, 60M, 70M. The last POM shall be at 75 M to be recorded against Residual POM. The efforts required to excavate trenches is not proportionate especially with reference to depth. Therefore, normally the workers tend to dig shallow trenches. As standard depth of the trench is important for future life and protection of cables, this tendency has to be discouraged. In order to encourage the contractor to achieve best possible depth in the face of site constraints, the following scale of payment shall be applied for digging trenches of lesser depths, subject to condition that relaxation has been granted by the competent authority for lesser depths.

| Depth between | Reduction in rate |
|-------------------------|-------------------------|
| <165 Cms. to > 150 Cms. | 5% |
| <150cms to > 130 cm | 12.5% of approved rates |
| <130 cms.to> 100 cms. | 25% of approved rates |
| Below 100 cms. | 40% of approved rates. |

Measurement of lengths and profiles of strata and protection.

The measurements of length of trenches are on running meter basis, irrespective of type of soil encountered while digging.

The type of protection provided (item code-wise) in a segment shall be recorded in the measurement book in the sheet provided for this purpose.

Measurement of length of cable: The length of cables laid in trenches, through pipes and through ducts shall be measured by use of RODO Meter/Measuring Tape. The length should be cross verified with the marking of lengths on the cable. The lengths shall be recorded in sheet provided in the measurement book.

Measurement of other items. The measurement/numerical details of other items shall be recorded in the sheets provided for respective items viz.

Digging of joint pit and preparation of joint chamber along with its type i.e. Brick chamber or Pre Cast RCC type.

Fixing, Painting and sign writing of route/joint indicators

Termination of Cable in equipment room and no. of joints.

8.1.5 The contractor shall sign all the measurement recorded in the measurement book. This will be considered as an acceptance by the contractor, of measurements recorded in the MB. In case contractor fails to attend at the measurements or fails to countersign or to record the difference within a week, than in any such events the measurements taken by Engineer-in-charge or by the subordinate as the case may be shall be final and binding on the contractor and the contractor shall have no right to dispute the same.

8.1.6 The Divisional Engineer before passing the bill for **SECTIONS** covered by each set of measurement may carry out test check by re-opening trench at as many locations as necessary as specified in document 'procedures for underground cable construction' and bills be passed only when he is personally satisfied of the correctness of entries in the "measurement Book" and also when he is satisfied of other aspects of the work as per the terms of the contract. The contractor shall provide the necessary assistance of labour for re-opening of trench for test check by

- the Divisional Engineer; Separate payment shall not be made to the contractor for excavation of such test checks; however such test pits shall not be more than 10% of the cable laying work.
- 8.1.7 Measurement of the work of cable pulling through pipe/duct will be taken equal to the length of the pipe/duct through which the cable has been pulled and not the total length of the cable pulled through pipe/duct.
- 8.2 **Inspection, and Quality Control:**
- 8.2.1 **The Quality of Works:** The importance of quality of Optical Fiber Cable Construction works cannot be over-emphasized. The quality and availability of long distance media and efficiency of the reliable media connectivity to exchanges depends up on quality of laying of Optical Fiber Cable.
Further, the OF cables are vulnerable to damages due to work of other agencies.
- 8.2.2 The quality of O.F. cable Plant depends upon the quality of individual items of work involved viz Depth of Cables laid, care while paying & laying, Protection, Jointing of Cables and Terminations in equipment room and at last but not the least on documentation of cable network. In order to ensure quality in Cable Construction Work, each component of work needs attention. The works shall be carried out strictly in accordance with specifications laid down to achieve the requisite quality aim.
- 8.2.3 It is imperative that the contractor(s) is/are fully conversant with the construction practices and shall be fully equipped to carry out the work in accordance with the specifications. The contractors are expected and bound to ensure quality in construction works in accordance with specifications laid down. The contractor shall engage adequate and experienced supervisors to ensure that work are carried out as per specifications and with due diligence and in a professional manner. The contractors shall satisfy himself/themselves that the work conforms to the quality specifications before offering the same to A.T. Wing for Acceptance and Testing.
- 8.2.4 An assessment of extent of interest shown by the contractors in executing the works with requisite quality shall be recorded and used in evaluating the contractors' Performance Rating (CPR).
- 8.2.5 In addition to Acceptance Testing being carried out by A.T. Wing and supervision by Construction Officers, all works at all times shall be open to inspection of the department. The contractors shall be bound, If called upon to do so, to offer the works for inspection without any extra payment.
- 8.2.6 Site Order Book : The site order book is one of the primary records to be maintained by the JTO supervising the work during the course of execution of works. The noting made by officers as well as contractors, will form as basis for operation of many contractual clauses. The contractor shall remove all the defects pointed out by the department in the. Site order book. The site order book is
to be maintained in the prescribed format. The contractor or their authorized representatives shall also be at liberty to note their difficulties etc. in these books. The site order books shall invariably be consulted at the time of making final payments to the contractor.
- 8.3 Testing and Acceptance Testing:
- 8.3.1 The work shall be deemed to have been completed only after the same has been accepted by the A.T. Officer. The contractor shall make test pits at the locations desired by A.T. Officer for conducting test checks without any extra payment. The contractor shall restore the pits after test measurements to its original shape. The contractor shall be responsible to provide test/measurement tools and testers for conducting various tests.
- 8.3.2 **Scope of Acceptance and Testing:** The purpose of acceptance and testing is to verify integrity of measurement and quality of work done. The A.T. Officer shall not be responsible for recording of measurements for the purpose of billing and contractual obligations. However if the measurements taking by A.T. Officer are found to be lesser than the measurement recorded by the officer responsible for recording the measurements. The measurement taken by A.T officer shall prevail without prejudice to any punitive action against the contractor as per provisions of the contract and the officer recording the measurements. The contractor shall be obligated to remove defects/deficiencies pointed out by the A.T. Officer without any additional cost to the department.
- 8.3.3 **Offering the work for acceptance and testing:** The Sub Divisional Engineer responsible for construction, after having satisfied himself of completion of work ready for A.T., shall offer the work to A.T. Officer for conducting Acceptance and Testing. The work shall be offered for A.T. as soon as part of work is complete in all respects. The work against any
work order can be offered for A.T. in a number of stages.
- 8.3.4 The contractor shall provide labour, if demanded by the A/T officer for digging of test pits and other necessary infrastructure for carrying out the A/T work. No extra payment will be made for the digging of test pit.
9. **WARRANTY**
- 9.1 The contractor shall warrant that the material supplied for the work shall be new and free from all defects and faults in material, workmanship and manufacture and shall be of the highest grade and consistent with the established and generally accepted standards for materials of the type ordered and shall perform in full conformity with the

specifications and drawings. The contractor shall be responsible for any defects that may develop under the conditions provided by the contract and under proper use, arising from faulty materials, design or workmanship such as corrosion of the equipment, inadequate quantity of materials etc. and shall remedy such defects at his own cost when called upon to do so by the Department who shall state in writing in what respect the stores are faulty. This warranty shall survive inspection or payment for and acceptance of goods, but shall expire except in respect of complaints notified prior to such date, twelve months after the acceptance testing.

9.2 If it becomes necessary for the contractor to replace or renew any defective portion/portions of the material under this clause, the provisions of the clause shall apply to the portion/portions material so replaced or renewed or until and end of the above mentioned period of twelve months, whichever may be later. If any defect is not remedied within a reasonable time, as prescribed by the department, the Department may proceed to do the work at the contractor's risk and costs, but without prejudice to any other rights which the department may have against the contractor in respect of such defects.

9.3 Deleted

9.4 Replacement under warranty clause shall be made by the contractor free of all charges at site including freight, insurance, cost of works and other incidental charges.

10. AUDIT AND TECHNICAL EXAMINATION :

10.1 Government shall have the right to cause an audit and technical examination of the work and the final bills of the contractor including all supporting vouchers, abstract etc. to be made after payment of the final bill and if as a result of such audit and technical examination any sum is found to have been overpaid in respect of any work done by the contractor under the contract or any work claimed by him to have been done by him under the contract and found not to have been executed, the contractor shall be liable the refund the amount of over payment and it shall be lawful for Government to recover the same from him in the manner prescribed in clause with the heading payment of bills (same chapter), or in any other manner legally permissible and if it is found that the contractor was paid less than what was due to him under it, the amount of such under payment shall be duly paid by Government to the contractor.

10.2 Provided that Government shall be entitled to recover any sum overpaid, not the contractor shall be entitled to payment of any sum paid short where such payment have been agreed upon between the Divisional Engineer or his subordinate officer on one hand and the contractor on the other under any term of the contract permitting payment for work after assessment by the (the SSA Head) or his subordinate officer.

10.3 Any sum of money due and payable to the contractor (including security deposit returnable to him) under this contract may be appropriate by the Government for the payment of a sum of money arising or under any other contract made by the contractor with the Government.

PAYMENT TERMS :

11.1 Procedure for Preparation and settlement of bills:

11.1.1 All items of work involved in this unit of work shall be completed in all respects before preferring the bills for the work. The provisions of running bill have been made to make it easy for the contractor to manage his cash flow and to complete the work systematically and meaningfully in a shortest possible time. The procedure for preparation of running and final bills is enumerated as under .

11.1.1.1 Procedure for preparation, processing and payment of running bills: The contractor shall prepare the running bills in triplicate ensuring execution of part work in its completeness as envisaged above correctness of rates and quantum of work and submit the bills to S.D.E. in-charge of work. The bills shall be prepared accurately and as per measurements recorded in the measurement book and after acceptance and testing of all the items involved in the work. The contractor should submit the running bill within 10 days of acceptance and testing. The SD.E. In-charge shall record the certificate on the running bill that the site order books have been consulted before signing the running bills. This would enable the S.D.E. to ensure whether the defects pointed during execution have been rectified or not. The SDE in-charge of the work shall scrutinize bills and accord necessary certificates and submit the running bills with the documents as mentioned below to the Divisional Engineer, in-charge of work.

First copy of bill with first copies of measurement sheets of measurement book and A/T reports. (PAYABLE copy)
Second copy of bill with second copies of measurement sheets of measurement book and A/T reports. (Not for Payment).

Third copy of the bill with photocopies of measurement sheets and A/T reports. (Not for Payment) List showing the details of labours / employees engaged and duration of their engagement.

The amount of wages paid to such labours / Employees for the duration in question.

Amount of EPF contributions (both employer's and employee's contribution) for the duration of engagement in question paid to the EPF authorities.

Copies of authenticated documents of payment of such contribution to EPF authorities. Declaration regarding compliance of the EPF Act, 1952, and other labour laws applicable from time to time.

11.1.1.2 The divisional Engineer shall exercise the prescribed checks on the bills and accord necessary Certificates on the bills. The Divisional Engineer shall retain the third copy in record and record it in the estimate file maintained in his office and send first and second copies with all documents to relevant higher office for processing of bills and release of payment.

11.1.1.3 The office cell dealing with OFC bills shall process the bills in the estimate file of the concerned work and scrutinize the bills vis-a-vis work order issued, sanctioned provisions in the estimate etc. The bill shall be passed after necessary scrutiny by Works **SECTION**, by the officer competent to pass the bill. Against any running bill, payment to the extent of only 90% shall be made which shall be treated as an advance to the contractor. 8% of the bill amount towards Performance Security Deposit and Statutory taxes (Income Tax etc.) applicable to contract shall be deducted at the time of payment from each running bill.

Account payee cheque for the amount passed in the bill will be issued only after the contractor gives a stamped receipt for the amount, if the bills are not pre-receipted

Details of payment of all the bills shall be entered into contract's ledger by Work **SECTION** of the Planning Cell.

11.1.1.4 In exceptional cases where work required for preferring a Running Bill cannot be completed within reasonable time due to non-availability of stores or any other reason and where the department is responsible for delay, the concerned D.G.M. permit payment of running bill (prepared without completing the work end-to-end for that unit of work) to the extent of 70% so that the contractor does not face resource crunch. Such payment shall be treated as an advance payment to the contractor like any other Running Bills.

11.1.2 Procedure for preparation, processing and payment of final bill: The contractor shall prepare the final bill in triplicate & acceptance and testing of all the works and submit the same to S.D.E. in-charge of work within 30 days of acceptance and testing and payment shall be made within three months if the amount of the contract is up to Rs. two lac and in six months if the same exceed Rs. two lacs, of the submission of such bill. The final bill shall be prepared for all the measurements of all items involved in execution of complete work order. The contractor shall prepare the final bill containing the following details.

The bill for all the quantities as per Measurements at the approved

rates adjustment of amount received against running bills

Adjustment of performance security deposit and statutory taxes already recovered .

Store reconciliation statement furnishing account of stores received against the work order and returned to the designated Store go down as surplus with requisite verifications from store in-charge/ S.D.E. in-charge of work.

Letters of grant of E.O.T(s) if work could not be completed within stipulated time. Six sets of bound documentation.

11.2.1 The S.D.E. in-charge of work shall scrutinize the final bill against the works entrusted and accord necessary certificates stating that the work has been executed satisfactorily in accordance with specifications and terms and conditions of the contract. The S.D.E. shall verify the quantities of items of work with reference to measurements recorded in the measurement book (and also A/T reports in case of any deviations noted by A/T officer). The S.D.E. in-charge of work shall submit the final bills, along with other documents mentioned above, with the documents as mentioned hereunder to the Divisional Engineer, in-charge of work.

Bill prepared by the contractor Material reconciliation statement Measurement Book. A/T Certificates

The site order Book. The hindrance register.

Details of recoveries/penalties for delays, damages to Departmental/Third party properties as per provisions of the contract.
In case no recovery is to be made, NIL report needs to be submitted.

Details of empty cable drums cost which needs to be recovered from the bill

11.1.2.2 The divisional Engineer shall exercise the prescribed checks on the bills and accord necessary certificates on the bills. The Divisional Engineer shall retain the third copy of the bill along with photocopies of other documents not available in his estimate file and send first and second copies of the bill measurement book and other documents submitted by S.D.E. along with the bills as above to the higher office for processing and final payment

11.2 Procedure for Payment for sub standard works :

11.2.1 The contractors are required to execute all works satisfactorily and in accordance with the specifications. If certain items of work are executed with unsound, imperfect or unskilled workmanship or with materials of any inferior description or that any materials or articles provided by him for execution of work are unsound or for a quality inferior to that contracted for or otherwise not in accordance with the contract (referred to as substandard work hereinafter), the Divisional Engineer in-charge shall make a demand in writing specifying the work, materials or articles about which there is a complaint .

11.2.2 **Timely action by construction Officers:** Timely reporting and action, to a great extent can prevent occurrence of sub standard work, which will be difficult or impossible to rectify latter on. It is incumbent on the part of Construction Officers to point out the defects in work in time during progress of the work. The Junior Telecom Officer/sub Divisional Engineer responsible for execution and super vision of work shall without any loss of time submit a report of occurrence of any sub standard work to the Divisional Engineer in-charge besides making entry in the site order book. A notice in respect of defective work shall be given to the contractor by Divisional Engineer in-charge in writing during the progress of work asking the contractor to rectify/replace/remove the sub standard item of work and also definite time period within which such rectification/removal/replacement has to be done. After expiry of the notice period, if the contractor fails to rectify/replace/remove the sub standard items, the defects shall be got rectified/replaced / removed departmentally or through some other agency at the risk and cost of the contractor.

11.2.3 Non-reporting of the sub standard work in time on the part of Construction Officer (s) shall not in any way entitle the contractor to claim that the defects were not pointed out during execution and as such the contractor cannot be absolved of the responsibility for sub standard work and associated liabilities.

11.2.4 **Authority and Procedure to accept sub standard work and payment thereof :** There may be certain items of work pointed out as sub standard which may be difficult to rectify and in the opinion of **the GMTD SAMBALPUR** the items in question will not materially deteriorate the quality of service provided by the construction, the head of **the GMTD Sambalpur** shall appoint committee to work out the reduced rates payable to the contractor for such sub standard work. The committee shall constitute one Divisional Engineer other than the one who is directly in-charge of cable Construction involving sub standard items of work, as Chairman and one S.D.E. and an Accounts Officer as members. The committee shall take into account the approximate cost of material / work pointed out sub standard and recommend the rates payable for sub standard work which shall not exceed 60% of the approved rates of the items in question.

11.2.5 **Record of sub standard work:** The items adjudged as sub standard shall be entered into the measurement book with red ink.

11. DISPOSAL OF EMPTY CABLE DRUMS:

11.1 The contractor shall be responsible to dispose off the empty cable drums after laying of the cable. The competent authority taking in to account the prevailing market rates has fixed the cost of Optical Fiber cable drums. The cost of empty cable drums shall be deducted from the bill for the work on which the cable along with the drum has been issued or any other amount due to the contractor or from security deposit.

11.2 Rates fixed for Optical Fiber cable drums are given in Tender Document (Qualifying Bid). The rates are fixed and there is no percentage above or below applicable on these rates.

11.3 The contractor shall be responsible for the accounting of the cable drums issued and shall mention the number cable drums in the bill so that the amount is deducted from the bills due.

11.4 The contractor shall not be allowed to dump the empty cable drums in Govt./public place, which may cause inconvenience to Govt./Public. If the contractor does not dispose off the empty cable drums within 3 days of becoming empty, the department is at liberty to dispose off the drum in any manner deemed fit and also recover the amount fixed in this contract for empty cable drums along with the transportation charges (to be decided by **GMTD Sambalpur** from the bill/security deposit/any other amount due to the contractor.

12. **PENALTY CLAUSE:**

13.1.1 **Delay in the contractor's performance**

13.1.1 The time allowed for completion of the work as entered in the tender shall be strictly adhered by the contractor and shall be deemed to be the most important aspect of the contract on the part of the contractor and shall be reckoned from Seventh day from issue of work order by the Department. The work shall throughout the stipulated period of contract, be proceeded with all due diligence to achieve the desired progress uniformly, and the contractor shall pay as penalty an amount equal to 0.25 percent of the estimated amount per day of delay in completion of work, subject to a maximum of 10 (10) percent of the cost of the work awarded.

13.1.2 On any date the penalty payable as above, reaches 10 (ten) percent of the estimated cost of the work, the contractor should proceed with the work further only on getting a written instructions from the Divisional Engineer that, he is allowed to proceed further with the work. It will be in the discretion of the Divisional Engineer to allow the contractor to continue with the work on the basis of any written agreement reached between the contractor and the Divisional Engineer on one of the conditions of such agreement may be a stipulation for the contractor to agree for realization of penalty for delay at a higher rate as may be agreed between the Divisional Engineer and contractor.

13.1.3 Penalty for delay in completion of the work shall be recoverable from the bills of the contractor and/or by adjustment from the security deposit or from the bills of any other contract. However, adjustment from security deposit will be made only when the contract has been terminated or at the time of final settlement of bills on completion of work.

13.1.4 In case of slow progress of the work in a **SECTION** which have been awarded to a particular contractor, and the public interest does not permit extension of time limit for completion of the work, the **GMTD Sambalpur** will have the full right to order that the scope of the contractor may be restricted to such fraction of the whole of the work and get the balance executed at the risk and cost of the contractor. The details are given in Rescission of the contract clause of the bid document. All such payments shall be recovered from the contractor's pending bills or security deposit.

13.1.5 The SSA Head reserves the right of cancel the contract and forfeits the security deposit if the contractor fails to commence the work within 7 days after issue of the work order.

13.2 **Penalty for causing inconvenience to the Public:**

13.2.1 To ensure progress during the execution of work and to cause minimum inconvenience to the public, the contract shall not dig a trench of more than 200 meters at a stretch in a route at a time. He shall cause to lay cable and close such trenches expeditiously. Under any circumstances a stretch of trench of maximum 200 meters shall not be kept open for more than 4 days in case of cable laying by digging paved surfaces. In the event of contract falling to comply with, these conditions a penalty of recovery up to Rs. 500/- per day the trench is kept open beyond the item limit allowed may be imposed by the department. This penalty will be in addition to that payable for delay or slow work.

13.2.2 The contractor shall not be allowed to dump the empty cable drums/waste materials in Govt./Public place, which may cause inconvenience to Govt./Public. If the contractor does not dispose off the empty cable drums/waste materials within 3 days of becoming empty, the department is at liberty to dispose off the drum in any manner deemed fit and also recover the amount fixed in this contract for empty cable drums/waste materials from the bill/security deposit/along with the costs incurred by the department in disposing off such materials. The Department may also levy a penalty up to Rs one thousand for each such default.

13.2.3 If any such penalty is levied on a contractor for more than 2 occasions, then his/her contract could be terminated. In this regard the decision of SSA Head shall be final and binding.

13.3 **Penalty for cutting /damaging the old cable:**

- 13.3.1 During excavation of trench utmost care is to be taken by the contractor so that the existing underground cables are not damaged or cut. In case any damage/cut is done to the existing cables, a penalty as per the schedules given below will be charged from the contractor or the amount will be deducted from his running bills;

| Size of existing UG/OF cables cut/damaged | Amount of penalty per cut/damage |
|---|---|
| Up to 100 pairs cable | Rs. 1000.00 (One Thousand) |
| Above 100 pairs & up to 400 pairs | Rs. 1500.00 (One Thousand five hundred) |
| Above 400 pairs | Rs. 2000.00 (Two thousand) |
| Of Cable of any size | Rs. 5000.00 (Five Thousand) |

Besides the above penalty, the contractor shall carry out such repairs for restoration of the damaged cable free of charge. The cost of jointing kit shall also be borne by the contractor. If contractor fails to repair the damage, the cost of repair (including cost of labour + jointing kit) shall be recovered from the contractor.

13.4 **Penalty to damage stores/materials supplied by the department while laying**

- 13.4.1 The contractor while taking delivery of materials supplied by the department at the designated place shall thoroughly inspect all items before taking them over. In case of execution of the work, if any material is found damaged / working unsatisfactorily, then a penalty equivalent to the cost of material + 10% as penalty shall be recovered from the contractor's payments securities.
- 13.4.2 However, contractor will not be penalized for any defect in workmanship of the materials, which shall be taken up separately with the supplier of the stores.

14. **Rescission/Termination of contract**

14.1 **Circumstances for rescission of contract:** Under the following conditions of the contract:

- If the contractor commits breach of any item of terms and conditions of the contract.
- If the contractor suspends or abandons the execution of work and the engineer in-charge of the work comes to conclusion that work could not be completed by due date for completion or the contractor had already failed to complete the work by that date.
- If the contractor had been given by the officer-in-charge of work a notice in writing to rectify/replace any defective work and he/she fails to comply with the requirement within the specified period.

14.2 Upon recession of the contract, the security deposit of the contractor shall be liable to be forfeited and shall be absolutely at the disposal of the Government as under:

- 14.2.1 Measurement of works executed since the date of last measurement and up to the date of rescission of contract shall be taken in the presence of the contractor or his authorised representative who shall sign the same in the MB. If the contractor or his authorized representative do not turn up for joint measurement, the measurement shall be taken by the officer authorised for this purpose after expiry of due date given for joint measurement. The measurement taken by the officer so authorised shall be final and no further request for joint measurement shall be entertained.
- 14.2.2 The unused material (Supplied by the Department) available at site shall be transported back by the department to the Telecom Store at the risk and cost of the contractor. If any such material is found damaged/lost then the penalty shall also be recovered from the contractor as per conditions in tender documents, *ibid*.
- 14.2.3 The un-executed work shall be got executed through the qualified bidder from amongst the bidders, who participated in the bidding process, by giving them offers in their order of ranking (L2, L3---) at their quoted rates . If the work was awarded on single tender basis then the department shall get the unexecuted work completed through any other contractor approved in **the GMTD Sambalpur** at the approved rates of the contractor. In such an event to compensation shall be payable by the Government to the contractor towards any inconvenience/loss that he may be subjected to as a result.

or such an action by the Government. In this regard the decision of the SSA Head shall be final and binding. In all these cases, expenses which may be incurred in excess of the sum which would have been paid to the original contractor if the whole work had been executed by him shall be borne and paid by the original contractor and shall be deducted from any money due to him by the Government under the contract or any other account whatsoever anywhere in the department or from a security deposit.

14.2.4 The certificate of the Divisional Engineer in-charge of work as to the value of work done shall be final and conclusive against the contractor, provided always that action shall only be taken after giving notice in writing to the contractor.

14.3 **Termination for Insolvency:**

13.1.1 The Department may at any time terminate the contract by giving written notice to the Contractor, without compensation to contractor, if the Contractor becomes bankrupt or otherwise insolvent as declared by the competent court provided that such termination will not prejudice or affect any right or action or remedy which has accrued or will accrue thereafter to the Department.

14.4 **Optional Termination by Government (Other than due default of the contractor)**

14.4.1 The Government may, at any time, at its option cancel and terminate this contract by written notice to the contractor, in which event the contractor shall be entitled to payment for the work done up to the time of such cancellation and a reasonable compensation in accordance with the contract prices for any additional expenses already incurred for balance work exclusive of purchases and/or whole of material, machinery and other equipment for use in or in respect of the work.

14.4.2 In the event of the termination of the contract, the contractor shall forthwith clear the site of all the contractor's materials, Machinery and equipment's and hand over possession of the work/operation concerned to the Government or as the Government may direct.

14.4.3 The Government may, at its option, cancel or omit the execution of one or more items of work under this contract and may part of such items without any compensation whatsoever to the contractor.

14.5 **Issuance of Notice:**

14.5.1 The Divisional Engineer in-charge of work shall issue show cause notice giving details of lapses, violation of terms and conditions of the contract, wrongful details or suspension of work or slow progress to the contractor directing the contractor to take corrective action a definite time schedule for corrective action shall be mentioned in the show cause notice.

If the contractor fails to take corrective action within the stipulated time frame, the Divisional Engineer in-charge shall submit a draft of final notice along with a detailed report to the competent authority who had accepted the contract.

14.5.2 The final notice for rescission of contract to the contractor shall expressly state the precise date and time from which the rescission would become effective. The following safe guards shall be taken while issuing the final notice:

- a. During the period of service of notice and its effectiveness, the contractor should not be allowed to remove from the site any material/equipment belonging to the department.
- b. The contractor shall give in writing the tools and plants he would like to take away/remove from the site . Such of the materials as belong to him and which may not be required for future execution of balance work may be allowed by the Divisional Engineer in-charge of work to be removed with proper records
- c. No new construction beneficial to the contractor shall be allowed.
- d. Adequate departmental security arrangement in replacement of the contractor watch and ward shall be made forthwith. Expenses on this account are recoverable form the security deposit or any amount due to the contractor.

15. **INDEMNITIES:**

- 15.1 The contractor shall at all times hold the Government harmless and indemnify from against all action, suits, proceedings, works, cost damages, changes claims and demands of every nature and descriptions, brought or procured against the Government its officers and employees and forthwith upon demand and without protect or demur to pay to the Government any and all losses and damages and cost (inclusive between attorney and client) and all costs incurred in endorsing this or any other indemnity or security which the Government may now or at any time have relative to the work or the contractors obligation or in protecting or endorsing its right in any suit on other legal proceeding, charges and expense and liabilities resulting from or incidental or in connection with injury, damages of the contractor or damage to property resulting from or arising out of or in any way connected with or incidental to the operations caused by the contract documents . In addition the contractor shall reimburse the Government or pay to the Government forthwith on demand without protect or demur all cost, charges and expenses and losses and damages otherwise incurred by it in consequences of any claim, damages and actions which may be brought against the Government arising out of or incidental to or in connection with the operation covered by the contractor.
- 15.2 The contractor shall at his own cost at the Government's request defend any suit or other proceeding asserting a claim covered by this indemnity, but shall not settle, compound or compromise any suit or other finding without first consulting the Government.
16. **FORCE MAJEURE:-**
- 16.1 If any time, during the continuance of this contract, the performance in whole or in part by either party or any obligation under this contract shall be prevented or delayed be reason of any war, or hostility, acts of the public enemy, civil commotion sabotage, fires, floods explosions, epidemics, quarantine restrictions, strikes, lockouts or act of God (Herein after referred to as events) provided notice of happenings, of any such eventuality is given by either party to the other within 21 days from the date of occurrence thereof, neither party shall be reason of such event be entitled to terminate this contract nor shall either party have any such claim for damages against the other in respect of such non-performance and work under the contract shall be resumed as soon as practicable after such event may come to an end or cease to exist, and the decision of the Department as to whether the work have been so resumed or not shall be final and conclusive, provided further that if the performance in whole or part of any obligation under this contract is prevent or delayed by reason of any such event for a period exceeding 60 days either party may, at his obtain terminate the contract.
- 16.2 Provided also that if the contract is terminated under this clause, the Department shall be at liberty to take over from the contractor at a price to be fixed by the Department which shall be final, all unused, undamaged and acceptable materials, bought out components and stores in the course of execution of the contract, in possession of the contractor at the time of such termination of such portions thereof as the Department may deem fit excepting such materials bought out components and stores as the contracts may with the concurrence of the Department elect to retain.
17. **ARBITRATION:**
- 17.1 In the event of any question, dispute or difference arising under this agreement or in connection there with except as to matter the decision of which is specifically provided under this agreement, the same shall be referred to sole arbitration of the Chief General Manager, Odisha Circle or
in case his designation in changed or his office is abolished then in such case to the sole arbitration of the officer for the time being entrusted whether in addition to the functions of the Chief General Manager Odisha Circle or by whatever designation such officers may be called (hereinafter referred to as the said officer) and if the Chief General Manager, Odisha Circle or the said
officer is unable or unwilling to act as such to the sole arbitration or some other person appointed by the Chief General Manager, or the said officer. The agreement to appoint an arbitrator will be in accordance with the Arbitration and Conciliation Act, 1996. There will be no objection to any such appointment that the arbitrator is Government servant or that he has to deal with the matter to which the agreement relates or that in the course of his duties as Government Servant he has expressed views on all or any of the matter under dispute. The award of the arbitrator shall be final and binding on the parties. In the event of such arbitrator to whom the matter is originally referred, being transferred or vacating his office or being unable to act for any reasons whatsoever such Chief General Manager or the said officer shall appoint another person to act as arbitrator in accordance with terms of the agreement and the person so appointed shall be entitled to proceed from the stage at which it was left out by his predecessors.
- 17.2 The arbitrator may from time to time with the consent of parties enlarge the time for making and publishing the award, Subject to aforesaid Indian Arbitration and Condition Act. 1996 and the Rules made there under, any modification thereof for the time being in force shall be deemed to apply to the arbitration proceeding under this clause.

- 17.3 The venue of the arbitration proceeding shall be the Office of the Chief General Manager, Odisha Circle or such other Places as the arbitrator may decide. The Following procedure shall be followed :
- 17.3.1 In case parties are unable to reach a settlement by themselves, the dispute should be submitted or arbitration in accordance with contract agreement.
- 17.3.2 There should not be a joint submission with the contractor to the sole Arbitrator.
- 17.3.3 Each party should submit its own claim severally and may oppose the claim put forward by the other party.
- 17.3.4 The onus of establishing his claims will be left to the contractor.
- 17.3.5 Once a claim has been included in the submission by the contractor, a reiteration or modification thereof will be opposed.
- 17.3.6 The "points of defence" will be based on actual conditions of the contract.
- 17.3.7 Claims in the nature of ex-gratia payments shall not be entertained by the Arbitrator as these are not contractual.
- 17.3.8 The question whether these conditions are equitable shall not receive any consideration in the preparation of "points of defence"
- 17.3.9 If the contractor includes such claims in his submission, the fact that they are not contractual will be prominently placed before the Arbitrator.
- The award of the sole Arbitrator shall be final and binding on all the parties to the dispute.
- 18 **SET OFF:**
- 18.1 Any sum of money due and payable to the contractor (including security deposit refundable to him) under this contract may be appropriated by the Department or the Govt. or any other person or persons contracting through the Govt. of India and set off the same against any claim of the Department or Govt. or such other person or persons for payment of a sum of money arising out of this contract made by the contractor with department or Govt. or such other person or persons contracting through Govt. of India.
19. **PERIODICITY OF AGREEMENT**
- The agreement will be normally for One year and can be extended on discretion of the competent authority for six months and further extension of six months can be given on mutual agreement. The period of agreement can be less than six months also which may be further extended on satisfactory performance. Extension will always be given on same rates and same terms and condition & of the tender.

**SECTION VI
SPECIAL CONDITIONS OF CONTRACT**

1. GENERAL

- 1.1 The work shall be accepted only after Acceptance Testing carried out by DOT/DTS team, designated by the Department, as per prescribed schedule and work/material passing the test successfully.
- 1.2 The department reserves the right to disqualify such bidders who have a record of not meeting contractual obligations against earlier contracts entered into with the Department
- 1.3 The Department reserves the right to black list a bidder for a suitable period in case he fails to honour his bid without sufficient grounds.
- 1.4 The Department reserves the right to counter offer price(s) against price(s) quoted by any bidder.
- 1.5 Any classification issued by Department, in response to query raised by prospective bidders shall form an integral part of bid documents and it may amount to amendment of relevant clauses of the bid documents.
- 1.6 Tender will be evaluated as single package of all the items given in the price schedule.
- 1.7 All work to be executed under the contract shall be executed under the direction and subject to the approval in all respects of by the Divisional Engineer or Site Engineer in-charge of work site who shall be entitled to direct at what point or points and what manner they are to be commenced, and from the time to time carried on.
- 1.8 Work may be awarded to more than one qualified bidders (maximum two) on L-1 rates and the quantum of work would be divided among them as per prevailing guide lines. The decision of GMTD Sambalpur in this regard will be final. However, GMTD reserves the right to reject the tender without assigning any reason.

If the contractor shall desire an extension of time for completion of the work on the grounds of unavoidable hindrance in execution of work or on any other ground he shall apply in writing to the Divisional Engineer within 3 days of the date of hindrance on account of which he desires such extension as aforesaid. In this regard the decision of **the GMTD Sambalpur** shall be final.

- 1.9 If at any time after the commencement of the work, the Department may feel that execution of whole or part of work, as specified in the tender is not required to be carried out, then the Department shall give notice in writing of the fact to the contractor who shall have no claim to any payment of compensation whatsoever on account of any profit or advantage which he might have derived in consequence of the full amount of the work not having been carried out neither shall he have any claim for compensations by reason of any alterations having been made in the original specifications, drawings, design and instruction which shall involve any curtailment of the work as originally contemplated.
- 1.10 Whenever any claims against the contractor for the payment of a sum of money arises out of or under the contract, the Department shall be entitled to recover such sum by appropriating in part or whole the security deposit of the contractor, and to sell any Government promissory notes etc.
forming the whole or part of such security or running / Final bill pending against any contract with the department . In the event of the security being insufficient or if no security has been taken from the contractor, then the balance or the total sum recoverable as the case may be, shall be deducted from any sum then due or which at any time there after may become due to the contractor under this or any other contract with Government . Should this sum be not sufficient to cover the full amount recoverable the contract or shall pay to Department on demand the balance remaining due.
- 1.11 No official of Gazetted rank or other Gazetted officer employed in Engineering or administrative duties in an Engineering Department or any other Department of the Government of India is allowed to work as a contractor for a period of two years after his retirement from Government service without the previous permission of Government of India. This contract is liable to be cancelled if either the contract or any of his employees is found at any time to be such a person who hadn't obtained the permission of Government of India as aforesaid before submission of the engagement in the contractor's service as the case may be.
- 1.12 In the event of the contractor being, adjusted insolvent or going voluntarily into liquidation or having received order or other order under insolvency act made against him or in the case of company, of the passing of any

- resolution, or making of any order for winding up whether voluntarily or otherwise, or in the event of the contractor failing to comply with any of the condition herein specified, The SSA Head shall have the power to terminate the contract without any notice.
- 1.13 Without prejudice to any of the rights or remedies under this contract, if the contractor dies, **the GMTD Sambalpur** on behalf of the President can terminate the contract without compensation to the contractor. However **the GMTD SAMBALPUR**, at his discretion may permit contractor's heirs to perform the duties or engagements of the contractor under the contract, in case of his death. In this regard the decision of **the GMTD Sambalpur** shall be the final.
- 1.14 In the event of the contractor, winding up his company on account of transfer or merger of his company with any other, the contractor shall make it one of the terms and stipulations of the contract for the transfer of his properties and business, that such other person or company, shall continue to perform the duties or engagement of the contractor under this contract and be subject to his liabilities there under.
- 1.15 Interpretation of the contract document**
- 1.16.1 The representative of **the GMTD Sambalpur** and the contractor shall in so far as possible by mutual consultation, try to decide upon the meaning and intent of the contract document. In case of disagreement the matter shall be referred to SSA Head whose decision shall be final. Any change in the contract documents shall be set forth in writing by the representative of the parties hereto. It shall be the contractor's responsibility to thoroughly familiarise all of his supervisory personnel with the contents of all the contract documents.
- 1.2 Notification**
- 1.2.1 The contractor shall give in writing to the proper person or authority person or authority with a copy to the Divisional Engineer such notification as may be mandatory or necessary in connection with the commencement, suspension, resumption, performance and/or completion of the contracted work. All notice shall be given sufficiently in advance of the proposed operation to permit proper co-- relation of activities and the contractor shall keep all proper persons or authorities involved and advised of the progress of operations throughout the performance of the work and/or with such other information and/or supporting figure and data as may from time to time as directed or required.
- 1.3 Shut down on account of weather conditions:**
- 1.3.1 The contractor shall not be entitled to any compensation whatsoever by reason of suspension of the whole or any part of the work made necessary by the Government or deemed advisable on account of bad weather conditions or other Force majeure conditions.
- 2. STORES SUPPLIED BY THE DEPARTMENT :**
- 2.1 At no point of time the contractor shall be issued stores of value more than the contractor's material security as per clause number 5(i) of **SECTION V**. If at all the work requires more amount of materials to issued to the contractor will not have any objection to it.
- 2.2 The contractor shall transport (including loading and unloading) all stores issued to him from District Telecom Store, to the site of work at his own cost. The Department shall not pay any transportation charges to the contractor.
- 2.3 All materials supplied to the contractor by the Department shall remain the absolute property of Department and shall not be removed from site of the work except for use in the work and shall be at all times open to inspection by the Representative of **GMTD Sambalpur** In-case the materials like cable and accessories are taken delivery of by the contractor and stored at the site office/store will also be treated "as site" for this purpose. Any such materials remaining unused at the time of the abandonment, completion or determination of the contract shall be returned to the Department at a place informed to him by the Department, failing which the cost of the unused materials shall be deducted from the contractor's material security or any of his pending bills or from any other security.
- 2.4 The contractor shall be responsible for the transportation of store, storage and safe custody of all material supplied to him by the Department, which in the contractor's custody whether, or not installed in the work. The contractor

shall satisfy himself regularly the quantity and quality of the materials supplied to him and he will be responsible for any subsequent deterioration and discrepancy (inclusive of theft) in the quantity/quality of the materials.

- 2.5 The contractor shall submit a proper account every months of all the materials supplied to him by the Department and those consumed for items of work any discrepancy of difference between the materials issued to the contractor and those consumed in the work as per the "Department's calculation" (which shall be final) will be charged to the contractor or deducted from his bills at 1.5 times of prevailing standard price including freight, handling charges, storage, charges etc.
- 2.6 The contractor shall ensure that only the required materials are issued to him. Upon completion of work, the contractor shall return to the Govt. at the later designated store in good condition, free of charges, any unused materials that were supplied by the Department
3. **EASEMENTS, PERMITS, LICENCES AND OTHER FACILITIES:**
- 3.1 The contractor shall obtain/provide at his own cost all easements, permits and licence necessary to do its work except for the following which shall be provided by the Representative of the the SSA Head:
- A. "Right of User" easements and permits.
- B. Railway and Highway crossing permits including bridge.
- Canal/stream crossing permits.
- 3.2 The contractor shall be fully responsible for angling and obtaining all necessary easements, permits and licences, for moving all construction equipment, tools, supplied materials and men across Railways and Highway, across public or private road as well as premises of any public utility within the right of user and for bearing all costs that may be incurred in respect of the same.
- 3.3 The contractor is to confine his operation to the provided construction "Right of User" unless it has made other arrangement with the particular property owners and /or tenants such other arrangements shall be entirely at the responsibility of the contractor as to cost and arrangement as also breach and claim and shall be entitled with a copy to the Divisional Engineer.
- 3.4 The contractor will not be entitled to extra compensation for hardship and increase in cost by the cable trench being routed adjacent to or across other pipeline, Highways, Railways, telephones or pose poles and wires or guy wires, embankments, cliffs, streams or other obstacles which may physically or otherwise in any manner, restrict or limit the use of the construction "Right of User". Some construction and such contingency shall be deemed to have been providing for in the rates.
- 3.5 At location where the OF cable trench is routed across or along railways or roads the contractor shall without extra cost provide and maintain such detours and road controls as are required by the railways or government or local agencies having jurisdiction.
- 3.6 If the department is not able to provide above mentioned permits etc. in time then the extension of time limit shall be provided as per EOT clause given in tender document.
4. **QUALITY OF WORK:**
- 4.1 The Department shall be the final judge of the quality of the work and the satisfaction of the department in respect thereof set forth in the contract documents. Laxity or failure to enforce compliance with the contract documents by the Department and/or its representative shall not manifest a change or intent of waiver, the intention being that , notwithstanding the same, the contractor shall be and remain responsible for complete and proper compliance with the contract documents and the specification there in . The representative of **GMTD Sambalpur** has the right to prohibit the use of men and any tools, materials and equipment which in his opinion do not produce work or performance meet the requirement of the contract documents.
5. **TAXES AND DUTIES :**

5.1 Contractor shall pay all rates, levies, fees royalties, taxes and duties payable or arising from out of, by virtue of or in connection with and/or incidental to the contract or any of the obligations of the parties in terms of the contractor documents and/or in respect of the works or operations or any part thereof to be performed by the contractor and the contractor shall indemnify and keep indemnified the Department from and against the some or any default by the contractor in the payment thereof.

6. **PROTECTION OF LIFE AND PROPERTY AND EXISTING FACILITIES:**

6.1 The contractor is fully responsible for taking all possible safety precaution during preparation for and actual performance of the works and for keeping the construction site in a reasonable safe condition. The contractor shall protect all life and property from damage or losses resulting form his construction operations and shall minimize the disturbance and inconvenience to the public.

6.2 If the excavation of trench alters the contours of the ground road and highway crossing in such locations dangerous to traffic, the contractor shall at his own cost, take all necessary precautions to protect public and shall comply with all the Department regulations as to placing of warning boards (Minimum size 3'x2'), traffic signals barricades, flags etc., at such location. If the contractor does not put the warning signal as per above direction, then a penalty of Rs. 500/- per day shall be levied on the contractor, till the directions are complied by the contractor. The contractor shall take due precautions to avoid damages to other pipe lines, water mains, sewers, telephones, telegraphs and power conduits, laid wires poles and guy wires, railways, highways, bridges or other underground or above ground structure and/or property crossing or adjacent to the cable trench being excavated.

6.3 Attention of the contractor is drawn to the rules regarding laying of cables at road crossing, along Railways Bridges, Highways safety precautions while working in Public Street. The contractor in writing shall obtain the detailed engineering instructions from the Divisional Engineer of the area.

6.4 The contractor shall be solely responsible for location through approved non destructive means and ensuring the safety of all existing underground pipeline, electrical cables, and or other structures.

6.5 The contractor shall be solely liable for all expense for and in respect of repairs and / or damage occasioned by injury of or damage to such underground and above structures or other properties and under take to indemnify the Department from and against all actions, cause of actions, damages, claims and demands what so ever, either in law or in equity and all losses and damages and costs (inclusive between attorney and client) charges and expenses in connection therewith and/or incidental thereto. The contractor shall take all responsibilities and risk in crossing other pipelines and cables and shall be responsible for protecting all such existing pipelines, poles, electric lines, sewers cable or other facilities from damage by the contractor's operation in connection with the work . The contractor without cost of the Department shall promptly repair any damage incurred.

6.6 The current market value of any commodities lost as a result of any damage to the aforesaid existing facilities shall be paid by the contractor together with such additional sums necessary to liquidate the personal of property damages, resulting there form.

7. **LABOUR WELFARE MEASURES AND WORKMAN COMPENSATION:**

7.1 **Obtaining Licence before commencement of work:**

The contractor shall obtain a valid labour licence under the contract Labour (R&A) Act 1970 and the Contract Labour (Regulation and Abolition) Central Rules 1971, before commencement of the work and continue to have a valid license until the completion of the work. The contractor shall also abide by the provisions of the Child Labour (Prohibition and Regulation) Act 1986. Any failure to fulfil this requirement shall attract the penal provisions of this contract arising out of the resultant non execution of work.

7.2 Contractors Labour Regulations:

7.2.1 Working Hours

7.2.1.1 Normally working hours of an employee should not exceed 9 hours a day. The working day shall be so arranged that inclusive of interval for rest, if any, it shall not spread over more than 12 hours on any day.

- 7.2.1.2 When a worker is made to work for more than 9 hours on any day or for more than 48 hours in any week he shall be paid over time for the extra hours put in by him.
- 7.2.1.3 Every worker shall be given a weekly holiday normally on a Sunday, in accordance with the provisions of Minimum Wages (Central) Rules 1960, as amended from time to time, irrespective of whether such worker is governed by the minimum Wages Act or not.
- 7.2.1.4 Where the minimum wages prescribed by the Government, under the Minimum Wages act, are not inclusive of the wages for the weekly day of rest, the worker shall be entitled to rest day wages, at the rate applicable to the next preceding day, provided he has worked under the same contractor for a continuous period of not less than 6 days.
- 7.2.1.5 Where a contractor is permitted by the Engineer-in-charge to allow a worker to work on normal weekly holiday, he shall grant a substituted holiday to him for the whole day, on one of the five days, immediately before or after the normal weekly holiday, and pay wages to such worker for the work performed on the normal weekly holiday at the overtime rate.
- 7.2.2 **Display of Notice Regarding Wages Etc.**
The contractor shall, before he commences his work on contract, display and correctly maintain and continue to display and correctly maintain, in a clear and legible condition in conspicuous places on the work, notices in English and in local Indian languages spoken by the majority of the workers, giving the minimum rates of the wages fixed under Minimum Wages Act, the actual wages being paid, the hours of work for which such wage are earned, wages periods, dates of payments of wages and other relevant information .
- 7.2.3 **Payment of Wages**
- 7.2.3.1 The contractor shall fix wage periods in respect of which wages shall be payable.
- 7.2.3.2 No wage period shall exceed one month.
- 7.2.3.3 The wages of every person employed as contract labour in an establishment or by a contractor, where less than one thousand such persons are employed, shall be paid before the expiry of seventh day and in other cases before the expiry of tenth day after the last day of the wage period in respect of which the wages are payable.
- 7.2.3.4 Where the employment of any worker is terminated by or on behalf of the contractor, the wages earned by him shall be paid before the expiry of the second working day from the date on which his employment is terminated.
- 7.2.3.5 All payment of wages shall be made on a working day at the work premises and during the working time and on a date notified in advance and in case the work is completed before the expiry of the wage period, final payment shall be made within 48 hours of the last working day.
- 7.2.3.6 Wages due to every worker shall be paid to him direct or to other person authorised by him in this behalf.
- 7.2.3.7 All wages shall be paid in current coin or currency or in both.
- 7.2.3.8 All wages shall be paid without any deductions of any kind except those specified by the Central government by general or special order in this behalf or permissible under the Payment of Wages Act 1956.
- 7.2.3.9 A notice showing the wages period and the place and time of disbursement of wages shall be displayed at the place of work and a disbursement of wages shall be displayed at the place of work and a copy sent by the contractor to the Engineer-in-Charge under acknowledgement.
- 7.2.3.10 It shall be the duty of the contractor to ensure the disbursement of wages in presence of the site Engineer or any other authorised representative of the Engineer-in-Charge who will be required to

be present at the place and time of the disbursement of wages by the contractor to workmen.

7.2.3.11 The contractor shall obtain from the site Engineer or any other authorised representative of the Engineer-in-Charge, as the case may be, a certificate under his signature at the end of the entries in the "Register of Wages" or the "Wage-cum-Muster Roll", as the case may be, in the following form:-

"Certified that the amount shown in the column No..... has been paid to the workman concerned in my presence on at"

7.2.4 Fines and deductions which may be made from wages

7.2.4.1 The wages of a worker shall be paid to him without any deduction of any kind except the following;

a. Fines

- b. Deductions for absence from duty i.e. from the place or the places where by the terms of his employment he is required to work .The amount of deduction shall be in proportion to the period for which he was absent.
- c. Deductions for damage to or loss of goods expressly entrusted to the employed person for custody, or for loss of money or any other deductions which he is required to account, where such damage or loss is directly attributable to his neglect or default.
- d. Deduction for recovery of advances or for adjustment of overpayment of wages, advances granted shall be entered in a register.
- e. Any other deduction which the central Government may from time to time, allow

7.2.4.2 No fines should be imposed on any worker save in respect of such acts and omissions on his part as have been approved of by the Labour Commissioner.

7.2.4.3 No fine shall be imposed on a worker and no deduction for damages or loss shall be made from his wages until the worker has been given an opportunity of showing cause against such fines or deductions.

7.2.4.4 Every fine shall be deemed to have been imposed on the day of the act or omission in respect of which is was imposed.

7.2.5 Labour records

7.2.5.1 The contractor shall maintain a muster roll register in respect of all workmen employed on work on contract in Form XIII of the Contract Labour (R&A) Central Rules 1971.

7.2.5.2 The contractor shall maintain a Muster Roll register in respect of all workmen employed by him on the work under Contract in Form XVI of the CL (R&A) Rules 1971

7.2.5.3 The contractor shall maintain a Wage Register in respect of all workmen employed by him on the work under contract in Form XVII of the CL (R&A) Rules 1971.

7.2.5.4 **Register of accidents** - The contractor shall maintain a register of accidents in such form as may be convenient at the work place but the same shall include the following particulars.

- a. Full Particulars of the labourers who met with accident.
- b. Rate of wages
- c. Sex
- d. Age
- e. Nature of accident and cause of accident Time and date of accident
- g. Date and time when admitted in hospital
- h. Date of discharge from the hospital
- i. Period of treatment and result of treatment
- j. Percentage of loss of earning capacity and disability as assessed by Medical Officer.
- k. Claim required to be paid under Workmen's compensation Act.
- L. Date of payment of compensation.
- m. Amount paid with details of the person to whom the same was paid.
- n. Authority by whom the compensation was assessed.
- o. Remarks

- 7.2.5.5 The contractor shall maintain a Register of Fines in the Form XII of the CL (R&A) Rules 1971 The contractor shall display in a good condition and in a conspicuous place of work the approved list of acts and omission for which fines can be imposed.
- 7.2.5.6 The contractor shall maintain a Register of deductions for damage or loss in Form XX of the CL(R&A) Rules 1971.
- 7.2.5.7 The contractor shall maintain a Register of Advances in form XXIII of the CL (R&A) Rules 1971.
- 7.2.5.8 The contractor shall maintain a Register of Overtime in Form XXIII of the CL(R&A) Rules 1971.
- 7.2.6 Attendance card-cum wage slip**
- 7.2.6.1 The contractor shall issue an Attendance card cum wage slip to each workman employed by him.
- 7.2.6.2 The card shall be valid for each wage period.
- 7.2.6.3 The contractor shall mark the attendance of each workman on the card twice each day, once at the commencement of the day and again after the rest interval, before he actually starts work.
- 7.2.6.4 The card shall remain in possession of the worker during the wage period under reference.
- 7.2.6.5 The contractor shall complete the wage slip portion on the reverse of the card at least a day prior to the disbursement of wages in respect of the wage period under reference.
- 7.2.6.6 The contractor shall obtain the signature or thumb impression of the worker on the wage slip at the time of disbursement of wages and retain the card with him.
- 7.2.7 Employment card**
- The contract shall issue an Employment Card in the Form XIV of CL (R&A) Central Rules 1971 to each worker within three days of the employment of the worker.
- 7.2.8 Service certificate**
- On termination of employment for any reason whatsoever the contractor shall issue to the workman whose services have been terminated, a service certificate in the form XV of the CL(R&A) Central Rules 1971 .
- 7.2.9 Preservation of labour records**
- The labour records and records of Fines and deductions shall be preserved in original for a period of three years from the date of last entries made in them and shall be made available for inspection by the Engineer-in-charge or labour officer or any other officers authorised by the Ministry of communication in this behalf.
- 7.3 Power of labour officer to make investigations or enquiry**
- The labour officer or any person authorised by the central government on their behalf shall have power to make enquires with a view to ascertaining and enforcing due and proper observance of fair wage clauses and provisions of these Regulations . He shall investigate into any complaint regarding the default made by the contractor in regard to such provision.
- 7.4 Report of Investigating officer and action thereon**
- The labour officer or other persons authorised as aforesaid shall submit a report of result of his investigation or enquiry to the Engineer in-charge indicating the extent, if any, to which the default has been committed with a note that necessary deductions from the contractor's bill be made and the wages and other dues be paid to the labourers concerned. The engineer in-charge shall arrange payments to the labour concerned with 45 days from the receipt of the report from the labour officer or the authorised officer as the case may be.
- 7.5 Inspection of Books and Slips**
- The contractor shall allow inspection of all the prescribed labour records to any of his workers or to his agent at a convenient time and place after due notice is received or to the labour officer or any other person, authorised by the central government on his behalf.
- 7.6 Submission of Returns**
- The contractor shall submit periodical returns as may be specified form time to time.

7.7 **Amendments**

The central Government may from time to time add to or amend the regulations and on any question as to the application/interpretation or effect of those regulations.

8.0 **INSURANCE:**

8.1 Without limiting any of his other obligations or liabilities the contractor shall, at his own expense, take and keep comprehensive insurance including third party risk for the plant, machinery, men, materials etc. brought to the site and for all the work during the execution. The contractor shall also take out workmen's compensations insurance as required by law and under take to indemnify and keep indemnified the Government from and against all manner of claims and demands and losses and damages and cost (including between attorney and client) charges and expenses that may arise in regard the same or that the Government may suffer or incur with respect to end/or incidental to the same. The contractor shall have to furnish originals and/or attested copies as required by the department of the policies of insurance taken with 15 (fifteen) days of being called upon to do so together with all premium receipts and other papers related thereto which the department may require.

9. **COMPLIANCE WITH LAWS AND REGULATIONS**

9.1 During the performance of the works the contractor shall at his own cost and initiative fully comply with all applicable laws of the land and with any and all applicable by laws rules, regulations and orders and any other provisions having therefore of law made or promulgated or deemed to be made or promulgated by the Government, Governmental agency or department, municipal board, Government of other regulatory or Authorised body or persons and shall provide all certificates of compliance therewith as may be required by such applicable law. By-laws, Rules, Regulations, order and / or provisions. The contractor shall assume full responsibility for the payment of all contributions and pay roll taxes as to its employees, servants or agents engaged in the performance of the work specified in the contractor documents. If the contractor shall require any assignee or subcontractor to sham any portion of the work to be performed hereunder may be assigned, subleased or sub contracted to comply with the provisions of the clause and in this connection the contractor agrees as to undertake to save and hold the Government harmless and indemnified from and against any/all penalties, actions, suits, losses and damages, claims and demands and costs (inclusive between attorney and client charges and expenses whatsoever arising out or occasioned, indirectly or directly, by failure of the contractor or any assignee or sub-contractor to make full and proper compliance with the said by laws, rules regulation law and order provision as aforesaid.

10. **TOOLS and PLANTS**

The contractor shall provide at his own cost all tools, plants appliances, implements, measuring instruments etc. required for proper execution of works. The contractor shall also supply without charge the requisite number of persons with the means and materials necessary for the purpose of setting out works, counting, weighing and assisting the measurements for examination at any time and from time to time. The contractor shall be responsible to make all arrangements, at his own cost for dewatering of trenches/ducts and de-gasification of the ducts before carrying out work. The contractor shall also be responsible to make arrangements, at his own cost for water required for carrying of works at sites including curing of CC/RCC works. Failing his so doing the same may be provided by the Engineer-in-charge at the expense of the contractor and the expenses shall be deducted form any money due to the contractor under this contract or otherwise.

11. **Compliance of Provisions of EPF Act 1952**

The contractor will ensure compliance of Employees Provident Fund & Misc. Provisions Act 1952 & Employees Provident Fund Scheme 1952 in respect of laborers/ employees by him for performing the works of BSNL.

12. Arrangement of permission for road cutting to lay OFC cable along the road

Obtaining the permission from NH Authorities/ State High Way Authorities / Municipality / NAC Authorities/ other authorities is sole duty & responsibility of the successful bidder. However, BSNL shall only apply for the permission indicating proposed route diagram to the concerned authority with a copy to the contractor. The compensation claimed by the concerned authority if any, shall be borne by BSNL after joint verification.

**SECTION VII
SCOPE OF WORK AND JURISDICTION OF CONTRACT**

1.0 SCOPE

1.1 The Engineering Instructions spelt out in this document deal with the methods to be adopted for underground Optical Fiber Cable laying in PLB HDPE ducts and inter connection of the existing Optical Fiber Cables with the newly laid OF cables and termination of OF Cables.

2.0 INTRODUCTION

2.1 deleted

3.0 OF CABLE LAYING APPROACH

3.1 On the basis of the survey reports routes for OF cable laying shall be finalized. Road Cutting Permission shall be obtained from road and rail authorities for laying the Optical Fiber Cable along the finalized roads and at rail / road crossing along the route. Generally O.F. Cable may preferably be laid straight as far as possible along the road near the boundaries, away from the burrow pits. When the O.F. Cable is laid along the National Highways, Cable should run along the road land boundary or at a minimum distance of 15 meters from the centre line of the road where the road land is wider as the OFC carries high capacity traffic and is planned for about 25 to 30 years of life. It is essential that the cable is laid after obtaining due permission from all the concerned authorities to avoid any damage (which may result in disruption of services / revenue loss) and shifting in near future due to their planned road widening works.

3.2 In special cases where it may be necessary to avoid burrow pits or low lying areas, the Cable may be laid underneath the shoulders at a distance of 0.6 meter from the outer edge of the road embankment provided the same is located at least 4.5 meters away from centre line of road.

4.0 GENERAL

4.1 Soil Classification

Soil shall be classified under two broad categories Rocky and Non Rocky, The soil is categorized as rocky if the cable trench cannot be dug without blasting and / or chiseling. All other types of soils shall be categorized as Non Rocky including Murrum & soil mixed with stone or soft rock.

1. Rocky soil.

The terrain which consists of hard rocks or boulders where blasting/ chiseling is required for trenching such as quartzite, granite, basalt in hilly areas and RCC (reinforcement to be cut through but not separated) and the like.

2. Non Rocky soils

This will include all types of soil - soft soil/hard soil/murrumie. any strata, such as sand, gravel loam, clay, mud, black cotton murrum, shingle, river or nullah bed boulders, soling of roads, paths etc. (All such soils shall be sub-classified as kachcha soil) and hard core, macadam surface of any description (water bound, grouted tarmac etc), CC roads and pavements, bituminous roads, bridges, culverts (All such soils shall be classified as Pucca soils)

4.2 The Optical Fibre Cable shall be laid through PLB HDPE Ducts buried at a nominal depth of 165 cms. The steps involved in OF Cable construction are as under

4.2.1. Excavation of trench up to a nominal depth of 165 cms in non-Rocky soil, according to construction specifications. along National/State Highways/other roads and in built up / rural areas. Under exceptional conditions/ genuine circumstances due to site constraints/ soil conditions, relaxation can be granted by the competent authority for excavation of trench to a depth lesser than 165cm. Such relaxation shall be given as per the laid down norms/ procedures being followed by the concerned CPSUs for their own works and with the approval of the competent authority. The payment in such cases shall be made on pro-rata basis as per the existing norms adopted by the concerned CPSUs.

4.2.2. Fixing of GI pipes/troughs with clamps on culverts/bridges and/or chambering or concreting of G.I. Pipes/troughs, wherever necessary. Normally, RCC/DWC pipes shall be used and use of GI pipes shall be avoided. However, in case it is felt that GI pipe is unavoidable in certain circumstances this should be done with the prior approval of competent authority within the concerned CPSUs. This shall be recorded appropriately.

4.2.3. Laying Protection Pipes On Bridges And Culverts. In case trenching and pipe laying is not possible on the culverts, the pipes shall be laid on the surface of the culverts/bridges after due permission from the competent authority as per construction specification

4.2.4. Back Filling and Dressing of the Trench according to construction specifications.

4.2.5. Making manhole (of size 2.0 m length x 1.0 m width x 1.65 m Depth) at every Cable pulling location for housing the OF Cable loop & Pulling Optical Fibre Cable using proper tools and accessories. Sealing of both ends of the PLB HDPE pipe in manhole by hard rubber bush of suitable size to avoid entry of rodents into the PLB HDPE Ducts, putting split PLB HDPE Ducts and split RCC pipes with proper fixtures over cable in the manhole to protect the bare cable.

4.2.8. Digging of pit of size 2 meter x 2 meter x 1.8 meter (depth) for fixing of Jointing chamber precast RCC cover or stone of suitable size on Jointing chamber to protect the Joint and back filling of jointing chamber with excavated soil.

4.2.9. Digging of pits 500 cm to 1000 cm towards jungle side at every manhole and jointing chamber along the route to a depth of 75 cms, fixing of route Indicator/joint indicator, concreting and back filling of pits. Painting of route indicators with Blue colour and joint Indicator by Grey colour and sign writing denoting route/joint indicator number and marked as

“BSNL”, as per construction specification.

4.3 Specifications of Materials to be used

4.3.1. PLB HDPE Duct

Optical Fiber Cables should be pulled through Permanently Lubricated HDPE Duct of 40 mm/33 mm size conforming to the specifications as per TEC GR No. TEC/GR/TX/CDS-008/03/MAR -11 with latest Amendments. The Ducts shall be blue in colour and have the identification markings as per TEC GR wherein BSNL logo shall be marked as purchaser's name.

4.3.2. PLB HDPE Duct Accessories a)

Push fit Coupler

Push Fit couplers shall be used for coupling PLB HDPE ducts/coils. The specifications of the couplers shall be as per TEC GR no TEC/GR/TX/CDS-008/03/Mar11 with latest amendments.

b) PP Rope Should conform to TEC GR No. TEC/GR/TX/CDS-008/03/MAR-11 with latest Amendments. However, this is optional and BSNL may use the same on need basis. The PP rope can be ordered along with the PLB duct as required. In this case PP rope is drawn through the HDPE/PLB pipes/coils and safely tied to the end caps at either ends with hooks to facilitate pulling of the OF cables at a later stage. The rope used is 3 strands Polypropylene Para Pro rope having yellow colour and size of 6 mm diameter. It should have a minimum breaking strength of 550 kgs. The length of each coil of rope should be 5 meter more than the standard length of duct (or as ordered) and it should conform to (i) BS 4928 Part-II of 1974 (ii) IS 5175 of 1982. It should be of special grade and should have ISI certificate mark. It should be manufactured out of industrial quality Polypropylene.

c) End Cap

End Cap shall be used for sealing the ends of the empty ducts, prior to installation of the OF Cable and shall be fitted immediately after laying the duct to prevent the entry of any dirt, water, moisture, insects/rodents etc. It should conform to TEC GR No. TEC/GR/TX/CDS-008/03/MAR-11 with latest amendments. The ends of the PLB HDPE ducts/coils laid in the manholes should be closed with End Caps. The End Caps used should be suitable for closing 40mm/33mm PLB HDPE ducts/coils. A suitable arrangement should be provided in the End Cap to tie PP Rope. (See figure-1 for details)

d) Cable sealing Plug

This shall be used to seal the end of the ducts perfectly, after the OF cable is pulled in the duct. For pulling the cable through the ducts, it is necessary to provide man holes at that location and also at bends and corners wherever required. The ends of the PLB HDPE ducts/coils are closed with Cable sealing Plugs. The End Plugs used should be suitable for closing 40mm/33mm PLB HDPE ducts/coils. The Cable sealing plug shall conform to TEC GR No. TEC/GR/TX/CDS 008/03/MAR- 11 with latest amendments. (Wherever blowing technique is used for laying OF Cable, at the discretion of the CPSUs concerned, the hand holes/manholes required for accessing the cable during cable laying can be at longer distances depending upon requirement.)

4.3.3. Material for Providing Additional

Protection a) RCC Full Round Pipes

Reinforced cement concrete pipes (spun type) coupled with RCC collars sealed with cement mortar used to provide additional protection to PLB HDPE Ducts/coils at lesser depths should be of full round, NP-2 class and size 100 mm (internal diameter), conforming to IS standard 458-1988 with latest amendments. The pipes should have a nominal length of 2 meters. The RCC collars should be properly sealed using cement mortar 1:3 (1:53 grade cement of reputed brand, 3: fine sand without Impurities). In case of long spans, every third joint will be embedded in a concrete block of size 60 cms (L) x 40 cms (W) x 25 cms (H) of 1:2:4 cement concrete mix (1: cement, 2: coarse sand, 4: stone aggregate of 20 mm nominal size) so that the alignment of RCC pipes remain firm and intact. Also, both ends of RCC pipes spans will be sealed by providing concrete block of size 40 cm (L) x 40 cm (W) x 25 cm

(H) of 1:2:4 cement concrete mix to avoid entry of rodents.

b) RCC Split Pipes

The split Reinforced cement concrete pipes (spun type) with in -built collars are used to provide additional protection to PLB HDPE Ducts/coils should be of 100mm internal dia.(Spigotted), Class-- NP-3, Thickness: 25mm, Length: 2Meters with inbuilt collar at one end, Conforming to ISI Specification IS: 458, 1988 with latest amendment

c) G.I. Pipes

G.I. pipes should be of medium duty class having inner diameter of 50mm and should conform to specifications as per IS 554/1985 (revised up to date) IS 1989 (Part-I), 1900 Sockets (revised up to date) & IS 1239 (Part-II) 1992 (revised up to date).

d) DWC Pipes

Use of normal duty DWC (Double walled corrugated) HDPE pipe – conforming to TEC GR no.GR/DWC-34/01 Sep.2007 with latest amendments shall be preferably utilized as first choice for protection of Optical Fiber Cable instead of GI pipes. The DWC pipes used shall be of size 75/61 mm as per table 2 of the said TEC GR.

e) M.S. Weld Mesh

The PLB HDPE Ducts can also be protected by embedding it in concrete of size of 20 cms x 20 cms reinforced with MS weld mesh. The MS weld mesh used should be of 50 mm x 100 mm size, 12 SWG, 120 cms in width in rolls of 50m each. One meter of MS weld mesh caters to approx. 3 meters of concreting. (See figure „2“ for details) The strength of RCC/CC is dependent on proper curing, therefore, it is imperative that water content of CC/RCC mix does not drain out into the surrounding soil. In order to ensure this, the RCC/CC work should be carried out by covering all the sides by yellow PVC sheets of weight not less than 1 kg per 8 sqm to avoid seepage of water into the soil.

4.3.4. Joint Chamber

The Joint chamber shall be provided at every joint location to keep the OF cable joint well protected and also to house extra length of cable which may be required in the event of faults at a later date. The Joint chamber shall be of pre-cast RCC type as per construction specification. Brick chamber can also be made with prior permission of Engineer in-charge.

4.3.5. Rubber Bush

To prevent entry of rodents into PLB HDPE DUCTS, the ends of PLB HDPE DUCTS are sealed at every manhole and joint using rodent resistant hard rubber bush (cap) after optical fibre cable is pulled. The rubber bush should be manufactured from hard rubber with grooves and holes to fit into 40 mm PLB HDPE DUCTS pipe, so that it should be able to prevent the entry of insects, rodents, mud, and rainwater into the PLB HDPE DUCTS pipe. It should conform to TEC GR with latest amendments. (See Figure-3)

4.3.6. Route/Joint Indicator

The Route/Joint indicators are co-located with each manhole/joint chamber. In addition Route indicators are also to be placed where route changes direction like road crossings etc. Either RCC/Pre-cast or Stone based route indicators can be used. The detailed specification and design of the same shall be as per construction specification. Generally, Stone Route indicators shall be used for the this project

CONSTRUCTION SPECIFICATIONS

1. EXCAVATION OF

TRENCHES 1.1. Trenching

1.1.1. Location and Alignment of the Trench

In built up areas, the trench will normally follow the foot -path of the road except where it may have to come to the edge of the carriage way cutting across road with specific permissions from the concerned authorities maintaining the road (such permissions shall be obtained by the department as per MOU signed with respective State Govt.). Outside the built up limits the trench will normally follow the boundary of the roadside land. However, where the road side land is full of burrow pits or afforestation or when the cable has to cross culverts/ bridges or streams, the trench may come closer to the road edge or in some cases, over the embankment or shoulder of the Road (permissions for such deviations for cutting the embankment as well as shoulder of the road shall be obtained). The alignment of the trench will be decided by a responsible official BSNL, not below the rank of a Junior Telecom Officer of BSNL

Once the alignment is marked, no deviation from the alignment is permissible except with the approval of Engineer-in-charge. While marking the alignment only the centre line will be marked and the Contractor shall set out all other work to ensure that, the excavated trench is as straight as possible. The Contractor shall provide all necessary assistance and labour, at his own cost for marking the alignment. Contractor shall remove all bushes, undergrowth, stumps, rocks and other obstacles to facilitate marking the centre line without any extra charges. It is to be ensured that minimum amount of bushes and shrubs shall be removed to clear the way and the contractor shall give all, consideration to the preservation of the trees.

The line up of the trench must be such that PLB pipe(s) shall be laid in a straight line, both laterally as well as vertically except at locations where it has to necessarily take a bend because of change in the alignment or gradient of the trench, subject to the restrictions mentioned elsewhere.

1.1.2. Line-Up

The line-up of the trench must be such that PLB HDPE Ducts shall be laid in a straight line except at locations where it has to necessarily take a bend because of change in the alignment or gradient of the trench, subject to the restrictions mentioned elsewhere.

1.2. Method of Excavation

In built up areas, the contractor shall resort to use of manual labour / HDD only to ensure no damage is caused to any underground or surface installations belonging to other public utility services and/or private parties.

However, along the Highways and cross country there shall be no objection to the Contractor resorting to mechanical means of excavation, provided that no underground installations exist in the path of excavation, if any, are damaged.

There shall be no objection to resort to horizontal boring to bore a hole of required size and to push through G.I. Pipe (50 mm ID) through horizontal bore at road crossing or rail crossing or small hillocks etc.

All excavation operations shall include excavation and „getting out“. „Getting out“ shall include throwing the excavated materials at a distance of at least one meter or half the depth of excavation, whichever is more, clear off the edge of excavation. In all other cases „getting out“ shall include depositing the excavated materials as specified.

In Rocky strata excavation shall be carried out by use of electro mechanical means like breakers/ jack hammers or by blasting wherever permissible with express permission from the competent authority. If blasting operations are prohibited or not practicable, excavation in hard rock shall be done by chiseling/ jack hammers.

Trenching shall as far as possible be kept ahead of the laying of pipes. Contractor shall exercise due care that the soil from trenching intended to be loose for back filling is not mixed with loose debris. While trenching, the Contractor should not cause damage to any underground installations belonging to other agencies and any damage caused should be made good at his own cost and expense.

Necessary barricades, night lamps, warning board and required watchman shall be provided by the contractor to prevent any accident to pedestrians or vehicles. While carrying out the blasting operations, the contractor shall ensure adequate safety by cautioning the vehicular and other traffic.

The contractor shall employ sufficient man-power for this with caution boards, flags, sign writings etc. The contractor should provide sufficient width at the trench at all such places, where it is likely to cave in due to soil conditions without any extra payment. A minimum free clearance of 15 cms should be maintained above or below any existing underground installation. No extra payment will be made towards this. In order to prevent damage to PLB HDPE DUCTS over a period of time, due to the growth of trees, roots, bushes, etc., the contractor shall cut them when encountered in the path of alignment of trench without any additional charges. In large burrow pits, excavation may be required to be carried out for more than 165 cms in depth to keep gradient of bed less than 15 degrees with horizontal. If not possible as stated above, alignment of trench shall be changed to avoid burrow pit completely.

1.3. Depth and Size of the Trench

The depth of the trench from top of the surface shall not be less than 165 cms unless otherwise relaxation is granted by competent authority under genuine circumstances. In rocky terrain, less depth shall be allowed only in exceptional circumstances with additional protection where it is not possible to

achieve the normal depth due to harsh terrain/ adverse site conditions encountered. This shall be done only with the approval of the competent authority and consent of the Engineer in -charge after following the laid down norms and procedures being followed in BSNL. This shall be properly documented. In all cases, the slope of the trench shall not be less than 15 degrees with the horizontal surface. The width of the trench shall normally be 45 cms at the top & 30 cms at the bottom. In case, additional pipes (HDPE/GI/RCC Pipes) are to be laid in some stretches, the same shall be accommodated in this normal size trench. When trenches are excavated in slopes, uneven ground, inclined portion, the lower edge shall be treated, as top surface of land and depth of trench will be measured accordingly. In certain locations, such as uneven ground, hilly areas and all other Places, due to any reason whatsoever it can be ordered to excavate beyond standard depth of 165 cms to keep the bed of the trench as smooth as possible. Near the culverts, both ends of the culverts shall be excavated more than 165 cms. to keep the gradient less than 15 degree with horizontal. For additional depth in excess of 165 cms., no additional payment shall be applicable. If excavation is not possible to the minimum depth of 165 cms., as detailed above, full facts shall be brought to the notice of the Engineer in charge in writing giving details of location and reason for not being able to excavate that particular portion to the minimum depth. Approval shall be granted by the competent authority in writing under genuine circumstances. The decision of the competent authority shall be final and binding on the contractor. All the relaxations granted as specified above shall be dealt with as per the laid down norms and procedure in BSNL.

1.3.1. Dewatering: The Contractor shall be responsible for all necessary arrangements to remove or pump out water from trench. The Contractor should survey the soil conditions encountered in the section and make his own assessment about dewatering arrangement that may be necessary. No extra payment shall be admissible for this.

1.3.2. Wetting: Wherever the soil is hard due to dry weather conditions, if watering is to be done for wetting the soil to make it loose, the same shall be done by the contractor. No extra payment shall be admissible for this.

1.3.3. Blasting: For excavation in hard rock, where blasting operations are considered necessary, the contractor shall obtain approval of the Engineer-in-Charge in writing for resorting to blasting operation. The contractor shall obtain license from the competent authority for undertaking blasting work as well as for obtaining and storing the explosive as per the Explosive Act, 1884 as amended up to date and the explosive Rules, 1983. The contractor shall purchase the explosives fuses, detonators, etc. only from a licensed dealer. Transportation and storage of explosive at site shall conform to the aforesaid Explosive Act and Explosive Rules. The contractor shall be responsible for the safe custody and proper accounting of the explosive materials. Fuses and detonators shall be stored separately and away from the explosives. The Engineer-in-Charge or his authorized representative shall have the right to check the contractor's store and account of explosives. The contractor shall provide necessary facilities for this. The contractor shall be responsible for any damage arising out of accident to workmen,

public or property due to storage, transportation and use of explosive during blasting operation. Blasting operations shall be carried out under the supervision of a responsible authorized agent of the contractor (referred subsequently as agent only), during specified hours as approved in writing by the Engineer-in- Charge. The agent shall be conversant with the rules of blasting. All procedures and safety precautions for the use of explosives drilling and loading of explosives before and after shot firing and disposal of explosives shall be taken by the contractor as detailed in IS: 4081 safety code for blasting and related drilling operation.

1.3.4. Trenching Near Culverts/ Bridges: The PLB HDPE Ducts shall be laid in the bed of culvert at the depth not less than 165 cms protected by RCC pipes as decided by Engineer- in charge. Both ends of culverts shall be excavated more than 165 cms in depth to keep the gradient of not less than 15 degree with horizontal. The bed of trench should be as smooth as possible.

1.3.5. While carrying out the work on bridges and culverts, adequate arrangement for cautioning the traffic by way of caution boards during day time and danger lights at night shall be provided. In case of small bridges and culverts, where there is a likelihood of their subsequent expansion and remodelling, the cable should be laid with some curve on both sides of the culvert or the bridge to make some extra length available for readjustment of the cable at the time of reconstruction of culvert or the bridge.

2. Laying OF PLB HDPE Ducts

After the trench is excavated to the specified depth, the bottom of the trench has to be cleared of all stones or pieces of rock and levelled up properly. A layer of soft soil/or sand (in case the excavated material contains sharp pieces of rock/stones) of not less than 5 cms is required for levelling the trench to ensure that the cable when laid will follow a straight alignment. Adequate care shall be exercised while laying so that the OF cables are not put to undue tension/pressure after being laid as this may adversely affect the optical characteristics of cables with passage of time.

The contractor shall ensure that trenching and pipe laying activities are continuous, without leaving patches or portions incomplete in between. In case intermediate patches are left, measurement of the completed portions will be taken only after work in such left over patches are also completed in all respects. Preparatory to aligning the pipe for jointing, each length of the PLB HDPE Ducts shall be thoroughly cleaned to remove all sand, dust or any other debris that may clog, disturb or damage the optical fibre cable when it is pulled at a later stage. The ends of each pipe and inside of each Socket shall be thoroughly cleaned of any dirt or other foreign materials. After the trench is cleaned the PLB HDPE Ducts/Coil shall be laid in the cleaned trench, jointed with Sockets. Drawing up of PP rope is optional as per TEC GR. In case of use of PP Rope, at every manhole approximately at every 200m or at bends or turns the PP rope will be tied to the HDPE end caps used for sealing the PLB HDPE Ducts, to avoid entry of rodents/mud etc.

At the end of each day work, the open ends of the pipes sections shall be tightly closed with end caps to prevent the entry of dirt/mud, water or any foreign matter into PLB HDPE Ducts until the work is resumed. In built up area falling within Municipal/Corporation limits, the PLB HDPE Ducts shall be laid with protection using RCC Pipes/ Concreting reinforced with weld mesh (only in exceptional cases).

For lesser depths requiring additional protection in built up areas, towns and cities falling within t the municipal limits, suitable protection shall be provided to PLB HDPE pipes/coils using RCC/DWC full round/split pipes or GI pipes or cement concreting reinforced with MS weld mesh or a combination of any of these as per the site requirement. This shall be done only with the prior instructions/approval of the Engineer-in-charge. The specifications for providing each of these protections are given later in this document.

Moreover, in cross country routes, if depth is less than 1.2 meters, protection by using RCC/DWC Pipe shall be provided. Engineer-in-Charges shall decide about such stretches and type of protection to be provided in view of the site requirements. Normally 100 mm RCC /DWC Pipes shall be used for protecting PLB HDPE Ducts but if more than one PLB pipe is to be laid and protected, RCC/DWC Pipe of suitable size to accommodate the required number of PLB Pipes shall be used.

The PLB HDPE Ducts shall be laid in RCC Full Round spun Pipes/GI Pipes as required at Road crossings. The RCC pipes/GI pipes shall extend at least 3 meters on either side of the road at Road crossings. At Road crossings, extra GI/PLB HDPE Ducts may be laid as per the direction of the Engineer- in charge. On Rail bridges and crossings, the PLB HDPE Ducts shall be encased in suitable cast iron as prescribed by the Railway Authorities.

Wherever RCC pipes are used for protection, the gaps between the RCC collars and the RCC pipes shall be sealed using cement mortar 1:3 (1:53 grade cement of reputed brand, 3: fine sand without impurities) to bar entry of rodents. Every third collar of RCC pipes (normally of 2 meters length) and

also both ends of RCC Pipes will be embedded in a concrete block of size 40 cms (L)x 40 cms (W) x 25 cms (H) of 1:2:4 cement concrete mix (1:53 grade cement of reputed brand, 2: coarse sand, 3: stone aggregate of nominal size of 20 mm) so that the alignment of RCC pipes remain firm and intact and to avoid entry of rodents.

Wherever GI pipes are used, special care should be taken to ensure that G.I. Pipes are coupled properly with the sockets so as to avoid damage to PLB pipe and eventually the OF Cable in the event of pressure coming on the joint and G.I. Pipe joint giving its way. Rubber bushes shall be used at either ends of the GI pipes to protect PLB pipe. Both the ends of G.I. Pipe will be embedded in a concrete block of size 40 cms (L)x 40 cms ((W) x 25 cms (H) of 1:2:4 cement concrete mix (1:53 grade cement of reputed brand, 2: coarse sand, 3: stone aggregate of nominal size of 20 mm) so that the alignment of G.I. Pipes remain firm and intact and to avoid entry of rodents.

In case of protection by concreting at site, the nominal dimension of concreting shall be 200 mm x 200 mm section. Cement Concrete Mixture used shall be of 1:2:4 composition i.e. 1:53 grade Cement of a reputed company , 2: Coarse Sand, 4: Graded Coarse Stone aggregate of 20 mm nominal size, reinforced with MS weld mesh. As the RCC is cast at site, it is imperative to ensure that special care is taken to see that proper curing arrangements are made with adequate supply of water. The contractor shall invariably use mechanical mixer at site for providing RCC protection, to ensure consistency of the mix. For carrying out concreting work in trenches, yellow PVC sheets of width not less than 1.0 M and of weight not less than 1 kg. Per 8 sq. meters shall be spread and nailed on sides of the trench to form trapezoidal section for concreting in the cleaned trench, to avoid seepage of water into the soil.

A bed of cement concrete mixture of appropriate width and 75 mm thickness shall be laid on the PVC sheet, before laying PLB HDPE ducts. The PLB HDPE Ducts shall then be laid above this bed of concrete. After laying the PLB HDPE Ducts, MS weld mesh is wrapped around and tied and concrete mix is poured to form the cross sectional dimensions as instructed by the Engineer-in-charge.

The strength of RCC is dependent on proper curing therefore; it is imperative that water content of RCC mix does not drain out into the surrounding soil. Portions where cement concreting has been carried out shall be cured with sufficient amount of water for reasonable time to harden the surface. After curing, refilling of the balance depth of the trench has to be carried out with excavated soil.

The PLB HDPE Ducts/RCC/GI Pipes shall be laid only in trenches accepted by Engineer-in-Charge or his representative. The Contractor shall exercise due care to ensure that the PLB HDPE Ducts are not subjected to any damage or strain.

Water present in the trench at the time of laying the PLB HDPE Ducts shall be pumped out by the contractor before laying the pipes in the trench to ensure that no mud or water gets into the pipes, thus choking it.

In case of nallahs, which are dry for nine months in a year, the PLB HDPE Ducts shall be laid inside the RCC Pipes laid at a minimum depth of 165 cms., as instructed by the Engineer-in-charge. The mechanical protection shall extend at least 5 meters beyond the bed of nallah on either side. Notwithstanding anything contained in clauses referred above, the Engineer-in - charge may order, based on special site requirements, that the PLB HDPE Ducts may be encased in reinforced cement concrete.

While laying the pipes, a gap of 2 M is kept at convenient locations approx. 200 m apart and at the bends and turns, which will be used as manholes during OF cable pulling. Ends of the PLB HDPE Ducts at the manholes shall be sealed using end caps after tying the PP rope to the end caps to avoid choking of the pipes. In a similar manner, manholes shall be kept while approaching bridges, road crossings etc., as instructed by the Engineer-in-charge. The location of the manholes will be decided by the Engineer-in-charge.

2.1. Laying Protection Pipes on Bridges And Culverts:

In case trenching and pipe laying is not possible on the culverts, the pipes shall be laid on the surface of the culverts/bridges after due permission from the competent authority. Of late the bridge construction authorities are providing channel ducts on the footpaths on the bridges for various services. The RCC/DWC/ G.I. Pipes can be laid in these ducts for pulling cables. However, for laying cables on existing bridges, where duct arrangement does not exist, one of the following methods may be adopted.

- a. In case of the Bridges/Culverts, where there are no ducts and where the cushion on the top of the Arch is 50 cm to 100 cm or more, G.I. Pipe (Carrying PLB HDPE pipe and cable) may be buried on the top of the Arch adjoining the parapet wall, by digging close to the wheel guards. Every precaution shall be taken to see that no damage occurs to the arch of the culvert. After burying the GI pipe, the excavated surface on the arch shall be restored.
- b. Where the thickness of the Arch is less than 50 cms, the pipe must be buried under the wheel guard masonry and the wheel guard rebuilt.

c. If neither of the two methods is possible, the G.I. Pipes/GI Troughs must be clamped on the parapet wall with the clamps. If necessary, the pipes may be taken through the parapet wall at the ends where the wall diverges away from the road.

Methods cited in above clauses should be carried out under close supervision of Road authorities. The surface to be concreted should be thoroughly cleaned and levelled before concreting. At both ends of the Bridges/Culverts, where the GI Pipes /GI Troughs slope down and get buried, the concreting should be extended sufficiently to ensure that no portion of the GI Pipes/GI Troughs is exposed as approved by the Engineer- in-charge to protect the pipe/trough from any possible externally caused damage.

Where white wash/colour wash exists on the Bridges/ Culverts, the same should also be carried out on the concreted portion to ensure uniformity.

3. Back Filling and Dressing of the Trench

Provided that the PLB HDPE pipes have been properly laid in the trench at the specified depth, the back filling operation shall follow as early as practicable. The earth used for filling shall be free from all roots, Grass, shrubs, vegetation, trees, saplings and any other kind of garbage or pebbles. The back filling operation shall be performed in such a manner so as to provide firm support under and above the pipes and to avoid bend or deformation of the PLB HDPE pipes when the pipes get loaded with the back filled earth.

At locations where the back filled materials contains stones/sharp objects which may cause injury to the PLB HDPE pipes and where the excavated or rock fragments are intended to refill the trench in whole or in part, the trench should be initially filled, with a layer of ordinary soil or loose earth (free from any stones/pebbles) not less than 10 cms thick over the pipes.

Back filling on public, roads, railway crossings, footpaths in city areas shall be performed immediately after laying the HDPE pipes. Back filling at such locations shall be thoroughly rammed, so as to ensure original condition so that it is safe for the road traffic. All excess soil/ material left on road/ footpath/railway crossing shall be removed by contractor. However, along the highways and in country side, the excess dug up material left over after refilling should be kept in a heap above over

the trench. In city limits, at any given time more than 50 Meters length of trench should be kept open and in all places where excavation has been done, no part of the trench should be kept open over night to avoid occurrence of any mishap or accident in darkness.

4. CABLE PULLING AND JOINING/SPLICING 4.1.

CABLE PULLING

Manholes marked during PLB HDPE Ducts pipe laying of approx. size of 2.0 m length x 1.0 m width x 1.65 m depth shall be excavated for pulling the cables. There may be situations where addition manholes are required to be excavated, for some reasons, to facilitate smooth pulling of cable.

Excavation of addition manholes will be carried out, without any extra cost. De-watering of the manhole, if required, will be carried out without any extra costs. Dewatering/ De-gasification of the Ducts, if required, will be carried out without any extra costs. The Optical Fibre cables are available in drums in lengths of approx. 2 kms. The cables shall be blown /manually pulled (in exceptional cases) through already laid PLB HDPE DUCTS. This work is to be carried out under the strict supervision of site in-charge. It shall be ensured that during the blowing /pulling of Cable the tension is minimum and there is no damage to the Cable/Optical fibers. After pulling of the drum is completed, both ends of the PLB HDPE DUCTS pipe in each Manhole should be sealed by hard rodent resistant rubber bush, to avoid entry of rodents/mud into PLB HDPE Ducts. The Manholes are prepared by providing 40 mm split PLB HDPE DUCTS pipe of 2.5 to 3m length and closing the split PLB HDPE Ducts by providing necessary clamps/ adhesive tape as per the directions of Engineer-in- charge. Afterwards, the split/cut PLB HDPE DUCTS pipe are covered with 100 mm split RCC pipe of 2m length and sealing the ends of RCC pipe with lean cement solution for protecting bare cable in the manhole . After fixing of RCC Split Pipes necessary back filling/reinstatement and dressing of manholes should be carried out as referred under trenching. The location of the pulling manhole should be recorded for preparation of documentation.

4.2. Jointing/ Splicing

Optical Fibre Cable Joints will be at varying distances depending upon the incremental fiber to be laid. The 24/96 fibers are to be spliced (by BSNL Staffs) at every Joint & at both ends (Terminations) in the equipment room as directed by the Engineer-in-charge.

The Optical Fibre Cable thus jointed end- to-end will be tested by an officer of Acceptance Testing unit of the concerned CPSUs for splice losses and transmission parameters as specified by BBNL and prevalent at that time. The through Optical Fibre should meet all the technical parameters, specified and no relaxation will be granted.

5. Construction of Jointing Chamber:

The joint chambers are provided at every joint to keep the O.F.C. joint well protected and also to keep extra length of cable, which may be, required to attend the faults at a later date. Jointing chambers are to be prepared at the Fiber Point of Interconnect (FPIO) or normally at distance of every 2 kms. Actual location of jointing chamber depends on length of cable drum and appropriateness of location for carrying out jointing work. The location is finalized by Engineer-in-charge. The jointing chambers are constructed by way of fixing pre-cast RCC chambers/Brick Chambers and covers as per the instructions from Engineer-in- charge.

5.1. Pre cast RCC chamber

For fixing pre cast RCC chamber, first a pit of size 2 m x 2 m x 1.8 m depth shall be required to be dug. Pre cast RCC chamber shall consist of three parts (i) round base plate of 140 cm diameter and 5 cm thickness in two halves (ii) full round RCC joint chamber with diameter of 120 cm and height of 100 cm and thickness of 5 cm (iii) round top cover will be in two halves with diameter of 140 cm and thickness of 5 cm having one handle for each half in centre and word „ BSNL OFC“ engraved on it. (See figure “4”). After, fixing the pre cast RCC joint chamber, the joint chamber is filled with clean sand before closing. Back filling of joint chamber pit with excavated soil shall be carried out in the end.

5.2. Brick Chamber

For constructing brick chamber, first a pit of size 2m x2 mx1.8 m depth is shall be required to be dug.. Then, base of the chamber shall be made using concrete mix of 1:5:10 (1 cement, 5 coarse sand, 10 graded stone aggregate of 40mm nominal size) of size of 1.7m x 1.7 m and 0.15 m thickness. Wall of brick chamber should be constructed on this base having wall thickness of 9” using cement mortar mix of 1:5 (1: cement, 5: fine sand). The chamber should have internal dimensions of 1.2 m x 1.2 m and 1 m height.. The bricks to be used for this purpose should be of size 9” x 4.5” x 3”, best quality available and should have smooth rectangular shape with sharp corners and shall be uniform in colour and emit clear ringing sound when struck. The joint chamber should be so constructed that PLB pipe ends remain protruding minimum 5 cms inside the chamber on completion of plastering. The PLB pipes should be embedded in wall in such a way that, the bottom brick should support the pipe and upper brick should be provided in a manner that PLB HDPE pipe remains free from the weight of the construction. The joint chamber should be plastered on all internal surfaces and top edges with cement mortar of 1:3 (1: cement, 3: coarse sand), 12 mm thick finished with a floating coat of complete cement as per standard. Pre- cast RCC slab with two handles to facilitate easy lifting, of size 0.7 m x

1.4 m and of thickness of 5 cm having one handle for each half in centre and word "'OFC' engraved on it are to be used to cover the joint chamber. Two numbers of such slabs are required for one joint chamber. This pre-cast slab should be made of cement concrete mix of 1:2:4 (1: cement, 2: coarse sand, 4: stone aggregate 6 mm nominal size) reinforced with steel wire fabric 75 x 25 mm mesh of weight not less than 7.75 Kg per sq. Meter. The joint chamber is filled with clean sand before closing. Back filling of joint chamber pit with excavated soil shall be carried out in the end 6. Fixing of Route Indicators / Joint Indicators Pits shall be dug 500 cm to 1000 cm towards jungle side at every Manhole and Jointing chamber for fixing of Route/Joint Indicator. In addition, Route Indicators are also required to be placed where O.F. Cable changes directions like road crossing etc. The pits for fixing the indicator shall be dug for a size of 60 cms. x 60 cms. and 75 cms. (depth). The indicator shall be secured in upright position by ramming with stone and murrum up to a depth of 60 cms. and concreting in the ratio of 1:2:4 (1: cement, 2: coarse sand, 4 stone aggregate 20 mm nominal size) for the remaining portion of 15 cms. Necessary curing shall be carried out for the concreted structure with sufficient amount of water for reasonable time to harden the structure. 6.1. RCC/Pre cast Route Indicators The route /joint indicator made of pre-cast RCC should have the following dimensions

(see Figure „5”)

Base - 250 mm x 150 mm

Top - 200 mm x 75 mm

Height - 1250 mm

6.2. Stone based Route Indicators

The route /joint indicators made of Sand/lime Stone Should have the following dimension The word „BSNL OFC“ should be engraved on the Route/Joint indicators.

- i. Stone to be used (Sand/lime Stone)
- ii. Indicator Top surface to be rounded
- iii. Base 155 mm × 100 mm
- iv. Upper 500 mm length to be Tapered width wise as shown in the drawing and homogeneously finished.
- v. Height 650mm (Straight) + 400 mm (Tapered)
- vi. The route indicators should be engraved with word “BSNL OFC” of size 80mm length & 50mm, width.
- vii. Length 3.5 Ft., top 4”x4” dressed 1Ft. from top & tapered.

(See figure “6” for details of Stone Route Indicators)

The Route indicators shall painted Blue and placed at 500 to 1000 cm away from the centre of the

trench towards jungle side. The Joint indicators are placed at OFC joints and placed 500 to 1000 cm away from wall of the joint chamber facing jungle side and are painted Grey. The engraved word “BSNL OFC” should be painted in white, on route as well as joint indicators. Numbering of route indicators/joint indicators should also be done in white paint. The numbering scheme for route indicators will be Joint No./Route Indicator No. for that joint. For example, 2/6 marking on a route indicator means 6th route indicator after 2nd joint. Additional joints on account of faults at a later date should be given number of preceding joint with suffix A, B, C, and D. For example sign writing 2A on a joint indicator means, additional joint between joint No. 2 and 3. The numbering of existing route/joint indicator should not be disturbed on account of additional joints. Enamel paints of reputed brand should be used for painting and sign writing of route as well joint indicators. The route and joint indicator shall be painted with primer before painting with oil paint. The material used should bear ISI mark. The size of each written letter should be at least 3.5 cms. The colours of painting and sign writing is as under :

- (1) For Joint Indicator: Grey colour
- (2) For Route Indicator: Blue colour
- (3) For BBNL OFC &Nos: White colour.

7. Documentation

The documentation, consisting of the following shall be prepared for each Route. Four (4) sets of documentation shall be provided both in Electronic format on CD as well as Hard binded copy.

7.1. Route Index Diagrams – General: This diagram shall consist of Cable Route Details on Geographical Map drawn to scale with prominent land marks and alignment of cable with reference to road. This shall be prepared on A-3 sheets of 80 GSM.

7.2. Route Index Diagrams –Profile

These diagrams will contain

Make and size of the cable.

Offset of cable from centre of the road at every 10 meters

Depth profile of Cable at every 10 meter;

Details of protection with type of protection depicted on it;

Location of culvert and bridges with their lengths and scheme of laying of PLB HDPE Ducts pipe thereon.

Important landmarks to facilitated locating the cable in future; Location of Joints and pulling manholes.

These diagrams shall be prepared on A-4 sheets of 80 GSM. On one sheet profile of maximum 400 meters shall be given to ensure clarity.

7.3. Joint Location Diagram

This diagram will show Geographical location

of all the joints.

Depth of Joint Chamber covers from ground level

Type of chamber (Brick/Pre-cast)

Length of O.F. Cable kept inside the joint chamber from either direction.

This shall be prepared on A-4 sheets of 80 GSM.

All the diagrams (i), (ii) & (iii) shall bear the signatures of the contractor, the Engineer-in-charge as a proof of accuracy of the details. The diagrams shall be bound in A-4 size book with cover. The cover sheets shall be of 110 GSM and laminated. The front cover shall have the following details.

1. Name of the State/District/Block
2. Name of the Route
3. BSNL Name with logo
4. Name of the Contractor
5. Date of commencement of work
6. Date of completion of work

For each Block 1 sets of above mentioned document shall be submitted to BBNL.

8. SAFETY PRECAUTIONS

8.1. Safety Precautions when excavating or working in excavations close to electric cables

The Engineer-in-charge of the work should get full information from Electricity undertaking regarding any electric cables, which are known or suspected to exist near the proposed excavation and unless this is done, excavation should not be carried out in the section concerned. The electricity undertaking should be asked to send a representative and work should be preceded with close consultation with them. Only wooden handled hand tools should be used until the electric cables have been completely exposed. Power Cables, not laid in conduits, are usually protected from above by a cover slab of concrete, brick or stone. They may or may not be protected on the sides. It is safer, therefore, always to drive the point of the pickaxe downwards then uncovering a cable, so that there is less chance of missing such warning slabs. No workman should be permitted to work alone where there are electric cables involved. At least one more man should be working nearby so that help can be given quickly in case of an accident. If disconnection of power could be arranged in that section it will be better. No electric cables shall be moved or altered without the consent of the Electric Authority and they should be contacted to do the needful. If an electric cable is damaged even slightly, it should be reported to the Electric Authority and any warning bricks disturbed during excavation should be replaced while back filling the trench. Before driving a spike into the ground, the presence of other underground properties should be checked. Information on plans regarding the location of power cables need not to be assumed as wholly accurate. Full precautions should be taken in the vicinity until the power cable is uncovered. All electric cables should be regarded as being live and consequently dangerous. Any power is generally dangerous, even low voltage proving fatal in several cases.

8.2. Electric shock-Action and treatment:

Free the victim from the contact as quickly as possible. He should be jerked away from the live conductors by dry timber, dry rope or dry clothing. Care should be taken not to touch with bare hands as his body may be energized while in contact. Artificial respiration should begin immediately to restore breathing even if life appears to be extinct. Every moment of delay is serious, so, in the meanwhile, a doctor should be called for.

8.3. Safety Precautions while working in Public Street and along railway lines:

Where a road or footpath is to be opened up in the course of work, special care should be taken to see that proper protection is provided to prevent any accidents from occurring. Excavation work should be done in such a manner that it will not unduly cause inconvenience to neither pedestrians nor occupants of buildings or obstruct road traffic. Suitable bridges over open trenches should be so planned that these are required for the minimum possible time. Where bridges are constructed to accommodate vehicular traffic and is done near or on railway property, it should be with the full consent and knowledge of the competent railway authorities.

8.4. Danger from falling material

Care should be taken to see that apparatus, tools or other excavating implements or excavated materials are not left in a dangerous or insecure position so as to fall or be knocked into the trench thereby injuring any workman who may be working inside the trench.

8.5. Care when working in Excavations

Jumping into a trench is dangerous. If it is deep, workmen should be encouraged to lower themselves. Workers should work at safe distance so as to avoid striking each other accidentally with tools. If the walls of the trench contain glass bits, corroded wire or sharp objects they should be removed carefully. If an obstruction is encountered, it should be carefully uncovered and protected if necessary. If an obstruction is encountered, it should be carefully uncovered and protected if necessary. Care must be taken to see that excavated material is not left in such a position that it is likely to cause any

accident or obstruction to a roadway or waterway. If possible the excavated material should be put between the workmen and the traffic without encroaching too much on the road.

8.6. Danger of cave in

When working in deep trenches in loose soil, timbering up/shoring the sides will prevent soil subsidence. The excavated material should be kept at sufficient distance from the edge of the trench or pit. Vehicles or heavy equipment must not be permitted to approach too close to the excavation. When making tunneled opening, it should be ensured that the soil is compact enough to prevent cave in even under adverse conditions of traffic. Extra care should be taken while excavating near the foundations of buildings or retaining walls. In such cases, excavation should be done gradually and as far as possible in the presence of the owners of the property.

8.7. Protection of Excavations:

Excavations in populated areas, which are not likely to be filled up on the same day should be protected by barriers or other effective means of preventing accidents and the location of all such openings must in any event be indicated by red flags or other suitable warning signs. During the hours from dusk to dawn, adequate number of red warning lamps should be displayed. Supervisory officers should ensure that all excavations are adequately protected in this manner as serious risk and responsibility is involved. Notwithstanding adoption of the above mentioned precautions, works involving excavations should be so arranged as to keep the extent of opened ground and the time to open it to a minimum.

8.8. Precautions while working on roads

The period between half an hour after sun-set and half an hour before sunrise, and any period of fog or abnormal darkness may also be considered as night for the purpose of these instructions, for the purpose of providing the warning signs. Excavation liable to cause danger to vehicles or the public must at all times be protected with fencing of rope tied to strong uprights or bamboo poles at a suitable height or by some other effective means. Any such temporary erection which is likely to cause obstructions and which is not readily visible should be marked by posts carrying red flags or boards with a red background by day and by continuously lighted lamps at night. The flags and the lamps should be placed in conspicuous positions so as to indicate the pedestrians and drivers of vehicles the full expanse i.e. both width and length of the obstruction. The distance between lamps or between floors should not generally exceed 1.25 m along the width and 6m along length of the obstruction in non congested areas, but 4 meters along the length in congested areas. If the excavation is extensive, sufficient notice to give adequate warning of the danger should be displayed conspicuously not less than 1.25 m above the ground and close to the excavation. Where any excavation is not clearly visible for a distance of 25m to traffic approaching from any direction or any part of the carriage way of the road in which the excavation exists, a warning notice should be placed on the kerb or edge of all such roads from which the excavation or as near the distance as is practicable but not less than 10 m from the junction of an entering or intersecting road in which the excavation exists. All warnings, in these should have a red background and should be clearly visible and legible. All warning lamps should exhibit a red light, but white lights may be used in addition to facilitate working at night. Wherever required a passage for pedestrians with footbridge should be provided. At excavations, cable drums, tools and all materials likely to offer obstructions should be properly folded round and protected. This applies to jointer's tents as well. Leads, hoses etc. stretched and across the carriageway should be guarded adequately for their own protection and also that of the public.

8.9. Traffic Control

The police authorities are normally responsible for the control of traffic and may require the setting up of traffic controls to reduce the inconvenience occasioned by establishment of a single line of traffic due to restriction in road width or any other form of obstruction caused by the work. As far as possible, such arrangements should be settled in advance. If there are any specific regulations imposed by the local authorities, these should be followed.

8.10. Work along Railway Lines

Normally all works at Railway crossing is to be done under supervision of the railway authorities concerned, but it is to be borne in mind that use of white, red or green flags by the Departmental staff is positively forbidden to be used when working along a railway line as this practice may cause an accident through engine drivers mistaking them for railway signals. When working along a double line of railway, the men should be warned to keep a sharp look on both the "UP" and „DOWN" lines to avoid the possibility of any accident when trains pass or happen to cross one another near the work spot.

8.11. Procedure and Safety Precautions for use of explosives during blasting for trenching:

In areas where the cable trench cannot be done manually on account of boulders and rocks, it is necessary to blast the rocks by using suitable explosives. The quality of explosive to be used depends on the nature of the rocks and the kind of boulders. A few types of explosive fuses and detonators normally used for making trenches for cable works are detailed below:

- i) Gun powder
- ii) Nitrate Mixture
- iii) Gilatine
- iv) Safety fuse
- v) Electric Detonator
- vi) Ordinary Detonator

8.11.1. Procedure

A detailed survey of the route is to be done to assess the length of the section where trenching is to be done with the help of blasting. A route diagram of the rocky section may be prepared indicating the length of the route where the explosives are to be used. For the purpose of obtaining license, a longer length of route should be given in the application as in many cases, after digging, rocks appear which was not initially anticipated. Next a license will have to be obtained for use and storing of explosive in that section. If the area falls under a police commissioner, the authority for granting such license is the police commissioner of the concerned area. When the route does not fall in the jurisdiction of a police commissioner, the authority for issuing license is the District Magistrate. The concerned authority should be applied in prescribed form with a route map. The concerned authority will make an enquiry and issue license for using/storing explosives for cables trenching work. Such license will be valid for 15 days only. The license should be got renewed if the blasting operation needs to be extended. Once the license is granted, it is the responsibility of the holders of the license for the proper use of explosives, its transportation and storing.

8.11.2. Method of using

The safest explosive is the Gilatine and electric detonator. Gilatine is in the form of a stick. Electric detonator is a type of fuse used for firing the explosive electrically. Holes are made at suitable intervals on rocky terrain or boulders either by air compressor or by manual chipping. The depth of the holes should be 2 to 3 ft. Fill up the holes with small quantity of sand for about 6". First the electric detonator is to be inserted into the Gilatine and the Gilatine is to be inserted into the holes keeping the + ve and -ve wirings of electric detonators outside the holes. Again refill the holes with sand. These +ve and -ve insulated wires of detonator are then extended and finally connected to an EXPLODER kept at a distance of not less than 100 m. Now the explosive is ready for blasting. But, before connecting wires to exploder for blasting, all necessary precautions for stopping the traffic, use of red flags, exchange of caution signals, etc. should be completed and only then Exploder should be connected and operated.

8.11.3. Operation of exploder (IDL Schaffer type 350 type exploder)

The type 350 blasting machine consists of a bearing block with blasting machine system and the explosion proof light-alloy injection moulded housing. The exploder is held with the left hand. The twist handle is applied to the drive pin, clapped with the right hand turned in the clock wise direction in continuous measurements at the highest speed from the initial position until it reached to a stop. At this stage an indication lamp will glow. When the indication lamp glows, "press button switch" should be pressed. This will extend the electric current to detonator and Gilatine will be detonated. The rock will be blasted out of the trench. Number of holes can be blasted in a single stroke by connecting all such detonators in series connection and finally to the exploder. After blasting, again mazdoors are engaged on the work to clear the debris. If the result of the first blasting is not satisfactory, it should be repeated again on the same place.

8.11.4. Warning

There may be two reasons for unsatisfactory results of the blasting

- a) Misfire of Gilatine due to leakage of current from detonator.
- b) Over loading because of overburdens.

Never pull the broken wire pieces from the holes in such cases. Attempt should not be made to re-blast the misfired Gilatine. The safest way is to make a fresh hole by its side and put fresh Gilatine in that hole and blast it.

8.11.5. Precautions

The abstract of Explosives Rules 1983 which are relevant to our work is given below:

8.12. Restriction of delivery and dispatch of explosives

No person shall deliver or dispatch any explosives to anyone other than a person who.

a) is the holder of a license to possess the explosives or the agent of a holder of such a license duly authorized by him in writing on his behalf.

OR

b) is entitled under these rules to possess the explosives without a license.

The explosives so delivered or dispatched shall in no case exceed the quantity, which the person to whom they are delivered or dispatched is authorized to possess with or without a license under these rules.

No person shall receive explosives from any person other than the holder of a license granted under these rules. No person shall receive from or transfer explosives to any person for a temporary storage or safe custody in a licensed premise unless prior approval is obtained from the Chief Controller.

A person holding license for possession of explosives granted under these rules shall store the explosives only in premises specified in the license.

8.13. Protection from Lightning During Storing

Every magazine shall have attached there to one or more efficient lightning conductors designed and erected in accordance with the specification laid down in Indian Standard Specifications No. 2309 as amended from time to time. The connections to various parts of earth resistance of the lightning conductor terminal on the building to the earth shall be tested at least once in every year by a qualified electrical engineer or any other competent person holding a certificate of competency in this behalf from the State Electricity Department. A certificate showing the results of such tests and the date of the last test shall be hung up in conspicuous place in the building.

8.14. Precautions during thunder-storm

When a thunder- storm appears to be imminent in the vicinity of a magazine or store house every person engaged in or a round such magazine and store house shall be withdrawn to a safe distance from such magazine or store house and the magazine and store house shall be kept closed and locked until the thunder storm has ceased or the threat of it has passed.

8.15. Maintenance of records

Every person holding a license granted under these rules for possession, sale or use of explosives shall maintain records in the prescribed form and shall produce such record on demand to an Inspection Officer.

8.16. Explosives not to be kept in damaged boxes

The licensee of every magazine or store house shall ensure that, the explosives are always kept in their original outer package. In case, the outer package gets damaged so that the explosive contained therein cannot be stored or transported, such explosives shall be repacked only after the same are examined by controller of explosives.

8.17. Storage of explosives in excess of the licensed quantity

The quantity of any kind of explosives kept in any licensed magazine or store house shall not exceed the quantity entered in the license against such kind of explosives. No explosives in excess of the licensed quantity shall be stored in the magazine or store house unless a permit in this behalf is obtained from the licensing authority by a letter or telegram.

8.18. Precautions to be observed at Site

The electric power at the blasting site shall be discontinued as far as practicable before charging the explosives. No work other than that associated with the charging operations shall be carried out within 10 meters of the holes unless otherwise specified to the contrary by the licensing authority.

When charging is completed, any surplus explosive detonators and fuses shall be removed from the vicinity of the hole and stored at a distance which should prevent accidental detonation in the event of a charge detonating prematurely in any hole. The holes which have been charged with explosive shall not be left unattended till the blasting is completed. Care shall be taken to ensure that fuse or wires connected to the detonation are not damaged during the placing of stemming materials and tamping.

8.19. Suitable warning procedure to be maintained

The licensee or a person appointed by the licensee to be in charge of the use of explosives at the site shall lay down a clear warning procedure consisting of warning signs and suitable signals and all persons employed in the area shall be made fully conversant with such signs and signals.

8.20. Precautions to be observed while firing

The end of the safety fuse (if used in place of a detonator should be freshly cut before being lighted. The exploders shall be regularly tested and maintained in a fit condition for use in firing. An exploder shall not be used for firing a circuit above its rated capacity. The electric circuits shall be tested for continuity before firing. All persons other than the shot-firer and his assistant, if any, shall be withdrawn from the site before testing the continuity. For the purpose of jointing, the ends of all wires and cables should have the insulation removed for a maximum length of 5 cms. and should, then be made clear and bright for a minimum length of 2.5 cms. and the ends to be joined should be twisted together so as to have a positive metal contact. Then these should be taped with insulation to avoid leakage when in contact with earth. In case of blasting with dynamite or any other high explosive, the position of all the bore holes to be drilled shall be marked in circles with white paint. These shall be inspected by the Contractor's agent. Bore holes shall be of a size that the cartridge can easily pass down. After the drilling operation, the agent shall inspect the holes to ensure that drilling has been done only at the marked locations and no extra hole has been drilled. The agent shall then prepare the necessary charge separately for each bore hole. The bore holes shall be thoroughly cleaned before a cartridge is inserted. Only cylindrical wooden tamping rods shall be used for tamping. Metal rods or rods having pointed end shall never be used for tamping. One cartridge shall be placed in the bore hole and gently pressed but not rammed down. Other cartridges shall then be added as may be required to make up the necessary charge for the bore hole. The top most cartridge shall be connected to the detonator which shall in turn be connected to the safety fuses of required length. All fuses shall be cut to the length required before being inserted into the holes. Joints in fuses shall be avoided.

Where joints are unavoidable, a semi-circular niche shall be cut in one piece inserted into the niche. The two pieces shall then be wrapped together with string. All joints exposed to dampness shall be wrapped with rubber tape. The maximum of eight bore holes shall be loaded and fired at one occasion. The charges shall be fired successively and not simultaneously. Immediately before firing, warning shall be given and the agent shall see that all persons have retired to a place of safety. The fuses of the charged holes shall be ignited in the presence of the agent, who shall see that all the fuses are properly ignited. Careful count shall be kept by the agent and other of each blast as it explodes. In case all the charged bore holes have exploded, the agent shall inspect the site soon after the blast but in case of misfire the agent shall inspect the site after half an hour and mark red crosses (X) over the holes which have not exploded. During this interval of half an hour, nobody shall approach the misfired holes. No driller shall work near such bore until either of the following operations has been done by the agent for the misfired boreholes.

- i. The contractor's agent shall very carefully (when the tamping is damp clay) extract the tamping with a wooden scraper and withdraw the primer and detonator.
- ii. The holes shall be cleaned for 30 cm of tamping and its direction ascertained by placing a stick in the hole. Another hole shall then be drilled 15 cm away and parallel to it. This hole shall be charged and fired. The misfired holes shall also explode along with the new one. Before leaving the site of work, the agent of one shift shall inform the agent relieving him for the next shift, of any case of misfire and each such location shall be jointly inspected and the action to be taken in the matter shall be explained to the relieving agent. The Engineer-in-charge shall also be informed by the agent of all cases of misfire, their cause and steps taken in that connection.

8.21. General Precautions

For the safety of persons red flags shall be prominently displayed around the area where blasting operations are to be carried out. All the workers at site, except those who actually ignite the fuse, shall withdraw to a safe distance of at least 200 meter from the blasting site. Audio warning by blowing whistle shall be given before igniting the fuse. Blasting work shall be done under careful supervision and trained personnel shall be employed. Blasting shall not be done within 200 meters of an existing structure, unless specifically permitted by the Engineer-in-Charge in writing.

8.22. Precautions against misfire

The safety fuse shall be cut in an oblique direction with a knife. All saw dust shall be cleared form inside of the detonator. This can be done by blowing down the detonator and tapping the open end. No tools shall be inserted into the detonator for this purpose. If there is water present or if the borehole is damp, the junction of the fuse and detonator shall be made water tight by means of tough grease or any other suitable material. The detonator shall be inserted into the cartridge so that about one-third of the copper tube is left exposed outside the explosive. The safety fuse just above the detonator shall be securely tied in position in the cartridge. Waster proof fuse only shall be used in the damp

borehole or when water is present in the borehole. If a misfire has been found to be due to defective fuse, detonator or dynamite, the entire consignment from which the fuse, detonator or dynamite was taken shall be got inspected by the Engineer-in-Charge or his authorized representative before resuming the blasting or returning the consignment.

8.23. Precaution against stray currents:

Where electrically operated equipment is used in locations having conductive ground or continuous metal objects, tests shall be made for stray current to ensure that electrical firing can proceed safely.

9. ALLIED ACTIVITIES

9.1. Transportation of Materials: The materials required for executing the work entrusted to the contractors against a work order shall be made available at Divisional Store Depot. In some cases the materials may be available at sub divisional store godown. The contractor shall be responsible for transporting the materials, to be supplied by the BSNL or otherwise to execute the work under the contract, to site at his/ their own cost. The costs of transportation are subsumed in the standard Schedule Rates and therefore no separate charges are payable on this account.

9.2. Disposal of Empty Cable Drums: The contractor shall be responsible to dispose of the empty cable drums after laying of the cables. The cost of various sizes of empty cable drums recoverable from the contractor has been fixed taking into account the prevailing market rates as mentioned in this document.

9.3. It shall be obligatory on part of the contractor to dispose of the empty cable drums at his/their level and the amount fixed for various empty cable drums shall be recovered from the bill for the work for which the drum (s) was/were issued or from any other amount due to the contractor or the Security Deposit.

9.4. The contractor shall not be allowed to dump the empty cable drums in Govt./Public place which may cause inconvenience to the BSNL / public. If the contractor does not dispose of the empty cable drums within 3 days of becoming it empty, the BSNL shall be at liberty to dispose off the drums in any manner deemed fit and also recover the amount fixed in this contract from the bill/security deposit/ any other amount due to the contractor.

9.5. Supply Of Materials: There are some materials required to be supplied by the contractor for execution of work under this contract like Bricks, Cement, Wire Mesh and Steel for protection, etc., besides using other consumables which do/don't become the part of the asset. The contractor shall ensure that the materials supplied are of best quality and workmanship and shall be strictly in accordance with the specifications.

9.6. Social auditing: While carrying out the execution work of cable/Eqpt, photography/videography may be carried out on sample basis for duration of 15 to 30 minutes per Route which may also involve the local people (If possible) and same may be submitted in a form of CD along with the documentation sets for information.

Note: All the materials as above have to be TSEC/Type approved by BSNL QA/TEC against mentioned TEC GR or as per the approval procedure of executing CPSUs for which TEC GR not there.

Figure 1

HDPE END CAPS

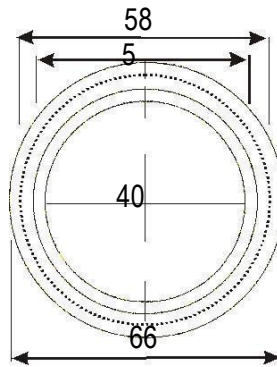
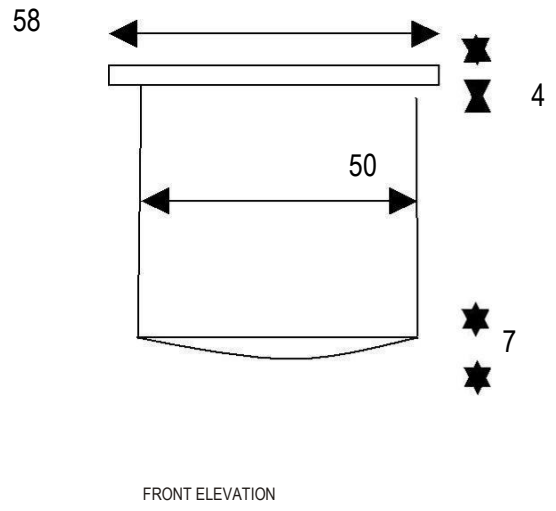
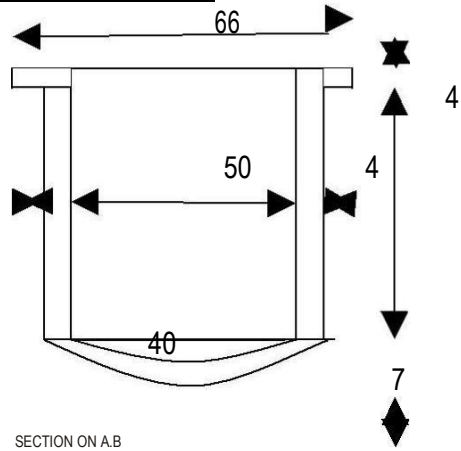
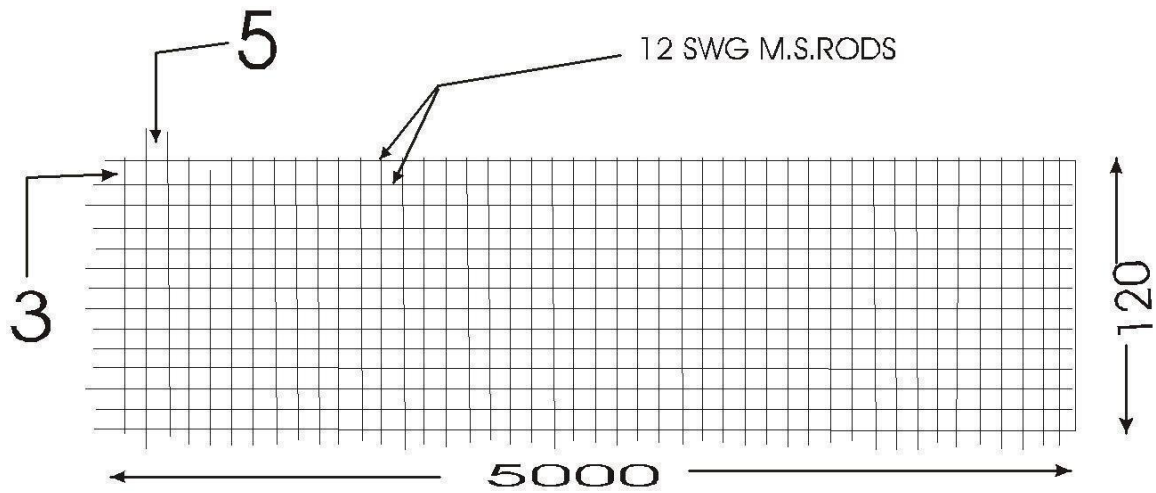


Figure 2

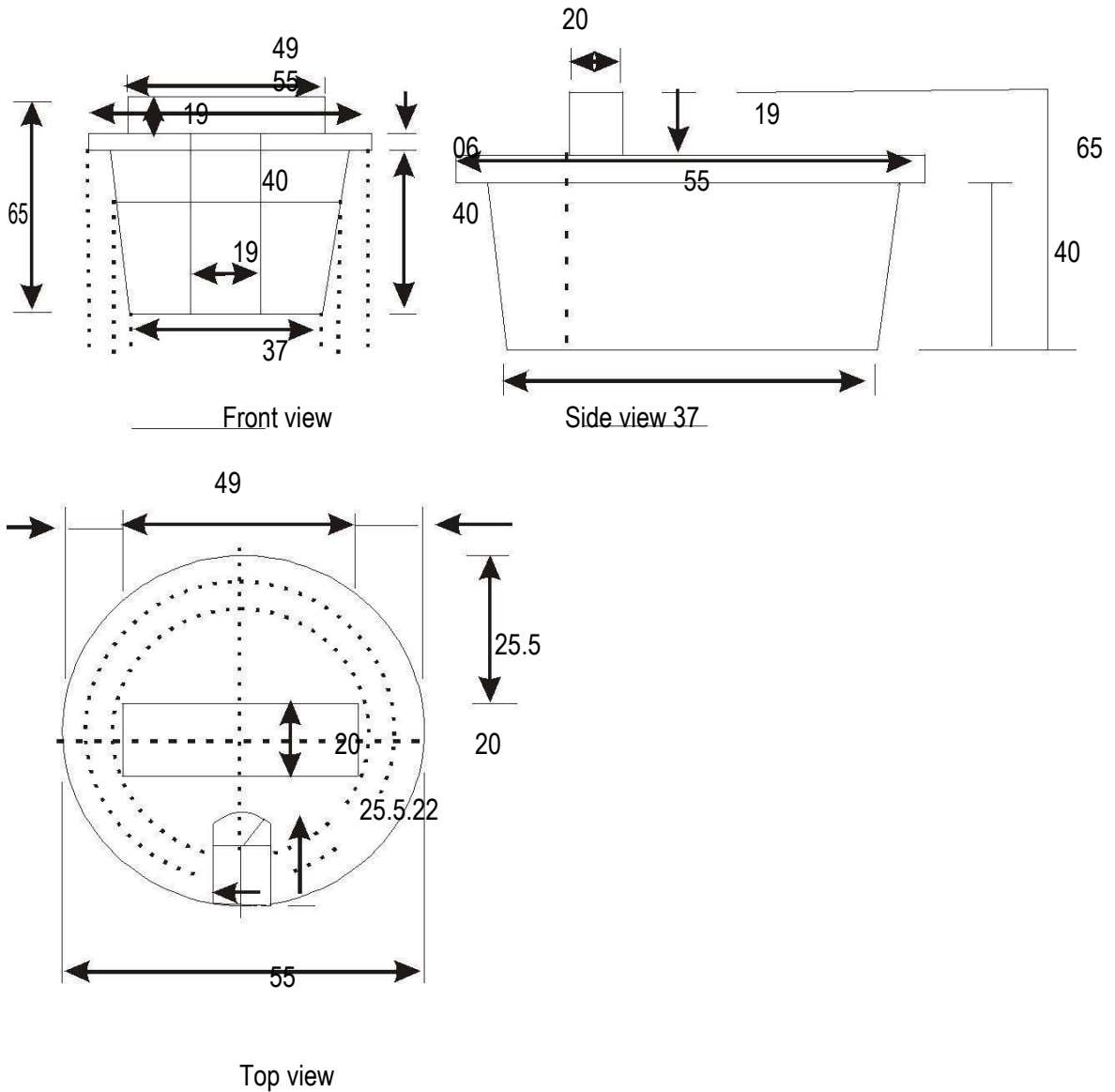
M.S. WELDMESH

DETAILS OF 100 MM X 50 MM, 12 SWG MILD STEEL WELD MESH HAVING WIDTH OF 120 CM.



Note : All measurements are in centimeters

Figure 3
Rubber Cork

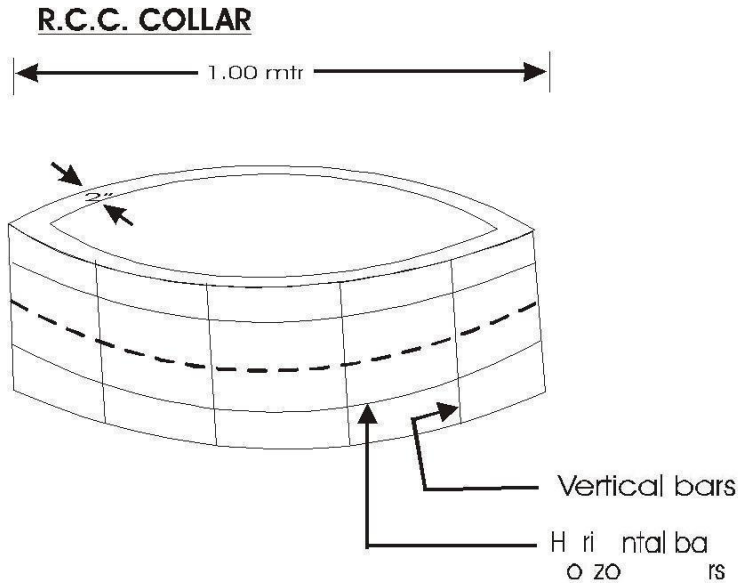


NOTE:

1. ALL DIMENSIONS ARE IN MM.
2. DIMENSIONS ARE ONLY FOR GUIDENCE. TAPPER SHOULD BE SUCH THAT IT SHOULD TIGHTLY FIX. INTO TYPE A & TYPE B HOPE 50 mm OO PIPES.

Figure 4

SPECIFICATION AND REINFORCEMENT DETAILS OF R.C.C. JOINT PROTECTION CHAMBERS



Specification :

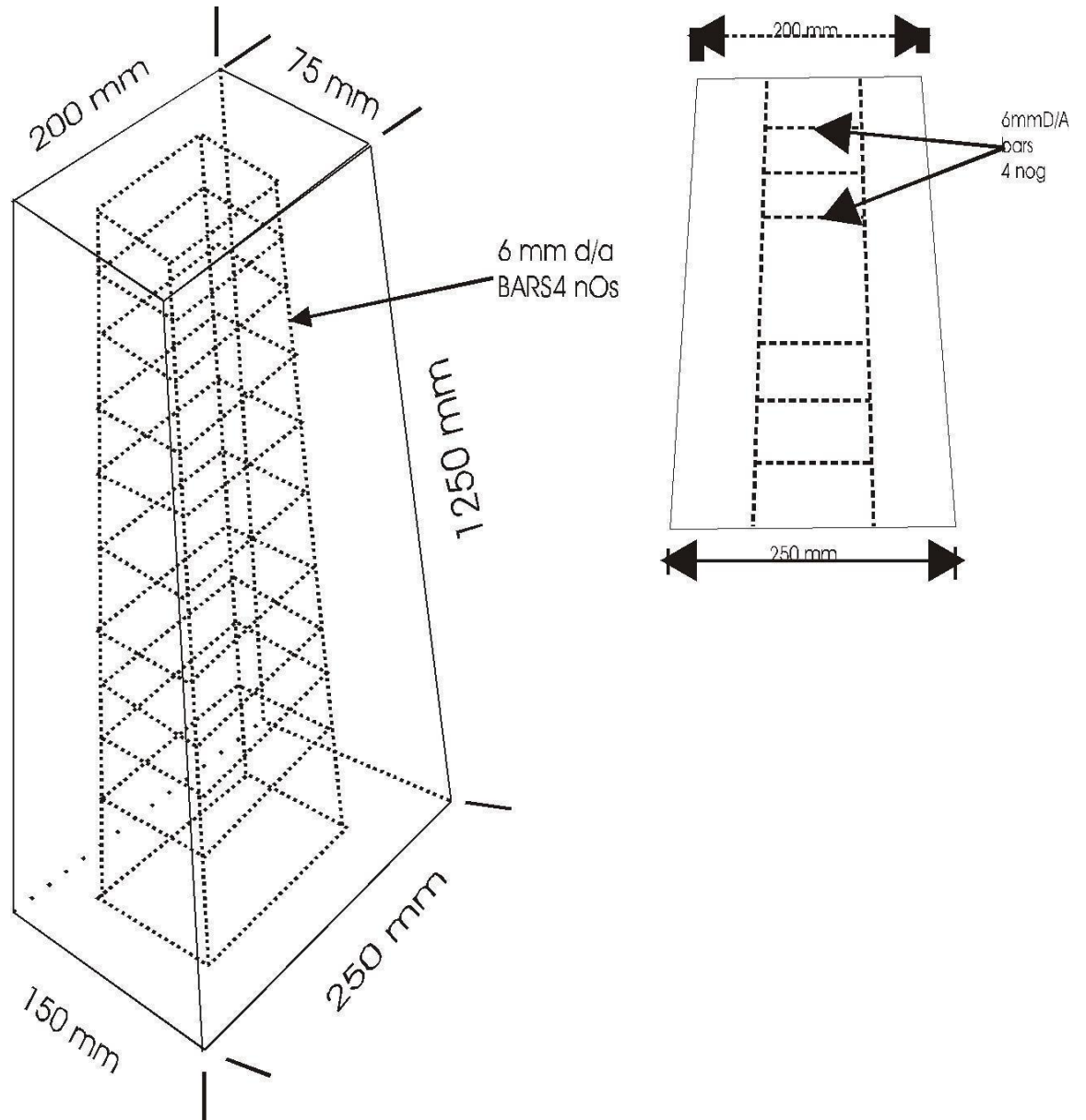
1. Diameter : 1.20 Mtr. (inner side)
2. Thickness : 5 cm.
3. Height : 100 cm.
4. 6 mm Horizontal Iron round rings – 4 Nos.
5. 6 mm vertical bars Iron – 12 Nos.
6. 12 gauge GI wire mesh to be wrapped before reinforcing the concrete.

Note :

- a) Concrete „Mix. 1: 2:3 (1 Cement : 2 Sand : 3 graded Stone aggregate 20 mm nominal size.
- b) Finishing : Smooth

Figure 5

RCC Route Indicator



Seal & Signature of Bidder

1. Stone OFC Route Indicator

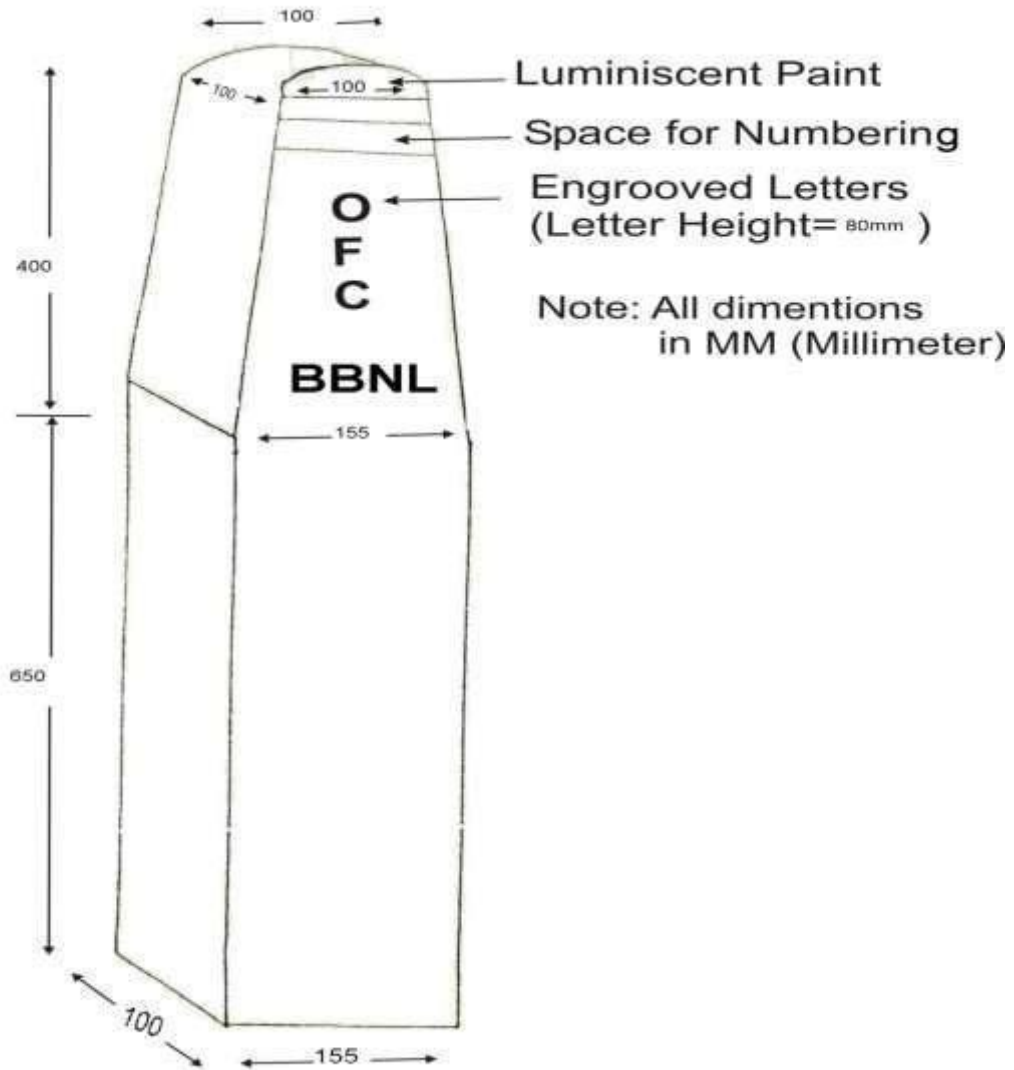


Figure 6

Abbreviations

1. DOT : Department of Telecom
2. BSNL : Bharat Sanchar Nigam Limited
3. TEC : Telecom Engineering Centre
4. HDPE : High Density Polyethelene
5. DWC Ducts : Double Walled Corrugated Ducts
6. GI pipe : Galvanized Iron Pipe
7. ASTM : American Society for Testing and materials
8. GR : Generic Requirement
9. CACT : Component Approval Centre for Telecom
10. RCC : Reinforced Cement concrete

10. **COST OF WORK** : The estimated cost of work is as mentioned in the notice inviting tenders which has been worked out based on standard scheduled rates mentioned in this tender document. The actual value of work may vary based on the actual requirement but generally being limited to +/- 50% of the indicated value.

11. PROVISION OF EPF

- 11.1. The contractor shall be required to have registration in EPF department and they shall fulfil /compliance the provisions of EPF and Misc Provisions of Act 1952 and Employees Scheme 1952.
- 11.2. Each claim bill of contractors must accompany the (i) list showing the details of labourers/employees engaged, (ii) duration of their engagement, (iii) the amount of wages paid to such labourers/employees for the duration in question, (iv) amount of EPF contributions (both employer's and employees contribution) for the duration of engagement in question, paid to the EPF Authorities, (v) copies of authenticated documents of payments of such contribution of EPF authorities and (vi) a declaration from the contractors regarding compliance of the conditions of the EPF Act,1952.
- 11.3. The contractor shall be required comply the provision ESI, payment of wages act, contractor labour regulation act, payment of bonus act, payment of gratuity act and GST regulation. Noncompliance of above provision will be treated as breach of contract and necessary action against the bidder will be taken.

SECTION - VIII

Optical Fiber Cable Construction Specifications

The detailed Optical Fiber construction specifications are given in document titled as "Optical Fiber Cable Construction practices - Manual" available at DE (Planning) office. The bidders are advised to go through the manual before quoting for bid.

PERFORM A FOR NO NEAR RELATIVE (S) OF THE CONTRACTOR IN BSNL

(On a stamp paper of Rs. 10/-) notarized

Certificate to be given by the contractor in respect of no near relatives (s) in BSNL.

I S/o Shri

..... R/o

hereby certify that none of my relatives (s) as defined in the tender document is/are employed anywhere in BSNL as per Detail given in tender document. In case at any stage, it is found that the information given by me is false/incorrect, BSNL shall have the absolute right to take any action as deemed fit, without any prior intimation to me.

Signature of the tenderer with seal

Note: - (I) In case of proprietorship firm, certificate will be given by the proprietor, for partnership firm, separate certificate will be given by all the partners and in case of Ltd. Company by all the Directors of the company.

(II) The near relatives for this purpose are defined as:

- A. Members of a Hindu Undivided family.
- B. They are husband and wife.
- C. The one is related to the other in the manner as father, mother, son(s) and son's Wife (Daughter-in-law). Daughter(s) and daughter's husband (Son-in-law), Brother(s) and brother's wife, sister(s) and sister's husband (Brother-in-law).

**SECTION IX
MATERIAL SECURITY BOND FORM**

Whereas(hereinafter called "the contractor") has been awarded the contract of cable construction work, as per tender number _____ know all men by these presents that

We.....of.....having our registered office at _____ (hereinafter called the "the contractor") are bound unto -----(hereinafter called „the department“) in the sum of-----for which payment will and truly to be made of the said Department, the bank binds itself, its successors and assigns by these presents.

THE CONDITIONS of the obligation are:

1. If the contractor is unable to keep stores issued to him, properly, i.e. the store provided to the contractor, by the Department are damaged or
2. The stores issued to the contractor by the Department are stolen or
3. The contractor is not able to provide proper account of the stores issued to him/her/them by the department.

We undertake to pay to the Department up to the above amount upon receipt of its first witting demand without the Department having to substantiate its demand, provided that in its demand, the Department will note that the amount claimed by it is due to it owing to the occurrence of one or two or all of three conditions specifying the occurred condition or conditions.

This guarantee will remain in force up to and including one hundred and eighty (180) days after the Period of contract validity, and any demand in respect thereof should reach the bank not latter than the above date.

Signature of the bank

Signature of the Witness

Name of Witness

Address of Witness

SECTION - X AGREEMENT

The successful tenderer shall have to execute the following agreement:

This agreement made on this _____ day of (months) _____
(year) _____ between M/s _____

_____ herein after called "The contractor" (Which expression shall unless excluded by or repugnant) to the context, include its successors, heir, executors, administrative representative and assignee) of the one part & the President of India of India here in after referred to as the Government, of other part.

Where as the contractor has offered to enter into contract with the said Government for the execution of work of trenching & pipe laying of cable pulling of cable splicing and termination, preparation of joint chambers, fixing, painting and sign writing of route/joint indicators and other associated works in **GMTD Sambalpur** on the terms and conditions herein contained and the rates approved by the government (copy of rates annexed) have been duly accepted and where as the necessary security deposits have been furnished in accordance with the provisions of the tender document and whereas no interest will be claimed on the security deposits.

Not these presents witness and it is hereby agreed and declared by and between the parties to these presents as follows.

1. The contractor shall, during the period of this contract that is to say from to or completion of work for Rs _____ (in words) _____ whichever is earlier or until this contract shall be determined by such notice as is hereinafter mentioned, safely carryout, by means of labours employed at his own expenses and by means of tools, implements and equipment etc. to be supplied by him to his labour at his own expenses, all trenching pipe laying cable pulling cable splicing, joint chamber preparation fixing painting and sign writing of route indicators and other associated works as described in tender documents (annexed to the agreement), when the government or **GMTD Sambalpur** or any other persona authorised by **GMTD Sambalpur** in that behalf require . It is understood by the contractor that the quantity of work mentioned on the schedule is likely to change as per actual requirements as demanded by exigencies of service.
2. The NIT (notice inviting tender), Bid documents (Qualifying and Financial), letter of intent approved rates, annexed hereto and such other additional particulars, instruction, drawings, work orders as may be found requisite to be given during execution of the work shall be deemed and taken to be an integral part of the contract and shall also be deemed to be included in the expression "The agreement" or "the contract" wherever herein used.
3. The contractor shall also supply the requisite number of workmen with means & materials as well as tools, appliances, machines, implements, vehicles for transportation, cartage etc. required for the proper execution of work within the time prescribed in the work orders.
4. The contractor hereby declares that nobody connected with or in the employment of the department of telecommunications / DTS is not / shall not ever be admitted as partner in the contract.
The contractor shall abide by the terms and conditions, rules, guidelines, construction practices, safety precautions etc. stipulated in the tender documents including any correspondence between the contractor and the government having bearing on execution of work and payments of work to be done under the contract.

In witness whereof the parties present have here into set their respective hands and seals the day and year in

Above Written:

Signed sealed & Delivered by the
above named contractor in
the presence of .

Witness:

- 1.
2. Signed & delivered on behalf of the President of India by the

Witness:

- 1.
- 2.

SECTION XI
LETTER OF AUTHORIZATION FOR ATTENDING BID OPENING

Tender Number _____

Subject: Authorization for attending bid opening on _____ (date) in the tender of _____

Following persons are hereby authorised to attend the bid opening for the tender mentioned above on behalf of _____

_____ (Bidder) in order of preference given below.

Order of Preference

Name

Specimen Signatures

I

II

Alternate

Representative

Signature of
bidder or

Officer authorised to sign the bid documents
on behalf of the bidder.

1. Maximum of two representatives will be permitted to attend bid opening. In cases where it is restricted to one, first preference will be allowed. Alternate representative will be permitted when regular representative are not able to attend
2. Permission for entry to the hall where bids are opened may be refused in case authorization as prescribed above is not recovered.

SECTION: XII
LIST OF THE DOCUMENTS TO BE SUBMITTED ALONG WITH QUALIFYING BID

The tenderer will have to submit the following documents/deposits with the Technical Bid. Any bid not accompanying the below mentioned documents/deposits will be liable to be rejected.

1. Bid Security in accordance to clause No. 02 of Section I.
The security (EMD) is required to protect the Purchaser's interests against the risk of bidder's conduct, which would warrant forfeiture of the bid security. The Earnest Money should be Demand Draft/FDR or Banker's cheque (pay order), drawn in the favour of the Accounts Officer (Cash) BSNL, O/o GMTD Sambalpur, payable at Sambalpur with technical bid or through NEFT/RTGS as mentioned earlier.
2. Tender Document(s), in original, must be duly filled in and signed by tenderer or his authorized representative along with seal on each page. All corrections and overwriting must be initiated with date by the tenderer or his authorized representative.
3. The bidder should have experience for successful execution of OF Cable laying/Maintenance of OF Cable routes and associated works in last seven financial years (2011-12 to 2017-18) in BSNL/MTNL/DOT/Central Govt. /State Govt. /PSUs in anywhere in India with satisfactory completion of work as given below:
 - (a) One year experience of any one financial year at least 80% of estimated cost of the zone.

OR
 - (b) Two year experience of any two financial years at least 50% of estimated cost of the zone in each financial year.

OR
 - (c) Three year experience of any three financial years at least 40% of estimated cost of the zone in each financial year.
4. The Experience Certificate in this regard must be issued by an officer not below the rank of JAG level or equivalent officer attested by the Gazetted Officer/Notary.
5. Photo copy (attested by Gazetted Officer/Notary) of PAN card in the name of Firm/Company. In case of Proprietorship, the PAN in the name of Proprietor may be acceptable.
6. Proof for the registration of the firm (original affidavit duly notarized in case of proprietary firm, attested copy of partnership deed in case of partnership firm and attested MOU in case in Limited Company).(Attestation by G.O./Notary/self attested).
7. Original Solvency Certificate issued by Nationalized/Scheduled Bank of 40% of advertised tender value in favour of SSA Head. The Solvency Certificate shall not be older than the date of issue of NIT.
8. Valid at the time of agreement, Character Certificate issued by District Magistrate for Sole Proprietor in case of proprietorship firm/All Partners, in case Partnership Firm/All Directors in case of Limited Company .
9. Original "Power of Attorney" in case person other than the tenderer has signed the tender documents.
10. Photo copy (attested by Gazetted Officer/Notary/self) of GST Registration, EPF registration &ESI Certificates.
11. Declaration on prescribed proforma (at page-64) for NO NEAR RELATIVE in BSNL on stamp paper of Rs. 10/- duly Notarized in original.
12. A certificate on stamp paper regarding declaration that he has not been black listed OR debarred from participation in tender anywhere in BSNL/MTNL/DOT. An affidavit of this effect on the stamp paper of Rs. 10/- is required to be attached in original.
13. All documents enclosed with tender documents or uploaded on Tender wizard should be self attested by bidder or attestation by G.O./Notary.
14. Self attested copy of latest income tax return should be attached with the tender documents.

15. The bidder must have total turnover for last three financial years (put together) ending on 31st March 2017 equivalent to 1.5 times of the estimated value of the zone for which tenderer is bidding. The turnover certificate enclosed must be issued by a Chartered Accountant
16. If any error found in tender nit/document may be intimated to AGM (Planning) within 7 days and after word it will not be considered for correction please.
17. The bidder should read the method for preparation of bid mention of **Section –IV sl.no.12** carefully and follow the instructions accordingly.
18. The bidders who are registered holder of suitable certificate are exempted from payment of cost of document & EMD. The NSIC/MSME should be valid on the day of tender opening and should be submitted with a copy of renewed NSIC/MSME before the finalization of tender in case of laps of validity. The tendered item should be registered item in the NSIC/MSME. A copy of NSIC /MSME duty attested should accompany bid document for exemption.

The tender, which is not accompanied by the requisite bid security, shall be summarily rejected. Tender will not be accepted/received after expiry date and time. **GMTD Sambalpur** reserves the right to reject any or all tenders without assigning any reason what-so ever.

SECTION - XIII
RATES OF EMPTY CABLE DRUMS

These are the rates of the empty cable drums which have to be deducted from contractor's bills as per tender document.

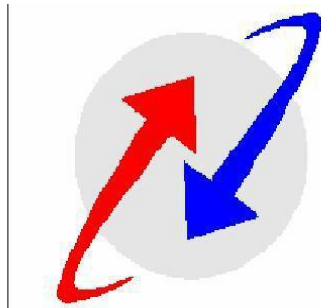
| Sl. No. | Size of drum | Rate of disposal |
|---------|--|-------------------------|
| 1. | Optical Fiber cable drums. 6F/12F/24F/48F/96F | Rs. 300/-per cable drum |

Note: These are fixed rates and no variation shall be acceptable from these rates.

**BID DOCUMENT
(FINANCIAL)**

Tender For Optical Fiber Cable Laying in Sambalpur SSA

TENDER No: W-111/ 2018-19 Dated 07-05.2018



BHARAT SANCHAR NIGAM LIMITED
(A Govt. of India Enterprise)

OFFICE OF THE GMTD SAMBALPUR

SECTION XIV
STANDARD SCHEDULE OF RATES FOR O.F. CABLE CONSTRUCTION WORKS (Rates given including all TAX except GST)

| Sl. No. | Description of Work | Unit | Scheduled rate (Rs.) |
|---------|---|-----------------|----------------------|
| R.1 | Excavation and back filling of trench of 165 cm depth as per description in the tender document (For all kinds of soils except rocky soils) | Per Meter | 91.00 |
| R.2 | Excavation and back filling of trench of 165 cm depth as per description in the tender documents (For rocky soils) | Per Meter | 187.00 |
| R.3 | Pulling of OF Cables in the HDPE / PLB Pipes | Per Meter | 10.00 |
| R.4 | Laying , straightening of HDPE/PLB Pipes | Per Meter | 8.00 |
| R.5 | Laying, of Half Round RCC Pipes / GI Pipes | Per Meter | 19.00 |
| R.6 | Construction of Joint chamber | Per chamber | 2800.00 |
| R.7 | Fixing Route indicators including supply of Route indicators as per tender specification. | Per Indicator | 346.00 |
| R.8 | Road boring/punching (Manual) without damaging the road as per tender specification. | Per Meter | 300.00 |
| R.9 | Concreting in 1:2:4 ratio as per tender specifications for (20cm width X 20cm depth) | Per Cubic Meter | 5700.00 |
| R.10 | Horizontal Directional Drilling (HDD) as per tender specifications. | Per Meter | |
| | (a) For 40mm bore per meter | Per meter | 350.00 |
| | (b)For 75mm bore Per meter | Per meter | 350.00 |
| R.11 | Pulling of OF Cable by blowing method (in case HDD of workonly) | Per meter | 10.00 |
| R.12 | Cutting Asphalted surface (15cmdepth) | Per meter | 80.00 |
| R.13 | Cutting concrete surface (15cmdepth) | Per meter | 80.00 |
| R.14 | Digging Test Pit (45cm X 90cm X 165cm) for tracing OF cable | Per Pit | 80.00 |
| R.15 | Drawing of OF cable 4F/6F/12F over head | Per meter | 12.00 |
| R.16 | Drawing of OF cable 24F & above over head | Per meter | 15.00 |
| R.17 | Laying & fixing of GI pipes on bridges & culverts with HDPE pipes inside & drawing PP nylon rope with iron clamp | Per meter | 41.00 |
| R.18 | Documentation (4 copies of documents per each route/section) | Each | 800.00 |

SECTION XV

Financial Bid Financial Bid (Rates to be quoted in Financial Bid Format on Tenderward only)

Zone No:-

To,
The GMTD
SAMBALPUR

Subjects: Our Financial Bid for Cable Construction Works on Optical Fiber in ZONE no. _____

Ref.:

Dear Sir,

Having examined the tender documents, terms and conditions stipulated therein, specifications of work etc., we the under signed offer to execute the cable construction works in conformity with the said specifications and conditions of contract at the percentage (below/at par/above) on standard schedule rates quoted as under

:

In figures %

BELOW

In words percent

OR

ATPAR

In words

OR

Above

In figures %

In words percent

(The quoted rate is applicable on all items (R.1 to R.18) of SOR.)

If our Bid is accepted, we shall submit the securities as per the conditions mentioned in the contract.

We agree to abide by this Bid for a period of 180days form the date of opening of financial bid and it shall remain binding upon us and may be accepted at any time before the expiry of that period.

Dated...../...../

Signature of the tenderer.....

Name of tenderer.....

Seal & Signature of Bidder