

PART – I

QUALIFYING BID DOCUMENT

Open Tender for Laying of OF Cable in Bellary SSA.

Tender No PLG/13-37/OFC/TDR/2009-10/2 dtd 30-5-2009



Bharat Sanchar Nigam Limited
(A Govt of India Enterprise)
O/o The G.M.Telecom, Station Road Bellary

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BHARAT SANCHAR NIGAM LIMITED
(A Govt. Of India Enterprise)
OFFICE OF THE GENERAL MANAGER TELECOM, BELLARY

Tender Schedule No: PLG/13-37/OFC/TDR/2009-10/2 dtd 30-5-2009

OPEN TENDER FOR LAYING of OF CABLE IN BELLARY SSA.

Part-I

1. Tender form NO:
2. Issue to (Name of the Tenderer) :

3. Name of the Zone :
4. Cost of blank tender form Rs.
5. D.D. No./ Rt No.

Date:

Asst. Genl. Manager (Plg)
o/o GMT Bellary



BHARAT SANCHAR NIGAM LIMITED
(A Govt. Of India Enterprise)
OFFICE OF THE GENERAL MANAGER TELECOM, BELLARY

Section I NOTICE INVITING TENDER

OPEN TENDER FOR LAYING OF OPTICAL FIBRE CABLE IN BELLARY SSA

NIT No : PLG/13-37/OFC/TDR/2009-10/2 dtd 30-5-2009

Sealed tenders (packing PVC tape/sealing wax) are invited for and on behalf of the BSNL by the General Manager Telecom, Bellary from the Eligible contractors both enlisted and non enlisted contractors for the works mentioned below :-

1. Trenching in all types of Soils up to a depth of 1.65 Mtrs.
2. Laying & Jointing of HDPE/PLB Pipes.
3. Laying and Jointing of GI Pipes.
4. Reinstatement of the trench.
5. Break down maintenance of OF cable on need basis.

Name of the work: Laying of OF Cable in Bellary SSA

1. Area of contract

| Name of the SDCA | Estimated cost of work | Cost of Bid Document (Non refundable) | Bid Security (E M D) | Security Deposit | Period of tender |
|--|------------------------|---------------------------------------|------------------------|------------------|------------------|
| Zone-I(Bellary Urban and Rural) | 10,00000 | 575/- | 25,000 | 1,00,000 | ONE YEAR |
| Zone_II (Hospet SDCA) | 15,00000 | 575/- | 37,500 | 1,50,000 | |
| Zone-III (Kurugodu, Siruguppa and Sandur SDCAs) | 16,20,000 | 575/- | 40,500 | 1,62,000 | |
| Zone-IV (Harapanahalli, H.B.Halli, Kudligi and Huvinahadagali SDCAs) | 22,50,000 | 575/- | 56,250 | 2,25,000 | |

2. ELIGIBILITY OF CONTRACTORS :

- a. The tenderer should have 50 Kms of Cable laying Experience. Certificate issued not below the rank of DGM is to be enclosed.
- b. The tenderer should have regular establishment, plant, Machinery & Vehicles.
- c. Successful tenderers have to obtain labour license, EPF Nos. as per rules.
- d. Work will be awarded only after getting the above certificates.
- e. Failing to produce these certificates will result in forfeiture of EMD.
- f. Separate tender for each zone is to be submitted with separate EMD amount.

g. Separate financial BID for each Zone is to be submitted

h. The financial BID for which EMD has been paid only will be considered for *evaluation*.

i) Contractors to pay EPF by cheque and produce proof to BSNL

3. Period of Contract : One year from the date of agreement (Until otherwise specified) or completion of work put to tender, whichever is earlier.
4. Mode of Payment: Tender document could be purchased by Paying Rs 575/- the cost of bid document in cash or DD drawn in favour of BSNL, Accounts Officer (Cash), Bellary SSA, payable at Bellary. If the document is got downloaded, from our website www.karnataka.bsnl.co.in Rs.575/-, the cost of the Tender document is to be paid through a DD drawn from any Nationalised Bank in favour of BSNL, A.O.(Cash), payable at Bellary. The DD should be kept in the cover containing BID security along with completed tender documents in the cover containing Bid Security along with the completed tender documents. Bid security to be paid in the Form of crossed Demand Draft issued by a scheduled Bank Drawn in favour of BSNL, Accounts Officer (Cash), Bellary SSA, payable at Bellary.
5. Tender document containing detailed description of work and terms and conditions can be had from : SDE (Plg) O/o GMT Bellary Phone 08392 272699
6. Sale of tender documents (on all working days) : Between 10:00 hrs to 16:00 hrs from 2-6-2009 to 22-6-2009
7. Time and last date of submission of Bid up to : 14:00 hrs on 23-6-2009
8. Time & Date of opening of tender : at 15:00 hrs on 23-6-2009

The sequence of opening of the tender is as follows:

1. Sealed Bid security cover will be opened first. If the Bid security is correct, then only-
2. The Sealed cover containing the qualifying Bid will be opened. And if the document in the qualifying Bid are correct. then only-
3. The Sealed cover containing the financial bid will be opened. And the rates quoted will be recorded. The contractors are required to carryout the works throughout the SSA.

As these works are of urgent in nature contractors are carryout the works immediately after getting the intimation from the site Engineer.

They are required to carried out work through out the year. But as and when they are intimated about works to be taken up.

The tenders will not be accepted or received after the expiry of the time and date as mentioned at SI.No.7 above. The G M Telecom Bellary reserves the right to reject any or all tenders without assigning any *reason what so ever*.

Asst. General Manager (Plg)

o/o GMT, Bellary - 1

Ph : 08392-232300

Fax : 08392-276900

Copy to:

1. The Accounts Officer(cash) o/o GMT Bellary: For information and n/a please.
2. The C.G.M.Telecom, Karnataka circle, Bangalore
3. Notice Board o/o GMT Bellary

SECTION – II

BID FORM

Tender No: PLG/13-37/OFC/TDR/2009-10/2 dtd 30-5-2009

To

The G M Telecom,
Bellary.

Dear Sir,

Having examined the conditions of contract and specifications including, addenda No..... the receipt of the which is hereby duly acknowledged, we, undersigned, offer to execute the work of Trenching and pipe laying In conformity with said drawings, conditions of contract and specifications as my 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 240 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 formal 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 Authorized

Signatory.....

In capacity of

Duly authorized to sign the bid for and on behalf

Of

Witness

Address.....

Signature.....

SECTION – III
TENDERER'S PROFILE

Passport size photograph of the tenderer

General:

1. Name of the Tenderer / firm.....
2. Name of the person submitting, the tender whose photograph is affixed Sri/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 attested copies of documents of registration/incorporation of your firm with the competent authority as required by business law)

7. Name of the Proprietor/Partners/Directors.....
.....

8.Tenderers Enlistment Certificate details

- a. Category
- b. Number
- c. Issuing Telecom Circle
- d. Valid up to

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

09. Tenderer's bank, its address and his current account number.....
10. Permanent Income ax Number, Income Tax circle.....

(Please attach a copy of last Income Tax return)

11. Infrastructural capabilities:
 - a. Capacity of trenching per day (InMetres).....
 - b. Capacity of pipe laying, per day (in Metres).....
 - c. Capacity of engaging mazdoors per day

d. Particulars of vehicles available with the *tenderer*:

Type of Vehicle(s)

Registration Number

e. particulars of other machines possessed by the contractor which can help in trenching, pipe laying:

12. Details of Technical and Supervisory Staff:

CERTIFICATE

I.....S/o.....hereby certify that none of my relative(s) as defined in the Tender document is/are employed in BSNL unit as per details 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.

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

Place :

Date:

Signature of tenderer/Authorized Signatory.....

Name of the *Tenderer*.....

Seal of the Tenderer

SECTION - IV
INSTRUCTIONS TO BIDDERS

A. INTRODUCTION :

1. DEFINITIONS

BSNL : The Bharat Sanchar Nigam Limited (A Govt. of India Enterprise)

Corporation : The Corporation means the Bharat Sanchar Nigam Limited any other department under the Ministry of Communications, on behalf of the BSNL. All references of :

Chief General Manager
General Manager
Dy. General Manager
Asst. General Manager
Divisional Engineer
Sub Divisional Engineer
Junior Telecom Officer
Chief Accounts Officer
Accounts Officer
Assistant Accounts Officer

Junior Accounts Officer

Including other officers in the Corporation, 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 Bharat Sanchar Nigam Limited: under the Ministry of Communications, Government of India.

I. **The General Manager Telecom, means The General Manager Telecom Bellary, and his successors.**

1. **The jurisdiction of the General Manager Telecom Bellary means jurisdiction of Bellary Telecom Dist. Bellary.**

Representative of General Manager Telecom : Representative of the General Manager Telecom means officer and staff for the time being in the General Manager Telecom, Bellary, deputed by the General Manager Telecom Bellary for inspecting or supervising the work or testing etc.

Engineer - In - Charge : The Engineer - In - Charge means the Engineering Officer nominated by the BSNL to supervise the work, under the contract. (Minimum Divisional Engineer level Officer).

Site Engineer : Site Engineer shall mean an SDE of the Corporation who may be placed by the **General Manager Telecom Bellary**, as in-charge of the work at site at any particular period of time.

A/T Unit : A/T Unit shall mean Acceptance and Testing Unit *of the BSNL.*

A/t Officer : An Officer authorized by T&D Circle to conduct A/T.

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 BSNL and the contract, 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 constructed and taken to mean the works by or by virtue of the contract contracted to be executed temporary or permanent, and whether original, substituted or additional.

Contractor : The Contractor shall mean the individual, firm or company, enlisted with BSNL 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 assignees of such individual, firm or company.

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.

Schedule(s) : The Schedule(s) referred to in these conditions shall mean the relevant schedule(s) or the standard schedule of rates mentioned in the document.

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 used for the purpose of carrying out the contract.

Normal time or Stipulated time : Normal time or Stipulated time means time specified in the work order to complete the work.

Extension of Time : Extension of Time means the time granted by the BSNL to complete the work beyond the normal time or stipulated time.

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.

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.

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

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 has been issued.

2. ELIGIBILITY OF BIDDERS :

The invitation of bids is open to all eligible contractors both enlisted and non enlisted having experience in DOT, BSNL,Railways,PWD,GESCOM or any other organization having experience in cable laying as per their eligibility mentioned in NIT of this tender document.

B. THE BID DOCUMENTS :

3. BID DOCUMENTS :

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

3.1.1 Qualifying Bid

Notice inviting tender.
Bid Form.
Tenderer's Profile.
Instructions to Bidders.
General (Commercial) conditions of the contract.
Special conditions of contract.
Scope of work and jurisdiction of the contract.
Trenching & pipe laying construction specifications.
Material Security bond form.
Agreement (Sample)
Letter of Authorization for attending Bid opening.
List of Documents to be submitted along with qualifying Bid.

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 Corporation in writing or by fax or cable at the Corporation's mailing address indicated in the invitation for Bids. The Corporation 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 Corporation shall be sent to all the prospective bidders who have purchased the bid documents and all such clarification issued by the Corporation *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 Corporation 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 or FAX to all prospective bidders on the address intimated at the time of purchase of bid document from the Corporation and these amendments will be binding on them.
- 5.3 In order to afford prospective bidders reasonable time to take the amendments into account in preparing their bids, the Corporation 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 Corporation, 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 :

Bid Security in accordance to clause No.8.

Tender document(s) in original, duly filled in and signed by tenderer or his authorized representative along with seal on each page. All corrections and overwriting must be initialed with date by the tenderer or his authorised representative.

Latest income tax clearance certificate.

The registration of the firm. Authenticated copy of partnership deed in cases of partnership firm.

Solvency certificate from the banker of the tenderer-up to works costing Rs.20 lacs is Rs.2 lacs; For works costing more than Rs.20 lacs is Rs.5 lacs. The solvency certificate shall not be earlier than the date of issue of NIT.

Bid Form, duly filled in as per Section II.

Tenderer's profile, duly filled in as per Section III of the tender document.

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

List of qualified experienced personnel, who are working for the tenderer, *who will be deployed for the work*.

8. BID SECURITY :

- 8.1 The bidder shall furnish, as part of his bid, a bid security (EMD) as specified in the NIT. No interest shall be paid by the Corporation on the bid security for any period, what so ever.
- 8.2 The bid security is required to protect the Corporation against the *risk of bidders* conduct, which would warrant the security's forfeiture, pursuant to Para 8.7.
- 8.3 Bid Security shall be paid in the form of Crossed Demand Draft issued by a Nationalized/Scheduled bank, drawn in favour of Accounts Officer, O/o G M T Bellary.
- 8.4 A bid not secured in accordance with Para 8.1 & 8.3 shall be rejected by the Corporation as non responsive.
- 8.5 The bid security of the unsuccessful bidder will be refunded as promptly as possible but not later than 30 days after the expiry of the period of bid validity prescribed by the Corporation.
- 8.6 The successful bidder has to pay the security deposit as shown in Section I of bid document within seven days from the receipt of provisional acceptance letter from this office. The security deposit can be paid by cash or DD or bank guarantee. DD can be drawn in favour of AO (cash) BSNL, o/o GMT Bellary. Bank Guarantee should cover the entire contract period. If the successful bidder fails to deposit the Security deposit amount, EMD paid by him will be forfeited. After payment of SD the EMD of the successful bidder will be refunded.
- 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 Corporation or
- 8.7.3 In case of successful bidder, if the bidder fails :
To sign the agreement in accordance with the relevant clause, or
To furnish Material Security in accordance with relevant clause.

The bid security shall be forfeited and the Acceptance of the Tender shall be re-considered and revoked. The Tenderer may be debarred from participating in similar tenders called for by the BSNL for a period of SIX MONTHS from the date of issue of the order for revocation;

BID PRICES :

- 9.1 The bidder shall give the total composite price inclusive of all levies and taxes, packing, forwarding, freight and insurance, in case of material 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 Corporation 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 Prices 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 of 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.*

PERIOD OF VALIDITY OF BIDS :

- 10.1 Bid shall remain valid for 240 days from date of opening of the bid (Qualifying Bid). **A BID VALID FOR A SHORTER PERIOD SHALL BE REJECTED BY THE CORPORATION AS NON-RESPONSIVE.**
- 10.2 The Corporation 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.**
- 10.3 The rates quoted in the bid shall be firm and valid for any other work order for extension of the same route or modification of the route or branching in case of spur routes that may be issued within the above period and remain so until the completion of the work assigned under such a work order.

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

METHOD OF PREPARATION OF BID :

- 12.1 Bid for each zone should be submitted in three envelopes placed inside a main Cover. *These envelopes should contain the following*

12.2

| Envelope | Marked on the Cover | Contents of Envelope |
|-----------------|----------------------------|---|
| First | Bid Security for Section | Containing Bid security as per the clause 8 of Section IV. |
| Second | Qualifying Bid | Containing documents as per the clause 7 of Section IV except bid security. |
| Third | Financial Bid for Section | Rates duly quoted by the tenderer in the <i>prescribed format</i> . |

On all these envelopes the name of the firm and whether "Bid Security" OR "Qualifying" OR "Financial" bid must be clearly mentioned and should be properly sealed (with sealing wax/packing PVC Tape). These envelopes are to be placed inside an outer envelope and properly sealed (with sealing wax/packing PVC Tape). The tenders which are not submitted in above mentioned manner shall be summarily rejected.

12.3 All envelopes (3 inner & one outer) must bear the following :

Tender for Trenching Pipe laying, Puling of OFC and Reinstatement works.
Zone NO (SDCAs:)

"NOT TO OPEN BEFORE (DUE DATE OF TENDER)"
(Tender No. _____)

Asst General Manager (Plg), O/o G M Telecom Bellary

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

12.5 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.

SUBMISSION OF BIDS :

13.1 Tenders should be dropped in person in the tender box placed in the office of Assistant General Manager (Plg), O/o G.M.Telecom, BSNL, station Road, Bellary, before the closing (Date & Time) of tender, as mentioned in NIT. The tenderer has to ensure the delivery of the bids at the correct address. Tender if sent by post, must be in double covering. The inner cover also must be sealed.

The Corporation 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 BSNL 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 :**

Tenders will not be received after the specified time or 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. **MODIFICATION AND WITHDRAWAL OF BIDS :**

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

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

E. BID OPENING AND EVALUATION :

16 **OPENING OF BIDS BY THE CORPORATION :**

16.1 The Corporation shall open the bids in the presence of bidders or his authorised representatives who choose to attend, at 15.00 Hrs. on due date. The bidder's representative 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 Section-XI).

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

16.3 The bids shall be opened in the following manner :

16.3.1 The bid 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 envelope of all the bids with date.

- 16.3.2 The envelopes containing the tender offer and not properly sealed, as required vide relevant Para 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 First the outer envelope containing the three envelopes be opened. The bid opening committee shall initial on all three envelopes with date.
- 16.3.4 Among these three envelopes, the envelope 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 "**QUALIFYING 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 bid opening committee members.
- 16.3.6 After recording of the "**QUALIFYING BID**" the TOC will place all the financial bids submitted by the bidder in an envelope and will properly seal it with wax or packing PVC Tape for keeping *safe custody.*
- 16.4 The financial bid shall be opened in the following manner :
- 16.4.1 The envelope marked "**FINANCIAL BID**" will be opened only for qualified tenders in "**QUALIFYING BID**".
- 16.4.2 The date and time of opening of "FINANCIAL BID" shall be conveyed to all the bidder's who have qualified in QUALIFYING BID and their representative shall be allowed to attend the financial bid opening.
- 16.4.3 After opening the "**FINANCIAL BID**" the bidder's name, bid prices, modifications, bid withdrawals and such other details as the Corporation, at its discretion, may consider appropriate, will be announced at the opening.
- 16.4.4 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 CORPORATION :**
To assist in examination, evaluation and comparison of bids, the Corporation 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 Corporation shall evaluate the bids to determinate 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 attest the correction of the errors with full signature, his bid shall be rejected.
- 18.3 Prior to the detailed evaluation, pursuant to clause 21, the Corporation will determine the substantial responsiveness of each bid in 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 Corporation's determination of bid's responsiveness is *to be based on the contents* of the bid documents without deviations. The Corporation'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 Corporation and shall not subsequent to the bid opening be made responsive by the bidder by correction of the non-conformity.
- 18.5 The Corporation 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 affect the relative ranking of the bidder.
19. **EVALUATION AND COMPARISON OF SUBSTANTIALLY RESPONSIVE BIDS :**
- 19.1 The Corporation 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 CORPORATION :**
- 20.1. Subject to clause 17 no bidder shall try to influence the Corporation 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 Corporation in the Corporation'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 Corporation shall consider award of contract only to those eligible bidders whose offers have been found technically, commercially and financially acceptable.
22. **CORPORATION'S RIGHT TO VARY QUANTUM OF WORK :**
The Corporation, at the time of award of work under the contract, reserves the right to decrease or increase the work by up to 25% of the total quantum of work specified in the schedule of requirements without any change in the rates or other terms and conditions.
23. **CORPORATION'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS :**
The Corporation reserves the right to accept or reject any bid and to annual the bidding process and reject all bids, at any time prior to award of contract without

assigning any reason what-so-ever and without thereby incurring any liability to the affected bidder or bidders on the grounds for the Corporation's action.

24. ISSUE OF LETTER OF INTENT :

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

24.2 The bidder shall within 21 days of issue of letter of intent, give his acceptance along with material security in conformity with clause 5 (i) section-V, 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 Corporation with in a week of submission of material security as per as 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 into the performance security deposit, which will be held by the Corporation till the completion of warranty period.

26. ANNULMENT OF AWARD :

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

SECTION V

GENERAL (COMMERCIAL) CONDITIONS OF THE CONTRACT

1. APPLICATION :

The General condition shall apply in contracts made by the Corporation for the execution of trenching and pipe laying works.

2. STANDARDS :

The works to be executed under the contract shall confirm to the standards prescribed in the 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. SUBCONTRACTS :

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

5. SECURITY :

i) Material Security :

- a) The Successful tenderer will have to deposit material security as mentioned in the scope of work, subject to a minimum of Rs. 2 lakhs in the form of bank guarantee (valid upto and including six months after, the period of the contract) from a scheduled bank and in the material security bond form provided in the bid document, Section –IX, Material security can also be submitted in the form of Crossed Demand Draft drawn in favour of A O (Cash) BSNL, Bellary issued by a schedule bank and payable at Bellary. The Material security will be a non-interest bearing deposit, for any period whatsoever.
- b) The contractor at any point of time will not be issued stores costing more than materials 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 General Manager, Telecom, Bellary shall be final and binding.
- c) The proceeds of the material security shall be payable to the Corporation 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”.

ii) PERFORMANCE SECURITY :

a) The contractor shall permit the corporation, at the time of making any payment to him for work done under the contract, to deduct such sum in addition to the sum already deposited as security deposit an amount to the tune of 10 % of running bills/ final bill.

b) The proceeds of the performance security shall be payable to the corporation as compensation for any loss resulting from the contractor’s failure to complete its obligations 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 document.

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 sub Divisional Engineer In-Charge of trenching and pipe laying works 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 Divisional Engineer.

6.4 The sub 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 Corporation 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 General Manager, Telecom, Bellary the contractor is not executing the work at the required pace.

7. EXTENSION OF THE 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 the 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 majeure, 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 JAG level in-charge of trenching and pipe laying 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.

7.2.2 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.

7.2.3 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.

7.2.4 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 Corporation. In such cases, the Engineer – In- Charge with the approval of competent Authority to sanction EOT, may issue extension of time suo moto without waiting for contractor to make an application for EOT. *Entry of hindrances shall be*

made in the Hindrance Register. The BSNL 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 & ACCEPTANCE TESTING

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 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 :

8.1.5 **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. The measurement of depth shall be recorded at each point of measurement (POM) in the measurement book in meters in the multiples of 5 Cms. For example 97 Cms will recorded as 95 Cms and 103 Cms as 105 Cms. The points of measurements shall preferably be at an interval of 5 Meters, starting from 0 (zero) meter in that segment provided the depth of excavation is uniform in that interval.

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 after evaluating on proportionate rate on depth basis |
|-------------------------|--|
| <165 Cms to > 150 Cms | 5% of approved rates. |
| < 150 Cms, to > 130 Cms | 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.

- 8.1.6 The contractor shall sign all the measurements 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, then 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.
- 8.1.7 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 trenching and pipe laying and bills will be passed only when he is personally satisfied of the corrections 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 payments 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 PLB pipe laying work.

8.2 Inspection and Quality Control :

- 8.2.1 The Quality of works : The importance of quality of trenching and pipe laying works need not be over-emphasized. The quality and availability of long distance media and efficiency of the reliable media connectivity to exchanges depends upon quality of trenching and pipe laying. 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 works 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 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 contractor's 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 Corporation. 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 Corporation in the site order book. The site order book is to be maintained in the prescribed format. The Contractor or their authorised representatives shall also be at liberty to note their difficulties etc in these books.

The site order book 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 taken by A/T Officer are found to be lesser than the measurements 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 A/T Officer without and additional cost to the Corporation.
- 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 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 Corporation 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 prepare 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 the 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 Corporation, the Corporation may proceed to do the work at the contractor's risk and costs, but without prejudice to any other rights which the Corporation may have against the contractor in respect of such defects.
- 9.3 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 BSNL 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 to the refund the amount of over payment and it shall be lawful for BSNL 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 the contract in respect of any work executed by him under it, the amount of such under *payment shall be duly paid by BSNL to the contractor.*

- 10.2 Provided that BSNL shall be entitled to recover any sum overpaid, nor 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 General Manager Telecom 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 appropriated by the BSNL for the payment of a sum of money arising out or under any other contract made by the contractor with the BSNL.

11 PAYMENT TERMS :

11.1 Procedure for Preparation and settlement of Bills :

11.1.1. All items of work involved in the work order shall be completed in all respects before preferring the bills for the work. The provision of running bill has 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 the S.D.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 S.D.E in-charge of work shall scrutinize the 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.(Payable Copy)
- Second copy of bill with second copies of measurement sheets of measurement book (Not for payment).
- Third copy of the bill with photocopies of measurement sheets (Not for Payment).

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-à-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. *10 % of the bill amount towards*

Performance Security Deposit and Statutory taxes (Income Tax etc.) applicable to contractor 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 can not be completed within reasonable time due to non-availability of stores or any other reasons and where the Corporation is responsible for delay, the concerned G M may 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 after acceptance testing of all the works and submit the same to SDE 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 the 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 godown as surplus with requisite verifications from store in-charge / SDE in-charge of work.
- Letter of grant of E.O.T(s). If work could not be completed within stipulated time.
- Six set of bound documentation.

11.1.2.1 The S.D.E. in charge of work shall scrutinize the final bill against the work 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 SDE 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.

- Bills prepared by the contractor.
- Material reconciliation statement.
- Measurement Book.
- A.T Certificates.
- The site order book.
- *The hindrance register.*

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

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*.

11.1.2.3 The office cell dealing with OFC bills shall process the bills in the estimate file of the concerned work and scrutinize the bill vis-à-vis work order issued, sanctioned provisions in the estimate etc. The office cell shall also scrutinize the bill to recover all the liabilities of the contractor and statutory taxes besides 10 % payments against security deposit. The bill shall be passed, after necessary scrutiny by works section, by the officer competent to pass the final bill.

11.2 Procedure for payment for sub standard works :

11.2.1.1 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 of any inferior description or that any materials or articles provided by him for execution of work or unsound or of 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.

11.2.1.2 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 later 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 supervision 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 an 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/removed corporation ally or through some other agency at the risk and cost of the contractor.

11.2.1.3 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.

- 11.2.1.4 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 General Manager / GM Telecom , the items in question will not materially deteriorate the quality of service provided by the construction , the General Manager/GMTelecom , 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 the work, 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 as sub standard and recommended the rates payable for sub standard work which shall not exceed 60% of the approved rates of the item 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.

12 PENALTY CLAUSE :

- 12.1 Delays in the contractor's performance:

- 12.1.1. 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 Corporation. 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 (ten) percent of the cost of the work awarded.

- 12.1.2 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 one of the conditions of such agreement may be stipulation for the contractor to agree for realisation of penalty for delay at a higher rate as may be agreed between the Divisional Engineer and contractor.

- 12.1.3 Penalty for delay in completion of the work shall be recoverable from the bills of the contractor and/or by adjustment from the SD 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.*

- 12.1.4 In case of slow progress of the work in a section which have been awarded to a particular contractor, and the public interest does nor permit extension of time limit for completion of work, the General Manager 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.
- 12.1.5 The Deputy General Manger Telecom reserves the right of cancel the contract and forfeit the security deposit if the contractor fails to commence the work within 7 days after issue of the work order.

12.2 Penalty for causing inconvenience to the Public :

- 12.2.1 To ensure progress during the execution of work and to cause minimum inconvenience to the public, the contractor shall not dig a trench of more than 200 meters at a stretch in a route at a time. He shall cause to lay pipe 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 pipe laying by digging paved surfaces. In the event of contractor falling to comply with, these conditions, a penalty of recovery upto Rs.300/- per day the trench is kept open beyond the time limit allowed may be imposed by the Corporation. This penalty will be in addition to that payable for delay or slow work.
- 12.2.2 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 General Manager Telecom shall be final and binding.

12.3 Penalty for cutting / damaging the old cable :

- 12.31. 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 schedule 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.500.00 (Five Hundred) |
| Above 100 pairs & up to 400 pairs | Rs.1,000.00 (One Thousand) |
| Above 400 pairs | Rs.2,000.00 (Two Thousand) |
| OF Cable of any size | Rs.5,000.00 (Five Thousand) |

Besides the above penalty, the contractor shall carryout 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.

12.4 Penalty to damage stores / materials supplied by the Corporation while laying:

- 12.4.1 The contractor while taking delivery of materials supplied by the Corporation at the designated place shall thoroughly inspect all items before taking them over. In case of execution of the work, if any materials *is found damaged/working unsatisfactorily*,

then a penalty equivalent to the cost of material + 10% as penalty shall be recovered from the contractor's payment/securities.

12.4.2 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.

13. Rescission / Termination of Contract :

13.1 Circumstances for rescission of contract : Under the following conditions the competent authority may rescind the contract.

- a) If the contractor commits breach of any item of terms and conditions of the contract.
- b) 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 the due date for completion or the contractor had already failed to complete the work by that date.
- c) 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.

13.2 Upon rescission of the contract, the security deposit of the contractor shall be liable to be forfeited and shall be absolutely at the disposal of the BSNL as under.

13.2.1 Measurement of works executed since the date of last measurement and upto the date of rescission of contract shall be taken in the presence of the contractor or his authorized 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 authorized for this purpose after expiry of due date given for joint measurement. The measurement taken by the officer so authorized shall be final and no further request for joint measurement shall be entertained.

13.2.2 The unused material (supplied by the Corporation) available at site, shall be transported back by the Corporation to the Telecom Store at the risk and cost of the contractor. If any such materials is found damaged/lost then the penalty shall also be recovered from the contractor as per conditions in tender documents / bid.

13.2.3 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 Corporation shall get the unexecuted work completed through any other contractor approved by General Manager Telecom at the approved rates of that particular section or to execute the work Corporation ally, as is convenient or expedient to the Corporation at the risk and cost of the contractor. In such a event no compensation shall be payable by the BSNL to the contractor towards any inconvenience/loss that he may be subjected to as a result or such an action by the BSNL. In this regard the decision of General Manager Telecom 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 BSNL under the contract or any other account whatsoever any where in the Corporation *or from a security deposit.*

13.2.4 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.

13.3 Termination for Insolvency :

13.3.1 The Corporation 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 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 Corporation*.

13.4 Optional Termination by BSNL (Other than due default of the contractor)

13.4.1 The BSNL 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 the balance work exclusive of purchase and/or whole of material, machinery and other equipment for use in or in respect of the work.

13.4.2 In the event of the termination of the contract, the contractor shall forthwith clear site of all the contractor's materials, machinery and equipment's and hand over possession of the work/operations concerned to the BSNL or as the BSNL may direct.

13.4.3 The BSNL may, at its option, cancel or omitecution of one or more items of work under this contract and may part of such items without any compensation whatsoever to the contractor.

13.5 Issuance of Notice :

13.5.2 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 delays 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.

13.5.3 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 Corporation.
- 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 Corporational security arrangement in replacement of the contractor watch and ward shall be made forthwith. Expenses on this account are recoverable from the security deposit or any amount to the contractor.

14. **INDEMNITIES**

- 14.1 The contractor shall at all times hold the BSNL harmless and indemnify from against all action, suits, proceedings, works, cost damages, charges claims and demands of every nature and descriptions, brought or procured against the BSNL, its officers and employees and forthwith upon demand and without protect or demur to pay to the BSNL 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 BSNL 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. I addition the contractor shall reimburse the BSNL or pay to the BSNL 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 BSNL arising out of or incidental to or in connection with the operation covered by the contractor.
- 14.2 The contractor shall at his own cost at the BSNL'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 BSNL.

15 **FORCE MAJEURE :**

- 15.1 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 by 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 by 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 Corporation as to whether the works have been so resumed or not shall be final and conclusive, provided further that if the performance, in whole or part of any obligation under this contract is prevented or delayed by reason of any such event for a period exceeding 60 days either party may, at his option terminate the contract.
- 15.2 Provided also that if the contract is terminated under the clause, the Corporation shall be at liberty to take over from the contractor *at a price to be fixed by the*

Corporation, 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 portion thereof as the Corporation may deem fit excepting such materials bought out components and stores as the contracts may with the concurrence of the Corporation elect to retain.

16. **ARBITRATION :**

- 16.1 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, Southern Telecom Project or in case his designation is 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, Southern Telecom Project or by whatever designation such officers may be called (hereinafter referred to as the said officer) and if the Chief General Manager, Southern Telecom Project) 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 BSNL Servant or that he has to deal with the matter to which the agreement relates or that in the course of his duties as BSNL Servant ha 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.*
- 16.2 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 Conciliation 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.
- 16.3 The venue of the arbitration proceeding shall be the Office of the Chief General Manager, Southern Telecom Projects or such other places as the arbitrator may decide. The following procedure shall be followed.
- 16.3.1 In case parties are unable to reach a settlement by themselves, the dispute should be submitted or arbitration in accordance with contract agreement.
- 16.3.2 There should not be a joint submission with the contractor to the sole Arbitrator.
- 16.3.3 Each party should submit its own claim separately and may oppose the claim put forward by other party.
- 16.3.4 *The onus of establishing his claims will be left to the contractor.*

- 16.3.5 Once a claim has been included in the submission by the contractor, a reiteration or modification thereof will be opposed.
- 16.3.6 The "points of defence" will be based on actual conditions of the contract.
- 16.3.7 Claims in the nature of ex-gratia payments shall not be entertained by the Arbitrator as these are not contractual.
- 16.3.8 The question whether these conditions are equitable shall not receive any consideration in the preparation of " points of defence".
- 16.3.9 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 disputes

17. SET OFF :

- 17.1 Any sum of money due and payable to the contractor (including security deposit refundable to him) under this contract may be appropriated by the Corporation 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 Corporation 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 Corporation or Govt. or such other person or persons contracting through *Govt. of India*.

SECTION –VI

SPECIAL CONDITIONS OF CONTRACT

1. GENERAL

- 1.1 The work shall be accepted only after Acceptance Testing carried out by T&D Team, designated by the Corporation, as per prescribed schedule and work/material passing the test successfully.
- 1.2 The Corporation reserves the right to disqualify such bidder who have a record of not meeting contractual obligations against earlier contractors entered into with the Corporation.
- 1.3 The corporation reserves the right to black list a bidder for suitable period in case he fails to honour his bid without sufficient grounds.
- 1.4 The Corporation reserves the right to counter offer Price(s) against price(s) quoted by any bidder.
- 1.5 Any clarification issued by corporation, 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 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 The work in each section may be split up between two or more contractors or accept any tender in part and not entirely if considered expedient by the General Manager / GM Telecom .
- 1.9 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 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 General Manager shall be final.
- 1.10 If any time after the commencement of the work, the Corporation may feel that execution of whole or part of work, as specified in the tender is not required to be carried out, then the Corporation 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 compensation by reason of any alterations having which shall *involve any curtailment of the work as originally contemplated.*

- 1.11 Whenever any claims against the contractor for the payment of a sum of money arises out of or under the contract, the corporation shall be entitled to recover such sum by appropriating in part or whole the security deposit of the contractor, and to Sell any BSNL promissory notes etc., forming the whole or part of such security or running / Final bill pending against any contract with the corporation. 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 BSNL. Should this sum not sufficient to cover the full amount recoverable the contractor shall pay to corporation on demand the balance remaining due.
- 1.12 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 BSNL is allowed to work as a contractor for a period of two years after his retirement from BSNL service without the previous permission of BSNL. This contract is liable to be cancelled if either the contractor or any of his employee is found at any time to be such a person who hadn't obtained the permission of BSNL as aforesaid before submission of the engagement in the contractor's service as the case may be.
- 1.13 In the event of the contractor being, adjudged 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 conditions herein specified, The General Manager Telecom , shall have the power to terminate the contract without any notice.
- 1.14 Without prejudice to any of the rights or remedies under this contract, if the contractor dies, the General Manager Telecom on behalf of the CMD, BSNL can terminate the contract without compensation to the contractor. However the General Manager 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 General Manager Telecom shall be the final.
- 1.15 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.

1.16 INTERPRETATION OF THE CONTRACT DOCUMENT:

- 1.16.1 The representative of the General Manager Telecom 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 the General Manager Telecom 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 familiarize all his supervisory personnel with the contents of all the *contract documents*.

1.1 NOTIFICATION

- 1.1.1 The contractor shall give in writing to the proper 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 operations through out 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.

1.2 SHUT DOWN ON ACCOUNT OF WEATHER CONDITIONS:

- 1.2.1 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 BSNL or deemed advisable on account of bad weather conditions or other force major conditions.

2 STORES SUPPLIED BY THE CORPORATION:

- 1.3 At no point of time the contractor shall be issued stores of value more than the contractor's material security as per the relevant clause. If at all the work requires more amount of materials to be issued to the contractor, then the security shall suitably be revised before the issue of the store and the contractor will not have any objection to it.
- 1.4 The contractor shall transport (including loading and unloading and unloading) all stores issued to him from store dump with in 30 Kms of the work, to the site of work at his own cost. The corporation shall not pay any transportation charges to the contractor,
- 1.5 All materials supplied to the contractor by the corporation shall remain the absolute property of corporation 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 General Manager. In case the materials like cable and accessories are taken delivery of by the contractor and stored at the site office /store of the contractor such 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 corporation at a place informed to him by the corporation, 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.
- 1.6 The contractor shall be responsible for the transportation of stores, storage and safe custody of all material supplied to him by the corporation, 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 deteriorations and discrepancy (inclusive of theft) in the quantity /*quality of the materials*.

- 1.7 The contractor shall submit a proper account every month of all materials supplied to him by the corporation 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 “ Corporation’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.
- 1.8 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 corporation.

2 EASEMENTS, PERMITS, LICENCES AND OTHER FACILITIES:

- 2.1 The contractor shall obtain / provide at his own cost all easements, permits and license necessary to do its work except for the following which shall be provided by the representative of DGM projects.
 - a. “Right of user “ easements and permits.
 - b. Railway and Highway crossing permits including bridge.
 - c. Canal / Stream crossing permits.
- 2.2 The contractor shall be fully responsible for angling and obtaining all necessary easements, permits and licenses, for moving all construction equipment, tools supplied materials and men across Railways and Highways, across public or private road as well as premises of any public utility within the right of user for bearing all costs that may be incurred in respect of the same.
- 2.3 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.
- 2.4 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, Telephones or poser 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 constructions and such contingency shall be deemed to have been providing for in the rates.
- 2.5 At location where the OF Cable trench is routed across or long railways or roads the contractor shall without extra cost provide and maintain such detours and road controls as are required by the railways or BSNL *or local agencies having jurisdiction*.

- 2.6 If the Corporation is not able to provide above mentioned permits etc., In time then the extension of time limits shall be provided as per EOT clause given in tender document.

3 QUALITY OF WORK:

- 3.1 The Corporation shall be the final judge of the quality of the *work and the* satisfaction of the Corporation in respect thereof set forth in the contract documents. Laxity or failure to enforce compliance with the contract documents by the Corporation 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 General Manager ("Projects) 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.

4 TAXES AND DUTIES

- 4.1 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 Corporation from the against the same or any default by the contractor in the payment thereof.

5 PROTECTION OF LIFE AND PROPERTY AND EXISTING FACILITIES

- 5.1 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 from his construction operations and shall minimize the disturbance and inconvenience to the public.
- 5.2 If the excavation of trench alters the contours of the ground around 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' x 2'), traffic signals, barricades, flags etc., at such location. If the contractor does not put the warning signals, as per above directions, 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 the other underground or above ground structure and / or property crossing or adjacent to the trench being excavated.
- 5.3 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.

- 5.4 The contractor shall be solely responsible for the location through approved non-destructive means and ensuring the safety of all existing underground pipeline, electrical cables, and or other structures.
- 5.5 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 proprieties and undertaken to indemnify the Corporation from and against all actions, cause of actions, damages, claims and demands what so ever, either in law or in equity and losses and damages and costs (inclusive between attorney and client), charges and expenses in connection therewith and / or incidental there to. The contractor shall take all responsibilities and risk in crossing other pipelines, cables and shall be responsible for protecting all such existing pipelines, poles, electric lines, sewers, cables or other facilities from damage by the contractors operation in connection with the work. The contractor without cost of the corporation shall promptly repair any damage incurred.
- 5.6 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 from.

6 LABOUR WELFARE MEASURE S AND WORKMAN COMPENSATION:

- 6.1 Obtaining License before commencement of work:

The contractor shall obtain a valid labour license under the contract labour (R&G) Act 1970 and the contract labour (Regulations and Abolition) Central rules 1971, before commencement of the work, and continue to have a valid license until the completion of work. The contractor shall also abide by the provisions of the child labour (Prohibition and regulation) Act 1986. Any failure to fulfill this requirement shall attract the penal provisions of this contact arising out of the resultant non-execution of work.

6.2 CONTRACTORS LABOUR REGULATIONS:

7.2.1 WORKING HOURS:

- 7.2.1.1 Normally working hours of an employee should not exceed 9 hrs 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 BSNL, 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 a 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 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 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 payments 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 authorized 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 Wages shall be paid with out any deduction of any kind except those specified by the Central BSNL by general or special order in this behalf or permissible under the payment of wags act 1956.
- 7.2.3.9 A notice showing the wages period and the place and time of disbursement of wages in 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 authorized 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 workman.
- 7.2.3.11 The contractor shall obtain from the site Engineer or *any other authorized* representative of the Engineer-in-charge, as the case may be a certified 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 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 damages to or loss of goods expressly to the employed person for custody, or for loss of money or any other deductions which he is required to amount, where such damage or loss is directly attributable to his neglect or default.
 - (d) Deductions for recovery of advances of for adjustment of overpayment of wages, advances granted shall be entered in a register.
 - (e) Any other deduction, which the BSNL may from time to time, allows.
- 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 fines shall be imposed on a worker and no deduction for damage 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 it was imposed.*

7.2.5 Labour records

- 7.2.5.1 The contractor shall maintain a Register of persons employed on work on contract is 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 Contract Labour (R&A) Central 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 Contract Labour (R&A) Central 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 wage
- c) Sex
- d) Age
- d) Nature of accident and cause of accident
- e) Time and date of accident
- f) Date and time when admitted in hospital
- g) Date of discharge from the hospital
- h) Period of treatment and result of treatment
- i) Percentage of loss of earning capacity and disability as assessed by Medical officer
- j) Claim required to be paid under workmen's compensation Act.
- k) Date of payment of compensation
- l) Amount paid with details of the person to whom the same was paid
- m) Authority by whom the compensation was assessed
- n) 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 the 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 deduction 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 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 contractor 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 authorized 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 authorized by the BSNL 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 person authorized 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 contractors 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 within 45 days from the receipt of the report from the labour officer or the authorized officer as the case may be.

7.5 INSPECTION OF BOOKS AND SLIPS:

The contractor shall allow inspection of all prescribed labour records to any of his workers or to his agent at convenient time and place after due notice is received or to the labour officer or any other person, authorized by the *BSNL on his behalf*.

7.6 SUBMISSION OF RETURNS:

The contractor shall submit periodical returns as may be specified from time to time.

7.7 AMENDMENTS:

The BSNL 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 INSURANCE:

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 BSNL 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 BSNL 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 Corporation of the policies of insurance taken with in 15 (fifteen) days of being called upon to do so together with all premium receipts and other papers related *thereto which the corporation may require*.

9 COMPLIANCE WITH LAWS AND REGULATION:

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 the force of law made or promulgated or deemed to be made or promulgated by the Government, Government agency or Department, municipal board, Government of other regulatory or Authorized body or persons and shall provide all certificated of compliance therewith as may be required by such applicable law, By-laws, Rules, Regulations, orders 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 sub-contractor to sham any portion of the work to be performed hereunder may be assigned, sub-leased 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 BSNL 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, Regulations, Laws and order and provisions as aforesaid.

10 TOOLS AND PLANTS:

The contractor shall provide at his own cost all tools, *plants applications*, 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 degasification of the ducts before carrying out the work. The contractor shall also be responsible to male arrangements, at his own cost, for water required for carrying of works at sited including curing of CC/RCC works. Failing his so doing the same may be provided by the Engineer-In-charge at the expenses of the contractor and the expenses shall be deducted from any money *due to the contractor under this contract or otherwise*.

11. Each claim of bill of the contractor must accompany the

- (i) List showing the details of labours/employees engaged.
- (ii) Duration of their engagement.
- (iii) The amount of wages paid to such labour/employees for the duration in question.
- (iv) The amount of EPF contribution (both employer's and employee contribution) for the duration of engagement in question paid to the EPF authorities.
- (V) Copies of authenticated documents of payments of such contribution to EPF authorities.
- (VI) Contractors to pay EPF by cheque and produce proof to BSNL
- (VII) The contractor will abide the conditions of EPF Act 1952

SECTION VII

SCOPE OF WORK AND JURISDICTION OF CONTRACT

1. SCOPE OF WORK

- 1.1 The steps involved in trenching and pipe laying works are as under:
- i) Excavation of trench up to a nominal depth of 165 cms. According to construction specifications along National/State Highways/other roads and also in city limits as mentioned in the notice inviting tender.
 - ii) Laying of PLB pipes/coils coupled by PLB sockets in excavated trenches, on bridges and culverts.
 - iii) Providing of mechanical protection by R.C.C. pipes/GI pipes and /or concreting/chambering according to construction specifications, wherever required.
 - iv) Fixing of GI pipes/ through with clamps at culverts/bridges and /or chambering or concreting of GI pipes/troughs, wherever necessary.
 - v) Back filling and dressing of the excavated trenches according to construction specifications.

1.2 ALLIED ACTIVITIES:

- 1.2.1 Transportation of Materials: The materials required for executing the work entrusted to the contractors against a work order shall be made available at Store dump with 30 Kms from the work spot. The contractor shall be responsible for transporting the materials, to be supplied by the Corporation 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.
- 1.2.2 Supply of Materials: There are some materials required to be supplied by the contractor for execution of works under this contract like Bricks, Cement, Wire Mesh and Steel for protection, etc., besides using other consumables which do/do not 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.

2. **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 requirements but generally being limited to +/- 25% of the indicated value.

SECTION VIII

OPTICAL FIBRE CABLE CONSTRUCTION PRACTICES

The guidelines in the form of Engineering Instructions (E.Is.) on Construction Practices of Optical Fibre Cables are issued by T & D wing of the department, from time to time.

1. General

The Optical Fibre Cable is planned considering the following objectives of the scheme.

- i) Minimum possible route length vis-à-vis route having maximum number of towns with potential telecom growth.
- ii) Linking of small exchanges off main road by leading in O.F.C. vis-à-vis routing the main cable itself via. Such exchanges.

After deciding the above-mentioned issues, a detailed measurement of lengths of cable route along with details of rail/road crossings, culverts, causeways, etc. may be recorded in the detailed survey register. The probable locations of joints, terminations and re-generators may also be decided and marked on the route, map.

On the basis of surveys, general permission from road and rail authorities for laying the Optical fibre Cable along the decided routes and permission for rail/road crossings will have to be obtained. Generally, O.F.C. is laid straight as far as possible along the road near the boundaries, away from the burrow pits. The O.F.C. is laid along the roads at a minimum distance of 15 meters from the centerline of the road or in accordance with the permission from the concerned road authorities in view of their road-widening plan. As the O.F.C. carries high capacity traffic and is planned for 40 years of life, it is imperative that the cable is laid after obtaining due permission from all the concerned authorities to avoid any damage/shifting at a later stage and also disruption of services/revenue loss.

In special cases, where it may be necessary to avoid burrow pits or low lying areas, the cable may be run 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 center line of road and 1.2 meter below the road surface.

The Optical Fibre Cable is laid through PLB Pipes buried at a nominal depth of 165 cms. The steps involved in OF Cable construction are as under:

- i) Excavation of trench up to a nominal depth of 165 cms., according to Construction specifications along National/State Highways/other roads and also in city limits as mentioned in the notice inviting tender.
- ii) Laying of PLB-HDPE pipes/coils coupled by PLB couplers in excavated trenches, on bridges and culverts *as per constructions Specifications and* sealing of PLB-HDPE pipe ends at every manhole by PLB end caps of suitable size.

- iii) Providing of mechanical protection by R.C.C. Pipes/GI Pipes and/or concreting/chambering according to construction specifications, *wherever required.*
- iv) Fixing of GI pipes/troughs with clamps at culvert/ bridges and/or chambering or concreting of GI Pipes/troughs, wherever necessary.
- v) Back filling and dressing of the excavated trenches according to construction specifications.

2.0 Specifications of Materials used:

- **PLB-HDPE PIPE/COILS**

The Optical Fibre Cable is pulled through 40 mm. Outer diameter PLB Pipes/Coils having strength of 10 Kg./Sq.cm. 40 mm. PLB-HDPE pipes/coils of 200 to 1000 meters length.

3.2 PLB Couplers and End caps:

For coupling PLB-HDPE Pipes/Coils, PLB Couplers as per required specifications should be used. The ends of the PLB-HDPE pipes/coils are closed with PLB end Caps, as decided by the Engineer in charge.

- **MATERIALS FOR MECHANICAL PROTECTION**

For lesser depths requiring mechanical protection as per specifications and in built up areas, in towns and cities falling within the municipal limits, suitable mechanical protection is provided to PLB-HDPE pipes/coils using Napha Slabs, RCC full round pipes or GI pipes or concreting of size 20cms. X 20cms. Reinforced with MS weld mesh or a combination of any of these as per the written instructions of the Engineer-in-charge.

- i) **RCC FULL ROUND PIPES**

Reinforced cement concrete pipes (spun type) coupled with RCC collars sealed with cement mortar are used to provide mechanical protection to PLB-HDPE pipes/coils. The RCC pipes/collars should be NP-2 class for 100 m./150mm. (internal diameter) full round, conforming to IS Standard 458 – 1988 revised up to date. 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). If the mechanical protection is provided by RCC pipes, every third joint will be embedded in a concrete block for size 60 cms. (L) x 40 cms. (W) x 25 cms. (H) of 1:2:4 cement concrete mix 1:2:4 (1: cement, 2: coarse sand, 4: stone aggregate of 20 mm. Nominal size) so that the alignment of RCC pipes remain firm and intact. Both ends of RCC/GI pipes 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.

- ii) **G.I.PIPES**

GI pipes should be of medium duty class having diameter of 65/50 mm. The GI Pipes should conform to 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*). Wherever protection by GI Pipe is provided, it is preferable to use PLB coils.

iii) **M.S. WELD MESH**

The PLB-HDPE pipes/coils 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 50 m each.* One meter of MS weld mesh caters to approx. 3 meters of concreting. (See figure '3' 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 of not less than 1 kg. Per 8 Sq.m. to avoid seepage of water into the soil.

3.0 EXCAVATION OF TRENCHES

3.1 Trenching

LOCATION AND alignment of the Trench:

In city area, 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 when cutting across road with specific permissions from the concerned authorities maintaining the road (such permissions shall be obtained by the corporation). Outside the city limits, the trench will normally follow the boundary of the roadside land. However where the roadside land is full of burrow pits or a forestation or when the cable has to cross culverts/bridges or steams, the trench may come closer to the roads 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 by the department.

The alignment of the trench will be decided by a responsible departmental official, not below the rank of a Junior Telecom Officer. 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 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 centerline 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-HDPE Pipes/coils 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 else where.*

Line – Up:

The Line – Up of the trench must be such that PLB-HDPE pipes/coils 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.

Method of Excavation:

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

However, along the Highways and cross country there shall be no objection to contractor resorting to mechanical means of excavation, provided that no underground installations existing 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 GI pipes (65 mm/50mm dia) 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 of 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 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.

Trenching shall as far as possible be kept ahead of the laying of pipes. Contractors 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 boards and required watchman shall be provided by the contractor to prevent any accident to pedestrians or vehicles while carrying out the blasting operation, the contractors 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 installations. No extra payment will be made towards this.

In order to prevent damages to PLB-HDPE pipes 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.

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, the depth of the trench may be restricted to a depth of 100 to 140 cms. However, Engineer-in-charge in exceptional cases due to adverse site additional protection. 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 and 30 cms. At the bottom. In case, additional pipes (PLB-HDPE/GI/RCC pipes) are to be laid in some stretches, the same shall be accommodated in this normal size trench.

When trenchers 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 whatever, it can be ordered to excavated more than 165 cms. To keep the gradient less than 15 degree with horizontal. For additional depth in excess of 165 cms., additional payment of pro rata basis 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 component authority shall be final and binding on the contractor.

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 arrangements that may be necessary. No extra payment shall be admissible for this.

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.

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 Explosive Rules, 1983*. The contractor shall purchase the explosives fuses, detonators, etc. only from a licensed dealer. Transportation and storage of explosives 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 contractors 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.

Trenching Near Culverts/Bridges:

The PLB-HDPE pipes shall be laid in the bed of culvert at the depth not less than 165 cms. Protected by GI pipes and concreting 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.

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 remodeling, 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.

4.0 LAYING OF PLB-HDPE PIPES:

After the trench is excavated to the specified depth, the bottom of the trench had to be cleared of all stones or pieces of rock and leveled 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 leveling 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 pipe 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/blown at later stages. The ends of each pipe and inside of each HDPE Socket shall be thoroughly cleaned of any dirt or other foreign materials.

After the trench is cleaned the PLB-HDPE Pipes/coils shall be laid in the cleaned trench, jointing the PLB Couplers to facilitate the cable bowing/pulling at a later stage.

At the end of each day work, the open ends of the pipe sections shall be tightly closed with end caps to prevent the entry of dirt/mud, water or any foreign matter into PLB-HDPE pipes until the work is resumed.

In city, Town, Urban area falling within Municipal/corporation limits, the PLB-HDPE Pipes shall be laid with protection using RCC/GI pipes/ Concreting reinforced with weld mesh. Moreover, in cross-country routes, if depth is less than 1.2 meters, protection by using RCC/GI/Pipe/Concreting reinforced with weld mesh shall be provided. Engineer-In-Charge shall decide about such stretches and type of protection to be provided *in view of the site* requirement. Normally 100 mm RCC Pipe shall be used for protecting PLB-HDPE Pipes but if more than one PLB_HDPE Pipes is to be laid and protected, RCC Pipe of suitable size to accommodate the required number of PLB-HDPE Pipes shall be used.

The PLB-HDPE Pipes 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 pipes may be laid as per the direction of the Engineer-In-Charge. On Rail bridges and crossings, the PLB/HDPE Pipes 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 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 GI pipes are coupled properly with the sockets so as to avoid damage to PLB/HDPE pipe and eventually the OF cable in the event of pressure coming on the joint and GI pipe joint giving its way. Rubber bushes shall be used at either end of the GI pipes to protect PLB-HDPE pipe. Both the ends of GI 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 GI 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 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 cleared 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 Pipes. The PLB-HDPE Pipes shall then be laid above this bed of concrete. After laying the PLB-HDPE Pipes, 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 have 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 Pipes/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 pipes are not subjected to any damage or strain.

Water present in the trench at the time of laying, the PLB-HDPE Pipes 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 pipes shall be laid inside the RCC Pipes/ or GI Pipes and concrete 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-Pipes may be encased in reinforced cement concreted, as detailed, in bid.

Laying Protection Pipes On Bridges and Culverts :

In case trenching and pipe laying is not possible in the beds of the culverts, the pipes shall be laid over the culverts/bridges after getting due permission from the competent authority. Of late, the bridge construction authorities are providing ducts below the footpaths on the bridges for various services. The telecom officers need to maintain good liaison with the concerned authority to get one side of the duct allotted for Telecom Cables. In such ducts, GI Pipes can be coupled and laid for pulling the cables. It would be pertinent to mention here that close liaison with bridge construction authorities would be of immense advantage in ensuring provision of ducts on one or both the sides of the bridges as per future requirements. However, for laying cables on existing bridges, where a duct arrangement does not exist, one of the following methods may be adopted.

Normally, in 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, GI Pipe (carrying PLB-HDPE Pipes/coils 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.

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.

If neither of the two methods is possible, the GI pipes/GI troughs must be clamped outside the parapet wall with the clamps supplied by the corporation. If necessary, the pipes may be taken through the parapet wall at the ends where the wall diverges away from the road.

In case where the methods explained in clause referred above are not possible, the GI pipes/GI troughs can be fixed on the top of the road kerb close to the inside face of the parapet wall by means of clamps supplied, using raw plugs and wood screws or small diameter of the bolts to 7.5 mm. The permission for carrying out this work will be obtained from the road authorities by the Corporation.

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 leveled 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 to ensure that no portion of *the GI pipes/GI Troughs* is exposed as ordered by the Engineer-In-Charge to protect the Pipe/trough from any possible damage externally caused.

Where white wash/color wash is existing on the Bridges/culverts, the same should also be carried out on the concreted portion to ensure uniformity.

5.0 Back filling and Dressing of the Trench:

The earth used for filling shall be free from all roots, grass, shrubs, vegetation, trees, saplings and rubbish. Provided that the PLB-HDPE pipes have been properly laid in the trench at the specified depth, the back filling operation shall follow as closely as practicable. 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 PLB-HDPE 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 derocked loose earth of not less than 10 cms above the pipes.

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

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

6.0 SAFETY PRECAUTIONS:

6.1 Safety Precautions when excavating or working in excavations close to electronic 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 in 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 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 near by 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 electronic cables shall be moved or altered without the consent of the Electronic Authority and they should be contracted 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 needs not 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.

6.1.1 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 movement of delay is serious, so, in the meanwhile, a doctor should be called for.

6.2 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 would not unduly cause inconvenience to pedestrians or 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 done with the full consent and knowledge *of the competent railway authorities*.

6.2.1 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.

6.2.2 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. 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 road way or waterway. If possible the excavated material should be put between the workmen and the traffic without encroaching too much on the road.

6.2.3 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.

6.2.4 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 even 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.

6.2.5 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. Excavations 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 6 m 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 1.25m above the ground and close to the excavation. Where any excavation is not clearly visible for a distance of 245 m 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 all such roads from which the excavation or as near the distance as is practicable but not less than 10M 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.

6.2.6 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*.

6.2.7 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.

6.3 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. Gelatine
- iv. Safety Fuse
- v. Electric Detonator
- vi. Ordinary Detonator

6.3.1 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 the route should be given in the application as in many cases, after digging, rocks appear where blasting 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 a license for using /storing explosives for cable trenching work. Such license will be valid 15 days only. The license should be got renewed if the blasting operations need 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*.

6.3.2 Method of using

The safest explosive is the gelatine and electric detonator. Gelatine 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 feet. Fill up the holes with small quantity of sand FOR ABOUT 6". First the electric detonators to be inserted into the gelatine and inserted into the holes keeping the +ve and -ve wiring 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 meters.

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 flag, exchange of caution signals, etc should be completed and only then exploder should be connected and operated.

6.3.3 Operation of exploder (IDL Schaffler type 350 type exploder)

The 350 exploder consist 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 drive the pin, clapped with the right hand turned in the clockwise direction in continuous measurements at the highest

speed from the initial position until it reaches to a stop. At this stage an indication lamp will glow. When the indication lamp glows, "press the button switch" should be pressed. This will extend the electric current to the detonator and gelatine 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.

6.3.4 Warning

There may be two reasons for unsatisfactory results of blasting;

- a) Misfire of gelatine due to leakage of current from detonator;
- b) Overloading 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 gelatine. The safest way is to make a fresh hole by its side and put fresh gelatine in that hole and blast it.

6.3.5 Precautions

The abstract explosive rules 1983 which are relevant to our work is given below:

Restriction of delivery and dispatch of explosives:

No person shall deliver or dispatch any explosives to any one 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*.
- 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.

- **Protection from Lightning During Storing:**

Every magazine shall have attached there to one or more efficient lightening 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 lightening 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.

- **Precautions during thunder-storm:**

When a thunder-storm appears to be imminent in the vicinity imminent in the vicinity of a magazine or store house, every person engaged in or around such magazine and store house shall be withdrawn to 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.

- **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 forms and shall produce such record on demand to an Inspecting Officer.

- **Explosives not to be kept in damaged boxes:**

The licensee of every magazine or storehouse 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*.

- **Storage of Explosives in excess of the licensed quantity:**

The quantity of any kind of explosives kept in any licensed magazine or storehouse 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 storehouse unless a permit in this behalf is obtained from the licensing authority by a letter or telegram.

6.3.6 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 explosives 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.

- **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.

- **Precautions to be observed while firing:**

The end of the safety fuse (if used in place of the 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 5cms., and should, then be made clear and bright for a minimum length of 2.5cms., 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 blasting with dynamite or any other high explosive, the position of all the boreholes 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 borehole. The boreholes 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 ends shall never be used for tamping. One cartridge shall be placed in the borehole 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 borehole. The top most cartridges shall 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 boreholes 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 safety 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 others 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.

- a) The Contractor's agent shall very carefully (when the tamping is a damp clay) extract the tamping with a wooden scraper and withdraw the primer and detonator.
- b) The holes shall be cleaned for 30cm. of tamping and its direction ascertained by placing a stick in the hole. Another hole shall then be drilled 15cms. 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 another agent by 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 causes and steps taken *in that connection*.

6.3.7 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.*

- **Precautions against misfire:**

The safety fuse shall be cut in an oblique direction with a knife. All saw dust shall be cleared from 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 proper tube is left exposed outside the explosive. The safety fuse just above the detonator shall be securely tied in position in the cartridge. Waterproof 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.

6.3.8 Precaution against stray currents:

Where electrically operated equipments 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.

- 6.3.9 a) In cities /areas where ECS/EFT facility is provided by Banks, the bidder must have account in such ECS/EFT facility providing banks and that bank A/C no shall be quoted in the bids of the bidder.
- b) The cost of ECS/EFT will be born by BSNL in all cases where the payment to contractor is made in a local branch i.e bidder is having bank account in the same place from where the payment is made by BSNL unit.
- c) In case payment is made to outside branch i.e bidder is having bank account not in the same place from where the payment is made by BSNL unit, the crediting cost will have to be born by the bidder only.
- d) The payments to contractors will compulsorily be made *through ECS/EFT in* respect of all contracts where the value of the contract is more than Rs.10 lakh. However circles can implement the ECS/EFT payment system for contracts valued *less than 10.00 lakh also*

**SECTION – IX
MATERIAL SECURITY BOND FORM**

Whereas(Herein after called “the Contractor”) has been awarded the contract of trenching and pipe laying 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 Corporation”) in the sum offor which payment will and truly to be made of the said Corporation, 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 the stores issued to him, properly, i.e. the stores provided to the contractor, by the Corporation are damaged or
2. The stores issued to the contractor by the Corporation are stolen or
3. The contractor is not able to provide proper account of the stores issued to him/her/them by the Corporation.

We undertake to pay to the Corporation up to the above amount upon receipt of its first written demand without the Corporation having to substantiate its demand, provided that in its demand, the Corporation will not 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 later than the above date.

Signature of the Bank

Signature of the witness

Name of Witness

Address of witness

SECTION – X

AGREEMENT

This agreement made on this _____ day of _____ (month)
_____ (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 CMD BSNL here in after referred to as the BSNL, of other part.

Where as the contractor has offered to enter into contract with the said BSNL for the execution of work of trenching & pipe laying and other associated works in the jurisdiction of **G M Telecom, Bellary** on the terms and conditions herein contained and the rates approved by the BSNL (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.

Now 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 herein after mentioned, safely carryout, by means of labours employed at his own expenses and by means of tools, implements and equipments etc.to be supplied by him to his labour at his own expenses, all trenching, pipe laying and other associated works as described in tender documents (annexed to the agreement),when the BSNL or General Manager Telecom in that behalf require. It is understood by the contractor that the quantity of the 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 instructions 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. 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 Corporation of Telecommunications/DTs/BSNL is not/shall *not ever be admitted as partner in the contract.*

5. The contractor shall abide by the terms and conditions, *rules, guidelines*, construction practices, safety precautions etc. stipulated in the tender document including any correspondence between the contractor and the BSNL, having bearing on execution of work to be done under the contract.
6. Each claim of bill of the contractor must accompany the
 - (i) List showing the details of labours/employees engaged.
 - (ii) Duration of their engagement.
 - (iii) The amount of wages paid to such labour/employees for the duration in question.
 - (iv) The amount of EPF contribution (both employer's and employee contribution) for the duration of engagement in question paid to the EPF authorities.
 - (V) Copies of authenticated documents of payments of such contribution to EPF authorities.
 - (VI) Contractors to pay EPF by cheque and produce proof to BSNL
 - (VII) The contractor will abide the conditions of EPF Act 1952

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

Above written:

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

Witness:

- 1.
- 2.

*Signed & delivered on behalf
CMD, BSNL in the presence of*

Witness:

- 1.
- 2.

SECTION – XI

LETTER OF AUTHORISATION FOR ATTENDING BID OPENING

Tender No: _____
Subject: Authorisation for attending bid opening on
_____ (Date) In the Tender of

Following persons are hereby authorized 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

Signatures of the Bidder

Or
Officer authorized to sign the bid
Documents on behalf of the bidder.

No.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 representatives 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 with the tender document.
2. Tender documents(s), in original, 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 copy of Enlistment certificate issued by the competent authority duly attested by a Gazetted Officer if applicable
4. Latest Income Tax clearance certificate.
5. The registration of the firm, Authenticated copy of partnership deed in cases of partnership.
6. Solvency Certificate from the banker of the tenderer-upto works costing Rs.20 lakhs – Rs.2 lakhs : for works costing more than 20 lakhs – 5 lakhs.
7. The solvency certificate shall not be older than the date of issue of NIT.
8. Bid form, duly filled in as per the proforma.
9. Tenderer's profile duly filled in as per the proforma.
10. Original "Power of Attorney" in case persons other than the tenderer has Signed the tender documents.
11. List of qualified experienced personnel, who are working for the tenderer, who will be deployed for the work.
12. In case of tender documents downloaded from website declaration from the tenderer in the proforma mentioned in NIT and DD towards *the cost of tender document*

PART-II
TENDER SCHEDULE

OpenTender for Laying of OF cable in Bellary SSA.

TENDER No. PLG/13-37/TDR/OFC/2009-10/2 dtd -5-2009



BHARATH SANCHAR NIGAM LIMITED
(A Government of India Enterprises)

OFFICE OF THE GENERAL MANAGER TELECOM, BELLARY

**GENERAL INSTRUCTIONS FOR PUTTING THE TENDER SCHEDULE IN
THE TENDER BOX**

- 1) Separate covers to be put as mentioned below:-
 - a) EMD(Bid security) in one cover.
 - b) Qualifying bid Part I and part II in one cover.
 - c) Financial bid in one cover. Part – III.

- 2) All these three covers has to be wax sealed and put together in main cover and main cover should also as be wax sealed.

- 3) All the covers should be superscribed in bold letters whether it is Schedule of Bid security , Qualified bid or Financial bid. The Tenderer who is not following the above said conditions, his *tender will be rejected*.

BHARAT SANCHAR NIGAM LIMITED

PART-III
BID DOCUMENT

(FINANCIAL)

OpenTender for Laying of OF Cable in Bellary SSA

Tender No: PLG/13-37/TDR/OFC/2009-10/2 dtd -5-2009

O/o. General Manager Telecom, Bellary

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SECTION –XIII

STANDARD SHEDULE RATES

II. The rates are prefixed for pipe laying and associated works as given below.

| Sl. No | Item code | Item | Prefixed rates in Rs. | Units |
|--------|-----------|--|-----------------------|------------|
| 1 | 2PLB | Laying of PLB Pipes coupled with sockets | 2 | Per metre |
| 2 | 2PLB-SD | Sub ducting in existing ducts per pipe | 6 | Per metre |
| 3 | 3LI- ES | Leading in of OF cable from exchange manhole to Transmission room by supplying and providing Rigid PVC pipes/ PVC Hoses on existing supports | 49 | Per metre |
| 4 | 3LI- WS | Leading in of OF cable from exchange manhole to Transmission room by supplying and providing Rigid PVC pipes/ PVC Hoses with supports | 170 | Per metre |
| 5 | 4HDD1 | Road/rail crossing through Horizontal boring/ HDD and inserting GI pipes (<150 mm dia), pushing PLB pipes and drawing 6 mm PP rope | 500 | Per metre |
| 6 | 4HDD2 | Road/rail crossing through Horizontal boring/ HDD and inserting GI pipes (>= 150 mm and dia), pushing PLB pipes and drawing 6 mm PP rope | 600 | Per metre |
| 7 | 5GITR1 | Laying & fixing <=100mm GI pipes in trenches | 4 | Per metre |
| 8 | 5GITR2 | Laying & fixing >100mm GI pipes in trenches | 5 | Per metre |
| 9 | 5GIBR1 | Laying & fixing <= 100 mm GI pipes in troughs/ bridges and culverts | 10 | Per metre |
| 10 | 5GIBR2 | Laying & fixing > 100 mm GI pipes in troughs/ bridges and culverts | 12 | Per metre |
| 11 | 5GICL | Fabrication and Supply of Galvanised clamps (per Kg) | 60 | Per Kg |
| 12 | 6CC | Providing CC protection(1:2:4) at site for encasing PLB Pipe /GI pipe in roads, bridges, crossings, culverts etc., | 2200 | Cu. Mtr |
| 13 | 6WLD | Supply of weld wire mesh 50mm x 100 mm , 12 SWG (per Sq. mtr) | 100 | per sq mtr |
| 14 | 7RCC-FR | Laying full round RCC pipes in trenches | 5 | Per metre |
| 15 | 7RCC-HR | Laying RCC troughs/ Napah/RCC slabs | 2 | Per metre |

| Sl. No | Item code | Item | Prefixed rates in Rs. | Units |
|--------|-----------|---|-----------------------|--------------------|
| 16 | 8-OFCP | Opening of manholes, insertion of 4 mm Nylon rope, pulling of OF cable, Digging of pit for jointing chamber, fixing of Pre-cast RCC Chamber, filling of RCC Chamber with clean sand ,placing of pre-cast RCC slabs on RCC chamber and back filling of jointing | 4 | Per metre |
| 17 | 8-OFBL | Cable blowing including DIT, fixing of Pre-cast RCC Chamber, filling of RCC Chamber with clean sand , placing of pre-cast RCC slabs on RCC chamber and back filling of jointing pit | 7 | Per metre |
| 18 | 9ORJF | Digging of pit 1 meter towards jungle side on each MH for fixing of route indicator, fixing & concreting of routes indicator, painting and sign writing of route indicators | 180 | Per Indicator |
| 19 | 10DOCT | Documentation (5 copies for each route) along with soft copy | 300 | Per Km |
| 20 | 11REDR | Cost of recovery of empty drums | 100 | Per drum |
| 21 | 12OFSB | Supply and installation of Iron OF Cable Storage box, as per specification in the transmission room. | 1500 | Per each |
| 22 | 13RRCC | Road restoration work with cement concrete 1:4:8 mix for thickness of 225 mm including supply of concrete to evenly match the road. | 1600 | Cu. Mtr |
| 23 | 13RRBT | Road restoration work with bituminous macadam for semi grouting 50 mm thick and premix Carpet surfacing 25 mm thick over the grouted surface (total upto 75 mm thick) including supply of asphalt etc. to evenly match the road, including Consolidation and rolling as per standard specification of DSR 1997 | 90 | Per metre |
| 24 | 5JCPC | Digging of pit of suitable size for jointing chamber, fixing of RCC Ring to make an RCC chamber and filling it up with clean sand, placing of pre-cast RCC slabs on RCC chamber and back filling of jointing pit. Size of RCC Ring: 1200 MM dia, 50 MM thickness, 400 MM height. Concrete 1:1, 5:3 (Ce sand stones / jelly 2 MM) with top cover (lid) with lifting hooks, of size 10 MM MS bar. | 1368.30 | Per joint chamber. |

BSNL will supply

1. PLB pipes of length 200m to 1000m or smaller, along with sockets
2. GI pipes in lengths of approx 6 meter
3. CI pipes in lengths of approx 5 meter
4. RCC pipes in lengths of 2M with collars; Materials required for sealing the couplings / ends will be arranged by the contractor.
5. RCC troughs (Half round pipes/ slabs), Cuddapah/ Napah/ RCC slabs.

Note : *All materials shall be collected by the contractor from the Divisional Store Godown or any other location in the jurisdiction of the Division. No separate charges for loading, unloading, transportation etc., shall be paid by BSNL.*

SECTION – XIV

1. Estimated rate for Trenching work:

Through rates for excavating trenches up to a depth of 165 cms and back filling the excavated trenches after laying the PLB Pipe with or without protection.

| Zone. No. | Name of SDCAs | Name of the Sites(Likely) | Length (Approx) | Through Rates per Mtr. |
|-----------|--|--|-----------------|------------------------|
| Zone-I | Bellary Rural and Urban (Bellary SDCA) | Bandihatti, Belagal, Cowlbazar, Fort, Halakundi, Kolagallu, Rayadurga Bus stand, Siddaratha coloy, M.V.Nagar, S.N.Pet.Somasamudra | 10 KMs | 100.00 |
| Zone-II | Hospet SDCA | Ramasagar, T.B.Dam, Hospet-Hampi Road, Kampli market area, Hampi University, Chitawadagi, Walmiki circle, | 15 KMs | 100.00 |
| Zone-III | Siraguppa, Kurugodu and Sandur SDCAs | Talur,Hachholli, Desanur, Halekote, Sirigere village, Bellary Road Siraguppa, Donimalai second site,JSW cement plant. | 18 KMs | 90.00 |
| Zone-IV | Harapanahalli, H.B.Halli, Kudligi and Huvinahadagali SDCAs | Hiremagalagere, Uppinayakanahalli, Harapanahalli Panchayat office, Virupapura, Huvinahadagali second site, H.B.Halli second site, Holagunda, Hudem, Shivapura, Kudligi SBM, Kottur busstand, <i>Suladahalli, Gundagatti, Tambrahalli, Harakabhavi, Halawagalu.</i> | 25 KMs | 90.00 |

- Tenderers have to quote the rate only for trenching and back filling.
- For all other activities the rates are as mentioned in the document.
- Percentage (%) quoted by the tenderer is not applicable for other activities.
- The rates for other activities included the transportation of the materials to the work *spot from wherever they are made available.*

Section – XV

FINANCIAL BID

To,
The A.G.M (Planning)
O/o G.M.Telecom,
Bellary.

Subject : Our Financial Bid for Laying of OF Cable in Zone -

Ref : NIT no.....

Dear Sir,

Having examined the tender documents, terms and conditions stipulated therein, specifications of work etc., we the undersigned offer to execute the trenching and pipe laying works and all other associated works in conformity with the said specifications and conditions of contract.

We offer to execute the trenching and reinstatement work with DIT at the percentage (Below/at par/above) on standard schedule rates (estimated rates) quoted as under:

BELOW
.....

In Figures.....%

In Words.....Percent

OR

**AT
PAR**

In Words.....

OR

ABOVE

In Figures.....%

In words.....Percent

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

We agree to abide by this Bid for a period of 240 days from the date of opening of Qualifying bid and it shall remain binding upon us and may be accepted at any *time before the expiry of that period.*

Place:

Date:

Signature of the Bidder

Name of the Bidder.....