



**BHARAT SANCHARNIGAMLIMITED**  
(A Govt. of India Enterprise)  
OFFICE OF THE CHIEF GENERAL MANAGER TELECOM.,  
U.P.(EAST) CIRCLE, 3rd FLOOR, DOOR SANCHAR SADAN, LAPLACE,  
SHAHNAJAF ROAD, LUCKNOW-226001.

**E-TENDER DOCUMENT**

**TENDER NO:** UPE/MM/OFC Connectivity of BHQs/2025-26

**Dated:** 07.07.2025

**Bid Document for**

**OFC Laying work for connectivity of BHQs in Prayagraj, Ayodhya, Gorakhpur, Kanpur, Sitapur, Sultanpur & Varanasi BAs under Amended Bharat Net Program in UP (East) Circle.**

DATE OF ISSUE : 07.07.2025  
LAST DATE OF BID SUBMISSION : 28.07.2025 (1200 Hrs.)  
DATE OF OPENING : 29.07.2025 (1200 Hrs.)  
VALIDITY OF OFFER : 150 DAYS (From the Date of Opening of Bid)  
VALIDITY OF BID SECURITY : 180 DAYS (From the Date of Opening of Bid)  
COST OF TENDER DOCUMENT : Rs. 4,720/-  
TENDER ESTIMATED COST : As per DNIT  
EMD/BID SECURITY : As per DNIT  
E-TENDER WEBSITE : <https://etenders.gov.in/eprocure/app>

**Tentative Pre-bid meeting in the Chamber of DGM (NWP-CFA) at Door Sanchar Sadan Laplace, Shahnajaf Road Lucknow-226001, scheduled on 15.07.2025 at 12:00 hrs and same can be attended in online mode by requesting link/id on email id: agmmm3upe@gmail.com**

**Note:** Bidders are advised to see the Central Public Procurement Portal (<https://etenders.gov.in/eprocure/app>) by NIC, Central Public Procurement Portal till the date of opening of Tender for any amendment/clarification/corrigendum and the bids are to be submitted online on Central Public Procurement Portal.

MM Cell.  
O/o Chief General Manager Telecom  
U.P.(EAST) Circle, 3rd Floor, Door Sanchar Sadan, Laplace,  
Shahnajaf Road, Lucknow-226001.



**BHARAT SANCHARNIGAM LIMITED**  
( A GOVT. OF INDIA ENTERPRISE )  
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U.P.(EAST) CIRCLE, 3rd FLOOR, DOOR SANCHAR SADAN, LAPLACE,  
SHAHNAJAF ROAD, LUCKNOW-226001.

**TENDER NO. UPE/MM/OFC Connectivity of BHQs/2025-26****Dated: 07.07.2025**

**Subject: OFC Laying work for connectivity of BHQs in Prayagraj, Ayodhya, Gorakhpur, Kanpur, Sitapur, Sultanpur & Varanasi BAs under Amended Bharat Net Program in UP (East) Circle.**


Please find enclosed the tender document in respect of above-mentioned tender which contains the following:

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If interested, kindly submit your bid offers online through CPP e-tender portal (<https://etenders.gov.in/eprocure/app>) on or before date & time specified in clause 6 of detailed NIT.

Asst. General Manager (MM-III)

**SECTION-1 PART A****DETAILED NOTICE INVITING TENDER (DNIT)**

	<p style="text-align: center;">BHARAT SANCHAR NIGAM LIMITED ( A GOVT. OF INDIA ENTERPRISE ) OFFICE OF THE CHIEF GENERAL MANAGER TELECOM., U.P.(EAST) CIRCLE, 3rd FLOOR, DOOR SANCHAR SADAN, LAPLACE, SHAHNAJAF ROAD, LUCKNOW-226001.</p>
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Digitally sealed Tender are invited for and **on the behalf of BHARAT SANCHAR NIGAM LIMITED** by Chief General Manager UP (East) Telecom Circle, for **“OFC Laying work for connectivity of BHQs in Prayagraj, Ayodhya, Gorakhpur, Kanpur, Sitapur, Sultanpur & Varanasi BAs under Amended Bharat net Program in UP (East) Circle.”** as defined in Scope of work in Single Stage Bidding and Two stage Opening using two Electronic Envelopes [Techno-Commercial (Qualifying Bid) & Financial Bid ] for and on behalf of BSNL , for the following works:

Sl. No.	Packages	Name of Package	Name of BA/OA	Name of the Block	Requirement of OFC works in Km	Item/Work	Estimated cost (all inclusive) (in Rs.)	EMD @2% (in Rs.)
1	PKG-1	AYD	Ayodhya/Barabanki & Gonda	Trivediganj & Babhanjot	27	OFC Laying work for connectivity of BHQs in Prayagraj, Ayodhya, Gorakhpur, Kanpur, Sitapur, Sultanpur & Varanasi BAs	₹ 66,44,934.00	₹ 1,32,900.00
2	PKG-2	GKP-1	Gorakhpur/Azamgarh	Mirzapur	12.5		₹ 30,28,942.00	₹ 60,600.00
3	PKG-3	GKP-2	Gorakhpur/Ballia	Chilkahar & Murli Chhapra	27.5		₹ 66,95,202.00	₹ 1,33,900.00
4	PKG-4	GKP-3	Gorakhpur/Basti	Lotan	24		₹ 58,22,238.00	₹ 1,16,500.00
5	PKG-5	GKP-4	Gorakhpur/Basti	Vikaramjot	23		₹ 55,85,176.00	₹ 1,11,700.00
6	PKG-6	GKP-5	Gorakhpur/Deoria	Desahi Deoria, Sukrauli & Vishunpura	35		₹ 85,27,506.00	₹ 1,70,600.00
7	PKG-7	GKP-6	Gorakhpur/Gorakhpur	Bhathat & Paniyara	23		₹ 56,16,564.00	₹ 1,12,400.00
8	PKG-8	SUL-1	Sultanpur/Sultanpur	Shukulbazar	19.4		₹ 49,57,840.80	₹ 99,200.00
9	PKG-9	SUL-2	Sultanpur/Jaunpur	Rampur & Sikrara	30.2		₹ 77,28,032.40	₹ 1,54,600.00
10	PKG-10	SUL-3	Sultanpur/Pratapgarh	Gaura	20		₹ 48,82,840.00	₹ 97,700.00
11	PKG-11	VNS-1	Varanasi/Ghazipur	Sadat	16		₹ 38,81,492.00	₹ 77,700.00
12	PKG-12	VNS-2	Varanasi/Mirzapur	Pahari & Jamalpur	39.06		₹ 1,00,26,346.72	₹ 2,00,600.00
13	PKG-13	VNS-3	Varanasi/varanasi	Barahani	12		₹ 29,15,544.00	₹ 58,400.00
14	PKG-14	KNP-1	Kanpur/Farrukhabad	Gughrapur & Haseran	32		₹ 77,85,050.00	₹ 1,55,700.00

15	PKG-15	KNP-2	Kanpur/ Fatehpur	Bhithaura	11.6		₹ 27,27,876.80	₹ 54,600.00
16	PKG-16	KNP-3	Kanpur/Kanp ur	Bidhunu, Chaubeypur & Shivrajpur	44.5		₹ 1,15,22,464.00	₹ 2,30,500.00
17	PKG-17	KNP-4	Kanpur/ Kanpur	Malasa & Patara	32.229		₹ 82,27,838.63	₹ 1,64,600.00
18	PKG-18	KNP-5	Kanpur/ Unnao	Asoha, Sumerpur & Bichhiya	36		₹ 87,66,456.00	₹ 1,75,400.00
19	PKG-19	PRJ	Prayagraj	Kaudiyara	26		₹ 63,31,172.00	₹ 1,26,700.00
20	PKG-20	STP-1	Sitapur/ Bahraich	Ekona	27		₹ 66,83,756.00	₹ 1,33,700.00
21	PKG-21	STP-2	Sitapur/ Bahraich	Gilaula	22.45		₹ 54,71,695.40	₹ 1,09,500.00
22	PKG-22	STP-3	Sitapur/ hardoi	Bharkhani & Harpalpur	34.39		₹ 83,72,678.20	₹ 1,67,500.00
23	PKG-23	STP-4	Sitapur/ Lakhimpur	Nakaha & Pasgawan	31.6		₹ 76,40,429.20	₹ 1,52,900.00
24	PKG-24	STP-5	Sitapur/ Lakhimpur	Mohamaddi & Mitauli	42.5		₹ 1,03,74,206.00	₹ 2,07,500.00
25	PKG-25	STP-6	Sitapur/ Shahjanpur	Jaitipur	23		₹ 55,76,798.00	₹ 1,11,600.00
26	PKG-26	STP-7	Sitapur/ Shahjanpur	Jalalabad & Kalan	30		₹ 72,73,520.00	₹ 1,45,500.00
27	PKG-27	STP-8	Sitapur/ Shahjanpur	Khudaganj Katra	30		₹ 72,73,520.00	₹ 1,45,500.00
28	PKG-28	STP-9	Sitapur/ Shahjanpur	Madnapur & Mirzapur	29		₹ 70,36,458.00	₹ 1,40,800.00
			Total		760.929			₹ 37,48,800

**Note 1 :** The quantities stipulated in the tender are estimated and BSNL reserves the right to vary the value of works to the extent of  $\pm 25\%$  of contract value during contract period at the same rates and terms & conditions with prior approval of the tender approving authority. However, **in exceptional circumstances only**, due to change in scope of work or otherwise, any variation in the value of work may be permitted up to 50% of contract value with prior approval of the next higher authority after recording adequate reasons and justification for the same”.

**Note 2 Bidding & Evaluation of the tender will be on individual package basis for above estimated work length kms as per price offered in the financial bid. Any bidder may bid in one or more packages or even all the packages, however tender award will be restricted to two Packages only as per clause 4 of Section 4 Part B. Bidders who have been rescinded /debarred by Tendering authority/Higher BSNL Unit as the case may be including for reasons for failing to sign necessary agreement with the concerned Tendering authority in stipulated time on earlier occasions, will not be eligible to participate in the tender for the same work.**

**Note 2a :** The tendered work is intended to be completed within four months period by the bidder from the date of signing of agreement. Accordingly bidders are advised to duly assess their capability and capacity to complete the work within stipulated time frame.

**Note 3** The work will be awarded to the contractor in a phased manner in the BA based on the availability of the budget and requirement based on the OF cable network of BA as well as policy of BSNL. Tentative details of routes / sections of OFC works of each Package is available in **Section 3 part-C**

**Note 4 :** MSE bidders are required to update their Udyam Registration on the CPP Portal, for availing the benefits on CPPP e-tender system under the Public Procurement Policy for MSE, such as 25% MSE Purchase preference and preference (non-elimination in e-RA, if H1 etc.) during e-RA (electronic reverse auction). It should broadly cover the **items/services** offered in tender. If a bidder does not update on CPPP, he will be deprived of benefits to MSEs on CPPP system.

**Note 4a: It may be noted that exemption (Tender Fee exemption, EMD exemption & other MSE benefit as applicable) will not be granted to MSE bidder if traded items/services are offered and exemption shall be considered only if the offered items/services are being manufactured/rendered by the MSE bidder themselves. Accordingly, Udyam Registration Certificate should not be registered under 'Trading' as Major activity which is meant for Public Sector Lending only.**

**Note 5:** Procurement under this tender would be in accordance with 'Public procurement (Preference to Make in India) Order 2017' notified by Government of India & its subsequent amendments, guidelines etc. for Preference to Make in India products."

**1.0 Purchase of Tender Document:** For e-bidding process, Tender document is to be downloaded by Bidders from Central Public Procurement portal i.e. <https://etenders.gov.in/eprocure/app> as a part of process of bid submission on Central Public Procurement portal.

1.1 The bidders downloading the tender document are required to submit the **tender fee of INR 4720/-** (inclusive of GST@18%) through DD/ Banker's cheque/ RTGS/NEFT along with their tender bid failing which the tender bid shall be left archived unopened/ rejected.

1.2 The DD/ banker's cheque shall be drawn from any Nationalized/ Scheduled Bank only in favour of "AO (Claim), BSNL, O/o CGMT, U.P.(East) Telecom Circle, Hazratganj, Lucknow-226001" **and payable at "Lucknow"**.

1.3 RTGS/NEFT may be done to UCO Bank Hazratganj Branch, Lucknow A/c 00460210001615 with IFSC code: UCBA0000046 in the name of AO CLAIM ,BSNL,CGMT UP(E) Lucknow. Bank transaction acknowledgement will be emailed on email id's: aoclaimscgmt@gmail.com and agmmm3upe@gmail.com. The copy of the same may also be uploaded on e-tender website.

**2.0** MSE (Micro & Small Enterprise) bidders are exempted from payment of Tender Fee provided they submit current and valid Udyam Registration Certificate issued from the Ministry of MSME for the tendered items manufactured/produced and services rendered by Micro and Small Enterprises. Udyam Registration Certificate must be current & valid to prove that they are either Micro or Small Enterprise on the date of opening of technical bid part, if exemption from tender fee is claimed. These exemptions are not applicable for Medium Scale Units.

**3.0 Availability of Tender Document:** The tender document shall be available for downloading from 07.07.2025 (18:00 Hrs) onwards up to 12:00 Hrs. on 28.07.2025 on CPP portal.

3.1 BSNL has decided to use a process of e-tendering for inviting this tender and thus the **physical copy of the tender document would not be available for sale. The bidder needs to download the tender document using the link as provided.**

3.2 Sale of Tender Document: **Not Applicable.**

#### **4.0 ELIGIBILITY CONDITIONS:**

Bidders having following qualifications /meeting criteria can participate in the tender. They have to upload copies of the following documents with the tender form:

**4.1** The Bidder shall be a company registered in India under the companies Act 1956/ 2013 **or** a partnership firm/proprietorship firm registered in India  
(Proof documents – Valid Registration Certificate of ROC for Registered Companies/An affidavit for sole Proprietorship for Proprietorship firm /Registered Partnership deed for partnership firm)

**4.2** Bidder's must be Class-I Local supplier in pursuance to Department for Promotion of Industry and Internal Trade order no: P-45021/2/2017-PP (BE-II) dt 16/09/2020 and DOT letter no: 18-10/2017-IP dt 29.08.2018 with minimum local content 50% for tendered item.

**(Proof document-** Self Certification as format Section-7(L) or Certificate as per clause 3.5(b) Section-4 Part B as

the case may be)

**4.3** Complies the restrictions under Rule 144(xi) of the General Financial Rules (GFRs) 2017 which are detailed in Appendix-1 to Section-1 Part A

**(Proof document-** Undertaking as per Section 7 (G) else registration certificate issued by competent authority as per Appendix 1 of Section 1 Part A, as per applicability)

**4.4** The Bidder should have valid registration with the ESI Corporation under ESI Act and should have been allotted with a Code Number by the ESIC.

**(Proof documents - Valid registration certificate with code number from ESIC).**

**4.5** The Bidder should have valid registration with the EPFO under EPF & Miscellaneous Provisions Act 1952 and should have been allotted Registration number

**(Proof documents- Valid registration certificate with code number from EPFO).**

**4.6** The Bidder should have valid Income Tax PAN and should be submitting IT returns for **last financial year such as 2022-2023 or 2023-24**

**(Proof documents- copy of valid PAN card and IT return acknowledgement copy)**

**4.7** Valid Goods and Service Tax (GST) registration Certificate of the bidding Firm/Company with self-declaration on company letter head that bidder is not black listed by GST authorities and in case bidder gets blacklisted by GST authorities during the tenure of contract with BSNL, bidder indemnifies BSNL from any monetary loss caused due such blacklisting i.e. Loss of input credit claim etc and ensures that such loss will be paid to BSNL by the Service provider.

**(Proof documents -Valid GST registration certificate number or exemption certificate with DECLARATION BY BIDDER ON COMPANY LETTER HEAD IN RESPECT OF BLACKLISTING BY GST AUTHORITIES in the format given in Section-7 (H) of Bid Document)**

**4.8** The Bidder shall have the average annual turnover of 30% of the estimated cost for that package of the tender in the last three financial years (i.e. either 2020-21, 2021-22 & 2022-23 or 2021-22, 2022-23& 2023-24).

**(Proof documents-** Annual turnover certificate issued by Chartered Accountant (CA) and Profit & Loss statement duly certified by the CA/company auditors. The certificates must be verified by UDIN system).

**4.9** The Bidder(s) should not have been black-listed/debarred by Central/ State governments/UT/ PSUs at the time of submission of bid **(Proof documents-** Declaration by bidders Not de-bar/Blacklisted as per format of Section-7 (J))

**4.10** Experience: For participating in this tender, the tenderer should meet the following eligibility criteria:

The tenderer who possesses experience of having successfully completed the **Optical Fiber Cable Construction** in BSNL/MTNL/TCIL/ITI/Rites/PGCIL/Rail Tel/Private Telecom Service Provider/ any other Govt. (Central/ State) undertaking having mandate to carry out OFC construction work or the PSUs directly and also have received the payment for such completed works to the extent as mentioned below, are eligible to participate in the tender:

(i) For an amount equal to at least 90% of estimated cost of work put to tender from 01/04/2020 to the date of issue of this NIT (for last 5 years +).

OR

(ii) For an amount equal to at least 120% of estimated cost of work put to tender from 01/04/ 2018 to the date of issue of this NIT (for last 7 years +).

**(Proof documents-** Copy of relevant purchase/work order(s) along with successful completion certificate(s) OR Experience Certificate(s) by service purchasing organization). Bidder is requested to submit SUMMARY OF EXPERIENCE CERTIFICATE IN EXCEL FORMAT as per the Pro-forma given in **Section-7D for evaluation purpose only.**

**Note 7: The experience of having successful completion of OF cable construction works is to be reckoned in terms of payment for such works during the above said periods.**

**Note 8: The Experience should be of Optical Fiber Cable construction work only and does not include any other work**

like Poleless/Up-gradation/ External Plant/ UG Cable (Copper)/ OFC maintenance work etc.

**Note 9:** In case, supplier gets black-listed during the tenure of BSNL contract, then BSNL has the right to recover the Input Credit Loss suffered by it due to any default by the vendor.

**Note 10:** Of late, big Govt. contracts are being carried out by the Public Sector Undertakings mentioned herein through a chain of contractors. In such a case, the experience certificate, if issued, in favor of a contractor, in the chain, by such PSUs in the prescribed format shall be acceptable.

**Note 11:** A bidder may also use the credentials of the original/parent entity of the bidder from which it has been demerged and come into existence, to meet the turnover and/or experience eligibility criteria of the tender. However the maximum time period for claiming the credentials of original/parent entity, for meeting aforesaid eligibility requirements, shall be 5 years from date of demerger. A, requisite proof of demerger from original/parent entity shall have to be submitted to claim the credentials of original/parent entity

**Note 12:** The bidder must have to submit a labour license from the labour department after signing the agreement /work order within 30 days if applicable. A self-declaration in this regard is required.

## **5 Bid Security/EMD:**

5.1 The bidder shall furnish the bid EMD in one of the following ways:-

(a) Demand Draft/ Banker's cheque drawn in favour of "AO (Claim), BSNL, O/o CGMT, U.P.(East) Telecom Circle, Hazratganj, Lucknow" and payable at "Lucknow" either separately for each type of tendered item or total for all types of tendered items.

b) Bank Guarantee/Fixed Deposit from a scheduled bank drawn in favour of "AO (Claim), BSNL, O/o CGMT, U.P.(East) Telecom Circle, Hazratganj, Lucknow" which should be **valid for 180 days from the tender opening date**, either separately for each type of tendered item or total for all types of tendered items.

c) Through RTGS/NEFT to UCO Bank Hazratganj Branch, Lucknow A/c 00460210001615 with IFSC code: UCBA0000046 in the name of AO CLAIM ,BSNL,CGMT UP(E) Lucknow either separately for each type of tendered item or total for all types of tendered items. Bank transaction acknowledgement will be emailed on email id's: [aoclaimscgmt@gmail.com](mailto:aoclaimscgmt@gmail.com) and [agmmm3upe@gmail.com](mailto:agmmm3upe@gmail.com).

d) Insurance Surety Bonds from Insurance Company registered under Insurance Act 1938 & its subsequent amendments, guidelines etc. notified by Government of India. Insurance Surety Bond should be **valid for 180 days from the tender opening date**, either separately for each type of tendered item or total for all types of tendered items.

A copy of DD/Banker's cheque /Bank Guarantee/ Bank transaction acknowledgement is to be uploaded in the e-tender portal and the original copy is to be submitted to MM Cell before the closing time of the tender as per instruction given in **Section-2** of the bid document.

5.2 MSE (Micro & Small Enterprise) bidders are exempted from payment of Bid Security provided they submit current and valid Udyam Registration Certificate issued from the Ministry of MSME for the tendered items manufactured/produced and services rendered by Micro and Small Enterprises. Udyam Registration Certificate must be current & valid to prove that they are either Micro or Small Enterprise on the date of opening of technical bid part, if exemption from EMD is claimed. **These exemptions are not applicable for Medium Scale Units.**

## **6 Date & Time of Submission of Tender bids: on or before 28.07.2025 (1200 Hrs.).**

**Note 13:** In case the date of submission (opening) of bid is declared to be a holiday, the date of submission (opening) of bid will be automatically shifted to next working day at the same scheduled time. Any change in bid opening date due to any other unavoidable reason will be intimated to all the bidders separately.

## **7 Opening of Tender Bids: 29.07.2025 (on or after 1200 Hrs.)**

**Note 14:** At the time of opening the bids, initially an envelope containing offline documents of all bidder(s) will be opened. The Electronic envelope consisting Techno Commercial bids of only those bidder(s) will be admitted who would have submitted required documents as offline submissions.

## **8 Place of opening of Tender bids:**

Authorized representatives of bidders (i.e. vendor/organization) can attend the Tender Opening Event (TOE) in the chamber of AGM(MM-III), BSNL, O/o CGMT, U.P.(East) Telecom Circle, 3rd Floor, Door Sanchar Sadan, Laplace, Shahnajaf Road, Lucknow-226001, where BSNL's Tender Opening Officers would be conducting through online e-Tender.

**9** Tender bids received after due time & date will not be accepted.

**10** Incomplete, ambiguous, Conditional, unsealed tender bids are liable to be rejected.

**11** "BSNL," reserves the right to accept or reject any or all tender bids or all bidding process, at any time prior to award of contract without assigning any reason whatsoever and without thereby incurring any liability to the affected bidder or bidders on the ground of Purchaser's action. BSNL is also not bound to accept the lowest bid.

**12** The bidder shall furnish a declaration in his tender bid that no addition/ deletion/ corrections have been made in the downloaded tender document being submitted and it is identical to the tender document appearing on the website. In case of any correction/ addition/ alteration/ omission in the tender document, the tender bid shall be treated as non-responsive and shall be rejected summarily.

**Note 15:** All documents submitted in the bid offer should be preferably in English. In case the certificate viz. experience, registration etc. is issued in any other language other than English, the bidder shall attach an English translation of the same duly attested by the bidder & the translator to be a true copy in addition to the relevant certificate.

**Note 16:** All computer generated documents should be duly signed/ attested by the bidder/ vendor organization.

**13** The queries in respect of the bid document, if any, can be submitted through **Email**, latest by **15.07.2025 17:00 (Hrs)**. **Any query received after this date will not be entertained.**

BSNL Contact-1	
BSNL's Contact Person	Sh. Praveen Kumar Jaiswal, AGM-III, MM Cell, O/o CGMT , UP-East , Circle Office , Lucknow
Telephone	+91-9415018414
	[between 11:00 hrs to 17:30 hrs on working days]
E-mail ID	agmmm3upe@gmail.com
BSNL Contact-2	
BSNL's Contact Person	Saurabh Singh
Telephone	+91-9450160001
	[between 11:00 hrs to 17:30 hrs on working days]
E-mail ID	<a href="mailto:adtplgupe@gmail.com">adtplgupe@gmail.com</a>

**14** Bidder has to produce original certificates/ documents for inspection whenever required by BSNL

**15 Integrity Pact: ( Not Applicable for this Tender)**

Integrity Pact Program is implemented for this tender for which signing of Integrity Pact is mandatory for the purchaser and bidder. To oversee the implementation of Integrity Pact Program, IEMs are appointed by BSNL vide No. CA/MMT/15-1/2015 dated 08.11.2019 which is available in 'Tender Notice' link on [www.bsnl.co.in](http://www.bsnl.co.in).



### Appendix-1 to Section-1 Part A

**I.** Any bidder from a country which shares a land border with India will be eligible to bid in any procurement whether of goods, services(including consultancy services and non-consultancy services) or works (including turnkey projects) only if the bidder is registered with the Competent Authority. Further, any bidder (including bidder from India) having specified Transfer of Technology(ToT) arrangement with an entity from a country which shares a land border with India, shall also be required to be registered with the same competent authority. The competent authority for the purpose of registration as per applicability of Rule 144(xi) **of the General Financial Rules (GFRs) 2017 shall be/ continue to be the registration committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT).**

**II.** "Bidder" (including the term 'tenderer', 'consultant' or 'service provider in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated herein before, including any agency branch or office controlled by such person, participating in a procurement process.

**III.** “Bidder (or entity) from a country which shares a land border with India” for the purpose of this Order means-

- a. An entity incorporated, established or registered in such a country; or
- b. A subsidiary of an entity incorporated, established or registered in such a Country; or
- c. An entity substantially controlled through entities incorporated, established or registered in such a country; or
- d. An entity whose beneficial owner is situated in such a country; or
- e. An Indian (or other) agent of such an entity; or
- f. A natural person who is a citizen of such a country; or
- g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above

**IV.** The beneficial owner for the purpose of (iii) above will be as under:

1. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has a controlling ownership interest or who exercises control through other means.

**Explanation-**

a. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent. of shares or capital or profits of the company;

b. "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements;

2. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;

3. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;

4. Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official.

5. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.

**V.** An Agent is a person, employed to do any act for another, or to represent another in dealings with a third person.

**VI** The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority (This is applicable for tenders of Works contracts, including Turnkey contracts).

**VII** The registration shall be valid at the time of submission of bid and at the time of acceptance of bid.

**VIII** If the bidder was validly registered at the time of acceptance/placement of, registration shall not be a relevant consideration during the contract execution.

**SECTION-1 PART B**  
**[CHECKLIST FOR BIDDER]**

S.No	Contents of 1 <sup>st</sup> Electronic Envelope (Techno-Commercial	Mode of Submission	Document Submitted (Yes/No)
1	Tender Fee as per DNIT clause 01	Scanned Copy on E-tender portal and Original Physical Copy Offline. <b>Note: (In case of online payment offline physical copy not required)</b>	
2	Bid Security as per DNIT clause 05		
3	Valid Power of Attorney(s) as per Clause 14.3 of Section-4 Part – A (Supported by Board resolution)	Online	
4	Integrity Pact as per clause 15 of DNIT (Not Applicable for this Tender)	Not Applicable	
5	<b>MSE</b> bidders should submit their valid URN (Udyam Registration Number )/valid <b>certification from MSME</b> and it should broadly cover the services offered in tender in order to be able to enjoy the benefits available to MSEs as contained in Public Procurement Policy for MSEs, if applicable. In case the ownership of such MSE Entrepreneurs happens to be from SC/ST category, proof in this regard also need to be submitted	Online	
6	Copy of Certificate of Incorporation as per clause 10.1 of Section-4 Part-A.	Online	
7	Article of Memorandum of Association or Partnership deed or Proprietorship deed as per clause 10.1 Section-4 Part-A.	Online	
8	Valid GST registration certificate number or exemption certificate with DECLARATION BY BIDDER ON COMPANY LETTER HEAD IN RESPECT OF BLACKLISTING BY GST AUTHORITIES in the format given in Section-7 (H) of Bid Document.	Online	
9	Copy of IT Return of F.Y. 2022-23 or 2023-24	Online	
10	Copy of Valid PAN Card	Online	
11	Copy of valid EPF & ESI registration certificate	Online	
12	Copy of relevant purchase/work order(s) along with successful completion certificate(s) OR Experience Certificate(s) by service purchasing organization (copy of Purchase Order /Work Order/contract if required). Bidder is requested to submit SUMMARY OF EXPERIENCE CERTIFICATE IN EXCEL FORMAT as proforma given in Section-7D as per clause 4.10, Section-1 Part-A for evaluation purpose.	Online	
13	Valid Annual turnover certificate and Profit & Loss statement duly certified by the CA/company auditors as per clause 4.8 section 1 Part-A.	Online	
14	Undertaking & declaration as per format- Section-6 Part A	Online	
15	Near relative certificates(s) as per format Section-6 Part B and Clause 34 of Section-4 Part-A	Online	
16	Undertaking & declaration as per format- Section-6 Part D	Online	
17	Clause-by-Clause compliance & No deviation statement pursuant to clause 11.2 (b) Section-4 Part-A as per Section-7(F).	Online	
18	Declaration Not de-bar/Blacklisted as per format of Section-7 (J)	Online	

19	Copy of Original Tender Document along with amendments issued if any	Online	
20	Bidder Profile & Questionnaire as per Section-8 duly filled and signed	Online	
21	Original Bid Form as per Section-9 Part-A	Online	
22	Undertaking for Labour Licence as per the Note:12 of DNIT	Online	
23	Undertaking as per Section 7 (G) else registration certificate issued by competent authority as per Appendix 1 of Section 1 Part A, as per applicability in pursuant to Clause 4.3 of Section 1 Part A	Online	
24	Self-Certification as format Section-7(L) and/ or Certificate as per clause 3.5(b) Section-4 Part B ( as the case may be)	Online	

Note: all the Declaration should be preferably on the letter head of the Company/firm. The Bidder has to upload the Scanned copy of all above said documents during Online Bid-Submission also.

Note: Failure to furnish all information required as per the Bid Documents or submission of the bids not substantially responsive to the Bid Documents in every respect will be at the bidder's risk and may result in rejection of the bid

## SECTION- 2 TENDER INFORMATION

**1.0 Type of tender- :** Single stage bidding, two stages Opening using Two Electronic Envelope System followed by E-reverse auction (if required).

**Note 1:** The bidder shall submit Techno-commercial & Financial bids simultaneously.

**Note 2:** The bids will be evaluated techno-commercially first and thereafter financial bids of techno-commercially compliant bidders only shall be opened. There may be an e-reverse auction after evaluation of financial bids.

**Note:2.1** If more than three responsive bidders are available then H1 bidder will not be allowed to participate in the e-reverse auction. However such bidder may be considered for the re-casting of inter-se ranking for award of the work, if required. The elimination of H1 is for e-reverse auction only. Offer for award of work at L1 prices achieved after e-reverse auction as per **clause 4 (Distribution of quantity) of Section 4 Part-B**.

In case of MSE bidder(s), if the bidder(s) happens to be the highest bidder but falls within the price band of L1+15% during financial evaluation before reverse auction, then such MSE bidder shall not be eliminated for e-reverse auction.”

**2.0 Bid Validity Period:** 150 days from the tender opening date.

### **3.0 Validity of bid Offer:**

The tender offer shall contain two electronic envelopes system, the first envelope will be named as **Techno-Commercial envelope** & will contain documents of bidders satisfying the eligibility/Technical & commercial conditions and 2<sup>nd</sup> envelope will be named as **financial envelope** containing financial quote. These envelopes shall contain one set of the following documents:

**A. Techno-commercial envelope** shall contain documents enlisted in Checklist for Bidders in **Section 1 Part B** in Electronic Form i.e. online except following documents which are to be submitted offline (i.e. offline submissions).

1. DD/ Banker's cheque of Tender fee/Not required in case of online payment as per **Clause 1.3 of DNIT, Section-1 Part A**.
2. EMD – Bid security (Original copy)/Not required in case of online payment as per **clause 5.1 (c) of DNIT, Section-1 Part A**
3. Deleted.
4. Integrity Pact in pursuance to Clause 15, DNIT, Section-1 Part-A, if applicable.

**Note3:** Only above listed documents are to be submitted offline (i.e. **No other document is to be submitted offline**) in original to the AGM (MM-III) O/o CGMT, UP(E) Telecom Circle, IIIrd Floor Door Sanchar Sadan, Laplace, Hazratganj Lucknow-226001 in a Sealed Envelope, as per the instructions given in the tender document, on any time before or **within 05 days** of bid submission end date, failing which the tender bid, if already opened on basis of scanned copies uploaded in 1st electronic Envelope i.e. Technical Envelope, shall be rejected.

In case the above documents are not submitted offline as per requirement specified above online bid containing the commercial, technical and financial offers of such bidder, SHALL NOT BE OPENED AND THE BID SHALL BE ARCHIVED UN-OPENED on e-tender portal.

### **B. Financial envelope shall contain:**

Electronic Form: Financial along with Price Schedule, **(Section-9 Part-B)** with all relevant bids Annexure.

**4.0 Payment terms:** As per Clause 14 of Section-5 Part-A.

**5.0 Period of Contract:** The period of this contract will be one year from the date of agreement. However, the BSNL reserves the right to extend the contract further, in terms of six months or less, up to one year on the same rates, terms & conditions, which shall be binding on the contractor.

**6.0 Consignees / Area of work: - as per Section 3 part-B**

Note: Being an E- Tender it is mandatory to upload both technical and financial bids on e-tendering portal. It is suggested that bidder should prepare and upload the bid one tendering portal well in time before closing date and time. Complaints regarding failure to upload online tender documents due to any reason of network or website after opening of tender will not be entertained.

**7.0 Paying Authority:**

AO (Claim) O/o CGMT UP (E) Hazratganj Lucknow- 226001 will be the paying authority and the complete set of invoice with supporting documents are to be submitted to AO (Claim) O/o CGMT UP (E) or as per guidelines under **VIPA** (Vendor Invoice Processing Automation) for invoice processing.

## SECTION- 3 PART A

### SCOPE OF WORK

**Jurisdiction of Contract: OFC Laying work for connectivity of BHQs in Prayagraj, Ayodhya, Gorakhpur, Kanpur, Sitapur, Sultanpur & Varanasi BAs under Amended Bharat Net Program in UP (East) Circle.**

#### A) SCOPE OF WORK

The scope of the work has been defined in NIT and given again as below-

**1.1 The Optical Fibre Cable is to be laid through PLB Pipes buried at a nominal depth of 165 cms. The steps involved in OF Cable construction/ OFC rehabilitation 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.
- a. Laying of PLB pipes/coils coupled by PLB sockets in excavated trenches, on bridges and culverts, drawing of 6 mm Polypropylene para pro rope (P.P.rope) through the PLB pipe ends at every manhole by PLB end caps of suitable size.
- b. Providing mechanical protection by R.C.C. Pipes/GI pipes and/or concreting/chambering according to construction specifications, wherever required.
- c. Fixing of GI pipes/troughs with clamps at culverts/bridges and/or chambering or concreting of G.I. Pipes/troughs, wherever necessary.
- d. Back filling and dressing of the excavated trenches according to construction specifications.
- e. Opening of manholes (of size 2 meters x 1 meters x 1.65 meters depth), replacing existing 6mm P.P. ropes by 8mm P.P. rope (from manhole to manhole) for ensuring smooth passage for pulling the cable. Pulling of Optical Fibre Cable with proper tools and accessories as per construction specifications. Sealing of both ends of the manholes by hard rubber bush of suitable size to avoid entry of rodents into the PLB pipes, putting split PLB pipes over cable in the manhole to protect the bare cable in the pulling manhole. Back filling and dressing of manholes.
- f. Digging of pit of size 2 meter x 2 meter x 1.8 meter (depth) for construction of jointing chamber at approximately every two kilometers of internal size of 1.5 meter x 1.5 meter x 1.2 meter using bricks and mortar or fixing pre-cast jointing chamber of internal diameter of 1.2 meter and minimum height of 0.3 meter, filling of jointing chamber with clean sand, placing either pre-cast RCC cover or stone of suitable size on jointing chamber to protect the joint and back filling of jointing chamber with excavated soil.
- g. Digging of pits 1 meter towards jungle side at every manhole and jointing chamber to a depth of 60 cms., fixing of route indicator/joint indicator, concreting and back filling of pits, painting of route indicators with yellow colour and joint indicator by red colour and sign writing denoting route/joint indicator number, as per construction specifications.
- h. Documentation.
- i. OFC rehabilitation works
- j. Proper earthing of armoured OFC cable at joint as per instruction given in the document.
- k. **Contractor shall also be responsible for coordination with external agencies like NHAI, Forest Department etc for getting permission for execution of the work under this NIT.**

#### C. BRIEF DESCRIPTION OF WORK

- 2.1 The work which shall be carried out as per Construction Specifications issued by BSNL contained in this bid document, involves Conventional Trenching and Reinstatement (CTR); Horizontal Directional Drilling (HDD); Related Allied Works (RAW). The various works can be summarized as below. The construction specification given below covers Conventional trenching and reinstatement and allied works. The specification for Horizontal directional drilling is specified.
- 2.2 Open trenching at 165 cm depth & width of 45 cm at top and 30 cm at bottom. In the case of HDD, **The depth should not be less than 165 cm and more than 200 cm. In exceptional cases, maximum depth more than 200 cm may be allowed by BA Head with proper justification and the same should be recorded by Supervisor of work and Site Incharge in MB Book. This restriction is incorporated to avoid inconvenience in tracing of OFC faults as higher depth leads to very troublesome/ delayed fault clearance. The BA heads must note this point while allowing depth more than 200cm.**
- 2.3. Permanently lubricated (PLB pipes) will be supplied by BSNL in coils of varying lengths from 200 meter onwards. Spools should be de-coiled using jack mechanism and bends removed by proper forming so that the pipes are straight. This will be part of the contractor's works and no extra payment will be paid. In addition to

the laying of PLB pipes, there may be cases where PVC pipes of straight lengths may also have to be provided.

- 2.4 Whenever there is any doubt in any of the construction step, BSNL's Engineering Instructions on Underground Optical Fiber Cable Laying Works shall be referred.

- D. COST OF WORK:** The estimated cost of work is as mentioned in the Notice Inviting Tenders which has been worked out based on standard scheduled rates mentioned in this tender document. The actual value of work may vary based on the actual requirement but generally being limited to **+/-25%** of the contract value of the work. However, **in exceptional circumstances only**, due to change in scope of work or otherwise, any variation in the value of work may be permitted up to 50% of contract value with prior approval of the next higher authority after recording adequate reasons and justification for the same”.



**SECTION- 3 PART B**  
**TECHNICAL SPECIFICATIONS/ REQUIREMENTS/SCHEDULE OF RATE**

**A. STANDARD SCHEDULE OF WORK AND RATES (SOR) for “OFC Laying work for connectivity of BHQs in Ayodhya, Gorakhpur-Z1 & Sitapur-Z1 BAs under Amended Bharat Net Program in UP (East) Circle.”**

**Rates are inclusive of all charges and levies, Transportations etc (Excluding GST as applicable)**

Sr. No	Item Code	Description of Item	Unit	Rate
1	Excavation of Trenches			
1.1	1OTNS	Excavation of trenches in normal /soft soil to a standard depth of 1.65 m as specified in laying practices of OF Cable, and back filling the excavated trenches after laying the PLB Pipe with or without protection.	per Meter	105
1.3	1OTSR	Excavation of trenches in soft rocky soil to a standard depth of 1.35 m as specified in laying practices of OF Cable, and back filling the excavated trenches after laying the PLB Pipe with or without protection.	per Meter	229
1.4	1OTHR	Excavation of trenches in Hard rocky soil to a standard depth of 1.35 m as specified in laying practices of OF Cable, and back filling the excavated trenches after laying the PLB Pipe with or without protection.	per Meter	470
1.5	1HDD	Horizontal Directional Drilling for laying of U/G PLB/HDPE pipes up to 50 mm dia to a standard depth of 1.65 m as specified in laying practices of OF cable, and pulling of single pipe.	per Meter	180
1.6	1HDD/A	for pulling of each additional pipe up to 50mm by HDD beyond single pipe	per Meter	15
2	Laying of PLB up to 50mm diameter and joining with a coupler (material to be supplied by BSNL.)			
2.1	2PLB/1	1st Pipe	per Meter	12
2.2	2PLB/2	Each additional pipe	per Meter	10
2.3	2PLB/3	Laying and fixing of PLB pipes with GI pipes with GI Clamps (inside building or area which is not exposed to sunlight) as per specifications along with supply of GI clamps (4 mm thickness,25 mm width) and all installation materials. Clamp spacing should be approx. 1 M take care of the load.	per Meter	90
2.4	2PLB/4	Laying of PLB Pipe in utility / existing duct provided by RoW/other authorities	per Meter	25
3	OFC pulling(OF Cable and accessories to be supplied by BSNL)			
Pulling of OF Cable and allied works (Viz. Replacing couplers and back filling in case of Manholes, Sealing of PLB Ends, refilling sand, Refixing RCC cover and back filling in case of joint chamber/manholes. No charges to be paid for opening of manholes/joint chambers.				
3.1	3OFCP1	Upto 48 Fibers	per Meter	17
3.2	3OFCP2	96F to 144 F	per Meter	22
3.3	3OFCP3	288 F	per Meter	26

4	OFC Blowing (OF Cable and accessories to be supplied by BSNL)			
Blowing of OF Cable and allied works (Viz. Replacing couplers and back filling in case of Manholes, Sealing of PLB Ends, refilling sand, Refixing RCC cover and back filling in case of joint chamber/manholes. No charges to be paid for opening of manholes/joint chambers.				
4.1	4OFBL1	Upto 48 Fibers	per Meter	22
4.2	4OFBL2	96F to 144 F	per Meter	24
4.3	4OFBL3	288 F	per Meter	26
5	DWC Pipe laying (DWC Pipe to be supplied by BSNL)			
5.1	5DWCT1	DWC Pipe (Up to 100mm OD) laying in trenches	per Meter	18
5.2	5DWCT2	DWC Pipe Laying & fixing with GI clamps (on bridge & culverts or external walls of building) as per specifications along with supply of GI clamps (4 mm thickness ,25mm width) and all installation material. Clamp spacing should be approx 1 M to take care of the load.	per Meter	150
6	Boring and CC Works			
6.1	6MBR	Boring/ cutting( morrum/ pucca road )/ black Top or Concrete road (depth 1.65m) at road crossing and any other unavoidable hindrance.	per Meter	240
6.2	6CCW	Providing CC of protection of size 20cms*20cms in the ratio of 1:2:4 for encasing PLB Pipe/GI Pipe/DWC Pipe in roads,bridges, crossing and culverts and for low depth protection or on wheel guard of bridge as specified in the construction practices of OF Cable Construction including material.	per Meter	300
7	Jointing Chamber			
7.1	7JTC	Construction of joint box housing of pre-cast RCC Ring of 1.2m dia and 0.3 m high with base and cover	per Chambe	4000
8	Route / Joint Indicator			
8.1	8ORJF	Digging of pit 1 m towards jungle side on each manhole/joint chamber for fixing of routes / joint chamber including supplying, fixing, and concreting of routes/joint indicator,painting and sign writing of route / joint indicators as per specification	Per each	700
9	OTHER ALLIED WORKS			
9	9TRPT	Cost towards transportation of materials including cost of Loading & Unloading, from store to work site	Per route Km. of stores	For 0-100 KM the amount is NIL. For 101 KM and above Rs. 800 per RKM of stores. ** see Note

<b>10 Cable Splicing work and Termination Work</b>				
Splicing of all the fibers of OF cable laid at every joint within specified splicing loss range ( $\leq 0.02$ db) and making termination at the ends. All material and labours except joint closure to be supplied by Bidder/Vendor.				
10.1	100FSP/1	For 12 Fibers	Per Joint	1800
10.2	100FSP/2	For 24 Fibers	Per Joint	3500
10.4	100FSP/4	For 48 Fibers	Per Joint	6000
10.6	100FSP/9	For 96 Fibers	Per Joint	8000
10.9	100FSP/28	For 288 Fibers	Per Joint	10000
<b>11 Documentation of Route Index Diagram in soft and Hard Copy (Three sets of Each)</b>				
11	11DOC	Documentation of route index diagram in hard and soft copies ( Three sets of Each).	Per KM	400
12	Cost of excavation work/digging of pit of dimension 1.5mX1.5mX1.65m (depth) for OFC maintenance work is a) for soft soil b) for Hard Soil		per pit	Rs 630/- Rs 1080/-
13	Earthing of Armoured OFC		Alternate joint	0

**Note: Individual rate for each Item for each package will be calculated as = SoR rate as per above table multiplied by total quoted price in financial bid/BOQ for a package divided by estimated total price**

[Total quoted price in financial bid/

$$[\text{Individual rate for each Item for each package}] = [\text{SoR rate as per above table}] \times \frac{\text{BOQ (Section-9 Part B) for a package}}{[\text{Total Estimated Price for a Package}]}$$

Note 1: ROW charges/restoration charges payable to local bodies/ road owning authorities to be paid on actual production of demand note by the contractor.

Note 2:\*\* Charges towards transportation of materials:

- (i) No transportation charges are payable if either end of the route is within 100 KM from the store location.
- (ii) If both the ends of the route are more than 100 KM from the store location , the amount of transportation charges payable for the route shall be equal to Rs. 800.00 x Route length in KM as specified in work order.

**Note 3 : Rs. 400 shall be deducted from bills as cost of empty cable drum of size 24/48/96/288F.**

The above Schedule of Rates are inclusive of all levies and charges but excluding GST which shall be paid extra as applicable.

The payment of items No. 1 (i.e. Execution of trenches ) shall be limited to approved average running rate per meter of the item No. 1 irrespective of variation in quantity of individual sub-items under this item, excepting the scenario wherein variation is warranted due to statutory requirement which was not stipulated in survey and incorporated in SOR/quantity earlier

## **B. OF CABLE CONSTRUCTION SPECIFICATION MANUAL**

The guidelines in the form of Engineering Instructions (E.Is.) on Construction Practices of Optical Fibre Cables are issued by the T & D wing of the Department, from time to time. However, the present practices are summarized here under, from the point of view of describing scope of work under various items of work. This document will need revision as and when

practices undergo any revision.

## 1. General

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

- i) Minimum possible route length vis-a-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-a-vis routing the main cable itself via such exchanges.

After deciding 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 borrow pits. The O.F.C. is laid along the roads at a minimum distance of 15 metres 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 borrow pits or low lying areas, the cable may be run underneath the shoulders at a distance of 0.6 metre from the outer edge of the road embankment provided the same is located at least 4.5 metres away from center line of road and 1.2 metre below the road surface.

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

- i) Excavation of trench upto a nominal depth as specified, 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, drawing of 6 mm polypropylene para pro rope (P.P. rope) through the PLB pipes/coils as per Construction Specifications and sealing of PLB pipe ends at every manhole by PLB end caps of suitable size.
- iii) Providing 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 culverts/bridges and/or chambering or concreting of G.I. Pipes/troughs, whenever necessary.
- v) Bank filling and dressing of the excavated trenches according to construction specifications.  
Digging of pits 1 metre towards jungle side at every manhole chamber to a depth of 60 cms., fixing of route indicator, concreting and back filling of pits. Painting of route indicators with yellow colour and sign writing denoting route indicator number as per construction specifications.

### vi) Documentation.

The documentation, consisting of the following shall be prepared exchange to exchange for intra SSA OFC links and for each section in case of inter SSA/National long distance routes.

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

b) **Route Index Diagrams – Profile:** These diagrams will contain:

- a. Make and size of the cable.
- b. Offset of cable from center of the road at every 10 meters
- c. Depth profile of Cable at every 10 meters
- d. Details of protection with type of protection depicted on it
- e. Location of culvert and bridges with their lengths and scheme of laying of PLB pipe/PLB Blowing Type/Pre-installed ropes thereon.
- f. Important landmarks to facilitate locating the cable in future
- g. Location of joints and pulling manholes.

These diagrams shall be prepared on **A-4 sheets** of 80 GMS. One sheet profile of maximum 400 meters shall be given to ensure clarity.

c) **Joint location Diagram:** This diagram will show:

- a. Geographical location of all the joints.
- b. Depth of Joint Chamber covers from ground level
- c. Type of chamber (Brick/Pre-cast)
- d. Length of O.F. Cable kept inside the joint chamber from either direction.

This shall be prepared on **A-4 sheets** of 80 GSM. All the diagrams (i), (ii) & (iii) shall bear the signatures of the contractor, the Engineer-in-charge as a proof of accuracy of the details. The diagrams shall be bound in A-4 size book with cover. The cover sheets shall be of 110 GSM and laminated. The front cover shall have the following details.

1. Name of the SSA/Project Organization.
2. Name of the OFC Link
3. Name of the Contractor
4. Date of commencement of work
5. Date of completion of work

For each route/section 6 sets of above-mentioned documents shall be submitted.

## **2. PLB/ROPE Materials used:**

### **PLB PIPE/COILS**

**PLB Socket:** For coupling PLB Pipes/coils

**PP Rope:** 6mm PP rope is drawn through the PLB pipes / coils and safely tied to the end caps at either ends with hooks to facilitate pulling of the OF cables at a later stage

**PLB End Caps:** For pulling the cable through the pipes, it is necessary to have suitable manholes at every 200M length and also at bends and corners suitably located. The pipes are laid for 200M or less at a time for the distance between two manholes. The ends of the PLB pipes/coils are closed with PLB End Caps. A suitable arrangement should be provided in the End Cap to tie PP Rope.

### **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 pipes/coils using RCC full/half round pipes or GI pipes or concreting of size 25 cms x 25 cms reinforced with MS weld mesh or a combination of any of these as per the instructions of the SDE-in-charge of the work as per instructions of the Engineer-in-Charge.

**G.I. PIPES:** Whenever protection by G.I. pipe is provided, it is preferable to use PLB coils. As space on parapet wall on Bridges/culverts is limited, 40mm GI pipes may be used with 32 mm PLB coil drawn inside.

**M.S. Weld Mesh:** The PLB pipes can also be protected by embedding it in concrete of size of 25 cms x 25 cms reinforced with MS weld mesh.

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.

**RUBBER BUSH :** To prevent entry of rodents into PLB pipes, the ends of PLB pipes are sealed at every manhole and joint using rodent resistant hard rubber bush (cap), so that it should be able to prevent the entry of insects, rodents, mud, and rainwater into the PLB pipe/Coil.

**ROUTE INDICATOR:** The route indicators are co-located with each manhole. In addition, route indicators are also to be placed where route changes direction like road crossings etc. The route indicators made of pre-cast RCC should have the following dimensions: Base(250 mm x 150 mm); Top(200 mm x 75 mm); Height(1250 mm). The word 'BSNL OFC' should be engraved on the route indicators. (See figure 'A' for details). The route indicators are painted yellow and the same are placed at 2 ft. away from the center of the trench towards jungle side. The engraved word 'BSNL OFC' should be painted in white, on route indicators. Numbering of route indicators should be done in white paint. The numbering scheme for route indicators will be Joint No./Route Indicator No. for that joint. For example, 2/6 marking on a route indicator means 6<sup>th</sup> route indicator after 2<sup>nd</sup> joint. Enamel paints of reputed brand should be used for painting and sign writing of route as well joint indicators.

### **JOINT CHAMBER**

The joint chamber is provided at every joint normally at a distance of 2 Kms to keep the O.F.C. joint well protected and also to keep extra length of cable which may be required in the event of faults at a later date. The joint chambers are made at site using bricks and mortar or are of pre-cast RCC type.

**Supply and fixing of Pre-fabricated RCC Closure as Joint Chamber :**

*For supplying RCC Ring*, First, a RCC ring closure of size 1.2m  $\Phi$ (dia) x 0.3m depth and rim thickness 50mm made of standard 1:2:4 concrete mix. It should have a split (with two halves) RCC cover of thickness 50mm made of cement concrete mix of 1:2:4 (1: cement, 2: coarse sand, 4 stone aggregate mm nominal size reinforced with MS fabric 75 x 75 mm mesh of weight not less than 7.75 Kg per sq. meter having galvanized iron handles for each half to facilitate easy lifting, to be used as joint chamber. The word '**OFC**' should be engraved on each half of the cover. The joint chamber should be so designed that PLB pipe/PLB Blowing Type/Pre-installed rope ends remain protruding minimum 5 cms inside the chamber. The PLB pipes should be embedded within the chamber in such a way that PLB pipe remains free from the weight of the construction. The joint chamber should be plastered on all internal surfaces and top edges with cement mortar of 1:3 (1: cement, 3: coarse sand) with a floating coat of complete cement as per standard. The joint chamber is to be filled with clean sand before closing.

*In Golden Quadrilateral & East West Corridor routes (every 10 Km) :*

For fixing Pre-cast RCC chamber, first a pit of size 1.5 m x 1.5 m x 1.65 m depth is required to be dug. Pre cast RCC chamber consists of three parts (i) round base plate in two half of 140 cm dia and 5 cm thickness (ii) full round RCC joint chamber with diameter of 120 cm and height of 100 cm and thickness of 5 cm (iii) round top cover will be in two halves with diameter of 140 cm and thickness of 5 cm having one handle for each half in centre and word '**BSNL OFC**' engraved on it.. After, fixing the pre-cast RCC joint chamber, the joint chamber is filled with clean sand before closing. Lastly, back filling of joint chamber pit with excavated soil is carried out.

## **CABLE PULLING AND JOINTING/SPLICING:**

### **CABLE PULLING:**

Manholes marked during PLB pipe Type/Pre-installed ropes laying of approx. size of 3m length x 1.0m width x 1.65m depth shall be excavated for pulling the cables. There may be situations where additional manholes are required to be excavated for some reasons, to facilitate smooth pulling of cable. Excavation of additional manholes will be carried out, without any extra cost. De-watering of the manholes, if required, will be carried out without any extra cost. Dewatering/ De-gasification of the ducts, if required, will be carried out without any extra cost. The existing 6mm PP rope shall be replaced by with PP rope of 8mm dia between the two consecutive manholes. This is to ensure that the PLB pipes Type/Pre-installed ropes are cleaned for pulling the cable without exerting undue tension on the OF cable. While cleaning, excessive pressure should not be put as this may result in breaking of P.P. rope and thus requiring opening of additional manholes. However, in case the cleaning rope gets stuck up during pulling, the location of clogging of PLB Pipe Type/Pre-installed ropes should be measured and located accurately. The trench at that location should be opened and the PLB Pipe Type/Pre-installed ropes should be cleaned properly or if not possible, it should be changed by a clean new PLB Pipe Type/Pre-installed ropes to facilitate easy cable pulling at a later stage without any breakage. If clogging of PLB Pipe Type/Preinstalled ropes is in the location where the pipes are protected either by RCC Pipe Type/Pre-installed ropes or by concreting and the protection is broken for cleaning/changing the PLB Pipe, the protection thus removed should be brought back to normal by the contractor without any extra cost. However, PLB Pipes Type/Pre-installed ropes, RCC Pipes required for this purpose will be supplied by the BSNL.

### **CABLE BLOWING**

- The tenderer should blow/de blow the cable in the PLB duct by air jet blowing as per Specification. Within 7 days of notice, the contractor shall commence Blowing /de blowing and complete the work at an average speed of 4 KM per day. There shall not be any damage to the OF cable blown/de blown. Cable blowing shall be done using blowing machine which can be kept inside the manhole, as it will avoid formation of loop outside. Compressor of suitable capacity shall be used.
- Blowing has to be done for the route length, end to end. This implies work may have to be done beyond the section awarded to the contractor, and he is bound to do it. The works involved in blowing are listed below.
- Transportation of all materials issued by BSNL from stores including cable drums, joint rings and handling of the same (including loading, unloading, handling and local distribution).
- Digging of manhole and reinstatement after blowing of cable.
- The opening of End plug, de-rope of rope in PLB pipes.
- Duct integrity test as per specifications.
- If any coupler is not connected properly, they should be connected at the coupling points. If required the coupling points are to be dug open for this purpose and the existing duct cut, aligned and coupled properly. Extra piece of pipe if required has to be coupled.
- Blowing of cable and fixing cable seal plug.
- Keeping 30mtr coil in every joint chamber.
- Digging of joint chambers, placing RCC chambers supplied by BSNL, and filling with river sand.
- Closing the manhole/joint cover and ensuring that the cover sits properly.

If there is time gap after laying of pipes and blowing, the contractor should carry out Duct Integrity test of the pipe to the specified pressure and ensure that there is no block or leak, as per specifications. If there are blocks the same shall be rectified. A check list may be submitted to the site Engineer of the section after every pipe is tested, indicating the block etc. and the action taken to rectify the duct. No separate rates are payable for duct integrity test or rectification of ducts.

Cable should be blown for the entire section in the pre-assigned pipe & colour. No crossing should take place in manholes between different coloured pipes, if multiple pipes are available. Ensure no mud, water or debris goes inside the pipe during the work. Any obstructions found in the pipeline after cable blowing, shall be removed at the expense of the Contractor.

Depending upon the length of the cable and the addl. length required at manholes, chain measurement should be taken from the starting end of the section, and the drums should be properly located.

The drums are of approx. 2 Km to 4 Km and may sometimes be smaller. It may be preferable to blow the OF cable by placing the drum at the manhole point nearest to midpoint of the coil size and blow in both directions. The standard practice is to keep the clock-wise end of the cable to A side of the route and the anticlockwise end to 'B' side. Also, it is the convention to have the clockwise end on top and anticlockwise at the bottom of the drum. With that in view, the OF Cable is mounted on the jack and wheel and positioned at the manhole point. It is important to keep the drum shaft (axle) in horizontal position by adjusting the jacks. After it is set in position, the cable should be inserted into the blowing machine.

Proper communication is to be established between the lead-in and take out manholes. This can be done by suitable Trans Receivers (Walkie Talkies) or Magneto telephones with drop wire. This has to be arranged by the contractor and communication with each point should be kept throughout the blowing. OF cable at RCC chambers should be lead along the walls & suitable MS clamps should be provided (4 on each side). Additional protection of cable if required shall be provided at manholes.

### **3. EXCAVATION OF TRENCHES**

#### **i) Trenching**

**Location and Alignment of the Trench:** In city areas, the trench will normally follow the foot-path of the road except where it may have to come to the edge of the carriage way when cutting across road with specific permissions from the concerned authorities maintaining the road (such permissions shall be obtained by the department). Outside the city limits the trench will normally follow the boundary of the roadside land. However, where the road side land is full of burrow pits or afforestation or when the cable has to cross culverts/bridges or streams, the trench may come closer to the road edge or in some cases, over the embankment or shoulder of the Road (Permissions for such deviations for cutting the embankment as well as shoulder of the road shall be obtained by the contractor on behalf of BSNL).

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 the center line will be marked and the Contractor shall set out all other work to ensure that, the excavated trench is as straight as possible. The Contractor shall provide all necessary assistance and labour, at his own cost for marking the alignment. Contractor shall remove all bushes, undergrowth, stumps, rocks and other obstacles to facilitate marking the center line without any extra charges. It is to be ensured that minimum amount of bushes and shrubs shall be removed to clear the way and the contractor shall give all consideration to the preservation of the trees.

**ii) Line-Up:** The line-up of the trench must be such that PLB pipe(s) 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.

**iii) 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 utility services and/or private parties. However, along the Highways and cross country, there shall be no objection to the Contractor resorting to mechanical means of excavation, provided that no underground installations exist in the path of excavation, if any, are damaged. There shall be no objection to resort to horizontal boring to bore a hole of required size and to push through G.I. Pipe (65mm/40mm 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 metre or half the depth of excavation, whichever is more, clear off the edge of excavation. In all other cases 'getting out' shall include depositing the excavated materials as specified. In Rocky strata excavation shall be carried out by use of electro mechanical means like breakers 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 authorize. Trenching shall as far as possible be kept ahead of the laying of pipes. Contractor shall exercise due care that the soil from trenching intended to be loose for back filling is not mixed with loose debris. While trenching, the Contractor should not cause damage to any underground installations belonging to other agencies and any damage caused should be made good at his own cost and expense. The contractor to prevent any accident to pedestrians or vehicles shall provide necessary barricades, night lamps, warning boards and required watchman. While carrying out the blasting operations, the contractor shall ensure adequate safety by cautioning the vehicular and other traffic. The contractor shall employ sufficient man-power for this with caution boards, flags, sign writings etc. The contractor should provide sufficient width at the trench at all such places, where it is likely to cave in due to soil conditions without any extra payment. A free clearance of minimum 15 cms. should be maintained above or below any existing underground installations. No extra payment will be made towards this. In order to prevent damage to PLB 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 horizontal. If not possible as stated above, alignment of trench shall be changed to avoid burrow pit completely.

iv) **Depth and Size of the Trench:** For normal & hard soil for all areas including ordinary & hard rock for all areas minimum depth shall be **165 cms** shall be for penalty. For ordinary & hard rock minimum depth shall be 135 cms shall be followed for penalty. For Hilly terrain, minimum depth shall be 90 cms shall be followed for penalty. However, Engineer-in-charge in exceptional cases due to adverse site conditions encountered, may allow to lay PLB Pipes at a lesser depth with 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/GI/RCC Pipes) are to be laid in some stretches, the same shall be accommodated in this normal size trench.

When trenches are excavated in slopes, uneven ground, inclined portion, the lower edge shall be treated, as top surface of land and depth of trench will be measured accordingly. In certain locations, such as uneven ground, hilly areas and all other places, due to any reason whatsoever it can be ordered to excavate beyond standard depth of 165 cms to keep the bed of the trench as smooth as possible. Near the culverts, both ends of the culverts shall be excavated more than 165 cms. to keep the gradient less than 15 degree horizontal. In case where depth beyond specified depth is necessary it shall be clearly indicated in the technical specification of bid documents and of each work order. No extra payment shall be made for such extra depth. 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. The competent authority shall grant approval in writing under genuine circumstances. The decision of the competent authority shall be final and binding on the contractor.

v) **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.

vi) **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.

vii) **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 operations.

The contractor shall obtain license from the competent authority for undertaking blasting work as well as for obtaining and storing the explosive as per the Explosive Act, 1884 as amended up to date and the explosive Rules, 1983. The contractor shall purchase the explosives fuses, detonators, etc. only from a licensed dealer. Transportation and storage of explosive at site shall conform to the aforesaid Explosive Act and Explosive Rules. The contractor shall be responsible for the safe custody and proper accounting of the explosive materials. Fuses and detonators shall be stored separately and away from the explosives. The Engineer-in-Charge or his authorized representative shall have the right to check the contractor's store and account of explosives. The contractor shall provide necessary facilities for this.

The contractor shall be responsible for any damage arising out of accident to workmen, public or property due to storage, transportation and use of explosive during blasting operation. Blasting operations shall be carried out under the supervision of a responsible authorized agent of the contractor (referred subsequently as agent only), during specified hours as approved in writing by the Engineer-in-Charge. The agent shall be conversant with the rules of blasting.

All procedures and safety precautions for the use of explosives drilling and loading of explosives before and after shot firing and disposal of explosives shall be taken by the contractor as detailed in **IS:4081** safety code for blasting and related drilling operation.

viii) **Trenching Near Culverts/Bridges :** The PLB pipes shall be laid in the bed of culvert at the depth not less than 165 cms protected by G.I. pipes/ DWC/ RCC 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 horizontal. The bed of the trench should be as smooth as possible.

While carrying out the work on bridges and culverts, adequate arrangements 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 authorized, the cable should be laid with some curve on both sides of the culvert or the bridge to make some extra length available for re-adjustment of the cable at the time of reconstruction of culvert or the bridge.

#### **4. LAYING OF H.D.P.E. PIPES / COILS:**

After the trench is excavated to the specified depth, the bottom of the trench has to be cleared of all stones or pieces of rock and 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 leftover patches are also completed in all respects.

Preparatory to aligning the pipe for jointing, each length of the PLB 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 at a later stage.

The ends of each pipe and inside of each PLB socket shall be thoroughly cleaned of any dirt or other foreign materials.

After the trench is cleaned the PLB Pipes/Coil shall be laid in the cleaned trench, jointed with "O" ring type PLB Sockets & 6 mm PP rope should be drawn through the PLB Pipes at the time of laying the pipes to facilitate cable pulling at a later stage. At every manhole approximately at every 200m or at bends or turns the pp rope will be tied to the PLB end caps used for sealing the PLB pipes, to avoid entry of rodents/mud etc.

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

In City, Town, Urban area falling within Municipal/Corporation limits, the PLB Pipes shall be laid with protection using RCC/G.I. Pipes/Concreting reinforced with weld mesh. Moreover, in cross country routes, if depth is less than 1.2 metres, protection by using RCC/G.I. 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 requirements. Normally 100mm RCC Pipes shall be used for protecting PLB Pipe but if more than one PLB Pipe is to be laid and protected, RCC Pipe of suitable size to accommodate the required number of PLB Pipes shall be used.

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

Whenever RCC pipes are used for protection, the gaps between the RCC collars and the RCC pipes shall be sealed using cement mortar 1:3 (1:53 grade cement of reputed brand, 3: fine sand without impurities) to bar entry of rodents. Every third collar of RCC pipes (Normally of 2 metres 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 20mm) so that the alignment of RCC pipes remain firm and intact and to avoid entry of rodents.

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

In case of protection by concreting at site, the nominal dimension of concreting shall be 250mm x 250mm 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 20mm nominal size, reinforced with MS weld mesh. As the RCC is cast at site, it is imperative to ensure that special care is taken to see that proper curing arrangements are made with adequate supply of water. The contractor shall invariably use mechanical mixer at site for providing RCC protection to ensure consistency of the mix.

For carrying out concreting work in trenches, yellow PVC sheets of width not less than 1.0M and of weight not less than 1 kg. per 8 sq. metres shall be spread and nailed on sides of the trench to form trapezoidal section for concreting in the cleaned trench, to avoid seepage of water into the soil. A bed of cement concrete mixture of appropriate width and 75 mm thickness shall be laid on the PVC sheet, before laying PLB pipes. The PLB pipes shall then be laid above this bed of concrete. After laying the PLB pipes, MS weld mesh should be wrapped around and tied and concrete mix is to be 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 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 pipes are not subjected to any damage strain.

Water present in the trench at the time of laying the PLB 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 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 metres 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 Pipes may be encased in reinforced cement concrete, as detailed, ibid.

While laying the pipes, a gap of 2M is kept at convenient locations approx. 200m apart and at the bends and turns, which will be used as manholes during OF cable pulling. Ends of the PLB pipes at the manholes shall be sealed using PLB end caps after tying the PP rope to the end caps to avoid choking of the pipes. In a similar manner, manholes shall be kept while approaching

bridges, road crossings etc., as instructed by the Engineer-in-charge. The location of the manholes will be decided by the Engineer-in-charge.

## 5. 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, G.I. 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 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, G.I. Pipe (Carrying PLB pipe and cable) may be buried on the top of the Arch adjourning 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 G.I. Pipes/GI Troughs/DWC Pipes must be clamped outside the parapet wall with the clamps. If necessary, the pipe 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 clauses referred above are not possible, the G.I. Pipes/GI Troughs/DWC Pipes can be fixed on the top of the road curb close to the inside face of the parapet wall by means of clamps, using raw plugs and wood screws or small diameter bolts, without damaging the concrete and limiting the external diameter of the bolts to 7.5 mm. The permission for carrying out this work will be obtained from the Road Authorities by the contractor. 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/colour wash is existing on the Bridges/Culverts, the same should also be carried out on the concreted portion to ensure uniformity.

## 6. Backfilling 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 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 pipes when the PLB 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 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 de-rocked 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 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 metres 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.

## 7 MICRO TUNNELING

### 7.1 GENERAL WORK DESCRIPTION

Laying of PLB pipe of different types and sizes in general, including some or all of the following activities:-

#### Horizontal boring and laying the PLB pipe through it:

Horizontal boring and PLB pipe laying through it along road and under railway/ road/ canal/ streams crossing in all types of soil at suitable depth including all civil works. **The depth should not be less than 165 cm and more than 200 cm. In exceptional cases, maximum depth more than 200 cm may be allowed by BA head with proper justification and the same should be recorded by Supervisor of work and Site Incharge in MB Book. This restriction is incorporated to avoid inconvenience in tracing of OFC faults as higher depth leads to very troublesome/ delayed fault clearance. The BA heads must note this point while allowing depth more than 200cm. Site Incharge shall personally see & ensure the depth at HDD IN and OUT (pulling points) points as per departmental norms i.e 165 cm. Since many times manual works of digging pits to place PLB pipes at proper depth are getting**

**Neglected.** Supply of all tested tools and tackles other required equipment and consumables, labour etc. and making all such necessary arrangements are under vendor's scope. Total job has to be completed within the time schedule mentioned in work order. The work is specified under two major heads.

- a) Laying along the road.
- b) Road/ Rail/ canal crossing (road crossing means crossing a road of minimum width of 8 mtr.)

**Under each head there will be again three different sizes of boring:**

- a) Boring single pipe.
- b) Boring from two pipes to four pipes.
- c) Boring more than four pipes.

The PLB pipe will be pulled through the horizontal bore with insertion of nylon rope provided by the department. Balloon (25mm. dia and 45mm length) test both ways is to be carried out by the bidder including the rope insertion if necessary for each pipe line. Duct integration test is to be carried out for each pipe in case of without rope pipes.

## **7.2 SPECIFICATION FOR PLB PIPE LAYING BY MICRO TUNNELING**

### **1. In this system of cable laying following job specification should be maintained:**

- (i) Guided boring / drilling technology is to be used. Mechanical mores are not permitted.
  - a. Radio or any other detection system should be used for avoiding damage to existing underground utilities i.e. electric supply, water pipe lines, telecom copper cables and optical fiber cables, gas pipelines, sewerage etc.
  - b. The depth of boring should be such as to clear any underground utilities/obstacles. However in no case the depth of boring be less than 2m from the road surface.
  - c. In horizontal and vertical boring the system should be capable of going up to 10 meters below the ground level.
  - d. In a shift of 8 hrs at least 500( Five hundred ) meters of drilling should be achieved.
  - e. As far as possible cable should be laid in drum lengths and cutting of cable should be avoided while lying along the road .

### **2. Ground penetrating Radar survey and damage to Telephone cable and other underground utility services:**

- (i) The contractor should collect all available information regarding underground services and take necessary care to protect them. He should also have sufficient arrangements to identify and protect such underground services.
- (ii) The contractor shall carry out ground penetrating Radar surveys along the proposed cable route at his own cost to identify the underground services and for setting out the rules as directed by the executive officer. The executive officer shall provide the route map to the contractor if available for plotting the existing utilities and setting the route for horizontal drilling. However, for safe drilling the contractor should make requisite inspection and test pits whenever necessary.

### **3. LIFTING OF PLB PIPE:**

- 3.1 The PLB pipe will be handed over to the contractor at stores. The contractor is to lift the store from the store depot to the work site.
- 3.2 Guarding at the work site is to be done by the contractor.
- 3.3 At the time of laying, jack and wheel should be used so that the pipe is not damaged.
- 3.4 The contractor is to make arrangement of water and power at the site of work
- 3.5 Permission for laying is to be taken by contractor from appropriate civic & road authorities.
- 3.6 Digging of the test pit and restoration of pits are to be done by the contractor.

**4. Fixing of Route Indicators/Joint Indicators:** Pits shall be dug 1 M. towards the jungle side at every manhole for fixing of Route Indicator. In addition, Route Indicators are also required to be placed where O.F Cable changes directions like road crossing etc. The pits for fixing the indicator shall be dug for a size of 60 cms. X 60 cms. and 75 cms. (depth). The indicator shall be secured in upright position by ramming with stone and murrum up-to a depth of 60 cms. And concreting in the ratio of 1:2:4(1: cement, 2: coarse sand, 4: stone aggregate 20 mm nominal size) for the remaining portion of 15 cms. Necessary curing shall be carried out for the concreted structure with sufficient amount of water for reasonable time to harden the structure. The route indicator shall be painted with primer before painting with oil paint. The material used should bear ISI mark. The size of each written letter should be at least 3.5 cms. The colours of painting are yellow for Route Indicator and colour of sign writing white for Letters . The numbering scheme for route indicators will be Joint No./Route Indicators No. for that joint. For example 2/6 indicator means 6<sup>th</sup> route indicator after 2<sup>nd</sup> joint.

### **8. DOCUMENTATION :**

The documentation, consisting of the following shall be prepared exchange to exchange for intra SSA OFC links and for each section in case of Inter SSA/National Long Distance routes.

**i) Route Index Diagrams – General :**

This diagram shall consist of pipe Route Details on Geographical Map drawn to scale with prominent land marks and alignment of pipe with reference to road. This shall be prepared on A-3 sheets of 80 GSM.

**ii) Route Index Diagrams – Profile :**

These diagrams shall contain: Make and size of the pipe, Offset of pipe from center of the road at every 10 metres, Depth profile of pipe at every 10 metres; Details of protection with type of protection depicted on it, Location of culvert and bridges with their lengths and scheme of laying of PLB Pipe/coil thereon, Important landmarks to facilitate locating the pipe in future and Location of pulling manholes.

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

All the diagrams (i) & (ii) shall bear the signatures of the contractor, the SDE-Site-in-charge as a proof of accuracy of the details. The diagrams shall be bound in A-4 size book with cover. The cover sheets shall be of 110 GSM and laminated. The front cover shall have the details: Name of the SSA/Project Organization, Name of the OFC Link, Name of the Contractor, Date of commencement of work & Date of completion of work

For each route/section, 6 sets of above mentioned document shall be submitted.

**9. SAFETY PRECAUTION :****i) Safety Precautions when excavating or working in excavations close to electric cables.**

The Engineer-in-charge of the work should get full information from Electricity undertaking regarding any electric cables, which are known or suspected to exist near the proposed excavation and unless this is done, excavation should not be carried out in the section concerned. The electricity undertaking should be asked to send a representative and work should be preceded with close consultation with them.

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

**ii) Electric shock-Action and treatment:**

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

Safety precautions while working in Public Street and along railway lines where a road or footpath is to be opened up in the course of work, special care should be taken to see that proper protection is provided to prevent any accidents from occurring. Excavation work should be done in such a manner that it will not unduly cause inconvenience to 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 with the full consent and knowledge of the competent railway authorities.

**iii) 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.

**iv) 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 roadway or waterway. If possible the excavated material should be put between the workmen and the traffic without encroaching too much on the road.

**v) 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 a tunnelled opening, it should be ensured that the soil is compact enough to prevent caving 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.

**vi) Protection of Excavations:**

Excavations in populated areas, which are not likely to be filled up on the same day, should be protected by barriers or other effective means of preventing accidents and the location of all such openings must in any event be indicated by red flags or other suitable warning signs. During the hours from dusk to dawn, an 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

**vii) 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 at night for the purpose of these instructions, for the purpose of providing the warning signs. Excavation liable to cause danger to vehicles or the public must at all times be protected with fencing of rope tied to strong uprights or bamboo poles at a suitable height or by some other effective means. Any such temporary erection which is likely to cause obstructions and which is not readily visible should be marked by posts carrying red flags or boards with a red back-ground by day and by continuously lighted lamps at night.

The flags and the lamps should be placed in conspicuous positions so as to indicate to 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 1.25m along the width and 6m along length of the obstruction in non-congested area, 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 25m to traffic approaching from any direction or any part of the carriage way of the road in which the excavation exists, a warning notice should be placed on the side or edge of 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 applied 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.

**viii. 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.

**ix. 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.

**x. 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 as: Gun powder, Nitrate, Mixture, Gelatin, Safety Fuse, Electric Detonator, and Ordinary Detonator.

**i) Procedure :**

A detailed survey of the route is to be done to assess the length of the section where trenching is to be done with the help of blasting. A route diagram of the rocky section may be prepared indicating the length of the route where the explosives are to be used. For the purpose of obtaining license, a longer length of route should be given in the application as in many cases, after digging, rocks appear 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 for 15 days only. The license should be got renewed if the blasting operation 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.

**ii) Method of using :**

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

**iii) Operation of exploder (IDL schaffler type 350 type exploder) :**

The type 350 blasting machine consists of a bearing block with blasting machine system and the explosion proof light – alloy injection moulded housing. The exploder is held with the left hand. The twist handle is applied to the drive pin, clapped with the right hand turned in the clock wise direction in continuous measurements at the highest speed from the initial position until it reached to a stop. At this stage an indication lamp will glow. When the indication lamp glows, "press button switch" should be pressed. This will extend the electric current to detonator and gelatin 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.

**iv) Warning :**

There may be two reasons for unsatisfactory results of the blasting:

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

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

**10.**

**Precautions :**

The abstract of Explosives 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 is the holder of a license to possess the explosives or the agent of holder of such a license duly authorized by him in writing on his behalf. OR is entitled under these rules to possess the explosives without a license.

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

No other 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 a license for possession of explosives granted under these rules shall store the explosives only in premises specified in the license.

**11. Protection from Lightening 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.

**i) Precautions during thunder–storm:**

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

**ii) 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 Inspection Officer.

**iii) Explosives not be kept in damaged boxes:**

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

**iv) Storage of explosives in excess of the licensed quantity:**

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

**v) 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.

**vi) 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.

**vii) Precautions to be observed while firing :**

The end of the safety fuse if used in place of a detonator should be freshly cut before being lighted. The exploders shall be regularly tested and maintained in a fit condition for use in firing. An exploder shall not be used for firing a circuit above its rated capacity. The electric circuits shall be tested for continuity before firing. All persons other than the shot-firer and his assistant, if any, shall be withdrawn from the site before testing the continuity.

For the purpose of jointing, the ends of all wires and cables should have the insulation removed for a maximum length of 5 cms. And should, then be made clear and bright for a minimum length of 2.5 cms. And the ends to be joined should be twisted together so as to have a positive metal contact. Then these should be taped with insulation to avoid leakage when in contact with earth.

In case of blasting with dynamite or any other high explosive, the position of all the bore holes to be drilled shall be marked in circles with white paint. These shall be inspected by the Contractor's agent. Bore holes shall be of a size that the cartridge can easily pass down. After the drilling operation, the agent shall inspect the holes to ensure that drilling has been done only at the marked locations and no extra hole has been drilled. The agent shall then prepare the necessary charge separately for each bore hole. The bore holes shall be thoroughly cleaned before a cartridge is inserted. Only cylindrical wooden tamping rods shall be used for tamping. Metal rods or rods having pointed ends shall never be used for tamping. One cartridge shall be placed in the bore hole and gently pressed but not rammed down. Other cartridges shall then be added as may be required to make up the necessary charge for the bore hole. The top most cartridge shall be connected to the detonator which shall in turn be connected to the safety fuses of required length. All fuses shall be cut to the length required before being inserted into the holes. Joints in fuses shall be avoided. Where joints are unavoidable, a semi-circular niche shall be cut in one piece inserted into the niche. The two pieces shall then be wrapped together with string. All joints exposed to dampness shall be wrapped with rubber tape.

The maximum of eight bore holes shall be loaded and fired at one occasion. The charges shall be fired successively and not simultaneously. Immediately before firing, warning shall be given and the agent shall see that all persons have retired to a place of safety. The 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.





**Introduction-Why Earthing (in other words Grounding):** Proper grounding and bonding is required for the safe and effective dissipation of unwanted electrical current, and it promotes personal and site safety. Typically, fibre-optic systems do not carry electrical power, but the metallic components of a conductive cable are capable of transmitting current. This would occur if a metallic piece of the cable—such as the interlocking or corrugated armour—were to come into contact or close proximity with electrical current from sources such as exposed wiring, faulty electrical systems, lightning or other events. This creates the potential for the occurrence of several hazards, such as electrical shock, fire, damage to electronics and system failures resulting in downtime.

According to the industry standards, —Bonding is the permanent connection of metallic parts to form an electrical path that will be conductive and continuous. —Grounding is the act of connecting that path to the earth or some conducting body that serves as the earth. When all the components of a system are properly bonded together and grounded to the earth, the risk associated with electrical current harming personnel or damaging property and equipment is reduced.

The splice closure and the cable armour shall be earthed at regular intervals (may be at every splice point or alternate splice point) to avoid any damage to the cable/splice or the persons working on the cable. Though there are different types of Earthing techniques available, it is proposed to use —Spike Earthing to obtain necessary earthing potential of  $<5\Omega$ . It is suggested taking into consideration the limited space availability around the splice pit. Ground Conditions The spikes will be exposed to a range of soil types, including the following: • Clay - soft and compacted; • Granite and gravel; • Rock, shale and sandstone; • Sand; and • Alluvial sediment. Across this range of ground conditions, both the electrical conductivity and corrosive properties of the soils, vary markedly

### **Spike Earthing:**

The spike earthing arrangement of earth electrode system may consist of one or more numbers of 25.0 mm or mm dia. GI pipes, each of 275 cm or 375 cm length. Each pipe is used as earth spike and is so driven into the ground that its top remains at some depth below the ground surface. The spacing between any two spikes should not be less than 375 cm ordinarily. In no case, it should be less than 250 cm. A typical layout is shown in figure below. *There are different types of Earth rods are available and if required the installer may choose appropriate one for earthing to obtain  $<5\Omega$ . For e.g. one such earthing rod of 1853 mm (i.e.  $25 + 1752 + 76$ ) long fabricated from 20 mm dia M.S. Rod, the bottom of which to be made cut of the same rod in the shape of a cone – 76 mm long and the forged head made out of the same rod with 30 mm (dia) = 25 mm (height).*

The positions of the spikes (may be one or more, may be 4 nos at every corner of the pit) should be marked out around the splice pit and a trench no wider than necessary should be excavated. The trench should be 70 to 100 cms deep or it may be around the RCC splice chamber. The spike should be driven vertically into the trench until the top of the driving head is 30 cms above the bottom of the excavation. Spikes can be driven in quite easily with a sledge hammer for round electrodes. A new arrangement has been developed consisting of a sliding hammer placed on the electrode so that the work may be carried out at a level convenient to the workman without a ladder or auxiliary platform. The blows are delivered to the rod at a point near to the ground. The driving head or a suitable bolt is supplied with each earth spike and this must be used to prevent the top of the spike being damaged during the driving operation, when the spike has been driven fully into the ground, it will probably be found that the driving head will be tight fit on the spike and in these circumstances it may be left in position.

If the earthing requirement of  $<5\Omega$  is not achieved with one spike, then, multiple spikes are driven and the spikes should be connected together by a continuous main earth conductor, bare tinned copper protected by PVC pipe to prevent corrosion. The PVC pipe containing the earth conductor should be lightly dressed down and wiped on to the earth conductor at each side of the binder. The binder should be soft copper wire, 1.4 mm. diameter wound round the earth conductor at the points where it is held in the clamp on the spike as shown in the figure below. The PVC pipe used should be of sufficient diameter to carry the copper conductor and thickness. The binder and the exposed part of the earth conductor should be thoroughly tinned. Earth Enhancing Compound in the form of granular mixture of Calcium Bentonite (clay) & Gypsum may also be used where ever necessary.

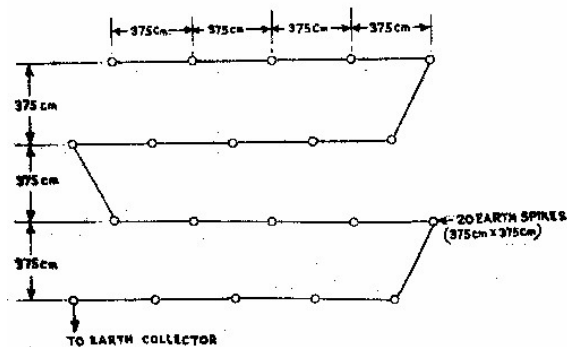
Alternatively a pit of required diameter is dug up and the copper/GI rod is placed in the middle and driven into the ground to hold it in position, with the connecting point easily accessible (above the ground). The pit is then filled up using a mixture of charcoal/salt/sand/ in required combination. Earth Enhancing Compound in the form of granular mixture of Calcium Bentonite (clay) & Gypsum may also be used where ever necessary.

The earth conductor should be clamped at a point as low as possible on the spike and bent so as to lie along the bottom of the trench. All bolts, clamps, plumber's wipers and tinned copper wire adjacent to the welded joints should be well coated with black paint suitable for iron work.

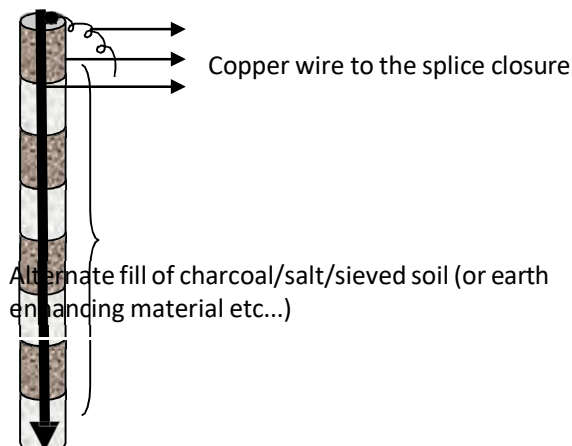
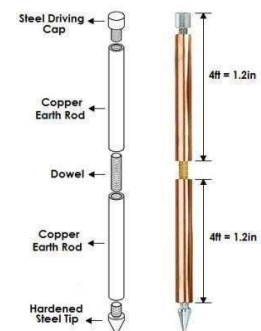
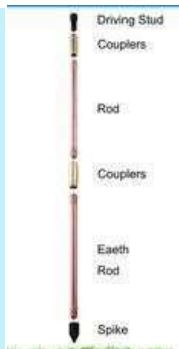
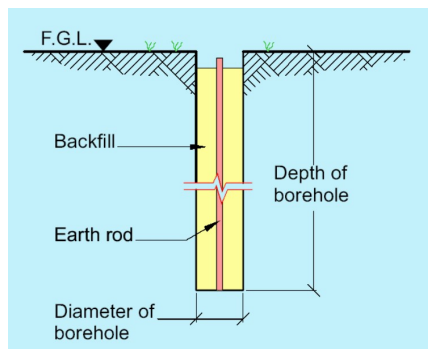
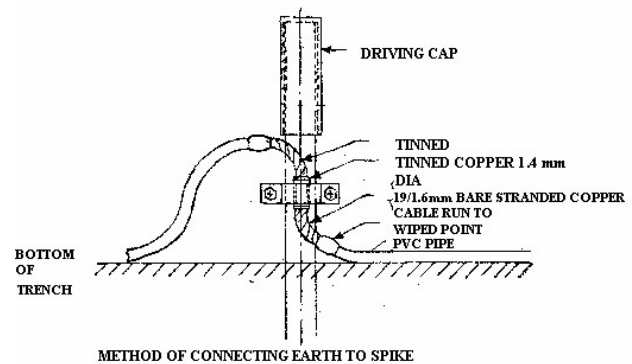
The main earth conductor shall then be brought to the splice closure as straight and short as possible from the electrode system to the earth connector on the splice closure and is connected tight. The electrode positions shall be marked (may be on the splice chamber) so that it can be watered during dry season when the conductivity is low

The earth is measured and the reading noted as reference. It may be noted on a paper and put inside the closure noting the date of measurement. On regular intervals or when attending to a cable/splicing fault, the earth may be measured and the same may be noted and also noted in the paper available inside the closure.

### Connecting the multiple spikes



### Method of connecting earth to spike



**SECTION-3 PART C****SCHEDULE OF REQUIREMENT & QUANTUM OF WORKS****A. Schedule of Requirement & Quantum of Works****TABLE-1**

The route particular of the proposed OFC works for outsourcing is given below.

**Package-I (Ayodhya/ Trivediganj, Babhanjot Block):-AYD**

SN	BA	OA	Block Name	Route Name	Distance in Km	Total Patch work length (in Km)
1	Ayodhya	Gonda	Babhanjot	Babhanjot Block to Maskanwa Exchange	18	<b>27</b>
2	Ayodhya	Barabanki	Triveniganj	Haiderganj TE to Triveniganj TE	9	

**Package-II (Gorakhpur/ Mirzapur block):-GKP-1**

SN	BA	OA	Block Name	Route Name	Distance in Km	Total Patch work length (in Km)
1	Gorakhpur	Azamgarh	Mirzapur	Lahidih Exchange to Nizamabad Exchange	12.5	<b>12.5</b>

**Package-III (Gorakhpur/ Chilkahar & Murli Chhapra block):-GKP-2**

SN	BA	OA	Block Name	Route Name	Distance in Km	Total Patch work length (in Km)
1	Gorakhpur	Ballia	Chilkahar	Rasra Exchange to Chilkahar Exchange	13.9	<b>27.5</b>
2	Gorakhpur	Ballia	Murli chhapra	Raniganj Exchange to Dokti Exchange	13.6	

**Package-IV (Gorakhpur/ Lotan block):- GKP-3**

SN	BA	OA	Block Name	Route Name	Distance in Km	Total work length (in Km)
1	Gorakhpur	Basti	Lotan	Birdpur to Lotan	24	24

**Package-V (Gorakhpur/Vikaramjot block):- GKP-4**

SN	BA	OA	Block Name	Route Name	Distance in Km	Total work length (in Km)
1	Gorakhpur	Basti	Vikaramjot	Harriyan- Chavni- Vikaramjot	23	23

**Package-VI (Gorakhpur/ Desahi Deoria, Sukrauli & Vishunpura block):- GKP-5**

SN	BA	OA	Block Name	Route Name	Distance in Km	Total work length (in Km)
1	Gorakhpur	Deoria	Desahi Deoria	Baltikara to Desahi Deoria ( Bhatani dadan)	12	35
			Sukrauli	Hata to Sukrauli	12	
			Vishunpura	Padrauna to Mansachapar	11	

**Package-VII (Gorakhpur/Bhathat & Paniyara block):- GKP-6**

SN	BA	OA	Block Name	Route Name	Distance in Km	Total work length (in Km)

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1	Gorakhpur	Gorakhpur	Bhathat	Rapti Nagar - Bhathat	15	<b>23</b>
2			Paniyara	Partawal to Paniyara	8	

**Package-VIII (Sultanpur/ Shukulbazar block):- SUL-1**

SN	BA	OA	Block Name	Route Name	Distance in Km	Total work length (in Km)
1	Sultanpur	Amethi	Shukulbazar	TE Shukul Bazar to Jagdishpur Mode	19.4	<b>19.4</b>

**Package-IX (Sultanpur/ Ram Pur & Sikrara block):-SUL-2**

SN	BA	OA	Block Name	Route Name	Distance in Km	Total work length (in Km)
1	Sultanpur	Jaunpur	rampur	Mariyahu- Rampur	10.2	<b>30.2</b>
2			Sikrara	Jaunpur- Sikrara	20	

**Package-X (Sultanpur/ Gaura block):- SUL-3**

SN	BA	OA	Block Name	Route Name	Distance in Km	Total work length (in Km)
1	Sitapur	Pratapgarh	Gaura	Fatanpur- Jamtali & Fatanpur- Raniganj	16+4 =20	<b>20</b>

**Package-XI (Varanasi/ Sadat block):- VNS-1**

SN	BA	OA	Block Name	Route Name	Distance in Km	Total work length (in Km)
1	Varanasi	Ghazipur	Sadat	Saidpur- Sadat	16	16

**Package-XII (Varanasi/ Pahari & Jamalpur block):-VNS-2**

SN	BA	OA	Block Name	Route Name	Distance in Km	Total work length (in Km)
1	Varanasi	Mirzapur	Pahari	Mirzapur TE to Pahari or Padri TE-1	24	39.06
2	Varanasi	Mirzapur	Jamalpur	Adalhat TE to Jamalpur TE-1	15.06	

**Package-XIII (Varanasi/ Barahani block):-VNS-3**

SN	BA	OA	Block Name	Route Name	Distance in Km	Total work length (in Km)
1	Varanasi	Varanasi	Barahani	Saidraja - Barahani	12	12

**Package-XIV (Kanpur/ Gughrapur & Haseran Block):- KNP-1**

SN	BA	OA	Block Name	Route Name	Distance in Km	Total work length (in Km)
1	Kanpur	Farrukhabad	Gughrapur	Gugrapur-Kusumkhor- Kannauj	14	32
2	Kanpur	Farrukhabad	Haseran	Haseran- Indergarh	18	

**Package-XV (Kanpur/ Bhitaura block):- KNP-2**

SN	BA	OA	Block Name	Route Name	Distance in Km	Total work length (in Km)
1	Kanpur	Fatehpur	Bhitora	Bhitora to Asni and Asni to Hussainganj	11.6	<b>11.6</b>

**Package-XVI (Kanpur/ Bidhunu, Chaubeypur & Shivrajpur Block):- KNP-3**

SN	BA	OA	Block Name	Route Name	Distance in Km	Total work length (in Km)
1	Kanpur	Kanpur	bidhunu	Ramaipur- Bidhunu	10.5	<b>44.5</b>
2	Kanpur	Kanpur	Chaubeypur	Kalyanpur- Chaubepur via Mandhana	22	
3	Kanpur	Kanpur	Shivrajpur	Chaubepur- Shivrajpur	12	

**Package-XVII (Kanpur/ Malasa & Patara block):- KNP-4**

SN	BA	OA	Block Name	Route Name	Distance in Km	Total work length (in Km)
1	Kanpur	Kanpur	Malasa	Moosanagar- Malasa	20.229	<b>32.229</b>
2			Patara	Ghatampur - Patara	12	

**Package-XVIII (Kanpur/ Asoha, Sumerpur & Bichhiya block):- KNP-5**

SN	BA	OA	Block Name	Route Name	Distance in Km	Total work length (in Km)

1	Kanpur	Unnao	Asoha	Kantha - Asoha	8.5	<b>36</b>
2			Sumerpur	Bighapur – Takia- Sumerpur	18.5	
3			Bichhiya	Dahi Chowki - Bichhiya	9	

**Package-XIX ( Prayagraj/ Kaudiyara Block):- PRJ**

SN	BA	OA	Block Name	Route Name	Distance in Km	Total work length (in Km)
1	Prayagraj	Prayagraj	Kaudiyara	Karchana- Baraon - Kaudhiyara	26	<b>26</b>

**Package-XX (Sitapur/ Ekona block):-STP-1**

SN	BA	OA	Block Name	Route Name	Distance in Km	Total work length (in Km)
1	Sitapur	Bahraich	Ekona	Bhinga- Ekauna (via Semari Chauraha BTS)	27 (11km + 16km)	<b>27</b>

**Package-XXI (Sitapur/ Gilaula block):-STP-2**

SN	BA	OA	Block Name	Route Name	Distance in Km	Total work length (in Km)
1	Sitapur	Bahraich	Gilaula	Bahraich T.E to Gilaula	22.45	<b>22.45</b>

**Package-XXII (Sitapur/ Bhakhani & Harpalpur block):- STP-3**



SN	BA	OA	Block Name	Route Name	Distance in Km	Total work length (in Km)
1	Sitapur	Hardoi	Bharkhani	Bharkhani TE – Pali TE	12.39	<b>34.39</b>
2	Sitapur	Hardoi	Harpalpur	Sandi - Harpalpur	22	

**Package-XXIII (Sitapur/ Nakaha & Pasgawan block):-STP-4**

SN	BA	OA	Block Name	Route Name	Distance in Km	Total work length (in Km)
1	Sitapur	Lakhimpur	Nakaha	Chahmalpur TE to Nakha TE	7.6	<b>31.6</b>
2	Sitapur	Lakhimpur	Pasgawan	Mohammadi TE to pasgawan TE	24	

**Package-XXIV (Sitapur/ Mohamaddi & Mitauli block):-STP-5**

SN	BA	OA	Block Name	Route Name	Distance in Km	Total work length (in Km)
1	Sitapur	Lakhimpur	Mohamaddi	Gola TE to Mohammadi TE	35.5	<b>42.5</b>
2	Sitapur	Lakhimpur	Mitauli	Kasta TE to Mitauli TE	7	

**Package-XXV (Sitapur/ Jaitipur block):- STP-6**

SN	BA	OA	Block Name	Route Name	Distance in Km	Total work length (in Km)
1	Sitapur	Shahjahanpur	Jaitipur	Tilhar TE – Jaitipur TE	23	<b>23</b>

**Package-XXVI (Sitapur/ Jalalabad & Kalan block):- STP-7**

SN	BA	OA	Block Name	Route Name	Distance in Km	Total work length (in Km)
1	Sitapur	Shahjahanpur	Jalalabad	Jalalabad TE to Madnapur TE	16	30
2	Sitapur	Shahjahanpur	Kalan	Mirzapur to Kalan	14	

**Package-XXVII (Sitapur/ Khudaganj Katra block):- STP-8**

SN	BA	OA	Block Name	Route Name	Distance in Km	Total work length (in Km)
1	Sitapur	Shahjahanpur	Khudaganj Katra	Tilhar to Katra and Katra to Khudaganj	14+16	30

**Package-XXVIII (Sitapur/ Madnapur & Mirzapur block):- STP-9**

SN	BA	OA	Block Name	Route Name	Distance in Km	Total work length (in Km)
1	Sitapur	Shahjahanpur	Madnapur	Madnapur TE to Kanth TE	16	29
2	Sitapur	Shahjahanpur	Mirzapur	Mirzapur TE to Jalalabad TE	13	

**Note:** The route & route length mentioned above are tentative and may change while issuing work order

TABLE-2

**Consolidated Quantum of Work- items wise:**

[illegible]

Pulling of OF Cable and allied works (Viz. Replacing couplers and back filling in case of Manholes, Sealing of PLB Ends, refilling sand, Refixing RCC cover and back filling in case of joint chamber/manholes. No charges to be paid for opening of manholes/joint chambers.													
3.1	3OFCP1	Upto 48 Fibers	per Meter	27500	12500	27500	24000	23000	37800	23000	0	30200	20000
4	OFC Blowing (OF Cable and accessories to be supplied by BSNL)												
Blowing of OF Cable and allied works (Viz. Replacing couplers and back filling in case of Manholes, Sealing of PLB Ends, refilling sand, Refixing RCC cover and back filling in case of joint chamber/manholes. No charges to be paid for opening of manholes/joint chambers.													
4.1	4OFBL1	Upto 48 Fibers	per Meter	0	0	0	0	0	0	0	19400	0	0

Sr. No.	Item Code	Description of Item	Unit	Pkg-1 (AYD)	Pkg-2 (GKP-1)	Pkg-3 (GKP-2)	Pkg-4 (GKP-3)	Pkg-5 (GKP-4)	Pkg-6 (GKP-5)	Pkg-7 (GKP-6)	Pkg-8 (SUL-1)	Pkg-9 (SUL-2)	Pkg-10 (SUL-3)
6	<b>Boring and CC Works</b>												
6.2	6CCW	Providing CC of protection of size 20cms*20cms in the ratio of 1:2:4 for encasing PLB Pipe/GI Pipe/DWC Pipe in roads,bridges,crossing and culverts and for low depth protection or on wheel guard of bridge as specified in the construction practices of OF Cable Construction including material.	per Meter	500	0	0	0	0	0	0	0	400	0
7	<b>Jointing Chamber</b>												
7.1	7JTC	Construction of joint box housing of pre-cast RCC Ring of 1.2m dia and 0.3 m high with base and cover	per Chamber	18	7	14	15	15	18	15	25	56	16

8	Route / Joint Indicator												
8.1	8ORJF	Digging of pit 1 m towards jungle side on each manhole/joint chamber for fixing of routes / joint chamber including supplying, fixing, and concreting of routes/joint indicator, painting and sign writing of route / joint indicators as per specification	Per each	140	62	116	120	115	193	125	125	151	100
9	OTHER ALLIED WORKS												
9	9TRPT	Cost towards transportation of materials including cost of Loading & Unloading, from store to work site	Per route Km. of stores 0-100 Km	0-100	0-100	0-100	0-100	0-100	0-100	0-100	0-100	0-100	0-100

Sr. No.	Item Code	Description of Item	Unit	Pkg-1 (AYD)	Pkg-2 (GKP-1)	Pkg-3 (GKP-2)	Pkg-4 (GKP-3)	Pkg-5 (GKP-4)	Pkg-6 (GKP-5)	Pkg-7 (GKP-6)	Pkg-8 (SUL-1)	Pkg-9 (SUL-2)	Pkg-10 (SUL-3)
10	Cable Splicing work and Termination Work												
Splicing of all the fibers of OF cable laid at every joint within specified splicing loss range (<=0.02 db) and making termination at the ends. All material and labours except joint closure to be supplied by Bidder/Vendor.													
10.2	10OFSP/24	For 24 Fibers	Per Joint	18	8	0	15	15	18	17	25	60	16
10.4	10OFSPR/48	For 48 Fibers	Per Joint	0	0	18	0	0	0	0	0	0	0
11	Documentation of Route Index Diagram in soft and Hard Copy (Three sets of Each)												
11	11DOC	Documentation of route index diagram in hard and soft copies (Three sets of Each).	Per KM	27	12.5	28	24	23	35	23	19.40	30.20	20

Tender No: UPE/MM/OFC Connectivity of BHQs/2025-26

12	Cost of excavation work/ digging of pit if dimension 1.5x1.5mx1.65m (depth) for OFC maintenance work is												
	a)	For soft soil	Per pit	0	0	0	0	0	0	20	0	0	0



Tender No: UPE/MM/OFC Connectivity of BHQs/2025-26

3.1	30FCP1	Upto 48 Fibers	per Meter	16000	38960	12000	33600	11600	44500	32229	36000	26000	27000
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## Tender No: UPE/MM/OFC Connectivity of BHQs/2025-26

9	9TRPT	Cost towards transportation of materials including cost of Loading & Unloading, from store to work site	Per route Km. of stores 0-100 Km	0-100	0-100	0-100	0-100	0-100	0-100	0-100	0-100	0-100	0-100
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Sr. No.	Item Code	Description of Item	Unit	Pkg-11 (VNS-1)	Pkg-12 (VNS-2)	Pkg-13 (VNS-3)	Pkg-14 (KNP-1)	Pkg-15 (KNP-2)	Pkg-16 (KNP-3)	Pkg-17 (KNP-4)	Pkg-18 (KNP-5)	Pkg-19 (PRJ)	Pkg-20 (STP-1)
10	Cable Splicing work and Termination Work												
Splicing of all the fibers of OF cable laid at every joint within specified splicing loss range (<=0.02 db) and making termination at the ends. All material and labours except joint closure to be supplied by Bidder/Vendor.													
10.2	10OFSP/24	For 24 Fibers	Per Joint	10	21	8	21	27	34	32	29	20	29
10.4	10OFSPR/48	For 48 Fibers	Per Joint	0	0	0	0	0	0	0	0	0	0
11	Documentation of Route Index Diagram in soft and Hard Copy (Three sets of Each)												
11	11DOC	Documentation of route index diagram in hard and soft copies (Three sets of Each).	Per KM	16.00	38.96	12	32	12	44.50	32.229	36	26	27

Sr. No.	Item Code	Description of Item	Unit	Pkg-21 (STP-2)	Pkg-22 (STP-3)	Pkg-23 (STP-4)	Pkg-24 (STP-5)	Pkg-25 (STP-6)	Pkg-26 (STP-7)	Pkg-27 (STP-8)	Pkg-28 (STP-9)
1	<b>Excavation of Trenches</b>										

Tender No: UPE/MM/OFC Connectivity of BHQs/2025-26

1.1	1OTNS	Excavation of trenches in normal /soft soil to a standard depth of 1.65 m as specified in laying practices of OF Cable, and back filling the excavated trenches after laying the PLB Pipe with or without protection.	per Meter	0	0	0	0	0	0	0	
1.5	1HDD	Horizontal Directional Drilling for laying of U/G PLB/HDPE pipes up to 50 mm dia to a standard depth of 1.65 m as specified in laying practices of OF cable, and pulling of single pipe.	Per Meter	22450	34390	31600	42350	23000	30000	30000	29000
1.6	1HDD/4	for pulling of each additional pipe up to 50mm by HDD beyond single pipe	Per Meter	0	0	0	0	0	0	0	0
2	Laying of PLB up to 50mm diameter and joining with a coupler (material to be supplied by BSNL.)										
2.1	2PLB/1	1st Pipe	Per Meter	0	0	0	0	0	0	0	0
3	OFC pulling(OF Cable and accessories to be supplied by BSNL)										
Pulling of OF Cable and allied works (Viz. Replacing couplers and back filling in case of Manholes, Sealing of PLB Ends, refilling sand, Refixing RCC cover and back filling in case of joint chamber/manholes. No charges to be paid for opening of manholes/joint chambers.											
3.1	3OFCP1	Upto 48 Fibers	per Meter	22450	34390	31600	42500	23000	30000	30000	29000

Sr. No.	Item Code	Description of Item	Unit	Pkg-21 (STP-2)	Pkg-22 (STP-3)	Pkg-23 (STP-4)	Pkg-24 (STP-5)	Pkg-25 (STP-6)	Pkg-26 (STP-7)	Pkg-27 (STP-8)	Pkg-28 (STP-9)
6	Boring and CC Works										

[illegible]

Sr. No.	Item Code	Description of Item	Unit	Pkg-21 (STP-2)	Pkg-22 (STP-3)	Pkg-23 (STP-4)	Pkg-24 (STP-5)	Pkg-25 (STP-6)	Pkg-26 (STP-7)	Pkg-27 (STP-8)	Pkg-28 (STP-9)
10	Cable Splicing work and Termination Work										
Splicing of all the fibers of OF cable laid at every joint within specified splicing loss range (<=0.02 db) and making termination at the ends. All material and labours except joint closure to be supplied by Bidder/Vendor.											
10.2	10OFSP/24	For 24 Fibers	Per Joint	18	27	19	36	14	19	19	19
10.4	10OFSPR/48	For 48 Fibers	Per Joint	0	0	0	0	0	0	0	0
11	Documentation of Route Index Diagram in soft and Hard Copy (Three sets of Each)										
11	11DOC	Documentation of route index diagram in hard and soft copies (Three sets of Each).	Per KM	22.45	34.40	31.6	43	23	30	30	29

**Note 1: Rs. 400 shall be deducted from bills as cost of empty cable drum of size 24/48/96/288F**

**Note 2: The Tentative quantity of different items (as above) of tender pertaining to the routes under this NIT has been given in the schedule of work. Hence the contractor / Vendor interested to participate in bidding are requested to have an option also for on-site survey for OFC route assessment as at later stage quantity variations leading to higher cost shall not be entertained.**

## SECTION-4 PART A GENERAL INSTRUCTIONS TO BIDDERS (GIB)

### 1.0 DEFINITIONS:

- 1.1 President of India:** The President of India means the President of India and his successors.  
**1.2 Government of India:** The Government or Government of India shall mean the President of India.  
**1.3 The BSNL** means Bharat Sanchar Nigam Limited, the company with Chairman & Managing Director and Board of Directors, with Head Quarter at New Delhi.

All references of : Department,

Chief General Manager

Principal General Manager

Sr. General Manager/ General Manager

Addl. General Manager/ Joint General Manager

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

Sub Divisional Engineer

Junior Telecom Officer

Chief Accounts Officer

Accounts Officer

Junior Accounts Officer

Including other officers in the BSNL, 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 BSNL, an enterprise, under the Ministry of Communications and Information Technology, Government of India.

**1.4 "The Purchaser"** means Bharat Sanchar Nigam Ltd. (BSNL), Lucknow.

**1.5 "The Bidder"** means the individual or firm who participates in this tender and submits its bid.

**1.6 "The Supplier" or "The Vendor" or "The Service Provider"** means the individual or firm providing the services under the contract.

**1.7 "The Goods"** means all the equipment, machinery, and/or other materials which the Supplier is required to supply to the Purchaser under the contract.

**1.8 "The Services"** means providing rehabilitation services for external plant which the Supplier is required to supply to the Hirer/Purchaser under the contract.

**1.9 "The Advance Purchase Order" or "Letter of Intent"** means the intention of Purchaser to place the Purchase/Service Order on the bidder.

**1.10 "The Purchase Order"** means the order placed by the Purchaser on the Supplier/ provider signed by the Purchaser including all attachments and appendices thereto and all documents incorporated by reference therein. The purchase order shall be deemed as "**Contract**" appearing in the document.

**1.11 "Validation"** is a process of testing the equipment as per the Generic Requirements in the specifications for use in BSNL network. Validation is carried out in a simulated field environment and includes stability, reliability and environmental tests.

**1.12 "Telecom Service Provider"** means any Telecom operator in India, who is licensed by the Department of Telecommunications (DOT), Government of India to provide telecom services to the general public or to the other DOT licensed Telecom operators. "Telecom Service Provider" also refers to any Telecom operator in other countries providing telecom services to the general public of that country or to other telecom operators of the same country.

**1.13 "Successful Bidder(s)"** means the bidder(s) to whom work in this tender is awarded.

**1.14 "OA"** means Operation Areas defined by BSNL (generally comprising one or more revenue districts).

**1.15 "BA"** means Business Area comprising of one or more SSA's

**1.16 "OFC"** means Optical Fiber Cable of any size, say 6F/12F/24F/48F/96F/288F.

**1.17 "Section"** means the OFC cable route between any designated locations.

"**Contract**" means the agreement made between BSNL and the successful bidder for Comprehensive OFC rehabilitation

- 1.18 “Act”** means statutes, laws, rules and regulations by Government authorities or any regulatory agencies;
- 1.19 “Agreement”** means this agreement between BSNL and the Contractor relating to the provision of Services by the Contractor including the LOI, Schedules(s), Work Order(s), Annexure(s), tender terms and conditions, vide tender No..... and any other documents explicitly incorporated in Agreement;
- 1.20 “Charges”** mean the monthly charges payable by BSNL to the contractor.
- 1.21 “Contract Price”** shall mean the unit price of various activities to be undertaken by the Contractor and to be payable by BSNL on completion of the activity / service. The contract price is exclusive of service tax but inclusive of all other taxes. However, statutory liabilities of ESI, EPF contribution and all other statutory taxes and levies applicable and payable by the Contractor shall not be a part of the Contract Price and BSNL shall not be responsible in any way whatsoever to pay for the same.
- 1.22 “Contractor”** means any person or entity that provides service(s) in accordance with the terms and conditions of the Agreement.
- 1.23 “Effective Date”** means the date of entering into the Agreement.
- 1.24 “Force Majeure Events” or “Force Majeure”** means fire, flood, earthquake, elements of nature or acts of God, epidemic, acts of war, terrorism, riots, civil disorder, rebellions, revolutions, strikes, lockouts, change of law or any other similar cause beyond the reasonable control of such party.
- 1.18 “OFC route”** means the optical fiber cable route of BSNL;
- 1.19 “Party” or “Parties”** mean the party or parties in the Agreement;
- 1.20 “Rates”** mean the agreed rates for various components of the services provided by the Contractor under the agreement;
- 1.21 “Route”** means any section of the OFC route of BSNL;
- 1.22 “Services”** means operations, preventive and corrective maintenance, protection of BSNL materials and equipment and any other services provided by the contractor under the agreement in respect of the OFC route;
- 1.23 “Term”** means one year’s effective from the date of agreement;
- 1.24 “Stretch or section means”**, the Optical Fiber Cable route between any given locations.
- 1.25 “Work Order(s)”** means the relevant work order issued by BSNL to the contractor as per the terms of the agreement
- 1.26** The jurisdiction of GM/Addl.GM/ DGM/DET shall mean the territorial area under their control for the purpose of administration and management of the projects and other associated functions.
- 1.27** Representative of GM/Addl.GM/ DGM / DET means Officer and staff under their control for the time being deputed for supervising the work or testing etc.
- 1.28** Engineer – in – charge: The Engineer – in – charge means the Engineering Officer nominated by the GM/Addl.GM/DGM to supervise the work, under the contract. (Minimum Divisional Engineer level officer to be nominated while approving the work order).
- 1.29** Site Engineer: Site Engineer shall mean JTO/SDE of the BSNL who may be placed by the work order issuing authority for supervising the work.
- 1.30** A/T Unit: A/T unit shall mean Acceptance and Testing unit of the BSNL.
- 1.31** A/T Officer: An officer authorized by BSNL to conduct A/T.
- 1.32** The words bidder and tenderer have been used interchangeably.
- 1.33** 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 contractor, together with the documents referred to therein including these conditions, the specifications, designs, drawings and instructions issued from time to time, by the engineer in-charge and all these documents taken together shall be deemed to form one contract and shall be complementary to one another.
- 1.34** Contractor: The contractor shall mean the individual, firm or company, approved to undertake the works and shall include the legal personal representative of such individual or the persons composing such firm or company, or the successors of such firm or company and the permitted assignees of such individual, firm or company.
- 1.35** Work: The expression “works” shall unless there be something either in the subject or context repugnant to such construction be construed and taken to mean the works by or by virtue of the contract contracted to be executed whether temporary or permanent and whether original, altered, substituted or additional.
- 1.36** Schedule(s): Schedule(s) referred to in these conditions shall mean the relevant schedule(s) or the standard schedule of rates mentioned in the document.
- 1.37** Site: The site shall mean the land / or other places on, into or through which work is to be executed under the contract or any adjacent land, path or street through which, the work is to be executed under the contract or any adjacent land, path or street which may be allotted or used for the purpose of carrying out the contract.
- 1.38** Normal time or stipulated time: Normal time or stipulated time means time specified in the work order to

complete the work.

**1.39** Extension of Time: Extension of Time means the time granted by the BSNL to complete the work beyond the normal time or stipulated time. The EOT may be with/without Liquidated damages as may be decided by the competent authority.

**1.40** 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.

**1.41** 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.

**1.42** 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.

**1.43** 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.

**1.44** Extra work: as used herein any work or compliance with any requirements, other than a change, which is not expressly or impliedly contemplated by the contract documents, and which is necessary to be performed for the proper completion of the contracted work. For the purpose of clarifications, it is declared that, any work or operation which shall be necessarily incidental to the proper performance of any item of work or part thereof shall be deemed to have been by implication provided for in the relevant item of work or part thereof and shall not constitute extra work.

## **2.0 ELIGIBILITY CONDITIONS:**

2.1 Kindly refer to Clause 4 of Section – 1, Part A i.e. detailed NIT.

## **3.0 COST OF BIDDING:**

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

## **4.0 DOCUMENTS REQUIRED:**

4.1 The services required to be provided; bidding procedures and contract terms and conditions are prescribed in the Bid Documents. The contents of the Bid documents are specified in the covering letter.

4.2 The Bidder is expected to examine all instructions, forms, terms and conditions in the Bid Documents and clarifications/ amendments/ addenda, if any. Failure to furnish all information required as per the Bid Documents or submission of the bids not substantially responsive to the Bid Documents in every respect will be at the bidder's risk and may result in rejection of the bid.

## **5.0 CLARIFICATION OF BID DOCUMENTS:**

5.1 A prospective bidder, requiring any clarification on the Bid Documents shall notify the Purchaser in writing by Email of the Purchaser as indicated in the invitation of Bid latest by **15.07.2025/17:00 (Hrs)**. **Any query received after this date will not be entertained.** The Purchaser shall respond in writing to any such request for the clarification of the bid documents in the format given below. Copies of the query (without identifying the source) and clarifications by the Purchaser shall be sent to all the prospective bidders who have received the bid documents.

Sl. No.	Section	Clause	Brief Description of the clause	Ref Page No in Bid	Comments of Bidder

5.2 Any clarification issued by BSNL in response to query raised by prospective bidders shall form an integral part of bid documents and shall amount to an amendment of the relevant clauses of the bid documents.

## **6.0 AMENDMENT OF BID DOCUMENTS:**

6.1 The Purchaser may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, may modify bid documents by amendments prior to the date of submission of Bids with due notification to prospective bidders.



6.2 The amendments shall be notified in writing Email or by Addendum through e-tendering portal (for tenders invited through e-tendering process) to all prospective bidders on the address intimated at the time of purchase of the bid document from the purchaser and these amendments will be binding to them. Therefore, the prospective bidders are advised to visit the website regularly.

6.3 In order to afford a reasonable time prospective bidders to take the amendment into account in preparing their bids, the purchaser, at its own discretion, may extend the deadline for the submission of bids suitably.

## **7.0 DOCUMENTS COMPRISING THE BID:**

The bid prepared by the bidder shall ensure availability of the following components:

7.1 Documentary evidence establishing that the bidder is eligible to bid and is qualified to perform the contract if its bid is accepted in accordance with the clause 2 & 10 of this section.

7.2 Bid Security furnished in accordance with clause 12 of this section.

7.3 A Clause by Clause compliance as per clause 11.2 (b) of this section.

7.4 Bid form and price schedule completed in accordance with clause 8 & 9 of this section.

## **8.0 BID FORM:**

8.1 The bidder shall complete the bid form and appropriate Price Schedule furnished in the Bid Documents, indicating the services to be provided, brief description of the services, quantity and prices as per Section- 9.

## **9.0 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 materials to be supplied and inclusive of all Taxes and Levies but exclusive of Goods and Service Tax in case of works to be executed. Goods and Service tax shall be paid extra, if applicable. The contractor shall be responsible for loading/unloading and transporting the materials, to be supplied by the BSNL from any BSNL store / Telecom factory to the work site. The charges on this account shall be regulated as per the rates in Standard Schedule of Rates (SOR). The offer shall be firm in Indian Rupees. No Foreign exchange will be made available by the purchaser.

9.2 Prices shall be quoted by the bidder as below / above / at par the standard schedule of rates of package work in the schedule of quoting rates (Financial Bid). Prices quoted at any other place shall not be considered. Quoted rates shall be inclusive of all charges and levies but exclusive of Goods and Service Tax (GST) which shall be paid extra as applicable. However evaluation should be done on the basis of package cost. Difference in Total Package Cost (All-inclusive) is due to reverse calculation of Unit rate restriction to two decimal places.

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 quoting rates (Financial Bid). Bidders desiring to offer discount shall therefore modify their offers suitably while quoting.

9.5 (i). In case of any variation in quantity of individual sub-items under item No.1( i.e Excavation of Trenches) of SOR as mentioned in Section-XIX Part-B of tender document, on account of change in method of execution and/or soil strata, the payment of item No.1 for excavation of trenches shall be limited to approved average running rate per meter of this item as a whole.

(ii). However, in case of any variation in quantity of individual items, arising from change in method of execution warranted due to statutory requirement of local bodies/state govt./central govt. which was not stipulated in survey and incorporated in SOR/quantity earlier, the payment of item No.1(i.e. Excavation of trenches) may be made as per actual without aforesaid capping of payment as mentioned in para 9.5(i) above.

The variation on this account shall be permitted only with prior approval of the tender approving authority after recording adequate reasons and justification supported by statutory orders/documents necessitating such change subject to limits of variation of overall contract value as stipulated under Clause- 25 of Section IV Part-A of this bid document

Income tax and all other taxes (except GST) enforced from time to time or at present rates will be deducted from the bills of the contractor. Any other statutory tax or levies introduced by the Govt. of India/ State Govt. shall be borne by the contractor.

## **10.0 DOCUMENTS ESTABLISHING BIDDER'S ELIGIBILITY AND QUALIFICATION:**

10.1 The bidder shall furnish, as part of the bid documents establishing the bidder's eligibility, the following

documents or whichever is required as per terms and Conditions of Bid Documents.

- (a) Valid MSE Certificate, if applicable. In case the ownership of such MSE Entrepreneurs happens to be from SC/ST category, proof in this regard also need to be submitted.
- (b) Additional documents to establish the eligibility and qualification of the bidder as specified in Section-1 and Section-4 Part B.
- (c) Power of Attorney as per clause 14.3 (a) and (d) of this section and authorization for executing the power of Attorney as per clause 14.3 (b) or (c) of this section.
- (d) Certificates from all Directors of the bidder stating that none of their near relatives are working in BSNL in accordance with clause 34 of this section.
- (e) Certificate of incorporation, if applicable.
- (f) Article or Memorandum of Association or partnership deed or proprietorship deed as the case may be.

#### **11.0 DOCUMENTS ESTABLISHING SERVICES CONFORMITY TO BID DOCUMENTS:**

11.1 Pursuant to clause 7, the bidder shall furnish, as part of its bid, documents establishing the conformity of its bid to the Bid Documents of all services which he proposes to provide under the contract.

11.2 The documentary evidences of the "goods and services" conformity to the Bid Documents may be, in the form of literature, drawings, data etc. and the bidder shall furnish:

- (a) a detailed description of services with essential technical and performance characteristics;
- (b) a clause-by-clause compliance on the purchaser's Technical Specifications and Commercial Conditions demonstrating substantial responsiveness to the Technical Specifications and Commercial Conditions. In case of deviations, a statement of the deviations and exception to the provision of the Technical Specifications and Commercial Conditions shall be given by the bidder. A bid without clause-by-clause compliance of the Scope of Work, Technical Specifications, SOR (Section-3 Part A, B & C), General instruction to bidders, Special instruction to bidders and e-tendering instruction to bidders (Section -4 Part A, B, C) and General (Commercial) Conditions (Section-5 Part A) shall not be considered.

11.3 For the purpose of compliance to be furnished pursuant to the clause 11.2(b) above, the bidder shall note that the standards for the workmanship, material and equipment and reference to the brand names or catalogue number, designated by the Purchaser in its Technical specifications are intended to be descriptive only and not restrictive.

#### **12.0 BID SECURITY / EMD:**

12.1 The bidder shall furnish, as part of its bid, a bid security as mentioned in Section-1 Part B (DNIT).

12.2 The MSE bidders are exempted from payment of bid security:

- (a) A proof regarding valid registration with the body specified by the Ministry of Micro, Small & Medium Enterprise for the tendered items will have to be attached along with the bid.
- (b) The enlistment certificate issued by MSME should be valid on the date of opening of tender.
- (c) MSE unit is required to submit its monthly delivery schedule.
- (d) If a vendor registered with body specified by Ministry of Micro, Small & Medium Enterprise claiming concessional benefits is awarded work by BSNL and subsequently fails to obey any of the contractual obligations; he will be debarred from any further work/ contract by BSNL for one year from the date of issue of such order.

12.3 The bid security is required to protect the purchaser against the risk of bidder's conduct, which would warrant the forfeiture of bid security pursuant to Para 12.7.

12.4 A bid not secured in accordance with Para 12.1 & 12.2 shall be rejected by the Purchaser being non-responsive at the bid opening stage and archived unopened on e-tender portal for e-tenders and returned to the bidder unopened(for manual bidding process).

12.5 The bid security of the unsuccessful bidder will be discharged/ returned as promptly as possible and within 30 days of finalization of the tender or expiry of the period of the bid validity period prescribed by the purchaser pursuant to clause 13 of this section.

12.6 The successful bidder's bid security will be discharged upon the bidder's acceptance of the advance purchase order satisfactorily in accordance with clause 27 and furnishing the performance security, except in case of L-1 bidder, whose EMBG/EMD shall be released only after the finalization of ordering of complete tendered quantity in pursuance to clause no. 24.4 & 27.3 of this section.

12.7 The bid security may be forfeited and debarred:

- (a) If the bidder withdraws or amends its bid or impairs or derogates from the bid in any respect during the period of bid validity specified by the bidder in the bid form or extended subsequently; or
- (b) In the case of successful bidder, if the bidder fails  
i. to sign the contract in accordance with clause 28.

- ii. to furnish performance security in accordance with clause 27.
- iii. to furnish Material Security in accordance with clause 7 of Section 5 Part A.
- iv. to follow the lawful instructions of BSNL Authorities or his representatives.

### **13.0 PERIOD OF VALIDITY OF BIDS:**

13.1 Bid shall remain valid for the period specified in **clause 2 of Section 2** of Tender Information. A bid valid for a shorter period shall be rejected by the purchaser being non-responsive.

13.2 In exceptional circumstances, the purchaser may request the consent of the bidder for an extension to the period of bid validity. The request and the response thereto shall be made in writing. The bid security provided under clause 12 shall also be suitably extended. The bidder may refuse the request without forfeiting its bid security. A bidder accepting the request and granting extension will not be permitted to modify its bid.

### **14.0 FORMAT AND SIGNING OF BID:**

14.1 The bidder shall submit his bid, online, complying with all eligibility conditions, other terms and conditions of tender document to be read along with the clarifications and amendments issued in this respect. All the documents must be authenticated, using Digital Signature by the authorized person. The letter of authorization shall be indicated by written power-of-attorney accompanying the bid.

14.2 The bid shall contain no interlineations, erasures or overwriting except as necessary to correct errors made by the bidder in which case such corrections shall be signed by the person or persons signing the bid. All pages of the original bid, except for un-amended printed literatures, shall be digitally signed by the person or persons signing the bid.

#### **14.3 Power of Attorney:**

(a) The power of Attorney should be submitted and executed on the non-judicial stamp paper of appropriate value as prevailing in the concerned states(s) and the same be attested by a Notary public or registered before Sub-registrar of the state(s) concerned.

(b) The power of Attorney can be executed by a person who has been authorized by the Board of Directors of the bidder in this regard, on behalf of the Company/ institution/ Body corporate. A copy of resolution authorizing the concerned person by the Board of Director to execute power of attorney shall be attached.

(c) In case of the bidder being a firm, the said Power of Attorney should be executed by all the partner(s) in favour of the said Attorney. A copy of the partnership deed (First & last and relevant pages only) duly self attested by Partners shall be attached

(d) Attestation of the specimen signatures of such authorized signatory of the bid by the Company's/ firm's bankers shall be furnished. Name, designation, Phone number, mobile number, email address and postal address of the authorized signatory shall be provided.

(e) **In case the representative of bidder company, who uploads the document on e-tender portal using his digital signature Certificate (DSC) is different from the authorized signatory (Power of attorney holder) for the bid then the representative who uploads the documents on e-tender portal using DSC issued in his name, should also be made as one of the Power of Attorney holder by the bidder company, in addition to authorized signatory for the bid.**

### **15.0 SEALING AND MARKING OF BIDS:**

#### **15.1 The bid should be submitted as per clause 3 Section-2 of tender information.**

15.2

(a) The Offline document envelope shall be addressed to the purchaser inviting the tender. The Purchaser Address shall be: .....

(b) The Offline documents envelope consisting documents as stated in clause 3 of Section-2 (Tender Information) shall bear the name of the tender, the tender number and the words 'DO NOT OPEN BEFORE' ..... (due date & time).

(c) The Offline documents envelope shall indicate the name and complete postal address of the bidder to enable the purchaser to return the bid unopened in case it is declared to be received 'late'.

(d) Offline documents as stated in clause 3 of Section-2 (Tender Information) may be sent by post or delivered in person on above mentioned address (address is given in clause 15.2 (a) above). The responsibility for ensuring that

the tenders are delivered in time would vest with the bidder.

(e) Offline documents as stated in clause 3 of Section-2 (Tender Information) delivered in person on the day of tender opening shall be delivered up to specified time & date as stated in NIT to ..... The purchaser shall not be responsible if the bids are delivered elsewhere.

(f) Venue of Tender Opening..... at specified time & date as stated in NIT.

(g) If due to administrative reasons, the venue of Bid opening is changed, it will be displayed prominently in chamber of..... & at a place notified.

9.1 If Offline documents envelope is not sealed and marked as required at Para 15.1 and 15.2, the bid shall be rejected.

## **16.0 SUBMISSION OF BIDS:**

16.1 Bids must be submitted by the bidders on or before the specified date & time indicated in clause 6 of Section-1 Part A i.e. DNIT.

16.2 The Purchaser may, at its discretion, extend this deadline for the submission of bids by amending the Bid Documents in accordance with clause 6 of Section-4 Part A in which case all rights and obligations of the purchaser and bidders previously subject to the deadline will thereafter be subjected to the extended deadline.

16.3 The bidder shall submit its bid offer against a set of bid documents purchased by him for all or some of the systems/ equipment as per requirement of the Bid Documents. They may include alternate offer, if permissible as per the bid. However, not more than one independent and complete offer shall be permitted from the bidder(s).

## **17.0 LATE BIDS:**

17.1 No bid shall be accepted either online by E-Tender Portal or physically in case of manual bidding process after the specified deadline for submission of bids prescribed by the purchaser. It is the sole responsibility of the tenderer that he should ensure timely online submission of tender and in the manner as prescribed on the e-tendering website. The time settings fixed in the server side & displayed at the top of the e-tendering site, will be valid for all actions of requesting, bid submission, bid opening etc., in the e-tender system. The bidders should follow this time during bid submission.

17.2 Post Bid Submission: No documents post bid submission shall be entertained/taken. Any deficient bid in this regard may be summarily rejected. However, any clarifications on the submitted bid documents may be sought to examine and evaluate the bid, if required for the sake of clarity.

## **18.0 MODIFICATION AND WITHDRAWAL OF BIDS:**

18.1 The bidder may modify, revise or withdraw his bid after submission prior to the deadline prescribed for submission of bid.

18.2 The bidder's modification, revision or withdrawal shall have to be online and digitally authenticated (in case of e-tendering) & physically (in case of manual bidding process) as per clause 6 & 15 of Section 4 Part A.

18.3 Subject to clause 20, no bid shall be modified subsequent to the deadline for submission of bids.

## **19.0 OPENING OF BIDS BY PURCHASER:**

19.1 The purchaser shall open bids online (in case of e-Tenders) or physically (in case of manual bidding process) in the presence of the authorized representatives of bidders online (in case of e-Tenders) or physically present (in case of e-Tenders as well as manual bidding process) who choose to attend, at time & date specified in clause 7 of DNIT (Section-1 Part A) on due date.

The bidder's representatives, who are present, shall sign in an attendance register. Authority letter to this effect shall be submitted by the authorized representatives of bidders before they are allowed to participate in bid opening (A Format is enclosed in Section-7).

19.2 A maximum of two representatives of any bidder shall be authorized and permitted to attend the bid opening.

19.3 Name of envelopes to be opened & information to be read out by Bid Opening Committee

In Single stage bidding & two envelopes system; the bids will be opened in 2 stages i.e. the techno-commercial bid shall be opened on the date of tender opening given in NIT. The financial bid will not be opened on the Date of opening of techno commercial bids in this case & sealed financial bids will be handed over to

..... for retention. Thereafter the CET will evaluate Techno-commercial bids & the report of CET will be approved by competent authority. The financial bids of those bidders, who are approved to be techno-commercially compliant by the competent authority will be opened by TOC in front of techno commercially eligible bidders/ authorized representatives by sending them a suitable notice.

(i) The following information should be read out at the time of Techno-commercial bid opening:-

- a) Name of the Bidder
- b) Name of the item
- c) EMD amount & validity and acceptability
- d) Information in respect of eligibility of the bidder.
- e) Details of bid modification/ withdrawal, if applicable.

(ii) The following information should be read out at the time of Financial bid opening:-

- a) Name of the Bidder
- b) Name of the item
- c) Quantities/prices quoted in the bid
- d) Discount, if offered
- e) Taxes & levies

19.4 The date fixed for opening of bids, if subsequently declared as holiday by the BSNL, the revised date of schedule will be notified. However, in absence of such notification, the bids will be opened on next working day, time and venue remaining unaltered.

## 20.0 CLARIFICATION OF BIDS:

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

20.2 If any of the documents, required to be submitted along with the technical bid is found wanting, the offer is liable to be rejected at that stage. However the purchaser at its discretion may call for any clarification regarding the bid document within a stipulated time period. In case of non-compliance to such queries, the bid will be out rightly rejected without entertaining further correspondence in this regard.

## 21.0 PRELIMINARY EVALUATION:

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

21.2 Arithmetical errors shall be rectified on the following basis. Based on the quoted percentage of duties and taxes, Freight etc. the amounts quoted thereof shall be worked out and rounded off to 2 decimal points. In case the unit price quoted does not tally with its breakup quoted, the same shall be corrected by summing up the breakups. If there is a discrepancy between the unit price and total price that is obtained by multiplying the unit price and quantity, **the unit price shall prevail and the total price shall be corrected by the purchaser.**

21.3 If there is **a discrepancy between words and figures, the amount in words shall prevail.** If the supplier does not accept the correction of the errors, its bid shall be rejected.

21.4 Prior to the detailed evaluation pursuant to clause 22, the Purchaser will determine the substantial responsiveness of each bid to the Bid Document. For purposes of these clauses, a substantially responsive bid is one which confirms to all the terms and conditions of the Bid Documents without material deviations. The purchaser's determination of bid's responsiveness shall be based on the contents of the bid itself without recourse to extrinsic evidence.

21.5 A bid, determined as substantially non-responsive will be rejected by the purchaser and shall not subsequent to the bid opening be made responsive by the bidder by correction of the non-conformity.

21.6 The Purchaser may waive any minor infirmity or non-conformity or irregularity in a bid which doesn't constitute a material deviation, provided such waiver doesn't prejudice or affect the relative ranking of any bidder.

**22.0 EVALUATION AND COMPARISON OF SUBSTANTIALLY RESPONSIVE BIDS:**

22.1 The Purchaser shall evaluate in detail and compare the bids previously determined to be substantially responsive pursuant to clause 21.

22.2 The evaluation and comparison of responsive bids will be done on Total rate arrived in Price Schedule Sec -9 Part- B. .

22.3 The evaluation and comparison of responsive bids shall be done on the basis of quoted price of the services offered including GST in the Section-9 Part B of the Bid-document after arithmetical correction in the manner laid down in clause 21.2 above.

(a) “Duties & Taxes for which the firm has to furnish GST Challans/Tax Invoices indicated separately in the PO/APO.

(b) Vendors should furnish the correct HSN/SAC Classification/Customs tariff Head in the price Schedule. If the credit for the Duties and Taxes under provisions/rules under GST law is found to be not admissible at any stage subsequently owing to wrong furnishing of Tariff Head, then the vendors will be liable to refund such non-admissible amount, if already paid, along with penalty if charged by the concerned authority.

(c) In case the Duties & Taxes which are not eligible for input tax credit as per the quotes indicated in the price schedule by the vendors and subsequently at any stage it is found that Credit for such Duties & Taxes is admissible as per GST Law, then the vendors will be liable to refund the amount equivalent to such Duties & Taxes if already paid to them provided the credit can be claimed within the time prescribed under the applicable legislation and BSNL has all the documents to claim such credit. The refund is also subject to the bidder performing necessary act for enabling BSNL to claim credit viz. upload the information on GSTN. However, the purchaser may allow the service provider to submit necessary documents in this regard which may enable the purchaser to avail the input tax credit provided such credit is still available for the amount so paid as per provisions of GST Law.

(d) The purchaser reserves the right to ask the bidders to submit documentary proof confirming the correct HSN or SAC Classification/ Tariff Head from the CGST/SGST/IGST officer or Custom authority E.D./Customs authority where the HSN or SAC Classification/ Tariff Head furnished against the particular tendered item by different bidders differs from each other or the same is found apparently not furnished in accordance with GST Act./ Customs Tariff notifications.

(e) “If the supplier fails to furnish necessary supporting documents i.e. Tax invoices/Custom Invoices etc. in respect of the Duties/taxes which are eligible for input tax credit, the amount pertaining to such Duties/ Taxes will be deducted from the payment due to the firm.”

(f) If the supplier fails to perform necessary compliances which would in any manner restrict BSNL to claim input tax credit, then the amount pertaining to such Duties/ Taxes will be deducted from the payment due to the supplier.

(g) If the supplier does not disclose the correct details on the invoice or on the GSTN viz. registration number, particular of services etc which restricts BSNL to claim input tax credit, then the amount pertaining to such Duties/ Taxes will be deducted from the payment due to the supplier.

**23.0 CONTACTING THE PURCHASER:**

23.1 Subject to clause 20, no bidder shall try to influence the Purchaser on any matter relating to its bid, from the time of the bid opening till the time the contract is awarded.

23.2 Any effort by a bidder to modify its bid or influence the purchaser in the purchaser's bid evaluation, bid comparison or contract award decision shall result in the rejection of the bid.

**24.0 PLACEMENT OF ORDER:**

24.1 The Purchaser shall consider placement of orders for commercial services only to those eligible bidders whose offers have been found technically, commercially and financially acceptable and whose services have been type approved/ validated by the purchaser. The Purchaser reserves the right to counter offer price(s) against price(s) quoted by any bidder.

24.2 The ordering price of any bidder shall not exceed the lowest evaluated package price.

24.3 The purchaser reserves the right for the placement of order of the entire tendered quantity on the bidder with the lowest evaluated price.

24.4 If there are more than two tenderers at the same rates, the tenderer having highest experience in the 7 or 5 years period category (as the case may be) shall proceed to the one having lower experience while deciding ranking

for consideration for the award of work. The final ranking, L-1, L-2, L-3 etc. shall be worked out using the highest experience irrespective of criteria of 7 or 5 years period category.

## **25.0 PURCHASER'S RIGHT TO VARY QUANTITIES:**

25.1 BSNL reserves the right to increase or decrease up to 25% of the quantity of services specified in the schedule of requirements without any change in the unit price or other terms and conditions at the time of award of contract.

25.2 In case of extension of the quantity of work additional security deposit of the enhanced quantity of work has to be deposited..

25.3 In case of non-satisfactory performance of weekly progress by bidder, BSNL reserves the right to get the balance quantity of work executed by any means including awarding the balance work to any of the existing contractors of Circle at the risk and cost of respective bidder.

25.4 BSNL also reserves the right for placement of additional order or up to 50% of the additional quantities of services contained in the running tender/contract within a period of 12 months from the date of acceptance of first APO in the tender at the same rate or a rate negotiated (downwardly) with the existing vendors considering the reasonability of rates based on prevailing market conditions and the impact of reduction in duties and taxes etc and supplies to be obtained within delivery period scheduled afresh.

## **26.0 PURCHASER'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS:**

The Purchaser reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids, at any time prior to award of contract without assigning any reason whatsoever and without thereby incurring any liability to the affected bidder or bidders on the grounds of purchaser's action.

## **27.0 ISSUE OF ADVANCE PURCHASE ORDER:**

27.1 Issue of an Advance Purchase Order shall constitute the intention of the Purchaser to enter into contract with the bidder.

27.2 The bidder shall within 14 days of issue of the advance purchase order, give its acceptance along with performance security as well as material security in conformity with the Performa provided with the bid document at Section-7.

27.3 L-1 bidder may be issued Advanced Purchase Order (APO)/ Letter of intent (LOI) for L-1 quantity as defined in clause above.

## **28.0 SIGNING OF CONTRACT:**

28.1 Once the tender is approved by the competent authority and APO/Letter of Intent (LoI) is issued, the contractor shall deposit the Performance Bank Guarantee (PBG) and Material Security in the form of Bank Guaranty (BG) within fourteen days. The Bid Security deposited along with the tender shall be refunded to the bidder after signing of the agreement.

28.2 The issue of Purchase order shall constitute the award of contract on the bidder.

28.3 Upon the successful bidder furnishing performance security pursuant to clause 27, the Purchaser shall discharge the bid security in pursuant to clause 12, except in case of L-1 bidder, whose EMBG/ EMD shall be released only after finalization of ordering of complete tendered quantity in pursuance to clause 24 & 27 of this section.

## **29.0 ANNULMENT OF AWARD:**

Failure of the successful bidder to comply with the requirement of clause 27 & 28 shall constitute sufficient ground for the annulment of the award and the forfeiture of the bid security in which event the BSNL may make the award to any other bidder at the discretion of the BSNL or call for new bids. The following grounds individuals or collectively will become the basis of annulment of award.

- (a) Work not as per specification.
- (b) Progress not as per work order.
- (c) Non-payment to workers.
- (d) Not responding to communication from BSNL representatives through SMS, email, and letter by post, telegrams and voice calls.

(e) As per provisions in Appendix 1 of Section 4 Part, the decision of BSNL will be final and binding.

### **30.0 QUALITY ASSURANCE REQUIREMENTS:** As per section 3 part A

#### **31.0 REJECTION OF BIDS:**

31.1 While all the conditions specified in the Bid documents are critical and are to be complied, special attention of the bidder is invited to the following clauses of the bid documents. Non-compliance of any one of these shall result in outright rejection of the bid.

(a) Clauses 12.1, 12.2 & 13.1 of Section- 4 Part A: The bids will be rejected at opening stage if Bid security is not submitted as per clauses 12.1 & 12.2 and bid validity is less than the period prescribed in clause 13.1 mentioned above.

(b) Clause 2 & 10 of Section-4 Part A: If the eligibility condition as per clause 2 of Section-4 Part A is not met and/ or documents prescribed to establish the eligibility as per clause 10 of section-4 Part A are not enclosed, the bids will be rejected without further evaluation.

(c) Clause 11.2 (b) of Section-4 Part A: If clause-by-clause compliance as well as deviation statements as prescribed are not given, the bid will be rejected at the stage of primary evaluation.

(d) While giving compliance to Section-5 Part A, General Commercial conditions, Section-4 Part B, Special Instructions to Bidders, Section-3 Technical Specifications ambiguous words like "Noted", "Understood", "Noted & Understood" shall not be accepted as complied. Mere "Complied" will also not be sufficient, reference to the enclosed documents showing compliances must be given.

(e) Section-8 Price Schedule: Prices are not filled in as prescribed in the price schedule.

(f) Section-4 Part A clause 9.5 on discount which is reproduced below:

"Discount, if any, offered by the bidder shall not be considered unless specifically indicated in the price schedule. Bidders desiring to offer discount shall therefore modify their offer suitably while quoting and shall quote clearly net price taking all such factors like Discount, free supply etc. into account".

31.2 Before outright rejection of the Bid by Bid-opening team for non-compliance of any of the provisions mentioned in clause 31.1(a), 31.1(b) of Section-4PartA, the bidder company is given opportunity to explain their position, however if the person representing the company is not satisfied with the decision of the Bid opening team, he/ they can submit the representation to the Bid opening team immediately but in no case after closing of the tender process with full justification quoting specifically the violation of tender condition if any.

31.3 Bid opening team will not return the bids submitted by the bidders on the date of tender opening even if it is liable for rejection and will preserve the bids in sealed cover as submitted by taking the signatures of some of the desirous representatives of the participating bidder/companies present on the occasion.

31.4 The in-charge of Bid opening team will mention the number of bids with the name of the company found unsuitable for further processing on the date of tender opening and number of representations received in Bid opening Minutes and if Bid opening team is satisfied with the argument of the bidder/company mentioned in their representation and feel that there is prima-facie fact for consideration, the in-charge of the bid opening team will submit the case for review to Officer competent to approve the tender as early as possible preferably on next working day and decision to this effect should be communicated to the bidder company within a week positively. Bids found liable for rejection and kept preserved on the date of tender opening will be returned to the bidders after issue of P.O. against the instant tender.

31.5 If the reviewing officer finds it fit to open the bid of the petitioner, this should be done by giving three (working) days' notice to all the participating bidders to give opportunity to participants desirous to be present on the occasion.

31.6 BSNL shall be disclosing the reason of rejection of bid upon enquiry made by bidder in writing in Pursuant to GFR 173(iv).

### **32 ACTION BY PURCHASER AGAINST BIDDER(S)/ VENDOR(S) IN CASE OF DEFAULT:**

As per Appendix-1 to Section 4 Part A.

### **33 BSNL'S RIGHT TO BAN BUSINESS DEALINGS**

As per provisions in Appendix 1 of Section 4 Part A & other clauses of the tender.

### **34 NEAR-RELATIONSHIP CERTIFICATE:**



34.1 The bidder should give a certificate that none of his/ her near relatives, as defined below, is working in the units where he is going to apply for the tender. In case of proprietorship, a firm certificate will be given by the proprietor. For partnership firm certificate will be given by all the partners and in case of limited company by all the Directors of the company excluding Government of India/ Financial institution nominees and independent non-Official part time Directors appointed by Govt. of India or the Governor of the state and full time Directors of PSUs both state and central. Due to any breach of these conditions by the company or firm or any other person the tender will be cancelled and Bid Security will be forfeited at any stage whenever it is noticed and BSNL will not pay any damage to the company or firm or the concerned person.

34.2 The Company or firm or the person will also be debarred for further participation in the concerned unit.

34.3 The near relatives for this purpose are defined as:-

- (a) Members of a Hindu undivided family.
- (b) They are husband and wife.
- (c) The one is related to the other in the manner as father, mother, son(s) & Son's wife (daughter in law), Daughter(s) and daughter's husband (son in law), brother(s) and brother's wife, sister(s) and sister's husband (brother in law).

34.4 The format of the certificate is given in Section-6(B).

### **35 VERIFICATION OF DOCUMENTS AND CERTIFICATES:**

The bidder will ensure that all the documents and certificates, including experience/ performance and self-certificates submitted by him are correct and genuine before enclosing them in the bid. The onus of proving genuineness of the submitted documents would rest with the bidder.

If any document/ paper/ certificate submitted by the participant bidder is found / discovered to be false / fabricated / tempered / manipulated either during bid evaluation or during award of contract or thereafter, then BSNL will take action as per Clause-1 of Appendix-1 of this Section.

Note for Tender opening Committee:

- At the time of tender opening, the TOC will check/ verify that the documents conforming to eligibility are submitted by the participant bidder duly authenticated by the authorized signatory to obviate any possibility of doubt and dispute and maintain veracity of the documents / papers/ certificates.
- The documents/ papers to be submitted in respective bid parts have been explicitly stated in Clause-7 of Section-4 Part A.
- This opened bid part which is already signed by the authorized representative of the bidder company during bid submission will be signed by the tender opening committee on hard copy and preserve it along with the bids received online in case of e-tendering.
- These papers will be treated as authentic one, in case of any dispute.

## Appendix-1 to Section-4 Part A

	Defaults of the bidder / vendor.	Action to be taken
A	B	C
1(a)	Submitting fake / forged	i) Rejection of tender bid of respective Vendor.
	a) Bank Instruments with the bid to meet terms & condition of tender in respect of tender fee and/ or EMD;	ii) Banning of business for 3 years which implies barring further dealing with the vendor for procurement of Goods & Services including participation in future tenders invited by BSNL for 3 years from date of issue of banning order.
	b) Certificate for claiming exemption in respect of tender fee and/ or EMD;	iii) Termination/ Short Closure of PO/WO, if issued. This implies non-acceptance of further supplies / work & services except to make the already received material work/ complete work in hand.
	and detection of default at any stage from receipt of bids till award of APO/ issue of PO/WO.	
	<b>Note 1:-</b> However, in this case the performance guarantee if alright will not be forfeited.	
	<b>Note 2:-</b> Payment for already received supplies/ completed work shall be made as per terms & conditions of PO/ WO.	
1(b)	Submitting fake / forged documents towards meeting eligibility criteria such as experience capability, supply proof, registration with Sales Tax, Income Tax departments etc and as supporting documents towards other terms & conditions with the bid to meet terms & condition of tender:	
	(i) If detection of default is prior to award of APO	i) Rejection of Bid & ii) Forfeiture of EMD. iii) Banning of business for upto three years which implies Barring further dealing with the vendor for procurement of Goods & Services including participation in future tenders invited by BSNL for upto three years from date of issue of banning order.
	(ii) If detection of default after issue of APO but before receipt of PG/ SD (DD,BG etc.)	i) Cancellation of APO, ii) Rejection of Bid & iii) Forfeiture of EMD. iv) Banning of business for up to three years which implies Barring further dealing with the vendor for procurement of Goods & Services including participation in future tenders invited by BSNL for up to three years from date of issue of banning order.

	(iii) If <i>detection of default after receipt of PG/ SD (DD,BG etc.)</i> .	i) Cancellation of APO ii) Rejection of Bid & iii) Forfeiture of PG/ SD. However on realization of PG/ SD amount, EMD, if not already released shall be returned. iv) Banning of business for up to three years which implies Barring further dealing with the vendor for procurement of Goods & Services including participation in future tenders invited by BSNL for up to three years from date of issue of banning order
	(iv) If <i>detection of default after issue of PO/ WO</i>	i) Termination/ Short Closure of PO/WO and Cancellation of APO ii) Rejection of Bid & iii) Forfeiture of PG/ SD. However on realization of PG/ SD amount, EMD, if not released shall be returned. iv) Banning of business for upto three years which implies Barring further dealing with the vendor for procurement of Goods & Services including participation in future tenders invited by BSNL for upto three years from date of issue of banning order.
	<b>Note 3:-</b> However, settle bills for the material received in correct quantity and quality if pending items do not affect working or use of supplied items.	
	<b>Note 4:-</b> No further supplies are to be accepted except that required to make the already supplied items work.	
2	If the vendor or his representative uses violent/ coercive means viz. Physical / Verbal means to threatens BSNL Executive / employees and/ or obstruct him from functioning in discharge of his duties & responsibilities for the following :  a) Obstructing functioning of tender opening executives of BSNL in receipt/ opening of tender bids from prospective Bidders, suppliers/ Contractors. b) Obstructing/ Threatening other prospective bidders i.e. suppliers/ Contractors from entering the tender venue and/ or submitting their tender bid freely.	Banning of business for 3 years which implies Barring further dealing with the vendor for procurement of Goods & Services including participation in future tenders invited by BSNL for 3 years from date of issue of banning order.
3	Non-receipt of acceptance of APO/ AWO and SD/ PG by L-1 bidder within time period specified in APO/ AWO.	Forfeiture of EMD.
4.1	Failure to supply and/ or Commission the equipment and /or execution of the work at all even in extended delivery schedules, if granted against PO/ WO.	i) Termination of PO/ WO. ii) Under take purchase/ work at the risk & cost of defaulting vendor. iii) Recover the excess charges if incurred from the PG/ SD and outstanding bills of the defaulting Vendor.

4.2	Failure to supply and/ or Commission the equipment and /or execution of the Work in full even in extended delivery schedules, if granted against PO/ WO.	<p>i) Short Closure of PO/ WO to the quantity already received by and/ or commissioned in BSNL and/ or in pipeline provided the same is usable and/or the Vendor promises to make it usable.</p> <p>ii) Under take purchase/ work for balance quantity at the risk &amp; cost of defaulting vendor.</p> <p>iii) Recover the excess charges if incurred from the PG/ SD and outstanding bills of the defaulting Vendor.</p>
5.1	The supplied equipment does not perform satisfactory in the field in accordance with the specifications mentioned in the PO/ WO/Contract.	<p>i) If the material is not at all acceptable, then return the non-acceptable material (or its part) &amp; recover its cost, if paid, from the o/s bills/ PG/ SD.</p> <p>OR</p> <p>ii) If the material is inducted in network &amp; it is not possible to return it and/ or material is acceptable with degraded performance, the purchaser may determine the price for degraded equipment (Financial penalty = Price – price determined for degraded equipment) himself and/ or through a committee.</p> <p>Undertake recovery of financial penalty from outstanding dues of vendor including PG/ SD.</p>
5.2	Major quality problems (as established by a joint team / committee of User unit(s) and QA Circle) / performance problems and non-rectification of defects (based on reports of field units and QA circle)	<p>i) If the material is not at all acceptable, then return the non-acceptable material (or its part) &amp; recover its cost, if paid, from the o/s bills/ PG/ SD;</p> <p>OR</p> <p>ii) If the material is inducted in network &amp; it is not possible to return it and/ or material is acceptable with degraded performance, the purchaser may determine the price for degraded equipment (Financial penalty = Price – price determined for degraded equipment) himself and/ or through a committee.</p> <p>Undertake recovery of financial penalty from outstanding dues of vendor including PG/ SD; and</p> <p>iii) Withdrawal of TSEC/ IA issued by QA Circle.</p>
6	Submission of claims to BSNL against a contract	<p>i) Recovery of over payment from the outstanding dues of Vendor including EMD/ PG &amp; SD etc. and by invoking ‘Set off’ clause 14 of Section 5 Part A or by any other legal tenable manner.</p> <p>ii) Banning of Business for 3 years from date of issue of banning order or till the date of recovery of over payment in full, whichever is later.</p>
	(a) for amount already paid by BSNL .	
	(b) for Quantity in excess of that supplied by Vendor to BSNL.	
	c) for unit rate and/ or amount higher than that approved by BSNL for that purchase.	
<b>Note 5:-</b> The claims may be submitted with or without collusion of BSNL Executive/ employees.		
<b>Note 6:-</b> This penalty will be imposed irrespective of the fact that payment is disbursed by BSNL or not.		

7	<p>Network Security/ Safety/ Privacy:- If the vendor tampers with the hardware, software/ firmware or in any other way that</p> <p>a) Adversely affects the normal working of BSNL equipment(s) and/ or any other TSP through BSNL.</p> <p>b) Disrupts/ Sabotages functioning of the BSNL network equipments such as exchanges, BTS, BSC/ MSC, Control equipment including IN etc., transmission equipments but not limited to these elements and/ or any other TSP through BSNL.</p> <p>c) tampers with the billing related data/ invoicing/ account of the Customer/ User(s) of BSNL and/ or any other TSP(s).</p> <p>d) hacks the account of BSNL Customer for unauthorized use i.e. to threaten others/ spread improper news etc.</p> <p>e) undertakes any action that affects/ endangers the security of India.</p>	<p>i) Termination of PO/ WO.</p> <p>ii) Banning of business for 3 years which implies barring further dealing with the vendor for procurement of Goods &amp; Services including participation in future tenders invited by BSNL for 3 years from date of issue of banning order.</p> <p>iii) Recovery of any loss incurred on this account from the Vendor from its PG/ SD/ O/s bills etc.</p> <p>iv) Legal action will be initiated by BSNL against the Vendor if required.</p>
8	<p>If the vendor is declared bankrupt or insolvent or its financial position has become unsound and in case of a limited company, if it is wound up or it is liquidated.</p>	<p>iii) Termination/ Short Closure of the PO/ WO.</p> <p>iv) Settle bills for the quantity received in correct quantity and quality if pending items do not affect working or use of supplied items.</p> <p>v) No further supplies are to be accepted except that required to make the already supplied items work.</p> <p>vi) In case of turnkey projects, If the material is commissioned and is usable without any degradation of performance, then settle bills for the acceptable equipment/ material (or its part).</p> <p>vii) In case of turnkey projects, if the material is inducted in network &amp; it is not possible to return it and/ or material is acceptable with degraded performance, the purchaser may determine the price for degraded equipment (Financial penalty = Price – price determined for degraded equipment) himself and/ or through a committee.</p>
		<p>Undertake recovery of financial penalty from outstanding dues of vendor including PG/ SD.</p>

9	In the event of the vendor, its proprietor, Director(s), partner(s) is / are convicted by a Court of Law following prosecution for offences involving moral turpitude in relation to the business dealings.	<p>i) Termination/ Short Closure of the PO/ WO.</p> <p>ii) Settle bills for the material received in correct quantity and quality if pending items do not affect working or use of supplied items.</p> <p>iii) No further supplies are to be accepted except that required to make the already supplied items work.</p> <p>iv) In case of turnkey projects, If the material is commissioned and is usable without any degradation of performance, then settle bills for the acceptable equipment/ material (or its part).</p> <p>v) In case of turnkey projects, If the material is inducted in network &amp; it is not possible to return it and/ or material is acceptable with degraded performance, the purchaser may determine the price for degraded equipment (Financial penalty = Price – price determined for degraded equipment) himself and/ or through a committee.</p> <p>Undertake recovery of financial penalty from outstanding dues of vendor including PG/ SD.</p>
	If the vendor does not return/ refuses to return BSNL's dues:	i) Take action to appoint an Arbitrator to adjudicate the dispute.
	a) in spite of the order of the Arbitrator.	<p>i) Termination of contract, if any.</p> <p>ii) Banning of business for 3 years which implies barring further dealing with the vendor for procurement of Goods &amp; Services including participation in future tenders invited by BSNL from date of issue of banning order or till the date by which vendor clears the BSNL's dues, whichever is later.</p>
		iii) Take legal recourse i.e. filing recovery suite in appropriate court.
	b) in spite of Court Orders.	<p>i) Termination of contract, if any.</p> <p>ii) Banning of business for 3 years which implies barring further dealing with the vendor for procurement of Goods &amp; Services including participation in future tenders invited by BSNL from date of issue of banning order or till the date by which vendor clears the BSNL's dues, whichever is later.</p>
11	If the Central Bureau of Investigation/ Independent External Monitor (IEM) / Income Tax/ Sales Tax/ Excise / Custom Departments recommends such a course	Take Action as per the directions of CBI or concerned department.
12	The following cases may also be considered for Banning of business:	
	(a) If there is strong justification for believing that the proprietor, manager, MD, Director, partner, employee or representative of the vendor/ supplier has been guilty of malpractices such as bribery, corruption, fraud, substitution of tenders, interpolation, misrepresentation with respect to the contract in question.	i) Banning of business for 3 years which implies Barring further dealing with the vendor for procurement of Goods & Services including

	(b) If the vendor/ supplier fails to execute a contract or fails to execute it satisfactorily beyond the provisions of Para 4.1 & 4.2.	participation in future tenders invited by BSNL for 3 years from date of issue of banning order.
	(c) If the vendor/ supplier fails to submit required documents/ information, where required.	
	(d) Any other ground which in the opinion of BSNL is just and proper to order for banning of business dealing with a vendor/ supplier.	
<b>Note 7:</b> The above penalties will be imposed provided it does not clash with the provision of the respective tender.		
<b>Note 8:</b> -In case of clash between these guidelines & provision of invited tender, the provision in the respective tender shall prevail over these guidelines.		
<b>Note 9:</b> Banning of Business dealing order shall not have any effect on the existing/ on going works/ AMC / CAMC which will continue along with settlement of Bills.		

**SECTION-4 PART B****SPECIAL INSTRUCTIONS TO BIDDERS**

The Special Instructions to Bidders shall supplement the 'Instructions to Bidders' and in case of any conflict with those in Section-4 Part A i.e. GENERAL INSTRUCTIONS TO BIDDERS (GIB), the provisions herein shall prevail.

- 1. Eligibility Conditions:-As per para4 of DNIT & clause10 of Section4 Part-A.**
- 2. Bid Security: As per Clause 5 of Section 1 (DNIT)**
- 3. Preference to make in India**

**3.1** Purchaser reserves the right for providing Preference to Make In India telecom products, service and works in accordance with Department of Promotion of Industry and Internal Trade, Ministry of Commerce and Industry letter no. P-45021/2/2017-PP(BE-II) dated 16/09/2020 [Public Procurement (Preference to Make in India), Order 2017-Revision] along with relevant references from earlier letters, DPIIT Order No. 45021/2/2017-B.E.-II dated 15-06-2017, Order dated 28-05-2018, Order Dated 29-05-2019, Order dated 04-06-2020etc along with latest guidelines & amendments, if any.

**3.2 Definitions**

(i) 'Local content' means the amount of value added in India which shall, unless otherwise prescribed by the Nodal Ministry, be the total value of the item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties) as a proportion of the total value, in percent.

(ii) 'Class-I local supplier' means a supplier or service provider, whose goods, services or works offered for procurement need the minimum local content as prescribed for "Class-I local supplier" under DPIIT Public procurement (Preference to make in India), order 2017 Revision dt 16.09.2020.

(iii) Class-II local supplier' means a supplier or service provider, whose goods, services or works offered for procurement, needs the minimum local content as prescribed for "Class-II local supplier" under DPIIT Public procurement (Preference to make in India), order 2017 revision dt 16.09.2020 but less than that prescribed for "Class-I local supplier" under this order.

(iv) Non Local supplier' means a supplier or service provider, whose goods, services or works offered for procurement, has local content less than that prescribed for "Class-II local supplier" under DPIIT Public procurement (Preference to make in India), order 2017 Revision dt 16.09.2020.

(v) 'Margin of purchase preference' means the maximum extent to which the price quoted by a "Class-I local supplier" may be above the L1 for the purpose of purchase preference.

(vi) 'Works' means all works as per Rule 130 of GFR- 2017, and will also include turnkey.

**3.3** Margin of Purchase Preference: means the maximum extent to which the price quoted by "Class-I local supplier" may be above the L-1 for the purpose of purchase preference.

**3.4** 'Class-I local suppliers/Class-II local suppliers' are required to indicate the 'Local content' for the quoted telecom products, service and works, in their bid in the format available in Section:7(L)

**3.5 Verification of local content**

(a). The 'Class-I local supplier/Class-II Local suppliers' at the time of tender, bidding or solicitation shall be required to indicate percentage of local content and provide

Self-certification that the item offered meets the local content requirement for Class-I local supplier/Class-II Local suppliers', as the case may be. They shall also give details of the location(s) at which the local value addition is made.

(b). In cases of procurement for a value in excess of Rs. 10 crores, the 'Class-I local supplier/ Class-II local supplier' shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.

(c). False declarations will be in breach of the Code of Integrity under Rule 175(1)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (i) of the General Financial Rules along with such other actions as may be permissible under law.



(d). A supplier who has been debarred by any procuring entity for violation of this Order shall not be eligible for preference under this Order for procurement by any other procuring entity for the duration of the debarment. The debarment for such other procuring entities shall take effect prospectively from the date on which it comes to the notice of other procurement entities.

### 3.6 Purchase Preference

(a) Among all qualified bids, the lowest bid will be termed as L 1. If L 1. is 'Class-I local supplier', the contract for full quantity will be awarded to L 1.

(b) If L 1 bid is not a 'Class-I local supplier', 50% of the order quantity shall be awarded to L 1. Thereafter, the lowest bidder among the 'Class-I local supplier' will be invited to match the L 1 price for the remaining 50% quantity subject to the Class-I local supplier's quoted price falling within the margin of purchase preference, and contract for that quantity shall be awarded to such 'Class-I local supplier' subject to matching the L1 price. In case such lowest eligible 'Class-I local supplier' fails to match the L 1 price or accepts less than the offered quantity, the next higher 'Class-I local supplier' within the margin of purchase preference shall be invited to match the L 1 price for remaining quantity and so on, and contract shall be awarded accordingly. In case some quantity is still left uncovered on Class-I local suppliers, then such balance quantity may also be ordered on the L 1 bidder.

**3.7** Margin of Purchase Preference: The margin of purchase preference shall be 20%.

**3.8** Minimum Local Content: The Local content requirement to categorize a supplier as 'Class-I supplier' is minimum 50%. For Class-II Local suppliers, the local content requirement is minimum 20%.

**4. Distribution of work** (to be read with the provisions of Preference to Make in India as detailed in clause 3.0 above)

The Purchaser intends to limit the number of technically and commercially responsive **01 (One) bidder package wise** from the list of such bidders arranged in increasing order of their evaluated prices starting from the lowest for the purpose of ordering against this tender. The distribution of the quantity shall be as given in Table 1 below.

Table 1(A) (Without provisions for MSE Units)

No. of Bidders to be approved (Col. 1)	Quantity allotted to the respective bidder (Col. 2)				
	L1	L2	L3	L4	L5 and so on
One bidder	100%	Nil	Nil	Nil	Nil

Table1 (B) (With provisions for MSE Units) to be read with Note:3 of Section-1Part-A)

No. of Bidders to be approved (Col. 1)	Quantity allotted to the respective bidder (Col.2)		Qty. earmarked for MSE bidder(s)(Col.3)
Two bidders	L1 - 75%	L2- Nil	Out of 25% target of procurement from MSEs 20% will be procured from MSEs owned by SC/ST entrepreneurs. Out of total procurement from MSEs, 3% from within the 25% target shall be earmarked for procurement from MSEs owned by women

**Note1:** Table1 (B) shall be followed in case there are eligible MSE Bidder.

**Note2:** If no eligible MSE bidders are available then aforesaid earmarked 25% quantity shall be de-reserved & the allotted quantity for other general bidders will be restored to 100% and distribution shall be as per Table-1(A) above.

**Note3:** If L-1, L-2, L-3, etc. happens to be MSE bidders then they will be given allotted quantity as per the applicable sub-column of column 2 of above table. Incase, there are MSE bidders whose quoted price is within +15% of L-1 price then 25% reserved quantity shall be distributed amongst such MSE bidders i.e. the 25% reserved quantity for MSE may be distributed equally among all the MSE bidders whose quote lies within range L1+15% including L1, L2, L3, etc. MSE bidders.

Note: Concurrent application of Public Policy for Micro and Small Enterprises Order, 2012 and Public Procurement (Preference to make in India) Order, 2017 shall be done as per Guidelines issued by Department of Expenditure order No: F.1/4/2021-PPD dated 18.05.2023

- 4.1 Any bidder may bid in one or more packages or even all the packages however tender award will be restricted to two packages only.**
- 4.2 In case bidder is L-1 in more than 02 packages, allotment of work will be done for those packages in which the bidder quoted rate is the lowest w.r.t. SOR.**
- 4.3 Further if bidder is L-1 and lowest quoted rates are same w.r.t. to SOR, in two or more packages then work will be allotted for the package with highest estimated cost.**
- 4.4 If the two or more bidders are L-1 with same quoted rate in any package, the ranking of bidder should be followed as per clause 24.4 of Section 4 Part A.**
- 4.5 Further, in case of tie even after mentioned procedure, the work will be equally distributed among them subject to condition that Part of Package(s) distributed will also be treated as one Package as described below:**  
 Suppose Two Bidders are L-1 in Package-I, then the work of Package-I will be distributed equally between both of them as 50% of the Package-I and that 50% Part of Package-I will be treated as one Package.
- 4.6 Further package (beyond Two packages awarded initially to L-1 bidder, in case bidder stood L-1 in all packages) will be offered to L2 bidder on L-1 rate and in case L-2 does not agree to accept offer, then that package will be offered to L-3 on L-1 rate and so on.**
- 4.7 In case a bidder is L1 in more than two Packages, BSNL reserve the right to award more than two packages to that bidder which shall be binding on the bidder to accept.**

## Section- 4 Part C

### Instructions for Online Bid Submission

These Special Instructions to Bidders shall supplement 'Instruction to Bidders', as enclosed in Sec 4 Part A of the Tender Documents.

The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.

More information useful for submitting online bids on the CPP Portal may be obtained at: <https://etenders.gov.in/eprocure/app>

#### 1. REGISTRATION

Bidders are required to enrol on the e-Procurement module of the Central Public Procurement Portal (URL: <https://etenders.gov.in/eprocure/app>) by clicking on the link "Online bidder Enrolment" on the CPP Portal which is free of charge.

As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.

Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.

Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / nCode / eMudhra etc.), with their profile.

Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.

Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC / e-Token.

#### 2. SEARCHING FOR TENDER DOCUMENTS

There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Organization Name, Location, Date, Value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as Organization Name, Form of Contract, Location, Date, Other keywords etc. to search for a tender published on the CPP Portal.

Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective 'My Tenders' folder. This would enable the CPP Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.

The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

#### 3. PREPARATION OF BIDS

Bidder should take into account any corrigendum published on the tender document before submitting their bids.

Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.

Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF/JPG formats. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.

To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use "My Space" or "Other Important

Documents'' area available to them to upload such documents. These documents may be directly submitted from the "My Space" area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

Note: My Documents space is only a repository given to the Bidders to ease the uploading process. If Bidder has uploaded his Documents in My Documents space, this does not automatically ensure these Documents being part of Technical Bid.

#### 4. SUBMISSION OF BIDS

Bidder should log into the site well in advance for bid submission so that they can upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.

The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.

Bidder has to select the payment option as "offline" to pay the tender fee / EMD as applicable and enter details of the instrument.

Bidder should prepare the EMD as per the instructions specified in the tender document. The original should be posted/couriered/given in person to the concerned official, latest by the last date of bid submission or as specified in the tender documents. The details of the DD/any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise the uploaded bid will be rejected.

Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BoQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BoQ file, open it and complete the white coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected.

The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.

All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid opener's public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.

The uploaded tender documents become readable only after the tender opening by the authorized bid openers.

Upon the successful and timely submission of bids (i.e. after Clicking "Freeze Bid Submission" in the portal), the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.

The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.

#### 5. E-Reverse Auction

E-Reverse Auction would be conducted on Unit/ total package/ net cost to BSNL value for bid evaluation, subsequently after the opening of the Financial-Part. The following would be parameters for e-Reverse Auction:

S. No.	Parameter	Value
1	Date and Time of Reverse-Auction Bidding Event	Will be intimated to Technically Responsive bidders after the opening of Financial-part.
2	Duration of Reverse-Auction Bidding Event	.....( Typically 1 to 2 ) Hours

<b>3</b>	Automatic extension of the 'Reverse-Auction Closing Time', if last bid received is within a 'Pre-defined Time-Duration' before the 'Reverse-Auction Closing Time'	Yes
<b>3.1</b>	Pre-defined Time-Duration	..... xx Minutes(Typically 05 minutes)
<b>3.2</b>	Time-Duration of Automatic extension	.....yy Minutes (Typically 10 minutes)
<b>3.3</b>	Maximum number of Auto-Extensions	.....nn Automatic Extensions. (Typically 03 extensions)
<b>4</b>	Criteria of Bid-Acceptance	'Beat on Starting last quoted Price', as well as, 'Beat on Rank-1 Bid Value'
<b>5</b>	Entity – Start-Price	Unit/ total package/ net cost to BSNL (To be decided by planning cell)
<b>6</b>	Minimum Bid-Decrement	.....( Value in Currency) To be decided by planning cell
<b>7</b>	Display of 'Pseudo Identity' of Bidders during bidding period	To all Bidders, as well as, BSNL's officers.
<b>8</b>	Display of Bidder's own current Rank	Yes

**Note : Parameters at S. No.1, 5 & 6 shall be confirmed after opening & evaluation of Financial bid parts.**

## **6. ASSISTANCE TO BIDDERS**

Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender. Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk. For any technical related queries please call at 24 X 7 Help Desk Number 0120-4200 462/4001 002/4001005 International Bidders are requested to prefix +91 as country code

Email Support:

For any issues or Clarifications relating to the published tenders, bidders are requested to contact the respective Tender Inviting Authority

Technical support-eproc(at)nic(dot)in

Policy Related – cppp-doe(at)nic(dot)in

**SECTION-5 Part A****GENERAL (COMMERCIAL) CONDITIONS OF CONTRACT (SCC)****1. APPLICATION**

The General conditions shall apply in contracts made by the purchaser for the procurement of services.

**2. STANDARDS**

The services provided under this contract shall conform to the standards prescribed in the Technical Specifications mentioned in Section -3.

Wherever the Technical specifications mentioned in section -3 (A) in the document are not specific about any items of work, the item shall be executed as per the provisions of BSNL E.I. and BBNL E.I (Engineering Instruction).

**3. PATENT RIGHTS**

The supplier/contractor shall indemnify the BSNL against all third-party claims of infringement of patent, trademark or industrial design rights arising from use of the goods or any part thereof in Indian Telecom Network.

**4. PRICES:**

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. Price once fixed will remain valid for the period of contract. Increase and decrease of taxes/duties will not affect the price except Goods and Service tax (GST) which will be paid at prevailing rate, during this period (proof of payment to the GST authority shall be submitted by the contractor on time to avail ITC by BSNL.)

**5. SUBCONTRACTS:**

The Contractor shall not sub-contract or assign any part or the whole of the work under the agreement or any Work Order(s) (wherever applicable).

**6. INSPECTION AND TESTS: Kindly refer to Clause 5 of Section – 5, Part B i.e. SPECIAL CONDITIONS OF CONTRACT****7. SECURITY:****A. PERFORMANCE SECURITY:**

7.1 All successful bidders [including MSEs (MICRO & SMALL ENTERPRISES) who are registered with Appropriate Authority under Ministry of MSME shall furnish performance security to the purchaser for an amount equal to **5% of the value of Advance purchase order** by way of Performance Bank Guarantee (PBG) in favour of **“AO (Claim), BSNL, O/o CGMT, UP (East) Telecom Circle, Lucknow”** within 14 days from the date of issue of Advance Purchase Order (APO)/Letter of intent (LOI) by the Purchaser. **However, if the quoted price is less than the BSNL’s internal estimated cost by 15% or more, the bidder shall be required to deposit 10% of the APO value as PBG.**

On receipt of PBG from the bidder, after confirmation of the genuineness of the PBG from the bank, the EMD, if any, received earlier, will be returned.

7.2 The proceeds of the performance security shall be payable to the Purchaser as compensation for any loss resulting from the supplier's failure to complete its obligations under the contract.

7.3 The performance security Bond shall be in the form of Bank Guarantee issued by a scheduled Bank and in the proforma provided in 'Section-7(B.1) of this Bid Document or in the form Insurance Surety Bond issued by Insurance Company registered under Insurance Act 1938 & its subsequent amendments, guidelines etc. notified by Government of India in the proforma provided in 'Section-7(B.2) of this Bid Document. Other acceptable forms of performance security are Fixed Deposit Receipt and Account Payee Demand Draft.

7.4 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.

7.4a If there are recoveries to be made, Contractor shall deposit the money before the release of PBG for getting the PBG released and in failure to do so, PBG will be forfeited and recovery to be effected from the realized PBG amount and the balance amount, if any, after adjustment of recoveries, will be refunded to the bidder.

7.4b It is the responsibility of the vendor to submit the proof that he has deposited the Goods & service tax in time. Otherwise BSNL will recover from subsequent bills or PBG as the case may be.

7.4 c No interest will be paid to the contractor on the security deposit.

## **B. MATERIAL SECURITY:**

7.5 The successful tenderer including MSE bidder 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 in favour of “**AO (Claim), BSNL, O/o CGMT, UP (East) Telecom Circle, Lucknow**”, valid for the period of contract plus six months, from a scheduled bank and in the **material security bond form** provided in the bid documents **Section-X**. Material security can also be submitted in the form of cross demand draft drawn in favor of “**AO (Claim), BSNL, O/o CGMT, U.P.(East) Telecom Circle, Hazratganj, Lucknow-226001**” issued by a scheduled bank and payable at “**Lucknow**”. The Material security will be a non-interest bearing deposit for any period whatsoever. BSNL reserves the right to increase the amount of material security based on the quantum of work/maximum store to be issued at the time of execution of the work at any point of time.

7.6 The contractor at any point of time will not be issued stores costing more than material security. If due to any reason, more store has to be issued to the contractor then the material security shall be correspondingly enhanced to an amount equal to the cost of material/stores to be issued.

7.7 The proceeds of the material security shall be payable to the BSNL as a compensation for any loss resulting from the contractor's failure to account for the material issued to him.

7.8 The Material security shall be released / refunded within a month 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'.

**8. Deleted.**

## **9. ISSUE OF WORK ORDERS AND TIME LIMIT:**

i). Work will be executed by way of issuing work orders. Work orders may be issued in parts for a period as specified in the work order. The work order shall be for a part of work which will have to be completed in **04 months** of time.

ii). The work orders shall be issued by the Divisional Engineer in-charge of OF cable works after Pro-forma work order approval from Tender Approving Authority. The Divisional Engineer in charge of work shall issue the work order after examining the technical and planning details of the works to be executed.

iii). The BSNL 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 competent authority, the contractor is not executing the work at the required pace.

## **10. EXTENSION OF THE TIME LIMIT:**

### **10.1 GENERAL**

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

- 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.

### **10.2 Application for Extension of Time and Sanction of Extension of Time (EOT):**

**10.2.1** 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 to the engineer-in-charge for extension of time (EOT), on account of which, he desires such extension, on the same day of occurrence of hindrance. The Engineer-in-charge shall forward the request to the competent authority with his detailed report, within two 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.

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

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

**10.2.2** 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.

**10.2.3** The competent authority may also grant extension of time for completion of work in cases where reasons for delay are ascribable to the contractor, but such extension of time shall be with LD charges as per clause dealing with Liquidated damages (LD) for delays in execution of works.

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

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

### **10.3 Grant of Extension of Time without Applications:**

**10.3.1** There are, at times, practical difficulties like non-availability of material, delay in providing permissions/right of way etc. reasons of which are ascribable to the BSNL. 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.

**10.3.2** The competent authority for EOT will be BA Head or any officer authorized by him in writing

### **10.4 PERIODICITY OF AGREEMENT:**

One year from the date of agreement, this can be further extendable up to another One year on mutual consent. In Such case the security Deposit /PBG has to be suitably extended / modified.

## **11. MEASUREMENT, INSPECTION, TESTING AND ACCEPTANCE TESTING**

### **A. OPEN TRENCHING**

#### **11.1 Measurement:**

**11.1.1** 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 initialed & dated by the officer concerned.

**11.1.2 Responsibility of taking and recording measurements:** The measurement of various items of work shall be taken and recorded in the measurement book issued with each work order. The measurement shall be taken and recorded by an officer not below the rank of Junior Telecom Officer, supervising the work. The Junior Telecom Officer/Sub Divisional Engineer, directly responsible for supervision of work, shall be responsible for accuracy of 100% of measurements. The Sub Divisional Engineer where Junior Telecom Officer is supervising officer shall be responsible for conducting test check of 50% of measurements. The Divisional Engineer shall be responsible for conducting test check of 10% of measurements.

**11.1.3 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.

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

- **Measurement of depth of trenches** The cable routes of one work order shall be divided into a number of segments each of maximum 200 meters length bounded by identifiable landmarks at both the ends of the segments. If landmarks are not available, length of the segment may be maintained at 200 meters. The measurement of depth shall be recorded at each point of measurement (POM) in the measurement book in meters in the multiples of 5cms. For example 97 cms will be recorded as 95 cms and 103 cms as 105 cms. The points of measurements shall be at a distance of 10 meters starting from 0 (Zero) Meter. For example, if the length of segment is 175 meters, the POMs shall be at 0 M, 10M, 20M, 30M, 40M, 50M, 60M, 70M, 80M, 90M, 100M, 110M, 120M, 130M, 140M, 150M, 160M & 170M. The last POM shall be at 175th M to be recorded against Residual POM. The efforts required to excavate trenches is not proportionate especially with reference to depth. Therefore, normally the workers tend to dig shallow trenches. As standard depth of the trench is important for future life and protection of cables, this tendency has to be discouraged. In order to encourage the contractor to achieve best possible depth in the face of site constraints, the following scale of payment shall be applied for digging trenches of lesser depths, subject to condition that relaxation has been granted by the competent authority for lesser depths.



TABLE-I For Normal &amp; Hard soil for all areas UP E circle and state UP

Depth between	Reduction in rate
< 165 Cms to $\geq$ 150 Cms.	Pro rata basis
< 150 Cms to $\geq$ 130 Cms.	12.5 % of approved rates
< 130 Cms to $\geq$ 105 Cms.	25 % of approved rates
Below 105 Cms	40 % of approved rates

Table-2 For soft/hard rock for all areas UP &amp; UP E Circle.

Depth Between	Reduction in rate
< 135 Cms to $\geq$ 125 Cms.	5% of the approved rate.
<125 Cms to $\geq$ 105 Cms	15% of the approved rate.
Below 105 Cms.	40% of the approved rate.

TABLE-3 For Hilly Terrain for all areas UP E Circle

Depth between	Reduction in rate
< 90 Cms to $\geq$ 80 Cms.	5 % of the approved rate
< 80 Cms to $\geq$ 65 Cms.	12.5 % of approved rates
< 65 Cms to $\geq$ 50 Cms.	25 % of approved rates
Below 50 Cms	40 % of approved rates

The payment for sub normal length should be calculated using the following formula:

$$P = (100 - \text{ROR}) \times \text{RA} \times D / (100 \times \text{ND})$$

P = Payment for one meter

ROR = Reduction in rate in % as given above

RA = Approved rate of trenching per meter

D = Actual depth in Cms.

ND = Nominal depth of trench 165/135/90 cms for which the tender has been floated

- **Measurement of Lengths and profiles of strata and protection:**

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

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

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

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

- Digging of joint pit and preparation of joint chamber along with its type i.e. Brick chamber or Pre Cast RCC type.
- Fixing, Painting and sign writing of route/joint indicators.
- Termination of Cable in equipment room and no. of joints.

11.1.5 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.

11.1.6 The Divisional Engineer before passing the bill for **SECTIONS** covered by each set of measurement may carry out test check by re-opening trench at as many locations as necessary as specified in document 'procedures for underground cable construction' and bills be passed only when he is personally satisfied of the correctness of entries in the "measurement Book" and also when he is satisfied of other aspects of the work as per the terms of the contract. The contractor shall provide the necessary assistance of labour for re-opening of trench for test check by the Divisional Engineer; Separate payment shall not be made to the contractor for excavation of such test checks; however such test pits shall not be more than 10% of the cable laying work.

11.1.7 Measurement of the work of cable pulling through pipe/duct will be taken equal to the length of the pipe/duct

through which the cable has been pulled and not the total length of the cable pulled through pipe/duct.

## **B. Guidelines for Depth AT of Horizontal Directional Drilling**

**HDD Graph signed by contractor & Site Incharge of BSNL is essential at the time of AT of HDD work. HDD Graph must include Depth of PLB, Latitude & Longitude. This HDD graph shall be integrated as part of the AT document.**

The depth should not be less than 165 cm and more than 200 cm. In exceptional cases, maximum depth more than 200 cm may be allowed by BA head with proper justification and the same should be recorded by Supervisor of work and Site Incharge in MB Book. This restriction is incorporated to avoid inconvenience in tracing of OFC faults as higher depth leads to very troublesome/ delayed fault clearance. The BA heads must note this point while allowing depth more than 200cm.

**Brief Description of the work:** A high capacity drilling machine is used to drill the earth in almost horizontal manner and hence the name of the technology. Two manholes of 2 Mt X 2 Mt X 2 Mt pits are taken at the places marked by the site engineer. The distance between these manholes can vary from a minimum of 40 metres to 250 metres.

The drilling is done from Entry pit towards the Exit pit. At the Exit pit the PLB pipes are attached to the drill rods and the pipes are pulled back towards the Entry pit.

In general RCC manholes are constructed at the Entry pit and Exit pit after the HDD work is completed.

### **HDD work along with manholes:**

The location of manholes shall not only depend on the capacity of the machine but also on the roads. The man holes where the drilling commences is called the Entry Pit. The second manhole is called as Exit pit.

Normally if the HDD machine is kept near the Entry pit and the drilling is carried out, then the depth at which the Machine enters the earth shall not be less than 1.2 Mt. As per the

T&D standard any pipe laying less than 1.2 Mt requires additional protection. In order to achieve higher depth at the Entry pit the HDD machine is kept at around 6 to 8 meters away from the Entry pit. A separate pit called as pilot entry pit is dug up at 4 to 6mtr away from the Entry pit.

Wherever the roads are not in straight line, the span length reduces between the Entry and Exit pit. In general in overlay access works, the manholes are constructed at every 200 Mtrs approximately. The PLB pipes are coupled using the HDPE couplers.

The HDD machine drills the earth using 3 meter length rods. These rods jointed to each other by welding. In the beginning of the first rod contains the drill bit and an electronic beacon house. While the underground drilling work is in progress the drill bit position can be monitored from the surface of the earth using a tracker. The depth and the direction of the bit are monitored from the tracker. This is due to beacon house located in the drill bit.

In the onward drilling from the entry pit to Exit pit normally a lesser diameter (4 inch diameter) drill bit is used. After the drill bit reaches the Exit pit, the drill bit and the beacon house are removed from the first rod. A higher diameter drill bit called, Back reamer is attached to the first rod. The pipes are attached to the reamer and the rods are pulled back. Thus in the return path the tracker cannot detect the depth and direction of the reamer. Hence depth of the pipes can be monitored during the drilling from Entry pit towards Exit pit only.

In general the HDD technology is used in the cities where open trenching is not permitted. These roads are covered thick BT surface. For verifying the depth the test pits cannot be taken in the middle of the road. The second difficulty arises due to the depth of the pipes, which are at about 3 meters below the surface. It is very difficult to manually open a test pit to verify the depth. Hence carrying out the depth AT after the entire work is completed is not possible as is done in the usual depth check. Hence the Depth AT for the HDD work shall be done in real time.

The following tests and suggestions are recommended for the PLB pipes being laid using the HDD technology. Apart from the depth check, the pipes continuity check is also recommended especially for the ACCESS network jobs where multiple pipes are laid.

### **Standard Tests:**

- i. Online depth and offset check of the PLB pipes. The depth can be monitored from the tracker. The accuracy of the tracker may be verified by site-in charge before the work is commenced. The depth of the pipe should be more than 2.0 Mtrs.
- ii. The depth of the pipe may be recorded at the Entry pit and the Exit pit of the spans under test. The depth at both the places should be more than 1.2 Mtrs.

- iii. The depth at least two coupling points are to be verified in 1 KM. The depth should be more than 1.2 Mtrs.
- iv. The offset of the pipe may be recorded both from the center of the road and also from the edge of the road wherever the compound wall exists (City Areas).
- v. The depths of the pipes at a minimum of six continuous rods are to be verified by the T&D wing. The depth should be more than 2 Mtrs beyond 10 meters from the trailing edge of Entry pit.
- vi. The colours of the pipes to be recorded in case of multiple PLB laying. Different types of coloured pipes are to be used.

Protection: It is recommended that the regular depth protection standards may be applied for HDD works also.

Depth Relaxation: The depth relaxation is required at some situations. In general when HDD is used only for crossing the roads and short spans of 15 to 25 Mtrs length, due to the paucity of the road margin and due to the site conditions, the depth of 2.0 Mtrs may not be achieved. The depth also cannot be achieved at places where very old underground concrete structures, water and drainage pipes exist. It is recommended that the depth relaxation may be given by the competent authority.

Sl.No.	Depth measured at 10 mtrs from th trailing edge of the Entry Pit	Recommending Authority	Relaxing Authority
1	> or = 1.65 Mtr to 2.0 mtr	SDE in charge	DET In charge
2	> or = 1.5Mtr to 1.65 mtr	DET in charge	DGM in-charge

Note:- For depth more than 165 cms rates for horizontal drilling will remain same. In case of depths being less than 1.65 Mtrs up to 1.5 mtrs, the payment of horizontal drilling will be made on prorata basis. It is hereby recommended that no pipe shall be laid by HDD method for depths less than 1.5Mtrs. Hence no protection is required for the Pipes.

### 11.2 Inspection, and Quality Control:

- a. State of the art technology shall be used. Quality control through Acceptance Test (AT) shall be done by BSNL from time to time. BSNL reserves the right to carry out sample checks. Shortcomings/deficiencies noted shall be attended by contractor within 15 days and intimated to BSNL for re verification.
- b. Payment shall be linked to Acceptance Testing (AT).
- c. Quality will also be controlled through BSNL.
- d. Contractor will ensure incorporation of sufficient safety clauses.

11.2.1 **The Quality of Works:** The importance of quality of Optical Fibre Cable Construction works especially laying of multiple PLB pipes/coils using open trenching and trenchless technology method cannot be over- emphasized. The quality and availability of long distance media, efficiency of the reliable media connectivity to exchanges and success of new concept of overlay access network depends upon quality of laying of Optical Fibre Cable. Further, the OF cables are vulnerable to damages due to work of other agencies.

11.2.2 **It is imperative that the contractor(s) is/are fully conversant with the construction practices especially laying multiple pipes by trenchless technology using HDD machine 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 and Testing.

11.2.3 An assessment of extent of interest shown by the contractors in executing the works with requisite quality shall be recorded and used in evaluating the Contractors' Performance Rating (CPR).

11.2.4 In addition to Acceptance Testing being carried out by A.T. Wing and supervision by Constructions Officers, all works at all times shall be open to inspection of the department. The contractors shall be bound, if called upon to do so, to offer the works for inspection without any extra payment.

11.2.5 **Site Order Book:** The site order book is one of the primary records to be maintained by the JTO/SDE supervising the work during the course of execution of works. The noting made by officers as well as contractors, will form as basis for operation of many contractual clauses. The contractor shall remove all the defects pointed out by the department in the Site order book. The contractor or their authorized representatives shall also be at liberty to note their difficulties etc. in these books. The site order books shall invariably be consulted at the time of making final payments to the contractor.

11.2.6 **Guidelines for implementation of OFC construction / rehabilitation monitoring in Transnet Portal**

A provision has been made in the Transnet portal for uploading progress of new OFC route construction by CNTX-South team. The parameters like trench depth, offset, distance from landmark can be marked and a facility has been provided to upload relevant photos/video from the route location. The system has been tested for new routes & rehabilitation/ patch works. Henceforth, all the CWIP OFC routes have to be created in Transnet immediately after placement of work order and to be updated progressively during construction. The following activities have to be done by the officer in charge of the CWIP route:

- a. Nodal officer of Transnet in the Circle will have to create functional unit with the category Transmission Project & will attach of Officer incharge of CWIP Route and his reporting officer with the functional unit.
- b. The route has to be created under the category "CWIP" in OFCNET of Transnet and a unique Transnet RID is automatically generated.
- c. The KML file of the route has to be created on Google Earth and is to be uploaded in the Full GIS app under GIS menu in the Transnet.
- d. The user has to install the Transnet mobile App and proceed on the route for updating of the progress of the route.
- e. The status of the progress of work (ROW, Trenching and pipe laying, cable pulling, AT, OTDR trace of all the fibers and commissioning) has to be updated by marking the two ends of the section.
- f. For every 200 meters of OFC construction, the progressive RKM, trench depth, offset., distance from landmark has to be updated and photos of the route incharge showing trench depth, offset & landmarks are required to be uploaded. For every 1 km of OFC construction, a video of the landmarks are required to be uploaded (Uploading of photo and video can be done only using Transnet mobile App)
- g. AT officers shall also verify that all the CWIP routes are updated in Transnet and will see that photos/ videos as per above are updated in Transnet before the route is declared commissioned.
- h. After uploading the photo/ videos and other parameters as above, Transnet system will generate a certificate with a unique certificate ID of the route or section of the route
- i. After Completion of the task, the Service Entry Sheet (SES) is required to be created in SAP for the PO of Cable laying. On creation of SES, an inspection lot will be generated.
- j. The inspection lot is a Quality Schedule which will seek the info about the completion of Transnet activity.
- k. The user or third party will enter the Transnet RID and the certificate IID in the inspection lot which is to be approved by a higher level officer after verification in Transnet. Without Transnet RID and certificate ID, SES will be blocked.
- l. After completion of the Inspection lot, the SES activity can be processed as normal for approval.
- m. The nodal officers of circles will coordinate with the software team of CNTX-S for smooth implementation. GM (Tx) of the circles and GM (HQ) of the CNTX circles shall be responsible for smooth implementation of the same.

### **11.3 Testing and Acceptance Testing:**

11.3.1 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.

**11.3.2 Scope of Acceptance and Testing:** The purpose of acceptance and testing is to verify integrity of measurement and quality of work done. The A.T. Officer shall not be responsible for recording of measurements for the purpose of billing and contractual obligations. However, if the measurements taking by A.T. officer are found to be lesser than the 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 the A.T. officer without any additional cost to the department.

**11.3.3 Offering the work for acceptance and testing:** The Sub Divisional Engineer responsible for construction, after having satisfied himself of completion of work ready for A.T. , shall offer the work to A.T. Officer for conducting Acceptance and Testing. The work shall be offered for A.T. as soon as part of work is complete in all respects. The work against any work order can be offered for A.T. in a number of stages.

**11.3.4** 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

## **12. WARRANTY**

12.1 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 BSNL 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.

12.2 If it becomes necessary for the contractor to replace or renew any defective portion/portions of the material under this clause, the provisions of the clause shall apply to the portion / portions material so replaced or renewed or until 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 BSNL, the BSNL may proceed to do the work at the contractor's risk and costs, but without prejudice to any other rights which the BSNL may have against the contractor in respect of such defects.

12.3 The Cable joint shall be guaranteed for a period of ONE year from the date of closing of joint. In case of failure of the joint due to poor workmanship i.e. failure of joint without external damage, within the stipulated period of guarantee the contractor shall repair the joint(s) at his own cost within 24 hours of informing him, failing which the BSNL may carry out the repairs and penalty equivalent to five times of the approved rate of the jointing work plus the cost of materials used shall be recovered from the contractor from his pending bill/SD or any amount due to him without prejudice to any other action as per terms and conditions of the tender. The cost of joining kit, supplied by the BSNL, so used to revive the joint shall be deducted from the final bill of the contractor pending for payment or from security if all bills have been settled.

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

### 13. AUDIT AND TECHNICAL EXAMINATION:

13.1 BSNL shall have the right to cause an audit and technical examination of the work by the agency authorized by BSNL or by Chief Technical Examiner Govt of India, 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 refund the amount of over payment and it shall be lawful for Government to recover the same from him in the manner prescribed in clause with the heading payment of bills (same chapter), or in any other manner legally permissible and if it is found that the contractor was paid less than what was due to him under it, the amount of such under payment shall be duly paid by Government to the contractor.

13.2 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 (DGM/TDM/ SE (Civil)) or his subordinate officer.

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

### 14. PAYMENT TERMS:

#### 14.1 Procedure for Preparation and settlement of bills :

14.1.1 a) The following documents shall be submitted by the contractor to the Claim Cell O/o CGMT UP(East) Lucknow for releasing payments by BSNL

**OR**

Through VIPA (Vendor Invoice Processing Automation). The E-mail for submission of invoice is to be sent from the registered E-mail ID of the vendor only on the following two e-mail IDs designated by BSNL for this purpose: [bsnlvipa@evipa.com](mailto:bsnlvipa@evipa.com) and [bsnlvipa@bsnl.co.in](mailto:bsnlvipa@bsnl.co.in) (as applicable).

**Note:** Facilitation Charges are to be recovered at the approved rates prescribed below for processing of Invoices on VIPA Platform w.e.f 01.07.2025. These charges may be decided by BSNL time to time. The per invoice rate of Facilitation charge to be recovered from the vendor invoice is as follows:

Invoice Value (Including GST)	Facilitation Charges (Including GST)
exceeding Rs 1,00,000	Rs 1,180 (Rs 1,000+ Rs 180 GST)
From Rs 10,001 to Rs 1,00,000	Rs 590 (Rs 500+Rs 90 GST)
Up to Rs 10,000	Rs 177 (Rs 150+ Rs 27 GST)

**Exceptions:** The facilitation charges shall not be applicable to the processing of invoices relating to NFS, 4G saturation,

BBNL, Work for external agencies.

1. Invoice clearly indicating breakup details of composite price i.e. Basic, GST, Excise duty, any other duties/taxes, freight/packing charges, etc..
2. Relevant PO number and SESs (Service entry sheets) number is to be mandatorily mentioned on the invoice.
3. Copy of EPF & ESI payment challan as applicable.

b) Against successful completion of work the SES may be obtained by the contractor from SDE Incharge. The SDE Incharge shall initiate SES alongwith following documents

- Material reconciliation statement.
- Measurement Book.
- A/T Certificates.
- The site order Book.
- The hindrances register.
- Details of recoveries/penalties for delays, damages to Departmental/Third party properties as per provisions of the contract. In case no recovery is to be made, NIL report needs to be submitted.
- Details of empty cable drums cost which needs to be recovered from the bill.

c) The necessary penalty amount will be deducted from the bill by the paying authority in case such penalty is required to be imposed.

d) The bidder has to give the mandate for receiving payment electronically and the charge if any levied by the bank has to be borne by the bidder /contractor. The contractor is required to give the following information for this purpose:

- 1) Beneficiary Bank name
- 2) Beneficiary branch name
- 3) IFSC code of beneficiary Branch
- 4) Beneficiary account number.

e) **No interest shall be paid for any delayed payment.**

f) No. advance payment will be made.

**Note :-**

1. If the supplier fails to furnish necessary supporting documents i.e. GST invoice / Customs invoices etc. and also fails to upload the information on GSTN in respect of the Duties/taxes for which input tax credit is available, the amount pertaining to such Duties/Taxes will be deducted from the payment due to the supplier.
2. Tax amount will be paid to the supplier only after the supplier declares the details of the invoices in its return in GSTR 1 and GSTR-3 uploaded by the supplier and the same is reflected in GSTR-2A of BSNL on the GSTN portal.
3. TDS/ TCS shall be deducted at the prescribed rate, if any (as the case may be).
4. BSNL can adjust/ forfeit Bank Guarantee obtained from the supplier against any loss of input tax credit to BSNL on account of supplier's default.
5. In case BSNL has to pay GST on reverse charge basis, the supplier would not charge GST on its invoices. Further, the supplier undertakes to comply with the provisions of GST law as may be applicable.

**14.2 Procedure for payment for substandard works:**

14.2.1 The contractors are required to execute all works satisfactorily and in accordance with the specifications. If certain items of work are executed with unsound, imperfect or unskilled workmanship or with materials of any inferior description or that any materials or articles provided by him for execution of work are unsound or 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.

14.2.2 **Timely action by Site-In-charge: Timely reporting and action, to a great extent, can prevent occurrence of substandard work, which will be difficult or impossible to rectify later on. It is incumbent on the part of Site-In-charge 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 substandard 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 the Divisional Engineer in-charge in writing during the progress of work asking the contractor to rectify/replace/remove the substandard item of work and also define time period within which such rectification/removal/replacement has to be done. After expiry of the notice period, if the contractor fails to rectify/replace/remove the substandard items, the defects shall be rectified/replaced/removed departmentally or through some other agency at the risk and cost of the contractor.

14.2.3 Non-reporting of the substandard work in time on the part of Site In charge (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 substandard work and associated liabilities.

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

14.2.5 Record of substandard work: The items adjudged as substandard shall be entered into the measurement book with red ink.

**14.3 No claim for delayed payment due to dispute etc:** No claim for interest or damage will be entertained or be payable by the BSNL in respect of any amount or balance which may be lying with the BSNL owing to any dispute, difference or misunderstanding between the parties or in respect of any delay or omission on the part of the Engineer in charge in making intermediate or final payments or in any other respect whatsoever.

#### **14.4 DELAYS IN THE CONTRACTOR'S PERFORMANCE:**

Delay in performance of services shall attract penalty for the Contractor in accordance with the clause 17 below

#### **15. SHORT CLOSURE OF TENDER:**

Government OR BSNL's policy changes **OR** Any public interest at large is adversely affected

#### **16. DISPOSAL OF EMPTY CABLE DRUMS:**

16.1 The contractor shall be responsible to dispose off the empty cable drums after laying of the cable. The competent authority taking into account the prevailing market rates has fixed the cost of Optical Fiber cable drums. The cost of empty cable drums will be Rs.400/- per drum, which shall be deducted from the bill, for the work on which the cable along with the drum has been issued or any other amount due to the contractor or from security deposit.

16.2 Rates fixed for Optical Fiber cable drums are given in the Tender Document. The rates are fixed and there is no percentage above or below applicable on these rates.

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

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

16.5 The cost of an empty OFC drum will be Rs 400/- per drum. Cost of OFC drum to be recovered shall be Rs.400.00.

#### **17. PENALTY CLAUSE:**

##### **17.1 Liquidated Damages clause for Delays in the contractor's performance:**

17.1.1 The time allowed for completion of the work as per work order shall be strictly adhered by the contractor and shall be deemed to be the most important aspect of the contract on the part of the contractor and shall be reckoned from Seventh day from issue of work order by the BSNL. 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 LD for delay in execution of the work @ **0.5 % for each week** of delay or part thereof, for a period up to ten weeks and thereafter @ 0.7 % for each week of delay or part thereof for another ten weeks subject to a maximum of 12 % of the cost of the work allotted as per the work order.

17.1.2 On any date, if the LD payable as above, reaches 12 (twelve) percent of the cost of the work order, the competent authority reserves the right to short-close the work order and get the remaining work done at the risk and cost of the contractor.

17.1.3 The days on which work is not done due to reasons beyond the control of the contractor, such as natural calamities, law

& order situation etc., will not be accounted for in imposing the LD.

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

17.1.5 In case of slow progress of the work in a section which has been awarded to a particular contractor, if the public interest does not permit extension of time limit for completion of the work, then Tender Issuing Authority will have the full right to order that the scope of the contract may be restricted to such fraction of the work and get the balance work 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.

17.1.6 The Tender Issuing Authority reserves the right to 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 or as the time permitted by the competent authority.

## **17.2 Penalty for causing inconvenience to the Public in case of OFC improvement work:**

17.2.1 To ensure progress during the execution of work and to cause minimum inconvenience to the public, he shall cause to lay cable and close such trenches expeditiously. The contractor shall not leave the trenches open for more than 24 hours at a stretch in a route at a time and should take due precautions to avoid any mishap. In case of any accident, the contractor shall be fully responsible for the same and any penalty imposed on this account by any statutory authority shall be paid by the contractor. In case of failure to pay the same by the contractor it shall be recovered from his pending payment/security deposit.

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

## **17.3 Penalty for cutting / damaging the old cable:**

17.3.1 Penalty for cutting/damaging the old cable:

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 final bill.

Size of existing UG cable Cut /damaged	Account of penalty per cut/damage
Upto100 pairs cable	Rs 3000.00 (Three thousand)
Above 100 pairs cable & up to 400 pairs	Rs 5000.00 ( Five thousand)
Above 400 pairs	Rs 10000.00 ( Ten thousand)

For OF Cable Penalty for cutting/damaging will be as below:

Type of cable Cut /damaged	Charges per fault for penalty and compensation
OF Cable of any size	Rs 25000.00 (Twenty Five thousand)

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

## **17.3.2 Penalty to damage stores/materials supplied by the BSNL while laying:**

The contractor while taking delivery of materials supplied by the BSNL at the designated place shall thoroughly inspect all items before taking them over. In case of execution of the work, if any material is found damaged/working unsatisfactorily, then a penalty equivalent to the cost of material + 10% as penalty shall be recovered from the contractor's payments/securities.

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.

## **17.3.3 Penalty to damage the underground installation of other agencies:**

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 expenses.

17.3.4 **Penalty for achieving lower depth** : In no case the statutory depth of boring should be (i) less than 2 mtr. from the road / ground surface and (ii) less than 1.65 mtrs at the pits. In order to encourage the contractor to achieve required depth in the face of site constraints, the following payment schedule with penalty are to be adhered to for boring at lesser depths subject to condition that relaxation has been granted by the competent authority for lesser depths.

(i) For ground surfaces (other than pits) :

Actual Micro-tunneling (HDD) depth between	Penalty
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(ii) For pits :

< 2 Mtr. to > 1.50 Mtr	10% of approved rate
<1.5 Mtr	No payment. To be treated as non-standard work

Actual Micro-tunneling (HDD) depth between	Penalty
< 1.65 Mtr. to > 1.50 Mtr	10% of approved rate
<1.5 Mtr	No payment. To be treated as non-standard work.

**18. Rescission / Termination of Contract:**

**18.1 Circumstances for rescission of contract:** Under the following conditions the Tender Issuing Authority may rescind the contract:

- (i) If the contractor commits breach of any item of terms and conditions of the contract.
- (ii) If the contractor suspends or abandons the execution of work and the engineer in-charge of the work comes to conclusion that work could not be completed by due date for completion or the contractor had already failed to complete the work by that date.
- (iii) 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.

**18.2** 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:

**18.2.1** Measurement of works executed since the date of last measurement and up to the date of rescission of contract shall be taken in the presence of the contractor or his 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.

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

**18.2.2** 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 BSNL shall get the unexecuted work completed through any other contractor approved in the area of Tender Issuing Authority at the approved rates of that particular section or to execute the work departmentally, as is convenient or expedient to the BSNL 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 of such an action by the BSNL. In this regard the decision of **Tender Approving Authority** 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 his any other account whatsoever anywhere in the BSNL or from a security deposit.

**18.2.3** 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.

**18.3 Termination for Insolvency:**

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

**18.3.2 Optional Termination by BSNL (other than due default of the contractor):**

**18.3.3** 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.

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

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

**18.3.6 Issuance of Notice:**

**18.3.7** 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 for approval.

**18.3.8** 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 BSNL.

- 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 BSNL 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 due to the contractor.

## **19 TERMINATION FOR INSOLVENCY:**

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

## **20. INDEMNITIES :**

1. The contractor shall at all times hold the BSNL harmless and indemnify BSNL from and against all action, suits, proceedings, works, cost, damages, charges claim and demands of every nature and descriptions, brought or procured against the BSNL, its officers and employees and forthwith upon demand and without protest 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. In addition, the contractor shall reimburse the BSNL or pay to the BSNL forthwith on demand without protest 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.
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.
3. Contractor shall either pay to third parties all expenditure incurred for restoring services which are damaged by Contractor while carrying out the work or the same amount will be deducted from his bills. Such expenditure shall be intimated to Contractor either by Engineer- in-charge or concerned third parties in writing. The amount deducted by the Contractor from his bill shall be paid to concerned third parties by Divisional Engineer or Accounts Officer

## **21. FORCE MAJEURE:-**

1. If any time, during the continuance of this contract, the performance in whole or in part by either party or any obligation under this contract shall be prevented or delayed be reason of any war, or hostility, acts of the public enemy, civil commotion sabotage, fires, floods explosions, epidemics, quarantine restrictions, strikes, lockouts or act of God (Herein after referred to as events) provided notice of happenings, of any such eventuality is given by either party to the other within 21 days from the date of occurrence thereof, neither party shall be reason of such event be entitled to terminate this contract nor shall either party have any such claim for damages against the other in respect of such non-performance and work under the contract shall be resumed as soon as practicable after such event may come to an end or cease to exist, and the decision of the BSNL as to whether the work have been so resumed or not shall be final and conclusive, provided further that if the performance in whole or part of any obligation under this contract is prevent or delayed by reason of any such event for a period exceeding 60 days either party may, at his obtain terminate the contract.
2. Provided also that if the contract is terminated under this clause, the BSNL shall be at liberty to take over from the contractor at a price to be fixed by the BSNL which shall be final, all unused, undamaged and acceptable materials, bought out components and stores in the course of execution of the contract, in possession of the contractor at the time of such termination of such portions thereof as the BSNL may deem fit excepting such materials bought out components and stores as the contracts may with the concurrence of the BSNL elect to retain.

## **22 ARBITRATION:**

1. ARBITRATION (Applicable in case of supply orders/Contracts with company's, other than Public Sector Enterprise) (Not applicable in cases valuing less than Rs. 5 lakhs)

Except as otherwise provided elsewhere in the contract, if any dispute, difference, question or disagreement arises between the parties hereto or their respective representatives or assignees, in connection with construction, meaning, operation, effect, interpretation of the contract or breach thereof which parties unable to settle mutually, the same

shall be referred to Arbitration as provided hereunder:

(a) A party wishing to commence arbitration proceeding shall invoke Arbitration Clause by giving 60 days' notice to the designated officer of the other party. The notice invoking arbitration shall specify all the points of disputes with details of the amount claimed to be referred to arbitration at the time of invocation of arbitration and not thereafter. If the claim is in foreign currency, the claimant shall indicate its value in Indian Rupee for the purpose of constitution of the arbitral tribunal.

(b) The number of the arbitrators and the appointing authority will be as under:

Claim amount (excluding claim for counterclaim, if any)	Number of arbitrator	Appointing Authority
Above Rs. 5 lakhs to Rs. 5 crores	Sole Arbitrator to be appointed from a panel of arbitrators of BSNL.	BSNL (Note: BSNL will forward a list containing names of three empanelled arbitrators to the other party for selecting one from the list who will be appointed as sole arbitrator by BSNL)
Above Rs. 5 crores	3 Arbitrators	One arbitrator by each party and the 3rd arbitrator, who shall be the presiding arbitrator, by the two arbitrators. BSNL will appoint its arbitrator from its panel.

(c) Neither party shall appoint its serving employee as arbitrator.

(d) If any of the Arbitrators so appointed dies, resigns, becomes incapacitated or withdraws for any reason from the proceedings, it shall be lawful for the concerned party/arbitrators to appoint another person in his place in the same manner as aforesaid. Such person shall proceed with the reference from the stage where his predecessor had left it both parties consent for the same; otherwise, he shall proceed de novo.

(e) Parties agree that neither party shall be entitled for any pre-reference or pendente-lite interest on its claims. Parties agree that any claim for such interest made by any party shall be void.

(g) Unless otherwise decided by the parties, Fast Track procedure as prescribed in Section 29 B of the Arbitration Conciliation Act, 1996 for resolution of all disputes shall be followed, where the claim amount is upto Rs. 5 crores

#### **Fast track procedure:**

(i) Notwithstanding anything contained in this Act, the parties to an arbitration agreement, may, at any stage either before or at the time of appointment of the arbitral tribunal, agree in writing to have their dispute resolved by fast track procedure specified in sub-section (3).

(ii) The parties to the arbitration agreement, while agreeing for resolution of dispute by fast track procedure, may agree that the arbitral tribunal shall consist of a sole arbitrator who shall be chosen by the parties.

(iii) The arbitral tribunal shall follow the following procedure while conducting arbitration proceedings under sub-section (1):-

(a) The arbitral tribunal shall decide the dispute on the basis of written pleadings, documents and submissions filed by the parties without oral hearing;

(b) The arbitral tribunal shall have power to call for any further information or clarification from the parties in addition to the pleadings and documents filed by them;

(c) An oral hearing may be held only, if, all the parties make a request or if the arbitral tribunal considers it necessary to have oral hearing for clarifying certain issues;

(d) The arbitral tribunal may dispense with any technical formalities, if an oral hearing is held, and adopt such procedure as deemed appropriate for expeditious disposal of the case.

(iv) The award under this section shall be made within a period of six months from the date the arbitral tribunal enters upon the reference.

(v) If the award is not made within the period specified in sub-section (4), the provisions of sub-sections (3) to (9) of Section 29 A shall apply to the proceedings.

(vi) The fees payable to the arbitrator and the manner of payment of the fees shall be such as may be agreed between the arbitrator and the parties.]

(h) The arbitral tribunal shall make and publish the award within time stipulated as under:

<b>Amount of Claims and Counter Claims</b>	<b>Period for making and publishing of the award (counted from the date the arbitral tribunal enters upon the reference)</b>
Up to Rs. 5 crores	Within 6 months (Fast Track procedure)
Above Rs. 5 crores	Within 12 months

However, the above time limit can be extended by the Arbitrator for reasons to be recorded in writing with the consent of parties and in terms of provisions of the Act.

(i) In case of arbitral tribunal of 3 arbitrators, each party shall be responsible to make arrangements for the travel and stay, etc. of the arbitrator appointed by it. Claimant shall also be responsible for making arrangements for travel/stay arrangements for the Presiding Arbitrator and the expenses incurred shall be shared equally by the parties.

In case of sole arbitrator, BSNL shall make all necessary arrangements for his travel/stay and the expenses incurred shall be shared equally by the parties.

(j) The Arbitration proceeding shall be held at Lucknow.

(k) Subject to the aforesaid conditions, provisions of the Arbitration and Conciliation Act, 1996 and any statutory modifications or re-enactment thereof shall apply to the arbitration proceedings under this clause.

II. In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contracts between Central Public Sector Enterprises(CPSEs)/Port Trusts inter se and also between CPSEs and Government Department(s)/organisations(s)(excluding disputes concerning Railways, Income Tax, Customs & Excise departments). Such dispute or difference shall be taken up by either party for resolution through AMRCD as mentioned in DPE OM no. 4(1) 2013-DPE(GM)/FTS-1835 dt. 22.5.2018.

#### **APPLICABLE LAW AND JURISDICTION**

(a) The supply order for Goods 'or' Services, including all matters connected with this supply order shall be governed by the Indian law both substantive and procedural, for the time being in force and shall be subject to the exclusive jurisdiction of Indian Courts at the place from where the Purchase Order has been placed.

(b) Foreign companies, operating in India or entering into Joint Ventures in India, shall have to obey the law of land and there shall be no compromise or excuse for the ignorance of the Indian legal system in any way.

#### **23 SET OFF:**

Any sum of money due and payable to the supplier (including security deposit refundable to him) under this contract may be appropriated by the purchaser or the BSNL or any other person(s) contracting through the BSNL and set off the same against any claim of the Purchaser or BSNL or such other person or person(s) for payment of a sum of money arising out of this contract or under any other contract made by the supplier with the Purchaser or BSNL or such other person(s) contracting through the BSNL.

In case of set off of the security deposit against any claim of the purchaser or BSNL or such other person or person(s) for payment of a sum of money arising out of this contract or under any other contract made by the supplier with the Purchaser or BSNL or such other person(s) contracting through the BSNL, the GST on such set off will be borne by the supplier.

GST would not be liable on security deposit. But if supplier set off the security deposit against any claim of the purchaser or BSNL or such other person or person(s) for payment of a sum of money arising out of this contract or under any other contract made by the supplier with the Purchaser or BSNL or such other person(s) contracting through the BSNL, then GST would be levied0.

**24 COURT JURISDICTION**

Any dispute arising out of the tender/ bid document/ evaluation of bids/ issue of WO shall be subject to the jurisdiction of the competent court at the place from where the NIT/ tender has been issued.

**25. LIEN:**

1. Notwithstanding anything contrary contained in this Agreement, BSNL shall have the first lien on all amounts due to the Contractor in the event of the Contractor failing to comply with the terms and conditions of this Agreement.
2. BSNL shall have the right to retain and hold in its custody all requisite equipment, materials and/or machinery belonging to the Contractor in the event that the Contractor does not perform or fails to perform its obligations under this Agreement without prejudice to its other rights and remedies available under this Agreement. BSNL shall further be at liberty to sell such materials belonging to the Contractor if in the opinion of BSNL, it is necessary to avoid any loss / hardship / damages that may be incurred by BSNL on account of the Contractor's failure to execute the work to the satisfaction of BSNL.

**26. INDEMNIFICATIONS:**

1. The Contractor shall indemnify and keep BSNL indemnified from and against all claims, losses, costs, damages, expenses, action suits and other proceedings (including reasonable attorney fees) relating to or resulting directly or indirectly from; (a) an act or omission of the Contractor, its employees, agents, or any third party in the performance of the Services under this Agreement; and/or  
(b) breach of any terms of this agreement; and/or  
(c) breach of any representations or warranties given by the Contractor under this Agreement; and/or  
(d) infringement of any intellectual property rights or any third party intellectual property rights; and/or (e) non-compliance of statutory provisions, laws and rules; and/or (f) breach of insurance liabilities in respect of Services provided under this Agreement; and/or (g) breach of insurance liabilities in respect of equipments, tools and all other materials supplied by BSNL to Contractor (h) non-payment of taxes which are the obligations of the Contractor under this Agreement. The Contractor shall further indemnify, defend and hold BSNL harmless and their officers, employees and assignees and authorized representatives against any and all suits, actions, legal or administrative proceedings, claims, demands, damages, liabilities, interests, costs and expenses of whatsoever kind or nature, including those arising out of damage to property (including but not limited to property of third parties), accident, injury to or death of workmen/persons (including but not limited to the Contractor's employees) whether arising during or after completion of the work hereunder and in any manner directly or indirectly caused, or contributed to in whole or in part, by reason of any act, omission, fault or negligence whether active or passive of the Contractor or of any one acting under its direction or control or on its behalf in connection with or incidental to the performance of this Agreement.
2. In the event, BSNL is required to pay any penalty or other sum by whatever name known to any of its contracting partners or agencies, either on account of delay or the repair and/or maintenance work not being made operational in full by the Contractor, for reasons not attributable to BSNL, the Contractor agrees and undertakes to indemnify and keep indemnified BSNL from all such penalties, costs and/or expenses that may be claimed against BSNL.
3. By virtue of the provisions of Workmen's Compensation Act, 1923, Contract Labour (Abolition) and Regulation Act, and/or any other applicable Act, if BSNL is obliged to pay compensation to workmen employed by the Contractor and/or on behalf of the Contractor, for the execution of work or provision of Services, BSNL shall be entitled to recover from the Contractor the amount of compensation so paid, without any prejudice to the rights of BSNL under the provisions of such Act.

**27.0 APPOINTMENT OF OTHER AGENCIES FOR RE-EXECUTION:**

In the event of the Contractor failing to perform its obligations as per agreed productivity / quality norms of works and timelines as mentioned elsewhere in this Agreement and Schedules, BSNL after giving seven (7) days' notice to the Contractor can get the work executed / re-executed through any other contractor / agencies as BSNL deems fit and proper at the costs and expenses of the Contractor. However, if the estimated cost for execution of such work is more than the proportionate Contract Price, the excess amount incurred by BSNL in this connection shall be recovered from the dues including the bank guarantee payable to the Contractor under this Agreement.

**28.0 NO PUBLICITY:**

No party shall publish any press release or otherwise publicly disclose the existence of this Agreement (including its Schedules, Annexure and any other documents incorporated by reference), without the express prior written consent of the other Party.

**29.0 COMMUNICATION AND REPORTING:**

## 1. Communication:

The Parties must use their reasonable endeavors to communicate and promptly inform each other of any matter likely to affect the Services and to investigate how to avoid or minimize any adverse effects on the Services.

## 2. Authorized Representatives:

Each Party must designate an authorized representative ("Authorized Representative") and insert details of such Authorized Representative in this clause. A Party may designate a substitute or replacement as their Authorized Representative on reasonable notice in writing to the other Party.

## 3. Notices:

Except as specifically provided elsewhere in the Agreement, all notices required or permitted to be given by one Party to the other under the Agreement shall be in writing and shall be sufficient if made (i) by personal delivery, (including delivery by any commercial delivery service with acknowledgement received); or (ii) by registered or certified mail, postage prepaid, return receipt requested; or (iii) by facsimile transmission ("Fax") to the Parties at the respective addresses. The date upon which such notice is so actually delivered; or if the notice is given by registered or certified mail, the date upon which it is received as evidenced by Registered A.D. or other acknowledgement; or if sent by Fax, the date on which the Fax was sent, provided an original is received by the addressee by any commercial delivery service within two (2) business days of the Fax, shall be deemed to be the date of such notice, irrespective of the date appearing therein.

## 4. Reporting:

- (a) Contractor agrees to disclose relevant information in relation to the provision of the Services to BSNL and, upon request, to give BSNL a true and faithful account of dealings and matters arising in relation to the provision of the Services, and to furnish explanations when reasonably requested by BSNL.
- (b) Each Party must notify the other immediately after becoming aware of:
  - (I) any material breach of legislation relevant to the provision of the Services or the performance by a Party of its obligations under the Agreement which may amount to violating a material agreement applicable to it;
  - (II) any matter connected with the performance of the Services which would give rise to an actual or perceived conflict of interest; or
  - (III) any reason why a Party is or may be unable to perform its obligations under the Agreement.
- (c) BSNL must notify the Contractor if it appoints, engages or requests any other person to review or manage the provision of, or any part of, the Services by the Contractor.

**30.0 CONFIDENTIALITY:**

- (a) Neither Party to the Agreement may communicate, release or otherwise disclose confidential information ("Confidential Information") to any person concerning the Agreement, Services, information of the other Party or the business of the other Party without the prior written consent of that Party, provided that this clause shall not apply:
  - (i) to the extent that the disclosure is necessary to key persons on a need to know basis for the provision of the Services Provided that those persons to whom such information is supplied are bound by confidentiality obligations of the agreement;
  - (ii) to comply with the applicable law or regulation;
  - (iii) to the extent applicable to enable a Party to properly perform its obligations under the Agreement; or
  - (iv) to disclosures by the party receiving Confidential Information pursuant to a court order, administrative contractor and/or other governmental body provided however that the receiving party shall promptly provide notice of such disclosure to the disclosing party to enable the disclosing party to seek a protective order or otherwise prevent or restrict such disclosure.
- (b) Contractor shall and undertakes to promptly advise BSNL in writing of any misappropriation or misuse by any person of such Confidential Information, which may come to its attention.
- (c) In the event of any breach of this clause, the Contractor shall indemnify BSNL

from any loss, cost or damage or any other claim whatsoever BSNL. Furthermore, nothing in the Agreement shall prejudice BSNL from initiating appropriate legal proceedings for specific performance and injunctive relief available under the laws of equity and contract on breach of confidentiality obligations under this clause. The obligations contained in this clause will be valid for **two (2) years from the effective date of termination of the Agreement.**

### **31.0 INTELLECTUAL PROPERTY RIGHTS:**

1. Except as provided for in the Agreement, Contractor shall not acquire a right to use, and shall not use without BSNL's prior written permission, the names, characters, artwork, designs, trade names, trademarks, or service marks and shall maintain all copy right, trade mark, service mark of BSNL or other proprietary notice on BSNL's products or services ("Intellectual Property Rights") and otherwise comply with BSNL's reasonable quality control requirements.
2. The Contractor accepts for all purposes that any trademarks, logos, service marks, trade names or identifying slogans affixed or used by BSNL in respect of any of its services, whether registered or not, constitute the exclusive property of BSNL. The Contractor shall not contest, at any time, the right of BSNL or its affiliated companies to any trade mark or trade name or any other Intellectual Property used or claimed by BSNL.
3. During the term of the Agreement, the Contractor may be authorized to use BSNL's trademarks, logos and trade names, but only in connection with the Scope of Services as set out in the Agreement. The Contractor's use of such trademarks, logos and trade names shall be in accordance with the guidelines issued by BSNL from time to time. Nothing herein shall give the Contractor any interest in such trademarks, logos or trade names or any other Intellectual Property Rights. In the event of termination of the Agreement, howsoever caused, the Contractor's, right to use such Intellectual Property, including but not limited to, trademarks, logos or trade names shall cease forthwith from the date of termination of the Agreement. The Contractor agrees not to attach any additional trademarks, logos or trade designations to the trade marks, logos or trade designations of BSNL.
4. Contractor further agrees not to use the Intellectual property, including but not limited to the trade marks, logos and trade names of BSNL.
5. BSNL reserves the right of prior review and approval of the Contractor's use of BSNL's Intellectual Property including but not limited to any trademarks, logos and trade names as well as all relevant advertisement material in each instance. The Contractor shall not publish, nor cause to be published any advertisement, or make any representations oral or written, which might confuse, mislead or deceive the public or which are detrimental to the name, trademarks, good will or reputation of BSNL. The Contractor shall indemnify and keep indemnified BSNL against any third party claim arising out of or in relation to such advertisements or oral or written representations which might confuse, mislead or deceive the public or which are otherwise detrimental to the name, good will or reputation of BSNL.

### **32.0 REPRESENTATIONS AND WARRANTIES:**

#### **32.1 Warrants of Contractor**

(a) Contractor represents and warrants that:

- (i) it has and will continue to have and to use, the skills, qualifications and experience to provide the Services in an efficient and controlled manner with a high degree of quality and responsiveness and to a standard that complies with the Agreement;
- it has full corporate power and authority to enter into, perform and observe its obligations under the Agreement: and
- that the execution, delivery and performance of the Agreement has been duly and validly authorized by all necessary corporate action and it does not violate the governing documents or any law or material agreement applicable to it.

(b) Contractor represents and warrants that it has obtained and will continue to obtain any consents and/or approvals required by any governmental contractor in relation to the provision of the Services. It shall comply with all applicable laws and regulations in carrying out the rights and obligations under the Agreement. As of the date of signing the Agreement, there are no pending threatened legal proceedings that materially adversely affect its ability to perform its obligations under the Agreement.

- (c) While performing its obligations under the Agreement, it is not in violation of any third party intellectual property rights that may be relevant for the performance of its Services under the Agreement. Any designs, plans, etc., are the sole and independent creation of the Contractor and are not in breach of copyright and/or other intellectual rights violation.

### **33.0 INSURANCE AND LIMITATION OF LIABILITY:**

1. The Contractor shall, at all times during the Term, at its sole cost and expense, and thereafter for such period as BSNL in good faith requests, in consideration of the particular circumstances, carry and maintain the insurance coverage listed below:
  - (a) Worker's Compensation Insurance and Employee's Liability Coverage equivalent to the minimum amount required by law;
  - (b) Professional Indemnity Insurance in respect of legal liability arising from breach of professional duty by reason of any negligent act, error or omission;
  - (c) Public Liability insurance covering claims arising out of the performance or failure to perform the Services in the Agreement in respect of damage to real or personal property and injury to or death of persons;
  - (d) Appropriate insurance policies to cover third party claims including cross liability;
  - (e) Appropriate insurance policy to cover the value of equipments, tools and all other material given by BSNL to Contractor;
  - (f) In case of emergency / mishap the Contractor has to release the substantial amount of payment to the concerned person or his relatives to take care of the emergency situation and recover later through insurance etc.
2. The Contractor undertakes that wherever applicable, the Contractor shall ensure that the relevant insurance policy contains a suitable clause whereby BSNL shall be named as 'co-insured' or as 'loss-payee' under the relevant policy.
3. The Contractor shall ensure the satisfactory payment of premium and other charges payable under these policies and shall be responsible for satisfactory and expeditious compliance of all procedures, formalities, and other terms and conditions relating to the initiation and maintenance of the policy including any claims there under. The Contractor shall submit a copy of the policies as well as receipts for the payment of premium and/or any other charges in respect of the above policies to BSNL at its request.
4. Details of these insurance policies along with proof of premium payment and insurance cover notes / insurance policies must be provided by the Contractor to BSNL within fifteen (15) days from the date of signing of agreement and / or issuance of the Work Order (wherever applicable).
5. For the avoidance of doubt it is acknowledged and agreed that neither Party shall have any liability to the other Party in respect of consequential, indirect or special loss or damage including but not limited to loss of profit, and loss of business, arising out of or from this Agreement.

### **34.0 DISPUTE RESOLUTION:**

- (a) The Parties agree to cooperate and conduct in good faith such discussions and negotiations as may be necessary or desirable to amicably resolve any dispute which may arise between them.
- (b) If they are unable to resolve within twenty (20) working days of the relevant meeting of the Parties' senior representatives for whatever reason, then either party may refer such dispute to a sole arbitrator as appointed by BSNL. The arbitration shall be conducted in accordance with the Arbitration and Conciliation Act, 1996, as amended from time to time. The language used in the arbitral proceedings shall be English. Arbitration shall be conducted by a sole arbitrator.

The arbitral award shall be in writing and shall be **final and binding on each Party** and shall be enforceable in any court of competent jurisdiction. None of the Parties shall be entitled to commence or maintain any action in a court of law upon any dispute arising out of or relating to or in connection with the Agreement except for the enforcement of an arbitral award or as permitted under the Arbitration and Conciliation Act, 1996.

### **35.0 COMPLIANCE WITH LAWS:-**

1. The Contractor warrants that Services provided under the Agreement shall conform to all applicable laws,



statutory rules and regulations including the surety and environmental norms as **per Government rules and regulations.**

2. Notwithstanding the generality of the foregoing, the Contractor shall comply with the following but not limited to the Workmen's Compensation Act, Minimum Wages Act, Employees State Insurance Act, Employees' Provident Fund Act, Apprentices Act, Contract Labour Regulations & Abolition Act, and any/all other applicable statutes and all modifications thereof, in connection with manpower engaged by the Contractor. The Contractor shall keep intact with him all necessary documents in respect of payments towards Employees Provident Fund / Employees State Insurance Fund and under all other statutes as above and shall furnish the required documents to BSNL, within the specified time, as and when required by BSNL.

### **36.0 INTERPRETATION:**

In the Agreement unless the contrary intention appears:

- i) A reference to the Agreement includes any variation or replacement of the Agreement and includes all Schedules, Annexure attached to the Agreement and any documents that have been incorporated by reference as on the date of execution of the Agreement, and any new Schedules, Annexure and exhibits that may be added to the Agreement as mutually agreed upon by the Parties;
- ii) a reference to a statute, ordinance, code or other law included regulations and other instruments made under it and consolidations, amendments, re-enactments or replacements of any of them;
- iii) the singular includes the plural and vice-versa, words including one gender include other genders;
- iv) heading and marginal notes have been inserted for guidance only and do not form part of the context;
- v) a reference to a thing (including, without limitation, any amount) is a reference to the whole or any part of that thing and a reference to a group of persons is a reference to any two or more of them collectively and to each of them individually;
- vi) person includes a firm, a company, partnership, joint venture, association, corporation or other body corporate, a person, an unincorporated association or an authority;
- vii) a reference to a body or authority which has ceased to exist includes the body or authority which now serves substantially the same objects as the body or authority referred to;
- viii) If a period of time is specified to:
  - a. start from a given day or the day of an act or event, it must be calculated including that day; or
  - b. be after a given day or the day of an act or event, it must be calculated excluding that day; or
  - c. be to or until a given day or the day of an act or event, it ends on the day before that day.

**SECTION –5 Part B****SPECIAL (COMMERCIAL) CONDITIONS OF CONTRACT (SCC)**

The special conditions of contract shall supplement the 'Instruction to the Bidder' & General (Commercial) Conditions of the Contract as contained and wherever there is a conflict, the provision herein shall prevail over those Sections.

**A. GENERAL:**

- 1.1 The work shall be accepted only after Acceptance Testing carried out by the BSNL team, designated by the BSNL, as per prescribed schedule and work/material passing the test successfully.
- 1.2 The BSNL reserves the right to disqualify such bidders who have a record of not meeting contractual obligations against earlier contracts entered into with the BSNL.
- 1.3 The BSNL reserves the right to black list a bidder for a suitable period in case he fails to honour his bid without sufficient grounds.
- 1.4 The BSNL reserves the right to counter offer price(s) against price(s) quoted by any bidder.
- 1.5 Any clarification issued by BSNL, 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 a single package of all the items given in the price schedule.
- 1.7 All work to be executed under the contract shall be executed under the direction and subject to the approval in all respects of the Divisional Engineer or Site Engineer in-charge of the work site who shall be entitled to direct at what point or points and what manner they are to be commenced.
- 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 Tender Approving Authority.
- 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 on the same day of occurrence of hindrance on account of which he desires such extension as aforesaid. In this regard the decision of the Tender Approving Authority shall be final.
- 1.10 If at any time after the commencement of the work, the BSNL may feel that execution of whole or part of work, as specified in the tender is not required to be carried out, then the BSNL 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 been made in the original specifications, drawings, designs and instructions 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 BSNL shall be entitled to recover such sum by appropriating in part or whole of the security deposit of the contractor, and to sell any Government promissory notes etc., forming the whole or part of such security or Final bill pending against any contract with the BSNL. 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 thereafter may become due to the contractor under this or any other contract with BSNL. Should this sum be not sufficient to cover the full amount recoverable the contractor shall pay to BSNL 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 Government of India is allowed to work as a contractor for a period of two years after his retirement from Government service without the previous permission of Government of India. This contract is liable to be cancelled if either the contractor or any of his employee is found at any time to be such a person who had not obtained the permission of Government of India as aforesaid before submission of the engagement in the contractor's service as the case may be.
- 1.13 In the event of the contractor being adjudged insolvent or going voluntarily into liquidation or having received order or other order 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 Tender Approving Authority 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 **Tender Approving Authority** on behalf of the BSNL can terminate the contract without compensation to the contractor. However, **the Tender Approving Authority**, at his discretion, may permit the 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 **Tender Approving Authority** 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 Tender **Approving Authority** and the contractor shall, as 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 Competent Authority 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 of his supervisory personnel with the contents of all the contract documents.

## **1.2 Notification:**

- 1.2.1 The contractor shall give in writing to the proper person or authority 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 to authorities involved and advised of the progress of operations throughout the performance of the work and/or with such other information and /or supporting figure and data as may from time to time as directed or required.

## **1.3 Shut down on account of weather conditions:**

- 1.3.1 The contractor shall not be entitled to any compensation whatsoever by reason of suspension of the whole or any part of the work made necessary by the BSNL or deemed advisable on account of bad weather conditions or other Force majeure conditions.

## **2. STORES SUPPLIED BY THE BSNL:**

At no point of time the contractor shall be issued stores of value more than the contractor's material security as per clause number 5 (i) of Section V. If at all, the work requires more amount of materials to be issued to the contractor, then the material security shall correspondingly be enhanced to an amount equal to cost of the material/stores to be issued before the issue of the store and the contractor will not have any objection to it.

The contractor shall transport (including loading and unloading) all stores issued to him from District Telecom Store, to the site of work at his own cost. The BSNL shall not pay any transportation charges to the contractor.

All materials supplied to the contractor by the BSNL shall remain the absolute property of BSNL 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 Tender Issuing Authority. 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 material remaining unused at the time of the abandonment, completion or determination of the contract shall be returned to the BSNL at a place informed to him by the BSNL, 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.

The contractor shall be responsible for the transportation of store, storage and safe custody of all material supplied to him by the BSNL, which is in the contractor's custody whether, or not installed in the work. The contractor shall satisfy himself regularly about the quantity and quality of the materials supplied to him and he will be responsible for any subsequent deterioration and discrepancy (inclusive of theft) in the quantity/ quality of the materials.

The contractor shall submit a proper account every month of all the materials supplied to him by the BSNL 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 "BSNL'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.

The contractor shall ensure that only the required materials are issued to him. Upon completion of work, the contractor shall return to the BSNL. at the later designated store in good condition, free of charges, any unused materials that were supplied by the BSNL.

### **EASEMENTS, PERMITS, LICENCE AND OTHER FACILITIES:**

The contractor shall obtain/provide at his own cost all easements, permits and license necessary to do its work e.g. \_

- a. "Right of User" easements and permits.
- b. Railway and Highway crossing permits including bridge.
- c. Canal / Stream crossing permits.

The successful bidder will be required to prepare route diagram in required format as asked by RoW authorities free of cost and shall be responsible for obtaining "Right of User" easements & permits (RoW permission). But, the tendering authority shall make necessary payments towards RoW charges.

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 and for bearing all costs that may be incurred in respect of the same.

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.

The contractor will not be entitled to extra compensation for hardship and increase in cost by the cable trench being routed adjacent to or across other pipeline, Highways, Railways, telephones or 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". Such construction and such contingency shall be deemed to have been provided for in the rates.

At location where the OF cable trench is routed across or along railways or roads the contractor shall without extra cost provide and maintain such detours and road controls as are required by the railways or government or local agencies having jurisdiction.

Due to any reason, if above mentioned permits etc. could not be arranged in time then the extension of time limit shall be provided as per EOT clause given in tender document.

### **3. QUALITY OF WORK:**

The BSNL shall be the final judge of the quality of the work and the satisfaction of the BSNL in respect thereof set forth in the contract documents. Laxity or failure to enforce compliance with the contract documents by the BSNL 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 therein. The representative of the Tender Issuing Authority 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 to meet the requirement of the contract documents.

### **4. TAXES AND DUTIES :**

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 contract 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 BSNL from and against the same or any default by the contractor in the payment thereof. However, service tax (GST) shall be paid extra by BSNL as applicable.

### **5. PROTECTION OF LIFE AND PROPERTY AND EXISTING FACILITIES:**

The contractor is fully responsible for taking all possible safety precautions during preparation for and actual performance of the works and for keeping the construction site in a reasonably 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.

If the excavation of trench alters the contours of the ground around road and highway crossing in such locations become dangerous to traffic, the contractor shall at his own cost, take all necessary precautions to protect public and shall comply with all the BSNL 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 signal 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 pipelines, water, mains, sewers, telephones, telegraphs and power conduits, laid wires poles and guy wires, railways, highways, bridges or other underground or above ground structure and/or property crossing or adjacent to the cable trench being excavated.

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.

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

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

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 absolve the personnel of property damages, resulting therefrom.

## **6. LABOUR WELFARE MEASUREMENT AND WORKMAN COMPENSATION:**

### **6.1 Obtaining License before commencement of work:**

The contractor shall obtain a valid labour license under the contract Labour (R&A) Act 1970 and the contract labour (Regulation and Abolition) central Rules 1971, before commencement of the work and continue to have a valid license until the completion of 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 provision of this contract arising out of the resultant non-execution of work.

### **6.2 Contractors Labour Regulations:**

#### **6.2.1 Working Hours**

Normally working hours of an employee should not exceed 8 hours a day. The working day shall be so arranged that inclusive of interval for rest, if any it shall not spread over more than 12 hours on any day.

When a worker is made to work for more than 8 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.

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 workers are governed by the Minimum Wages Act or not.

Where the minimum wages prescribed by the Government under the minimum wages Act, are not inclusive of the wages for the weekly day or rest, the worker shall be entitled to rest day wages, 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

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.

#### **6.2.2 Display of Notice Regarding Wages Etc.**

The Contractor shall, before he commences his work on contract display and correctly maintain and continue to display and correctly maintain, in a clear and legible condition in conspicuous places on the work, notices in English and in local India 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.

### 6.2.3 Payment of Wages:-

- 1) The contractor shall fix the wage period in respect of which wages shall be payable.
- 2) No wage period exceeds one month.
- 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.
- 4) Where the employment of any worker is terminated by or on behalf of the contractor, the wages earned by him shall be paid before the expiry of the second working day from the date on which his employment is terminated.
- 5) All payment of wages shall be made on a working day at the work premises and during the working time and on a date notified in advance and in case the work is completed before the expiry of the wage period, final payment shall be made within 48 hours of the last working day.
- 6) Wages due to every worker shall be paid to him directly or to another person authorized by him on this behalf.
- 7) All wages shall be paid in current coin or currency or in both.
- 8) Wages shall be paid without any deductions of any kind except those specified by the Central government by general or special order in this behalf or permissible under the payment of wages Act 1956.
- 9) A notice showing wages period and the place and time of disbursement of wages shall be displayed at the place of work and copy sent by the contractor to the Engineer-in-charge under acknowledgement.
- 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 workmen
- 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 certificate under his signature at the end of the entries in the "Register of Wages" or the "Wage-cum-Muster Roll", as the case may be, in the following form:
- 12) "Certified that the amount shown in the column No ..... has been paid to the workman concerned in my presence on ..... at ....."

### 6.2.4 Fines and deductions which may be made from wages

#### 6.2.4.1 The wages of a worker shall be paid to him without any deduction of any kind except the following:

- a) **Fines**
  - I. Deductions for absence from duty i.e. from the place or the places where by the terms of his employment he is required to work. The amount of deduction shall be in proportion to the period for which he was absent.
  - II. Deductions for damage to or loss of goods expressly entrusted to the employed person for custody, or for loss of money or any other deductions which he is required to account, where such damage or loss is directly attributable to his neglect or default.
  - III. Deduction for recovery of advances or for adjustment of overpayment of wages, advances granted shall be entered in a register. Any other deduction, which the Central Government may from time to time allow.
  - IV. 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.
  - V. No fine 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.
  - VI. Every fine shall be deemed to have been imposed on the day of the act or omission in respect of which it was imposed.

### 6.2.5 Labour records

- I. The contractor shall maintain a register of persons employed on work on contract in form XIII of the contract Labour (R&A) Central Rules 1971.
- II. The contractor shall maintain a **Muster Roll** register in respect of all workmen employed by him on the work under Contract in Form XVI of the CL (R&A) Rules 1971.
- III. The contractor shall maintain a **Wage Register** in respect of all workmen employed by him on the work under

contract in form XVII of the CL (R&A) Rules 1971.

#### 6.2.6 Register of accidents

The contractor shall maintain a register of accidents in such form as may be convenient at the workplace but the same shall include the following particulars:

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

A. The contractor shall maintain a **Register of Fines** in the Form XII of the CL (R&A) Rules 1971 The contractor shall display in a good condition and in a conspicuous place of work the approved list of acts and omissions for which fines can be imposed.

B. The contractor shall maintain a **Register of deductions for damages or loss** in Form XX of the CL (R&L) Rules 1971.

C. The contractor shall maintain a **Register of Advances** in Form XXIII of the CL (R&L) Rules 1971.

D. The contractor shall maintain a **Register of Overtime** in Form XXIII of the CL (R&A) Rules 1971.

#### 6.2.7 Attendance card-cum wage slip

The contractor shall issue an Attendance card cum wage slip to each workman employed by him.

- (a) The card shall be valid for each wage period.
- (b) The contractor shall mark the attendance of each workman on the card twice each day, once at the commencement of the day and again after the rest interval, before he actually starts work.
- (c) The card shall remain in possession of the worker during the wage period under reference.
- (d) 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.
- (e) The contractor shall obtain the signature of thumb impression of the worker on the wage slip at the time of disbursement of wages and retain the card with him.

#### 6.2.8 Employment card

The contractor shall issue an Employment Card in the Form XIV of CL (R&L) Central Rules 1971 to each within three days of the employment of the worker.

#### 6.2.9 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.

#### 6.2.10 Preservation of labour records

The Labour records and records of Files and deductions shall be preserved in original for a period of three years from the date of last entries made in them and shall be made available for inspection by the Engineer-in-charge or labour officer or any other officers authorised by the Ministry of Communication on this behalf.

#### 6.2.11 Power of labour officer to make investigations or enquiry

The labour or any person authorised by the Central Government on their behalf shall have power to make enquiries with a view to ascertaining and enforcing due and proper observance of Fair Wage Clauses and provisions of these Regulations. He shall investigate any complaint regarding the default made by the contractor in regard to such provision.

#### **6.2.12 Report of investigating officer and action thereon**

The labour officer or other persons 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 the contractor's bill be made and the wages and other dues be paid to the labourers concerned. the Engineer in-charge shall arrange payments to the labour concerned within 45 days from the receipt of the report from the labour Officer or the authorized officer as the case may be.

#### **6.2.13 Inspection of Books and Slips**

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

#### **6.2.14 Submission of Returns**

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

#### **6.2.15 Amendments**

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

#### **6.2.16 Compliance of Provisions of EPF Act 1952**

The contractor will ensure compliance of Employees Provident Fund & Misc. Provisions Act 1952 & Employees Provident Fund Scheme 1952 in respect of labourers / employees engaged by him for performing the works of BSNL and ensuring EPF deposit on or before the due date.. ( Proof of Payment of EPF liberties is compulsory)

#### **6.2.17 Compliance of Provisions of ESI scheme**

The contractor will ensure compliance of ESI in respect of labourers/ employees engaged by him for performing the works of BSNL and ensure ESI deposit on or before due date

### **6.3 TOOLS AND PLANTS**

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

## **7.0 INSURANCE :**

7.1 Without limiting any of his other obligations or liabilities, the contractor shall at his own expense, take and keep comprehensive insurance including third party risk for the plant, machinery, men, materials etc. brought to the site and for all the work during the execution. The contractor shall also take out workmen's compensations insurance as required by law and undertake 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 to same or that the BSNL may suffer or incur with respect to and / or incidental to the same. The contractor shall have to furnish originals and /or attested copies as required by the BSNL of the policies of insurance taken within 15 (fifteen) days of being called upon to do so together with all premium receipts and other papers related thereto which the department may require



## 8.0 COMPLIANCE WITH LAWS AND REGULATION:

8.1 During the performance of the work 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, Governmental agency or department municipal board, Government of other regulatory or authorized body or persons and shall provide all certificates 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 agencies 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 Government harmless and indemnified from and against any/all penalties, actions, suits, losses and damages, claims and demands and costs (inclusive between attorney and client) charges and expenses whatsoever arising out or occasioned, indirectly or directly by failure of the contractor or any assignee or sub- contractor to make full and proper compliance with the said by-laws, Rules, Regulations, laws and order and provisions as aforesaid. SECTION : GENERAL (COMMERCIAL) CONDITIONS OF CONTRACT

8.2 The contractor shall also comply with the rule and regulation of EPF & ESI as per government rule and regulation from time to time at his own cost and expenses. The contractor shall indemnify the BSNL from any act or action in future or during the course of work in this regard at his own cost and expense. Tender Issuing Authority reserves the right to withhold the contractor amount up to 25% of tender value from the bills of contractor/security deposit in case of non-compliance of these rules and regulations by the contractor.

## 9. IMPORTANT INSTRUCTIONS

- a. After the work commences the contractor or his authorized representative(s) shall be present at the site. The representative shall be authorized by the Divisional Engineer incharge based on the contractor's request.
- b. Work shall be recorded in the site register by the site Engineer. The contractor or his authorized representative shall sign in the site register held by the site Engineer.
- c. If the contractor does not provide the barricades, warning cones, warning tapes and work notice board, 5% additional penalty shall be levied. The same shall be provided by BSNL and 150% of the cost of the items shall be recovered from the contractor.
- d. Due to underground utilities, if the manhole cannot be constructed at the site shown, the decision of the site engineer shall be final and binding on the contractor. If it is decided to shift the manhole within the neighborhood, the contractor shall construct at the place shown by the site engineer.
- e. The right of way (RoW) shall be obtained by the successful contractor on behalf of BSNL, including various permission from authorities like water, power, utilities, traffic police .The RoW charges shall be paid by BSNL. The work shall be carried out as per terms and conditions and timelines mentioned in the RoW permission. The contractor shall deploy adequate men and machine so as to complete the work within permitted time.
- f. If the work is not progressing as per the schedule, the work may be either restricted or terminated.
- g. After the ducts are laid by either Open trenching method or by HDD, the duct integrity test shall be carried out by the contractor on the next day. This is to facilitate the Manhole contractor to commence the manhole work.
- h. If any one or more number of ducts is found to fail the duct integrity test, additional laying/ HDD of pipe/s shall be carried out by the contractor at no extra cost. The cost of the damaged pipe(s) shall be recovered from the contractor with additional 17.5% towards Overhead charges.
- i. After the re-laying of additional pipe(s), duct integrity test shall be performed in the failed segment, on all the ducts once again.
- j. After the ducts are laid by either Open trenching method or by HDD, if duct integrity test is not carried out by the contractor, the test shall be carried out by BSNL and only 50% of the actual payment shall be made to the contractor for PLB pipe laying.
- k. For any unfinished work BSNL shall not effect any payment.
- l. The material abandoned shall be the property of BSNL. No claim in this regard from the contractor shall be entertained.
- m. Rate should be quoted in figures as well as in words and corrections should be attested, otherwise tender shall be rejected.

- n. The contractor shall restore the cut portions of BT/Concrete roads to their original conditions immediately on completion of the pipe laying works. If the restoration work is not satisfactory with reference to the standards prescribed by the Corporation / Highways, the amount equal to the charges as claimed by the Corporation/Highways will be recovered from the contractor.
- o. The fact that the contractor is working simultaneously in one or more sections in the same Division/other Divisions, will not absolve him from the responsibility of completing the work in time.
- p. Wastage of PLB pipes will be permitted to an extent of 5% of the completed length as measured on the road surface.
- q. In case of wastage of PLB pipes beyond 5%, the cost of PLB pipe will be recovered from the contractor.

## SECTION-6

### UNDERTAKING & DECLARATION

#### 6(A) - For understanding the terms & condition of Tender & Spec. of work

a) **Certified that:**

1. I/ We.....have read, understood and agree with all the terms and conditions, specifications included in the tender documents & offer to execute the work at the rates quoted by us in the tender form.

2. If I/ We fail to enter into the agreement & commence the work in time, the EMD/ SD deposited by us will stand forfeited to the BSNL.

b) **The tenderer hereby covenants and declares that:**

1. All the information, Documents, Photo copies of the Documents/ Certificates enclosed along with the Tender offer are correct.

2. If anything is found false and/or incorrect and/or reveals any suppression of fact at any time, BSNL reserves the right to debar our tender offer/ cancel the LOA/ Purchase/ work order if issued and forfeit the EMD/ SD/ Bill amount pending with BSNL. In addition, BSNL may debar the contractor from participation in its future tenders.

3. No addition / deletion / corrections have been made in the downloaded tender document being submitted and it is identical to the tender document appearing on the website.

In case of any correction/ addition/ alteration/ omission in the tender document, the tender bid shall be treated as non-responsive and shall be rejected summarily

Date:

Signature of Tenderer

Place: .....

Name of Tenderer .....

Along with date & Seal

**6 (B) –NEAR-RELATIONSHIP CERTIFICATE:**

(Format of the Certificate to be given as per the clause 34.3 of Section-4 Part-A by the bidder in respect of status of employment of his/ her near relation in BSNL)

"I.....s/o.....r/o ..... hereby certify that none of my relative(s) as defined in the tender document is/are employed in any **BSNL unit as defined in the clause in the tender Enquiry, on Near relationship.**

**OR**

\*Following are the details of near relative working with the BSNL.

S.No	Name of the Relative	Designation	Name of the Unit (Office & section of BSNL) where working

In case at any stage, it is found that the information given by me is false/ incorrect, BSNL shall have the absolute right to take any action as deemed fit/without any prior intimation to me.

Signature of the Proprietor / Partners/ Directors of the tenderer entity with date and seal

**6 ( D) PAYMENT INSULATION UNDERTAKING**

I/We undertake that I have sufficient capital resources to execute the scope of this tender and will make due payment to our firms labour / employees assigned to execution of this tender ,as per laws every month, insulating it with the payments from BSNL. I/We also undertake to perform in faithful & efficient manner the work of this tender without linking it to payments from BSNL.

Signature of bidder with Seal  
Name of the bidder

**Station:**

**Date:**

**6 (E) EMD RETENTION OPTION**

I/We undertake that I am giving option to BSNL to retain my EMD as long as the project continues or to a maximum time period of 24 months whichever is earlier, for unexecuted work executed if the approved bidder fails to execute their work.

Signature of bidder with Seal

**SECTION- 7****PROFORMAS****7(A.1) For the BID SECURITY/ EMD Guarantee**

(To be typed on Rs.100/- non-judicial stamp paper)

**Sub: Bid Security/EMD guarantee.**

Whereas M/s ..... R/o .....

..... (Hereafter referred to as Bidder) has approached us for giving Bank Guarantee of Rs. ..../- (hereafter known as the “B. G. Amount”) valid up to .... / ..... / 20..... (Hereafter known as the “Validity date”) in favour of \_\_\_\_\_, BSNL, (Hereafter referred to as BSNL----- ) for participation in the tender of work of

..... vide tender no. ....

Now at the request of the Bidder, We ..... Bank.....

..... Branch having .....

..... (Address) and Regd. office address as .....

.....

..... (Hereinafter called ‘the Bank’) agrees to give this guarantee as hereinafter contained:

2. We the Bank do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the BSNL -----stating that the amount claimed is due by way of loss or damage caused to or would be caused to or suffered by the BSNL----- reason of breach by the said bidder(s) of any of terms or conditions contained in the said Agreement or by reason of the bidder (s) failure to perform the said Agreement. Any such demand made on the bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee where the decision of the BSNL in these counts shall be final and binding on the bank. However, our liability under this guarantee shall be restricted to an amount not exceeding the “B. G. Amount”.

3. We undertake to pay to the BSNL----- any money so demanded notwithstanding any dispute or disputes raised by the bidder(s) in any suit or proceeding before any court or tribunal relating thereto our liability under this present being absolute and unequivocal. The Payment so made by us under this bond shall be valid discharge of our liability for payment there under and the bidder(s) shall have no claim against us for making such payment.

4. We the Bank further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to be enforceable till all the dues of the BSNL ----- under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till BSNL----- Certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said bidder(s) and accordingly discharge this guarantee. Unless a demand or claim under this guarantee is made on us in writing or before the expiry of Validity date from the date hereof, we shall be discharged from all liability under this guarantee thereafter.

5. We the Bank further agree with the BSNL----- that the BSNL-----shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Agreement or to extend time of performance by the said bidder(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the BSNL----- against the said bidder(s) and to forbear or

enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Bidder(s) or for any forbearance, act or omission on the part of the BSNL----- or any indulgence by the BSNL to the said bidder(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6. Notwithstanding anything herein contained ;

(a) The liability of the Bank under this guarantee is restricted to the “B. G. Amount” and it will remain in force up to its Validity date specified above.

(b) The guarantee shall stand completely discharged and all rights of the BSNLUPE under this Guarantee shall be extinguished if no claim or demand is made on us in writing on or before its validity date.

7. In case BSNL----- demands for any money under this bank guarantee, the same shall be paid through banker’s Cheque in favour of “-----.

8. The Bank guarantees that the below mentioned officer who have signed it on behalf of the Bank have authority to give this guarantee under its delegated power.

Place: .....

Date ..... (Signature of the Bank Officer) Rubber stamp of the bank

Authorized Power of Attorney Number: .....

Name of the Bank officer: .....

Designation: .....

Complete Postal address of Bank: .....

.....

Telephone Numbers .....

Fax numbers.....

**7(A.2) BID SECURITY IN FORM OF INSURANCE SURETY BOND****FORMAT FOR BID SECURITY IN FORM OF INSURANCE SURETY BOND****(To be submitted on non-judicial stamp paper of appropriate value)****Insurance Surety Bond for Bid Security**

Whereas M/s ..... R/o .....  
 (Hereafter referred to as Principal) has approached us for giving a Surety of Rs ...../- (hereafter known as the "Surety Amount") valid up to ...../...../ 20..... (hereafter known as the "Validity date") in favour of ..... (CGMT, UP(E) Telecom Circle Hazratganj Lucknow) (Hereafter referred to as BSNL) for participation in the tender of work of ..... vide tender no. ....

Now at the request of the Principal, We ..... Insurance Company Limited, registered under the Insurance Act, 1938, with its Corporate office, ..... and Registered/Head Office ..... (the "Surety") to transact the business of Surety Insurance under the powers conferred under Section 14 (2) (i) of IRDA Act, 1999 & IRDA Guidelines issued vide IRDAI/NL/GDL/SIC/01/01/2022 3rd January, 2022, agreed to give this Surety Bond by way of performance guarantee as hereinafter contained:

2. We, the Surety, do hereby undertake to pay the amounts due and payable under this Surety without any demur, merely on a demand from the BSNL stating that the amount claimed is due by way of loss or damage caused to or would be caused to or suffered by the BSNL by reason of breach by the said Principal of any of terms or conditions contained in the said tender Agreement or by reason of the Principal's failure to honour its bid submitted to perform the said works. Any such demand made on the Surety shall be conclusive as regards the amount due and payable by the Surety under this Surety where the decision of the BSNL in these counts shall be final and binding on the Surety. However, our liability under this Surety shall be restricted to an amount not exceeding the "Surety Amount".

3. We, the Surety, undertake to pay to the BSNL any money so demanded notwithstanding any dispute or disputes raised by the Principal in any suit or proceeding before any court or tribunal relating thereto our liability under this present being absolute and unequivocal. The Payment so made by us under this bond shall be valid discharge of our liability for payment there under and the Principal shall have no claim against us for making such payment.

4. We the Surety, further agree that the Surety herein contained shall remain in full force and effect during the period that would be taken for the performance of the said tender agreement and that it shall continue to be enforceable till all the dues of the BSNL under or by virtue of the said tender Agreement have been fully paid and its claims satisfied or discharged or till BSNL Certifies that the terms and conditions of the said tender Agreement have been fully and properly carried out by the said Principal and accordingly discharge this Surety. Unless a demand or claim under this Surety is made on us in writing or before the expiry of Validity date from the date hereof, we shall be discharged from all liability under this Surety thereafter.

5. We the Surety further agree with the BSNL that the BSNL shall have the fullest liberty, without our consent and without affecting in any manner our obligations hereunder, to vary any of the terms and conditions of the said tender Agreement or to extend time of performance by the said Principal from time to time or to postpone for any time or from time to time, any of the powers exercisable by the BSNL against the said Principal and to forbear or enforce any of the terms and conditions relating to the said tender agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Principal or for any forbearance, act or omission on the part of the BSNL or any indulgence by the BSNL to the said Principal or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6. Notwithstanding anything herein contained:

(a) The liability of the Surety under this Surety bond is restricted to the "Surety Amount" and it will remain in force up to its Validity date specified above.

(b) The Surety shall stand completely discharged and all rights of the BSNL under this Surety shall be extinguished if no claim or demand is made on us in writing on or before its validity date.

7. In case BSNL demands for any money under this Surety Bond, the same shall be paid through Banker's Cheque in favour of "AO (Claim) O/o CGMT, UP(E) Telecom Circle Lucknow" payable at Lucknow or by any other mode such as NEFT/RTGS, etc., as indicated by BSNL in its demand letter.

8. The Surety declares that the below mentioned officers who have signed it on behalf of the Surety, have authority to give this Surety under its delegated power.

Place: .....

Date ..... (Signature of the Insurance Company Officer)

Rubber stamp of the Insurance Company

Authorized Power of Attorney Number: .....

Name of the officer: .....

Designation: .....

Official Email ID:.....

Complete Postal address of Insurance Company: .....

Telephone Numbers .....

Fax numbers .....

Name, Address, Contact number and official Email ID of the Controlling Office of the Surety Issuing Branch or any web portal link, from whom / where the Surety Bond can be confirmed by BSNL.

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



**7(B.1) For the Performance Guarantee**

(To be typed on Rs.100/- non-judicial stamp paper)

Dated:.....

**Sub: Performance guarantee.**

Whereas -----BA R/o .....

.....(hereafter referred to as BSNL---) has issued an APO no. ....  
 ..... Dated ...../...../20.... awarding the work of .....  
 ..... to M/s .....  
 .....R/o.....(Hereafter referred to as "Bidder") and BSNL---- has asked him to submit a performance guarantee in favour of-----BA of Rs. ..../- (hereafter referred to as "P.G. Amount") valid up to ...../...../20 .....(hereafter referred to as "Validity Date")

Now at the request of the Bidder, We ..... Bank .....

.....Branch having .....

..... (Address) and Regd. office address as .....

..... (Hereinafter called 'the Bank') agreed to give this guarantee as hereinafter contained:

2. We, "the Bank" do hereby undertake and assure to the BSNL----- that if in the opinion of the BSNL , the Bidder has in any way failed to observe or perform the terms and conditions of the said agreement or has committed any breach of its obligations there-under, the Bank shall on demand and without any objection or demur pay to the BSNL----- the said sum limited to P.G. Amount or such lesser amount as BSNL may demand without requiring BSNL to have recourse to any legal remedy that may be available to it to compel the Bank to pay the same.

3. Any such demand from the BSNL----- shall be conclusive as regards the liability of Bidder to pay to BSNL---- -- or as regards the amount payable by the Bank under this guarantee. The Bank shall not be entitled to withhold payment on the ground that the Bidder had disputed its liability to pay or has disputed the quantum of the amount or that any arbitration proceeding or legal proceeding is pending between Bidder and BSNL regarding the claim.

4. We, the Bank further agree that the guarantee shall come into force from the date of its issue and shall remain in full force and effect up to its Validity date.

5. The Bank further agrees that the BSNL ---- shall have the fullest liberty without the consent of the Bank and without affecting in any way the obligations hereunder to vary any of the terms and conditions of the said agreement or to extend the time for performance of the said agreement from any of the powers exercisable by BSNL against the Bidder and to forebear to enforce any of the terms and conditions relating to the said agreement and the Bank shall not be relieved from its liability by reason of such failure or extension being granted to Bidder or through any forbearance, act or omission on the part of BSNL----- or any indulgence by BSNL---- to Bidder or any other matter or thing whatsoever which under the law relating to sureties would but for this provision have the effect of relieving or discharging the guarantor.

6. Notwithstanding anything herein contained ;

(a) The liability of the Bank under this guarantee is restricted to the P.G. Amount and it will remain in force up to its Validity date.

(b) The guarantee shall stand completely discharged and all rights of the BSNL ----- under this Guarantee shall be extinguished if no claim or demand is made on us in writing on or before its validity date.

7. In case BSNL-----demands for any money under this bank guarantee, the same shall be paid through banker's Cheque in favour of "AO (Claim) -----" payable at ----.

8. The Bank guarantees that the below mentioned officer who have signed it on behalf of the Bank have authority to give this guarantee under its delegated power.

Place: .....

Date: .....

(Signature of the Bank Officer)

Rubber stamp of the bank

Authorized Power of Attorney Number: .....

Name of the Bank officer: .....

Designation: .....

Complete Postal address of Bank: .....

.....

Telephone Numbers .....

Fax numbers .....

**7(B.2) for Performance Guarantee Surety Bond**

(To be submitted on non-judicial stamp paper of appropriate value)

**To ,**

Surety Bond No : .....  
 Surety Bond Issue dt : .....  
 Surety Bond Amt (INR) : .....  
 Bond Valid up to : .....  
 Bond Claim Period : .....

Dear Sir / Madam,

Whereas ..... (hereafter referred to as **BSNL**) has issued an APO/AWO no. ....  
 ..... Dated ..... awarding the work of .....  
 ..... (the "Agreement") to M/s ....., R/o .....  
 (hereafter referred to as "**Principal**") and BSNL has asked Principal to submit a performance guarantee in favour of .....  
 .....( e.g. **CGMT, UP(E) Telecom Circle Hazratganj, Lucknow**) of INR .....  
 (hereafter referred to as "Bond Amount") valid up to dd.mm.yyyy (hereafter referred to as "Validity Date")

Now at the request of the Principal, We..... Insurance Company Limited, registered under the Insurance Act, 1938, with its Corporate office, ..... and Registered/Head Office .....  
 ..... (the "**Surety**") to transact the business of Surety Insurance under the powers conferred under Section 14 (2) (i) of IRDA Act, 1999 & IRDA Guidelines issued vide IRDAI/NL/GDL/SIC/01/01/2022 3rd January, 2022, agreed to give this Surety Bond by way of performance guarantee as hereinafter contained:

2. The Surety do hereby undertake and assure to the BSNL that, if in opinion of BSNL the Principal in any way fails to observe or perform the terms and conditions of the Agreement or commits any breach of its obligations thereunder, the Surety shall on demand and without any objection or demur pay to the BSNL such sum or sums up to an aggregate sum of the Bond Amount or such lesser amount as BSNL may demand without requiring BSNL to have recourse to any legal remedy that may be available to it to compel the Surety to pay the same.

3. Any such demand from the BSNL shall be conclusive as regards the liability of Principal to pay to BSNL or as regards the amount payable by the Surety under this Surety Bond. The Surety shall not be entitled to withhold payment on the ground that the Principal had disputed its liability to pay or has disputed the quantum of the amount or that any arbitration proceeding or legal proceeding is pending between Principal and BSNL regarding the claim.

4. The liability of the Surety under this Surety Bond is restricted to the Bond Amount and this Surety Bond shall come into force from the date of its issue and shall remain in full force and effect up to its Validity date.

5. The Surety further agrees that the BSNL shall have the fullest liberty without the consent of the Surety and without affecting in any way the liability of the Surety under this Surety Bond to vary any of the terms and conditions of the Agreement or to extend the time for the performance contained in the Agreement from any of the powers exercisable by BSNL against the Principal and to forebear from enforcing any of the terms and conditions relating to the Agreement and the Surety shall not be relieved from its liability by reason of such failure or extension being granted to Principal or through any forbearance, act or omission on the part of BSNL or any indulgence by BSNL to Principal or any other matter or thing whatsoever which under the law relating to sureties would but for this provision have the effect of relieving or discharging the Surety.

6. In case BSNL demands for any money under this Surety Bond, the same shall be paid through banker's Cheque in favour of "AO (Claim) O/o CGMT UP(E) Telecom Circle Lucknow" payable at Lucknow or by any other mode such as NEFT/RTGS, etc., as indicated by BSNL in its demand letter.

7. The Surety guarantees that the below mentioned officers who have signed it on behalf of the Surety have authority to give this Surety Bond under its delegated power.

Notwithstanding anything contained herein above:

1. Our Liability under this Surety Bond shall not exceed INR.....(**Rupees:**  
..... **Only**).

2. This Surety Bond shall be valid upto .....(Validity date)

3. Further a claim period of **3( three)months** from the Validity date of the Surety Bond is available to make a demand under this Surety Bond. We are liable to pay the Bond Amount or any part thereof under this Surety Bond only and only if you serve upon us a written claim or demand on or before .....(Date of claim period if any).

4. At the end of expiry of the Validity Date (including claim period), unless an action to enforce the claim under this Surety Bond is initiated before the Court or Tribunal on or before 12 months after the expiry of the Validity Date (including claim period), all your rights under this Surety Bond shall stand extinguished and we shall be relieved and discharged from all our liabilities and obligations under this Surety Bond irrespective of return of original Surety Bond

Place: .....

Date: .....

(Signature of the Surety)

Rubber stamp of the Surety

Authorized Power of Attorney Number: .....

Name of the Surety officer: .....

Designation: .....

Complete Postal address of Surety: .....

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

Telephone Numbers .....

Fax numbers .....

Email ID ( only official Email ID).....

**7 (C) For Letter of Authorization for attending Bid Opening Event.**

(To be typed preferably on letter head of the company)

**Subject:** Authorization for attending Bid opening

I/ We Mr. /Ms. .... have submitted our bid for the tender no.  
..... in respect of .....

..... (Item of work) which is due to open on .....  
(date) in the Meeting Room, O/o .....

.....

We hereby authorize Mr. / Ms. ....&Mr. / Ms..... (alternative) whose  
signatures are attested below, to attend the bid opening for the tender mentioned above on our behalf.

.....

Signature of the Representative

..... Signature of Bidder/ Officer authorized to sign

Name of the Representative on behalf of the Bidder

.....

Signature of the alternative Representative

.....

Name of the alternative Representative

Above Signatures Attested

**Note 1:** Only one representative will be permitted to attend the Bid opening

2. Permission for entry to the hall where bids are opened may be refused in case authorization as prescribed above is not received.

**7(D) SUMMARY OF EXPERIENCE CERTIFICATE IN EXCEL FORMAT**

S. No.	Type of Work as specified under clause 4.10 of Section-1 Part A	BSNL, MTNL, DOT, or State/Central Government departments/PSUs/Private Telecom Operators/Telecom Infra Provider Name, Place and Address	PO No and Date	Details of Success full completion certificate by end user /client	Amount of Work (in Rs)	Year (Period) of completion of work
1						
2						
3						

**Signature of the Bidder**  
With date and seal

**7(E) - MATERIAL SECURITY BOND FORM**

Whereas .....(hereinafter called "the contractor") has been awarded the contract of cable rehabilitation 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 BSNL') in the sum of-----for which payment will and truly to be made of the said BSNL, the bank binds itself, its successors and assigns by these presents.

**THE CONDITIONS** of the obligation are:

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

We undertake to pay to the BSNL up to the above amount upon receipt of its first witting demand without the BSNL having to substantiate its demand, provided that in its demand, the BSNL will note that the amount claimed by it is due to it owing to the occurrence of one or two or all of three conditions specifying the occurred condition or conditions. This guarantee will remain in force up to and including one hundred and eighty (180) days after the Period of contract validity, and any demand in respect thereof should reach the bank not later than the above date.

Signature of the bank  
Signature of the Witness  
Name of Witness  
Address of Witness

**7(F) CLAUSE-BY-CLAUSE COMPLIANCE & NO DEVIATION STATEMENT**

Sl.	Clauses	Clause by Clause compliance	No Deviation Statement
(A)	B	C	D
1	All clauses of “General Commercial Conditions” of Section-5 Part-A		
2	All clauses of Scope of Work, requirement of quantity, SOR (Section-3 Part A, B & C)		
3	All clauses of “General Instruction to Bidders” of Section-4 Part-A		
4	All clauses of “Special Instruction to Bidders” of Section-4 Part-B		
5	All clauses of “E-tendering Instruction to Bidders” of Section-4 Part-C		

- The bidder should mention **‘FULLY COMPLIED’** in the column ‘C’
- and **“ No Deviation”** in Column “D” ,
- If column “C” left blank and the bidder signs this page of the document will be treated as full compliance &
- If column “D” left blank and the bidder signs this page of the document will be treated as No Deviation.

Place:.....

Signature of Bidder

Along with date &amp; Seal

**7(G) Certificate to be submitted by Bidders pursuant to Rule 144(xi) GFR 2017.**

**(On Company's Letter Head)**

-

**Reference 1: BSNL Tender Enquiry No. ....**

**Reference 2: Department of Expenditure Office Memorandums (OMs) No. F.7/10/2021-PPD(1) dated 23.02.2023 and its subsequent Clarification/Amendment if any.**

I, in the capacity of authorized signatory of M/s..... having Regd. office at .....being a participant bidder in BSNL T.E cited at reference 1 above, hereby declare that I have read and understood the clause under Rule 144(xi) of the General Financial Rules (GFRs) 2017 regarding restrictions on procurement from a bidder of a country which shares a land border with India;

I, hereby, further certify that this bidder is not from such a country which shares a land border with India and in light of conditions & restrictions imposed vide cited OMs, we fulfill all the requirements in this regard to become eligible to be considered in the subject Tender Enquiry by BSNL.

(Name of the authorized signatory)

Signature

Designation in Company

Seal / Stamp of Company



**7(H)-DECLARATION BY BIDDER ON COMPANY LETTER HEAD IN RESPECT OF BLACKLISTING BY GST AUTHORITIES**

I,.....S/o /W/o of Shri .....and  
proprietor/Director/Partner of M/s .....do hereby affirm and declare as under:

1. That I, the sole prop./partner/Director of M/s ..... (Supplier) has never been debarred and/or blacklisted by any GST authority and is not having any ongoing litigation or court cases pending or any other suite related to GST.
2. In case the above declaration is found to be incorrect or wrong, the contract if awarded to the Supplier shall be terminated immediately and the Supplier shall be liable to be black listed/debarred for future works/contract with BSNL. Any such action however be without prejudice to BSNL's rights under the law.
3. In case supplier gets Blacklisted by GST authorities during the tenure of contract with BSNL, supplier indemnifies BSNL from any monetary loss caused due such blacklisting i.e Loss of input credit claim etc and ensures that such loss will be paid to BSNL by the supplier.

(Signature with Office Seal)

Date:

Location:

Witnesses:

(1) Signature-

Name.....  
S/o.....  
Address.....  
.....

(2) Signature-

Name.....  
S/o.....  
Address.....  
.....

**7(I): FORMAT of LOI (Letter of Intent)**

NO. \_\_\_\_\_

Dated: \_\_\_\_\_

Sub: - Placement of LOI (Letter of Intent), for OFC rehabilitation/Patch Work in BSNL. Ref: -

Dear Sir,

On behalf of BSNL, Letter of Intent is hereby issued for rehabilitation/Patch Work of OF cable route in respect of -----  
 ----- (--- RKM) in ----- to fulfill the following terms and conditions.

- 1) The contractor has to submit a performance Bank Guarantee of Rs. \_\_\_\_\_ valid for a period of \_\_\_\_\_. The said BG shall be furnished by you from a nationalized bank/Scheduled bank within 14 days in accordance with the BSNL format as per Section 7(A) of the tender document.
- 2) Unit rate of the item shall be as per annexure; thereby total value of the order shall be Rs. \_\_\_\_\_ (as per annexure). The prices are firm, inclusive of all levies and taxes, excepting Service Tax.
- 3) The services rendered will be strictly in accordance with the specifications laid down by the BSNL in the above referred tender.
- 4) The works should commence within \_\_\_\_\_ days from the date of issue of detailed work order.
- 5) You are requested to convey your acceptance within 7 days along with PBG as per condition (1) above and enter into an agreement within 15 days of issue of LOI, failing which this offer is likely to be treated as cancelled.

Yours faithfully,

**7(J) NO DEBAR/ BLACKLISTED DECLARATION**

I /We..... hereby declare that my/our firm has/have not been Blacklisted / debarred for taking part in tender by State Government/UT/Govt. Of India/ any PSU. I/We also declared that my/our firm is not under process of debarring by the State Government/UT/Govt. Of India/ any PSU. I/We am/are aware that any suppression of facts in this regard/breach of this condition/clause would result in immediate termination of contract/cancellation of the existing contract/contracts and also forfeiting of my/our security deposit held.

Signature of Tenderer

Name of Tenderer  
Capacity in which signing

**7(K) - SAMPLE APPLICATION FOR DEPTH RELAXATION IN CASE OF ACHIEVING LOWER DEPTH**

To  
The Engineer-in-Charge,  
.....

Sub : Approval for lower depth than 200/165/135/90 cms ( depending on the terrain  
and method of execution as applicable)

Ref : Work Order No.....

Sir,

In the following section lengths the normal depth of .....(as prescribed) could not be  
achieved due to reasons stated against each section vide above reference work order.  
Your approval is requested.

Sl.No	Section No.	Location From	Location To	Length Mtrs.	Actual    Dept Achieved	Reason
1						
2						
3						

Yours faithfully,

Name of the Bidder with address & date.

Recommendation of the Site-in-Charge.

**7(L) - Format for Self-Certification regarding Local Content (LC) for Telecom Product/Service or Works**

Date: .....

Certificate to be submitted by Bidders in pursuant to Department of Promotion of Industry and Internal Trade, Ministry of Commerce and Industry letter no. P-45021/2/2017-PP(BE-II) dated 16/09/2020 [Public Procurement (Preference to Make in India),

**(On Company's Letter Head)**

-

**Reference 1: BSNL Tender Enquiry No. ....**

**Reference 2:** Department of Promotion of Industry and Internal Trade, Ministry of Commerce and Industry letter no. P-45021/2/2017-PP(BE-II) dated 16/09/2020 [Public Procurement (Preference to Make in India), and its subsequent Clarification/Amendment if any.

I, in the capacity of authorized signatory of M/s..... having Regd. office at .....being a participant bidder in BSNL T.E cited at reference 1 above, hereby declare that I have read and the bidder is Class-I Local Supplier having **minimum local content of 50%** as per Department of Promotion of Industry and Internal Trade, Ministry of Commerce and Industry letter no. P-45021/2/2017-PP(BE-II) dated 16/09/2020 [Public Procurement (Preference to Make in India),and its subsequent Clarification/Amendment if any.

Signature of Tenderer

Name of Tenderer

**7(M) - Declaration about Genuineness of Documents/Certificates**

(to be duly filled, signed, stamped, scanned and submitted with other documents as per clause-7 of Section-IV)

I/We..... hereby declare that the information furnished in the bid in response to the **NIT No -----** is true and correct. I/we verify the genuineness and correctness of all documents, including experience certificates attached with the bid submitted electronically or as a hard copy. Further I also declare that I have submitted the tender document digitally signed, without any additions/deletions/modifications, as a token of having read, understood and accepted the terms and conditions therein. I am also aware that I shall be held responsible in case any document attached is found false/forged/fabricated/tempered/manipulated at any stage and the BSNL is fully competent to take any action against me/my firm as deemed fit in accordance with the terms and conditions of the contract and law of the land.

Place: Signature of tenderer / Authorized signatory.....

Date: Name of the tenderer.....

**7(N) - PROFORMA OF AGREEMENT**

(To be typed on non-judicial stamp paper of appropriate value as per prevailing Govt. guidelines)

**AGREEMENT FOR OF OPTICAL FIBER CABLE (OFC) WORK**

This agreement for Construction of OFC Route in BA.....(name of BA) ("Agreement") is entered into ...  
.....

**BETWEEN**

BSNL (Bharat Sanchar Nigam Limited), a Government of India Enterprise (hereinafter referred to as "BSNL" which expression shall, unless it is repugnant to the subject or context thereof, include its successors, affiliates and permitted assigns)

**AND**

M/s.....(Contractor)

(Whereas BSNL and Contractor shall hereinafter be jointly referred to as the 'Parties' and individually as a 'Party' to this Agreement).

**WHEREAS**

A. BSNL is A Govt of India Enterprise to establish, operate and maintain telecommunication facilities and to provide telecommunication services and other related value added services, in various telecom circles in India.

**B. BSNL in connection with providing telecommunication services has established an optical fiber cable network ("OFC") and** intends to appoint the Contractor (as defined hereinafter) for the purpose of construction of the OFC routes, as defined in **Schedule -A** hereunder, on terms and conditions set forth in this Agreement.

C. Based on BSNL tender terms and conditions and on the acceptance of the same by the Contractor and has issued a letter of intent ("LOI") dated ..... to the Contractor. A copy of LOI issued to Contractor is enclosed as Annexure-I. The necessary security deposits, as mentioned below, have been furnished in accordance with the provisions of the tender document and whereas no interest will be claimed on the security deposits.

a) PBG No: ..... for Rs. .... Issued by .....(Bank)

b) Material Security BG No: ..... for Rs. .... Issued by..... (Bank)

D. In pursuance of the above, BSNL has agreed to avail the Services of the Contractor on exclusive basis and the Contractor has agreed to provide the same, on terms and conditions as contained herein below.

**IN CONSIDERATION OF THE MUTUAL PROMISES SET OUT HEREIN, THE PARTIES AGREE AS FOLLOWS:**

1. DEFINITION AND INTERPRETATION: As per Section 4 Part A.

**2. SCOPE OF AGREEMENT:**

As per tender terms and conditions

**3. RATES**

BSNL undertakes to pay OFC construction charges as per agreement.

**4. OBLIGATIONS OF CONTRACTOR:-**

4.1 Once the Contractor has been issued an LOI by BSNL, the Contractor is bound by the terms of its offer and this Agreement as the governing document between the Parties.

4.2 The charges quoted by the Contractor shall be construed to be based on Contractor's own knowledge and judgment of the conditions and hazards involved in the work to be performed. BSNL is not responsible for any assumptions made

by the Contractor for arriving at any type of costing or pricing.

4.3 BSNL shall at all times benchmark the performance of the Contractor to the expected service levels as laid down in Schedule -A. In case of any deviation from the requirements or standards in this Agreement, the Contractor must make good the same at no extra cost to BSNL and shall be liable to pay penalties.

4.4 The Contractor shall undertake to make allowances for all contingencies in the contract price and shall not raise any additional claims or objections against BSNL in respect of any matters including but not limited to on account of nature of work, site conditions, right of way, surface and water conditions, claims for labour, equipment, materials and all other related issues.

4.5 The Contractor shall undertake that all the pocket expenses, travelling, boarding and lodging expenses for the Term of this Agreement shall be included in the Contract Price. No extra costs on account of any items or services shall be payable by BSNL.

4.6 The machinery, tools, equipments and / or materials of BSNL, either on route or at site, kept in the custody of the Contractor shall be maintained at the cost of the Contractor for the Term of this Agreement. The Contractor shall at all times be responsible for its safe custody and will be liable for any damages to such tool, machinery, equipment and materials of BSNL. The Contractor further undertakes that it shall have no right or claim including but not limited to right of lien over such machinery, tools, equipments and / or materials of BSNL for any reasons whatsoever arising under this Agreement.

4.7 The Contractor shall undertake to engage qualified and efficient workers and to complete the work strictly in conformity with the plans, drawings, and time-frames provided by BSNL. The Contractor further undertakes to provide immediate efficient replacement in case of non- performance by any of the worker / staff provided by the Contractor.

4.8 The Contractor shall undertake at all times to be solely liable to pay the salaries, wages and allowances, provident fund, employees state insurance as required under law for it's staff and workers.

4.9 The Contractor shall undertake to strictly adhere to the terms of this agreement including the Schedules and any relevant Annexure subject to BSNL's instructions.

4.10 The Contractor shall undertake at all times work in coordination with BSNL's representative/supervisory staff and such other authorized personnel, other vendors and that of any other relevant body, as may be required for the purpose of this Agreement.

4.11 The Contractor further undertakes to submit a reconciliation statement of materials issued to the Contractor every 15 days.

4.12 The Contractor shall provide the entire infrastructure and work force under this Agreement exclusively for BSNL's use and the said infrastructure / work force shall not be used by Contractor for any other purpose or for any other company / entity / person in any manner whatsoever.

4.13 The Contractor shall, throughout the Term of this Agreement and throughout the duration of any Work Order(s) (wherever applicable), shall *inter alia* remedy any defects arising therein, and take all reasonable steps to protect the environment on and off the route, avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of it's method of operation or any other reasons attributable to the acts and omissions of the Contractor and it shall be exclusively liable and responsible for the same.

## **5. BANK GUARANTEE: As per clause 7 of Section 5 Part A.**

## **6. PAYMENT TERMS, PENALTIES AND AWARDS:**

It has been agreed by the Contractor that all payment terms, penalties and awards that are applicable in relation to the Services provided by the Contractor under this Agreement shall be in accordance with the terms and conditions specified in the tender document..

## **7. TAXES, LICENCES AND PERMITS:**

7.1 As part of the Contract Price, the Contractor shall, in connection with providing the Services, excluding service tax, applicable levies (excluding works contract tax) as existing, increased or modified from time to time and shall also include any other statutory levies in respect of provisioning of such Services. The Contractor shall cooperate with and render all necessary assistance to BSNL to enable BSNL to avail of and / or recover other indirect taxes, duties and the like. In the event that work contract tax is applicable, BSNL shall deduct from the Contractor and will deposit the same

with the appropriate authorities or the relevant body.

7.2 The Contractor shall and at all times be solely liable to pay the personal income taxes in respect of their staff and / or provident funds, employees state insurance and other statutory charges as required under law.

7.3 All licenses and permits required by the Contractor for the execution of the work and / or provision of Services under this Agreement shall be directly obtained by the Contractor. Any extra charge that may be incurred by the Contractor for maintaining or renewing any license or permit shall be to the account of the Contractor without any extra costs to BSNL.

**7.4. Payment of ROW charges:** - Obtaining permission from the concerned authorities, by paying relevant ROW Charges on behalf of BSNL for works mentioned above is the responsibility of the bidder (contractor). Application for ROW will be signed by BSNL authorities. Prior and proper approval of the Business Area Head of BSNL area for the value of ROW charges is a must before payment to be made by the bidder (contractor) to the concerned authorities. However, these charges will be reimbursed by BSNL on submission of valid documentary proof of payment and other relevant documents by the contractor during bill submission.

**8. TERM OF THE AGREEMENT:** As per clause 10.4 of section 5 Part A.

**9. TERMINATION:** As per clause 18 and 19 of section 5 Part A.

**10. SUB-CONTRACTING AND ASSIGNMENTS:** The Contractor **shall not subcontract** assign any part or the whole of the work under this Agreement or any Work Order(s) (wherever applicable).

**11. LIEN:** As per clause 25 Section 5 Part A.

**12. INDEMNIFICATIONS:** As per clause 26 Section 5 Part A

**13. APPOINTMENT OF OTHER AGENCIES FOR RE-EXECUTION:** As per clause 27 Section 5 Part A

**14. NO PUBLICITY:** As per clause 28 Section 5 Part A

**15. COMMUNICATION AND REPORTING:** As per clause 29 Section 5 Part A

**17. CONFIDENTIALITY:** As per clause 30 Section 5 Part A

**18. INTELLECTUAL PROPERTY RIGHTS:** As per clause 31 Section 5 Part A

**19. REPRESENTATIONS AND WARRANTIES:** As per clause 32 Section 5 Part A

**20. INSURANCE AND LIMITATION OF LIABILITY:** As per clause 33 Section 5 Part A

**21. FORCE MAJEURE:** As per clause 21 of section 4 Part A.

**22. DISPUTE RESOLUTION:** As per clause 34 Section 5 Part A

**23. COMPLIANCE WITH LAWS:-** As per clause 35 Section 5 Part A

**23. INTERPRETATION:** As per clause 36 Section 5 Part A

**24. INCONSISTENCIES:**

a) In the event of any conflict or inconsistency between the terms, conditions of a Schedule to the Agreement or other attachment to the Agreement and / or LOI, to the extent possible such provisions shall be interpreted so as to make them consistent. If it is not possible to interpret the provisions to make them consistent, the provisions of the main body of the Agreement shall prevail to the extent of the inconsistency.

b) To the extent that the Services include regulated activities, the requirements of the relevant legislation will, in the event of any conflict or inconsistency with the terms of the Agreement, prevail to the extent of the conflict or inconsistency.



**25. CONSTRUCTION:**

The Agreement was drafted with the joint participation of the Parties and shall be construed neither against nor in favour of any one Party but rather in accordance with the fair meaning thereof.

**26. SEVERANCE:**

Any provision of the Agreement which is void, illegal or otherwise unenforceable will be severed to the extent permitted by law without affecting any other provision of the Agreement, and, if reasonably practical, will be replaced by another provision of economic equivalence which is not so void, illegal or unenforceable.

**27. ADDITIONAL TERMS:**

For the avoidance of doubt, any additional terms or conditions in a Schedule, Annexure including any variations or amendments agreed by the Parties and recorded in writing will be a part of the Agreement and apply to the Services which are the subject of that Schedule, Annexure or any other documents incorporated by reference, Terms and conditions of Tender document ,LOI, work order , Terms and definitions in the Agreement shall have the same meaning as this Agreement, unless expressly stated otherwise.

IN WITNESS WHEREOF THE PARTIES HEREIN HAVE SET THEIR RESPECTIVE HANDS TO THESE PRESENTS AND DUPLICATES HEREOF ON THE DAY, MONTH AND YEAR FIRST ABOVE WRITTEN.

**BHARAT SANCHAR NIGAM LIMITED****CONTRACTOR'S NAME**

	SIGNED		SIGNED
Witnesses:			Witnesses:
Witness 1:			Witness 1:
Witness 2:			Witness 2:

**SECTION- 8****Bidder's profile & Questionnaire.**

Tenderer / Bidder's Profile & Questionnaire  
(To be filled in and submitted by the bidder)

**A) Tenderer's Profile**

Name of the Individual/ Firm:.....

Present Correspondence Address:.....

.....

Telephone No. .... Mobile No. ....

FAX No. ....

3. Address of place of Works/ Manufacture

.....

Telephone No. .... Mobile No. ....

4. State the Type of Firm: Sole proprietor-ship/partnership firm /  
(Tick the correct choice) Private limited company/Joint Venture.

5. Name of the sole proprietor/ partners/ Director(s) of Pvt. Ltd Co.:

S. No.	Name	Father's Name	Designation
1.			
2.			
3.			
4.			
5.			

6. Name of the person authorized to enter into and execute contract/ agreement and the capacity in which he is authorized (in case of partnership/ private Ltd company):

.....

7. Permanent Account No: .....

8. Details of the Bidder's Bank for effecting e-payments:

(a) Beneficiary Bank Name:.....

(b) Beneficiary branch Name:.....

(c) IFSC code of beneficiary Branch.....

(d) Beneficiary account No.:.....

(e) Branch Serial No. (MICR No.):.....

9. Whether the firm has Office/ works (i.e. manufacture of the tendered item) in Delhi? If so state its Address :

.....

.....

10. GSTN Registration Number(s) of all units/business places of the bidder vide which he intends to execute the contract, if awarded.

GSTN 1.....

GSTN 2.....

GSTN 3... .....and so on.

**B) Questionnaire :**

1. Do you think any other detail/ material is required to complete the work specified in the specification? Yes/ No.

1.1 If Yes, Give details:

.....  
 .....

2. Do you think any other item of work needs to be included in tender form to complete the work specified in the specification? Yes/ No.

2.1 If Yes, Give details:

.....  
 .....

3. Kindly indicate the maximum Quantity of tendered material which you are capable of supplying within the scheduled delivery period.

Name of the tendered Item	Qty that can be supplied by the firm Within the scheduled delivery period.

4. Suggestion for improvement of the tender document.

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

Place.....

Date .....

Signature of contractor .....

Name of Contractor .....

**SECTION-9 Part-A****BID FORM****To**

From,

.....  
<complete address of the purchaser>  
.....  
..........  
<complete address of the Bidder>  
.....  
.....

Bidder's Reference No:.....Dated.....

**Ref:** Your Tender Enquiry No. ....dated .....

1. Having examined the above mentioned tender enquiry document including amendment/ clarification/ addenda Nos. .... dated ..... the receipt of which is hereby duly acknowledged, we, the undersigned, offer to supply and deliver ..... in conformity with the said drawings, conditions of contract and specifications for the sum shown in the schedule of prices attached herewith and made part of the financial Bid.

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

3. We agree to abide by this Bid for a period of **150 (One Hundred Fifty)** days from the date fixed for Bid opening or for subsequently extended period, if any, agreed to by us. This bid shall remain binding upon us up to the aforesaid period.

4. We understand that you are not bound to accept the lowest or any bid, you may receive.

5. If our Bid is accepted, we will provide you with a performance guarantee from a Scheduled Bank for a sum @ 5% or more (as the case may be) as per clause 7 Section-5 Part A of the contract value for the due performance of the contract.

6. If our Bid is accepted, we undertake to complete delivery of all the items and perform all the services specified in the contract in accordance with the delivery schedule specified in the Section-2 (Tender Information).

7. Until a formal Purchase Order of Contract is prepared and executed, this Bid together with your written acceptance thereof in your notification of award shall constitute a binding contract between us.

Dated: ..... day of ..... 20.....

Signature .....

Witness:

Name .....

Signature.....

In the capacity of .....

Name .....

Duly authorized to sign the bid for and on

Address .....

on behalf of .....

Intentionally Blank

**SECTION-9 Part-B****Financial Bid****Schedule for Quoting the Rates**

**Tender Inviting Authority:** DGM (NWP-CFA), BSNL, Office of the CGMT, U.P.(East) Telecom Circle, 3<sup>rd</sup> Floor, Door Sanchar Sadan, Laplace, Shahnajaf Road, Lucknow-226001.

**Name of Work:** **OFC Laying work for connectivity of BHQs in Prayagraj, Ayodhya, Gorakhpur, Kanpur, Sitapur, Sultanpur & Varanasi BAs under Amended Bharat Net Program in UP (East) Circle.**

**Tender No. :** UPE/MM/OFC Connectivity of BHQs/2025-26 **Dated:** 07.07.2025

**Bidder's Name:** .....

**Note for bidder:**

- 1) Evaluation of the tender will be on individual package basis estimated quantities as per price offered in the financial bid. Any bidder may bid in one or more packages or even all the packages, however tender award will be restricted to two packages only.
- 2) Bidder must mandatorily quote GST as admissible.
- 3) The bidder who submits the offer with concessional GST shall submit the proof of applicable concessional GST. In case the concessional GST is not creditable to BSNL it should be included in the price of the goods/services.
- 4) In case, the dealer is registered under composition scheme or any rule/ notification where the BSNL is not eligible for input tax credit then the bidder should not disclose any amount in col 09 to 10 & 12.
- 5) Bidders must mandatorily mention HSN & SAC numbers.
- 6) Tenderer should quote the rates keeping in view that quoted rates are inclusive of all charges and levies but exclusive of Goods and Service tax (GST). GST will be paid extra, as applicable

**Declaration by bidder:**

1. "We hereby declare that in quoting the above price, we have taken into account the entire credit on inputs available under the GST Act introduced w.e.f 1 July 2017 and further extended on more items till date."

2. "We hereby certify that HSN/ SAC shown in column 7 are correct & credit of GST for the amount shown in column 12 above are admissible as per GST Laws."

SL. No	Item Description	Name of the Block under BA	Estimated cost for Package excluding GST Rs. P	Unit	Total Estimated cost for Package excluding GST Rs. P	HSN	Basic Unit Price excluding GST In Figures To be entered by the Bidder in Rs. P	GST (IGST or CGST + SGST) Rate( as % of Basic)	GST amount in Rs. P	All Inclusive Unit Cost in Rs. P	Amount of ITC to be available by BSNL in Rs. P	Unit Price excluding ITC Amount (net cost to BSNL in Rs. P	Total price inclusive of all levies & charges but excluding ITC (net total cost)	Total Amount with Taxes
1	2	3	4	5	6	7	8	9	10 = 9x8	11 = 8+10	12 = 10	13 = 11-12	14 = 4x13	15 = 4x11
Name of work	<b>OFC Laying work for connectivity of BHQs in Ayodhya, Gorakhpur-Z1 &amp; Sitapur-Z1 BAs under Amended Bharat net Program in UP (East) Circle.</b>													
1.1	PKG-1	AYD	1	AU	5631300									
1.2	PKG-2	GKP-1	1	AU	2566900									

1.3	PKG-3	GKP-2	1	AU	5673900									
1.4	PKG-4	GKP-3	1	AU	4934100									
1.5	PKG-5	GKP-4	1	AU	4733200									
1.6	PKG-6	GKP-5	1	AU	7226700									
1.7	PKG-7	GKP-6	1	AU	4759800									
1.8	PKG-8	SUL-1	1	AU	4201560									
1.9	PKG-9	SUL-2	1	AU	6549180									
1.10	PKG-10	SUL-3	1	AU	4138000									
1.11	PKG-11	VNS-1	1	AU	3289400									
1.12	PKG-12	VNS-2	1	AU	8496904									
1.13	PKG-13	VNS-3	1	AU	2470800									
1.14	PKG-14	KNP-1	1	AU	6597500									
1.15	PKG-15	KNP-2	1	AU	2311760									
1.16	PKG-16	KNP-3	1	AU	9764800									
1.17	PKG-17	KNP-4	1	AU	6972744.6									
1.18	PKG-18	KNP-5	1	AU	7429200									
1.19	PKG-19	PRJ	1	AU	5365400									
1.20	PKG-20	STP-1	1	AU	5664200									
1.21	PKG-21	STP-2	1	AU	4637030									
1.22	PKG-22	STP-3	1	AU	7095490									
1.23	PKG-23	STP-4	1	AU	6474940									

1.24	PKG-24	STP-5	1	AU	8791700									
1.25	PKG-25	STP-6	1	AU	4726100									
1.26	PKG-26	STP-7	1	AU	6164000									
1.27	PKG-27	STP-8	1	AU	6164000									
1.28	PKG-28	STP-9	1	AU	5963100									



# यांत्रिक अनुदेश

## ENGINEERING INSTRUCTION

### आर्मर्ड ऑप्टिकल फाइबर केबल्स के लिए अधिष्ठापन गाइडलाइन्स (डक्ट एप्लीकेशन टाइप – I और II)

#### INSTALLATION GUIDELINES FOR ARMOURED OPTICAL FIBRE CABLES (Duct Application Type-I & II)

क्रमांक : टी आर / सी ओ एफ सी / आई - 03 3

(No.: TR/COFC/I-033)

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*All efforts have been made to incorporate all relevant up to date information available, any discrepancies or need for addition or deletion is felt necessarily may please be intimated to this office for further improvement, on E-Mail Id: [kishore63@gmail.com](mailto:kishore63@gmail.com) / [desqos@gmail.com](mailto:desqos@gmail.com).*



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(A Govt. of India Enterprise)  
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**INDEX****INSTALLATION GUIDELINES FOR ARMOURED OPTICAL FIBRE CABLES  
(Duct Application Type-I & II)**

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**INSTALLATION GUIDELINES FOR ARMOURED OPTICAL FIBRE CABLES  
(Duct Application Type-I & II)****1.0 Introduction:**

The armoured optical fibre cable is being introduced in BSNL network. The proposed armoured cable is to be installed in pre-laid PLB ducts may be on a NLD (on core NW) or within Circle (SDCA) (between major cities) or within SSA (between SDCC to local exchanges). This EI is prepared on broad guidelines to be followed during the installation of such armoured cables. Normal cable installation practices and the precaution required for the installation of optical fibre cables currently being followed for un-armoured cables, other than given below shall also be applicable to this cable as well. Necessary PTCC clearance may be obtained and Protections indicated by PTCC during PTCC clearance shall be taken care of.

**2.0 Cable Construction:**

The latest GR for the armoured cable is currently TEC GR No. TEC/GR/TX/OFC-20/01/MAR-2011. Any change in its subsequent editions shall be taken care in appropriate instructions contained herewith. The design of this cable is of loose tube type similar to the un-armoured OF cables except for the metallic members. This cable may use Jelly/WS tape/WS yarn as moisture barrier and water blocking material. The raw materials used shall be of the latest TEC GR for OF raw materials.

The cable is protected against corrosion and saline atmosphere. The life is expected to be 25 years. It also provides resistance to heat energy, shock waves and crushing forces associated with lightning discharge. It is also protected from Rodent and termite. It shall be compatible to the joint closure as per TEC GR: GR/TX/OJC-002/03/APR-2010. This cable uses G.652D fibres approved by CACT as per latest ORM GR of TEC. Type-I, is of wet core and Type-II, is of semi-dry core. The semi-dry core cable will be lighter than the wet core cable. The fibres are protected in a loose tube filled with filling compound (jelly).

The number of fibres in the cable will be 6 or 12 or 24 or 48 or 96. Solid FRP non-metallic strength member is used and placed in the centre of the core. IGFR non-water blocking type is used for meeting the tensile strength of the cable. It is equally distributed over the periphery of cable core. Polyester foil or tape is used to wrap the core. Moisture barrier is either jelly or water swellable tape(s). Binder yarn may be used to hold the tape(s).

Armouring is provided using corrugated ECCS (Electrolytically Chrome Coated steel) tape to protect from Rodent and Termite. The armour also provides sufficient radial as well as compressive strength and the armour shall be electrically continuous and bonded to the outer sheath. The force of adhesion shall be minimum 14N and finally by HDPE (Black colour) sheath.

This EI prepared to give a fair idea about the installation practice to be followed for laying these cables.

**Note: It is considered that**

- The trenching and pipe laying are completed and the route is ready for cable laying.
- The route diagram is available with the unit-in-charge
- The pipes are free from any blockage and the couplers are fitted properly
- Necessary cross pits are made at designated locations as per the drum length for cable pulling/Blowing
- The splice pit locations are marked and prepared (if necessary)
- The guidelines for trenching and pipe laying is given in Annexure-A

**3.0 Installation procedure:****3.1 Laying procedure – cable pulling method****3.1.1 Drum Positioning:**

Cable drum on suitable Jack shall be positioned at right angle to pipe in the trench to ensure free movement of cable in the direction of pulling during cable pulling operations. Marking on the drums such as “Roll this way→” will indicate the direction of coiling or un-coiling. Care should be taken to place the drum in the un-coiling towards laying side of the trench. There are new semi-mechanised methods are being in practice other than jack-and-pull method such as horizontal rotating platform, roller plates. While using such methods, care should be taken that the cable is uncoiled properly and twisting of cable is avoided. The drum is usually placed at approximately half of the cable length in the drum (say 1KM in case of 2KM drum and so on...)

**3.1.2 Communication Link:**

A communication link is required to be established connecting both the end (feeding & terminating end) and at intermediate locations of the installation section for communication and co-ordination between feeding, pulling and controlling staff. All the locations are required to be alert and on communication with each other during actual installation of the cable in 2 km length of the laying section. The mobile NW may be of use here if the coverage is sufficient or else a private communication links using walkie-talkie may be used.

**3.1.3 OF Cable laying procedure:**

Before laying/Pulling, every cable drum shall be tested. This can be done at the store-yard itself. All fibres are to be tested with OTDR. The drum may be separately kept if any event or break or abnormal attenuation is observed and same is marked “Rejected”. Only the tested & cleared drums are shipped to the respective routes. The drum number, length of the cable and running meters to be noted. The optical fibres in the cables are delicate and fragile in nature. Therefore utmost care is required to be taken while installing the OF cable. The Armoured OFC shall be supplied with cable pulling eye and an anti-twist device/mechanism at both ends of the cable.

After initial preparation and positioning of the cable drum on the cable jack, the pulling rope available in the pre-laid PLB HDPE pipes shall be attached to the front end of the anti-twist device. In some of the latest supplies of 1KM coils of PLB HDPE pipes, the rope will not be available. In such cases “blowing method” as detailed in the next section may be adopted. The anti-twist device is used to prevent the twisting of the cable while it is being pulled. To avoid friction and damage to the cable, rollers are also required to be kept near the cable drum and up to the entry to the trench which shall act as a guide to the cable till it enters the pipe.

The cable pulling shall be taken up after above arrangements are completed. The rope at the other end of the pipe is pulled with constant force. Any jerks shall be avoided. Also no undue force shall be exerted in pulling. This will lead to the cable being damaged. In case of difficulty in pulling, the cause may be analysed and any blocks or mis-alignment or break in pipe continuity or coupler fault shall be set right and the pulling is continued. This shall be supervised throughout the pulling section. Max pulling tension and the permissible bend radius shall be monitored continuously.

After completing about half of the cable length, the remaining cable is un-coiled manually and is placed on the ground in figure 8(∞) configuration to avoid twisting of cable. Now the anti-twist device of the inner end

of cable in the drum shall be attached to the pulling rope available in the pre-laid PLB HDPE pipes and pulled in the same manner.

After completing every drum, a coil of (not less than 90cm of diameter) sufficient length (about 10M) is placed at both ends for splicing. So at every splice point ends of consecutive cables are available for splicing.

**Note: Pulling Precautions:**

During pulling operation, care is to be taken that at no point of time the pulling tension increases more than 2 times of the cable weight per kilometre length of the cable. [For example if the cable weight is 100 kg per km the pulling tension shall not be allowed to increase more than 200 kg force at any given point. It must be ensured that the cable is to be pulled and not pushed. The permissible pulling tensile force and the permissible bend radius, is required to be monitored continuously. All other normal precautions are also required to be observed and monitored.

**3.2 Laying procedure – Cable blowing method**

The latest cable laying adopts “blowing method” for the case where cables are laid in pre-laid PLB HDPE pipes. Here the cable is not pulled but blown in air allowing the cable to glide or move with minimum friction.

**3.2.1 Drum Positioning:**

Cable drum on suitable Jack shall be positioned at right angle to pipe in the trench to ensure free movement of cable in the direction of pulling during cable pulling operations. Marking on the drums such as “Roll this way→” will indicate the direction of coiling or un-coiling. Care should be taken to place the drum in the un-coiling towards laying side of the trench. There are new semi-mechanised methods are being in practice other than jack-and-pull method such as horizontal rotating platform, roller plates. While using such methods, care should be taken that the cable is uncoiled properly and twisting of cable is avoided. The drum is usually placed at approximately half of the cable length in the drum (say 1KM in case of 2KM drum and so on...)

**3.2.2 Communication Link:**

A communication link is required to be established connecting both the end (feeding & terminating end) and at intermediate locations of the installation section for communication and co-ordination between feeding, pulling and controlling staff. All the locations are required to be alert and on communication with each other during actual installation of the cable in 2 km length of the laying section. The mobile NW may be of use here if the coverage is sufficient or else a private communication links using walkie-talkie may be used.

**3.2.3 OF Cable blowing procedure:**

The cable blowing shall be taken up after above arrangements are completed. The optical fibres in the cables are delicate and fragile in nature. Therefore utmost care is required to be taken while installing the OF cable. The fibres in the cable shall be tested before commencing cable-laying and also after completion to ensure correctness of fibre length and attenuation. The Armoured OFC shall be supplied with cable pulling eye and an anti-twist device/mechanism at both ends of the cable.

After initial preparation and positioning of the cable drum on the cable jack, the cable is taken through a special arrangement where in the cable is guided by a pair of rollers which may act as enabler to gently push the cable while blowing. Compressed air is blown in the pipe along with the cable. If the pipe is laid

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properly without any air leakage at coupling points, the cable is easily blown to the other end. In case of leakage or blocking, the same is set right and the process is continued till the cable reaches the designated place. This shall be supervised and monitored continuously throughout the process. All other normal precautions are also required to be observed and monitored.

After completing about half of the cable length, the remaining cable is un-coiled manually and is placed on the ground in figure 8( $\infty$ ) configuration to avoid twisting of cable. Now other end of the cable shall be blown in the same manner.

After completing every drum, a coil of (not less than 90cm of diameter) sufficient length (about 10M) is placed at both ends for splicing. So at every splice point ends of consecutive cables are available for splicing.

### 3.3 Ducted Routes

The optical fibre cables may be laid through the existing ducts wherever the ducts are available. In ducts depth of the cable shall not be insisted upon. End of ducts shall be properly sealed and necessary protection by way of PLB pipe/ DWC HDPE/ RCC pipe/ G.I pipe should be provided at the entry and exit of the duct till the cable is buried at the depth of 1.2 m. However the ducts are nowadays are almost defunct due to large scale developmental works being carried out by the civic authorities.

**Note: Using the DWC HDPE ducts or RCC or both or GI pipe at the required places shall be based on the terrain, the probability of the cable being damaged by vehicles/ excavators etc...**

### 3.5 Splicing

#### 3.5.1 Splice Pit

A splice pit of 2 meter by 2 meter shall be prepared for housing the splice closure. A minimum of 10 meter of cable coming from both sides shall be individually coiled. The coiling diameter shall not be less than 90cms.

#### 3.5.2 Splice Enclosure arrangements:

The splice closure suitable for this cable is as per TEC GR No: GR/TX/OJC-002/03/APR-2010 with any amendments (if any) or the latest. At times there may be a requirement to use out-door FDMS based on TEC GR No: TEC/GR/TX/FDM-003/01/MAR-12. The splice closure shall be placed in such a way that both cable (after coiling) ends face the base of the splice closure. The cable ends shall be prepared after the cable entry into the closure. The cable and the strength member shall be secured tightly to avoid slipping of cable from the closure. The metallic components of the cable including armouring shall be fixed to the grounding device provided in the splice closure. The strength member shall be fixed to its fixing mechanism provided in the closure. The metallic portion of the cable fixing mechanism in the closure allows giving continuity to both the cables or to have a disconnection (common or independent bonding) and it shall be made accordingly. This may be required at EPR zones.

#### 3.5.3 Splicing of fibre

For preparing the cable ends for splicing use the tools supplied according to TEC GR no: GR/OFT-01/03.APR.2006 and amendments (if any) or the latest. If any special tool is required, the cable manufacturer shall supply the same. After fixing the cable in the splice closure, the bare fibres shall be guided to the Fibre Organizer [provided in the closure] through transport tubes. These fibres shall be spliced

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as per standard procedures. The spliced fibres shall be made to rest on the concerned tray/cassette (fibre organizer).

**3.5.4 Sealing of Splice Closure**

After completion of splicing, the base shall be closed with the dome of the closure as per the procedure given by the manufacturer. It shall be ensured that the splice closure is air tight and water proof.

**3.5.5 Earthing of the splice closures:**

Every Splice point (or alternative points or as decided by the field units) shall be earthed to protect the cable from the damage that may occur due to lightning and to safeguard the working people from induced currents except in EPR (Earth Potential Raise or Ground Potential Raise) zone where no earthing shall be done. A note shall be made in the route index diagram clearly showing the EPR Zone. As mentioned earlier, inside the joint closure, facility exists to ensure that the armouring of the cable and other metallic components can be electrically paralleled. This electrically paralleled point is extended to outside of splice closure for earthing the metallic components at one point. A standard earth shall be prepared and connected to this point of the closure. A longer connecting cable may be used to allow the splice closure to be taken out and operated upon without disconnecting the earth. The maximum earth resistance when measured shall not be more than 5 ohms. It may be noted that common or independent bonding of metallic portion of the interconnecting OF cables shall be decided as per the field requirement. Also the importance of earthing shall be made known to all the maintenance staff by educating the hazards it poses if not properly earthed. Before re-instating the pit, it shall be ensured that the earthing of the closure is done properly.

**3.6 Re-instatement of pit:**

After completion of earthing arrangements, the pit shall be filled with sand incorporating warning bricks etc. as per standard procedures. Splice-pit marking slabs (similar to route indicators) may be installed to identify the splice pit/route.

**3.7 Termination & earthing arrangement at the exchanges (Cable terminating ends):**

The armoured optical fibre cable shall be terminated in the termination box (FTB) as per TEC GR No: TEC/GR/TX/FTB-01/03/MAY-2010 with amendments (if any) or the latest. This box is usually ordered and supplied as part of cable supply. This termination box shall be installed inside the exchange building. The fibres of the cable shall be spliced to the pigtails for connection to the optical line systems. In the termination box arrangements have been provided to electrically parallel the armouring of the cable, the metallic components of the cable and the body of the termination box. This common point is extended to outside the body of termination box to facilitate the earthing arrangements. A standard earth of less than 5 ohms is to be prepared and connected to this point of the termination box.

NOTE: This earth shall be separate from Equipment Earth and Electrical Earth. Also the importance of earthing shall be made known to all the maintenance staff by educating the hazards it poses if not properly earthed. It is preferred that an insulated multi-strand earth wire (generally green in colour) shall be used to identify the earth link.

Apart from the above guidelines, specific instructions mentioned in the user manuals of the respective cable manufactures may also be referred and adhered to.

**3.8 Maintenance activities (Precautions to be taken while attending faults):**

As the cable is having metallic portion which is vulnerable for power induction, care should be taken while working with the cable and splice closure. Whenever a re-splicing is required, before opening the splice closure it shall be ensured that there is no induced current/voltage in the earth connecting point. There will

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be instances during the life of the cable that it may be damaged or cut. In such instance there will be a disconnection of earth to the armour.

While attending to the fault care should be taken to check that there is no induction on the armour. It can be done in various ways. A simple one is to check using a normal tester. If any induction is noticed, then the same may be allowed to be discharged using a simple spike rod driven to the ground and the same is connected to the armour via a resistance (may be an incandescent bulb). The bulb will be lit if there is a discharge and will extinguish when the induced voltage is vanished. If the induction is not vanishing, then the other end of the cable (splice point) may be opened and the earthing is checked. In a nut shell care should be taken to work on the cable only when it is safe to the human contact.

**Inspection and maintenance**

- Check earth and its connections periodically at interval of at least 3 months, to ensure that all connections are intact and soldered joints (if any) are in proper condition.
- Measure the earth resistance once in a year. Enter the value, date of last test and location of earth should be in a register.
- Earth resistance, date of last testing may also be noted in a slip and kept inside the splice closure (only when attending a fault).
- Watering to the earth electrode in summer and in other seasons as felt necessary.
- If earth resistance is more than the nominal value either renew the old earth or provide a new earth.

**Precautions**

- Earth electrodes shall not be buried in a position likely to cause an obstruction or where it is likely to be damaged.
- Protect the earth lead wire from mechanical damage.
- Apply anti-corrosive paint/ bitumen compound on the portion of wire buried in ground.



Procedure for Trenching**Note:**

**For the trenching procedure, The EI No: D – 001 on “LAYING PRACTICES OF OPTICAL FIBRE CABLE LOCAL AREA NETWORK, OPTICAL FIBRE CABLE” issued by T&D circle on 31/01/2007 may be referred.**

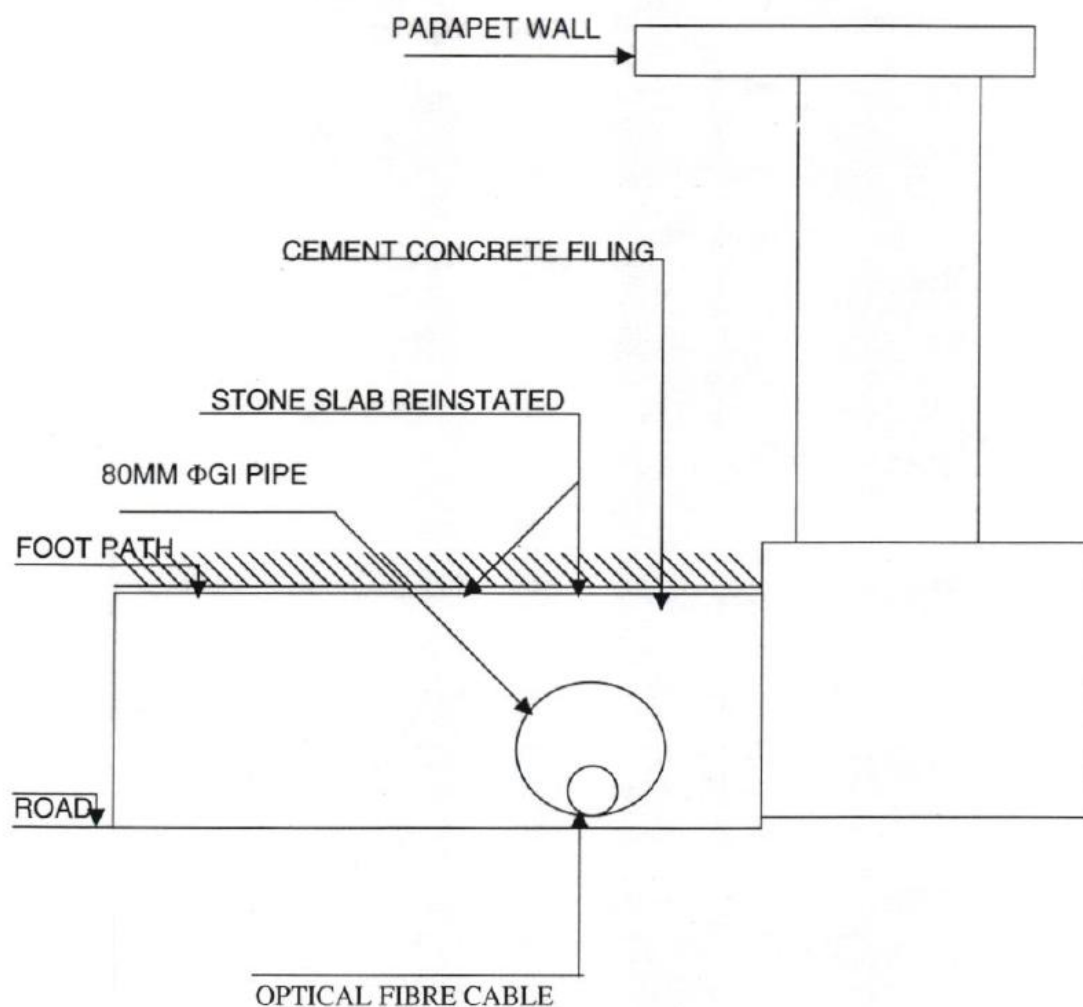
**A.1 Horizontal Directional Drilling (HDD)**

In the Metro cities, major cities, built-up areas, road-crossings, Railway crossings etc... it is suggested to use HDD. This avoids open trenching requirement which is not allowed by the civic authorities at designated zones. Using this method, the surface of landscape remains intact, including beautification features carried out by civic authorities, roadway, building and constructions. HDD procedure is not part of this EI and hence not discussed here.

The following important items are required to lay the Armoured fibre cable in ducts:

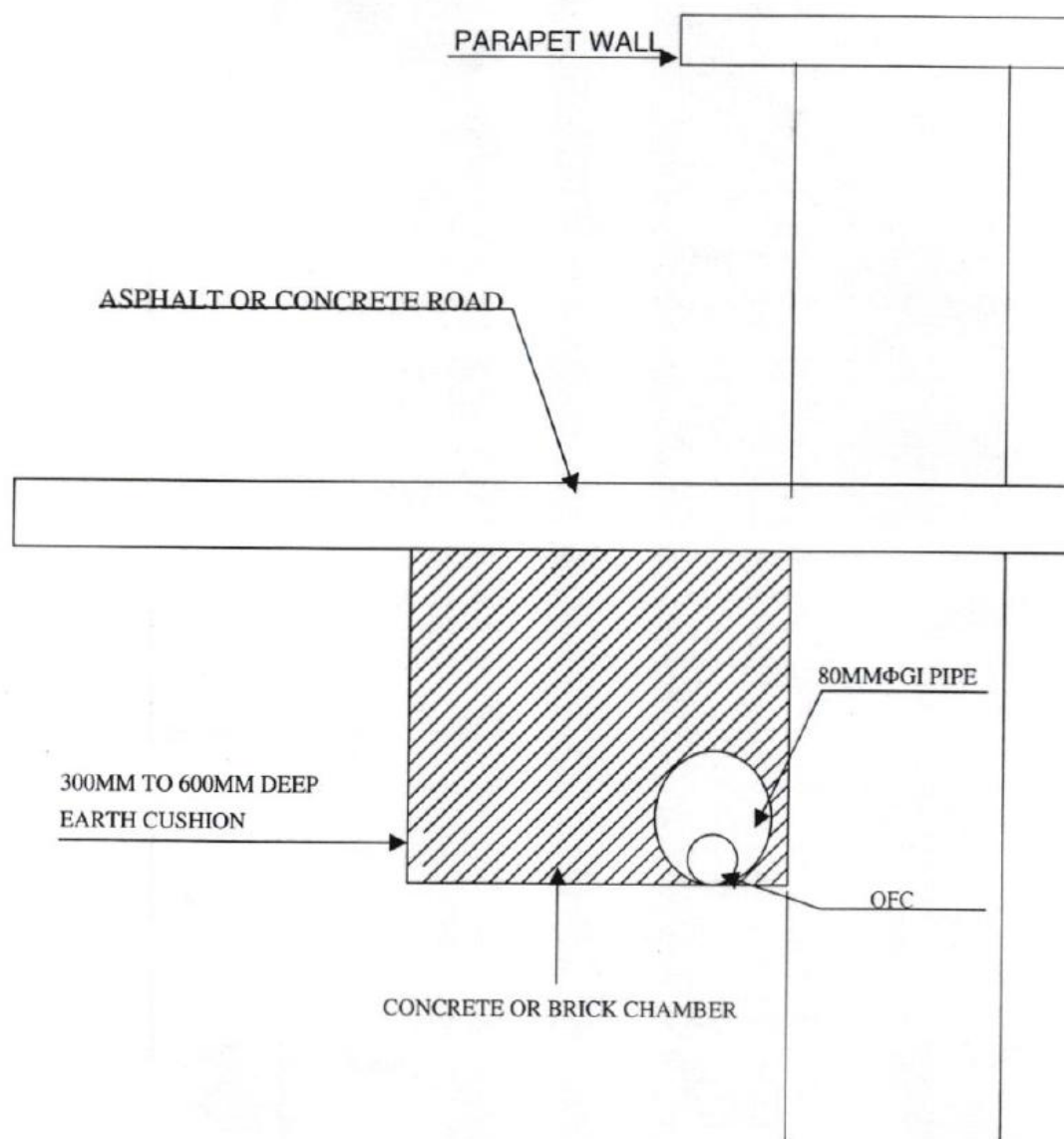
1. Armoured fibre cable drum
2. Cable Wheels/Jack
3. Communication sets (Walkie-talkie set / **flags**)
4. Sufficient Manpower
5. Fixation of supervisory positions
6. Safety precautions
  - A) Indicators (showing work is in progress)
  - B) Flags (red or green)
7. Route indicators
8. Blowing machine/accessory

## Annexure-B

**Cable/Pipe laying at difficult terrain wherein additional protection is required**

LAYING OPTICAL FIBRE CABLE IN G.I. PIPE 80MM  
BELOW THE FOOT PATH OF THE BRIDGE

FIG.1



LAYING OPTICAL FIBRE CABLE IN 80MM DIA G.I. PIPE  
 EARTH CUSHION OF THE BRIDGE

FIG.2

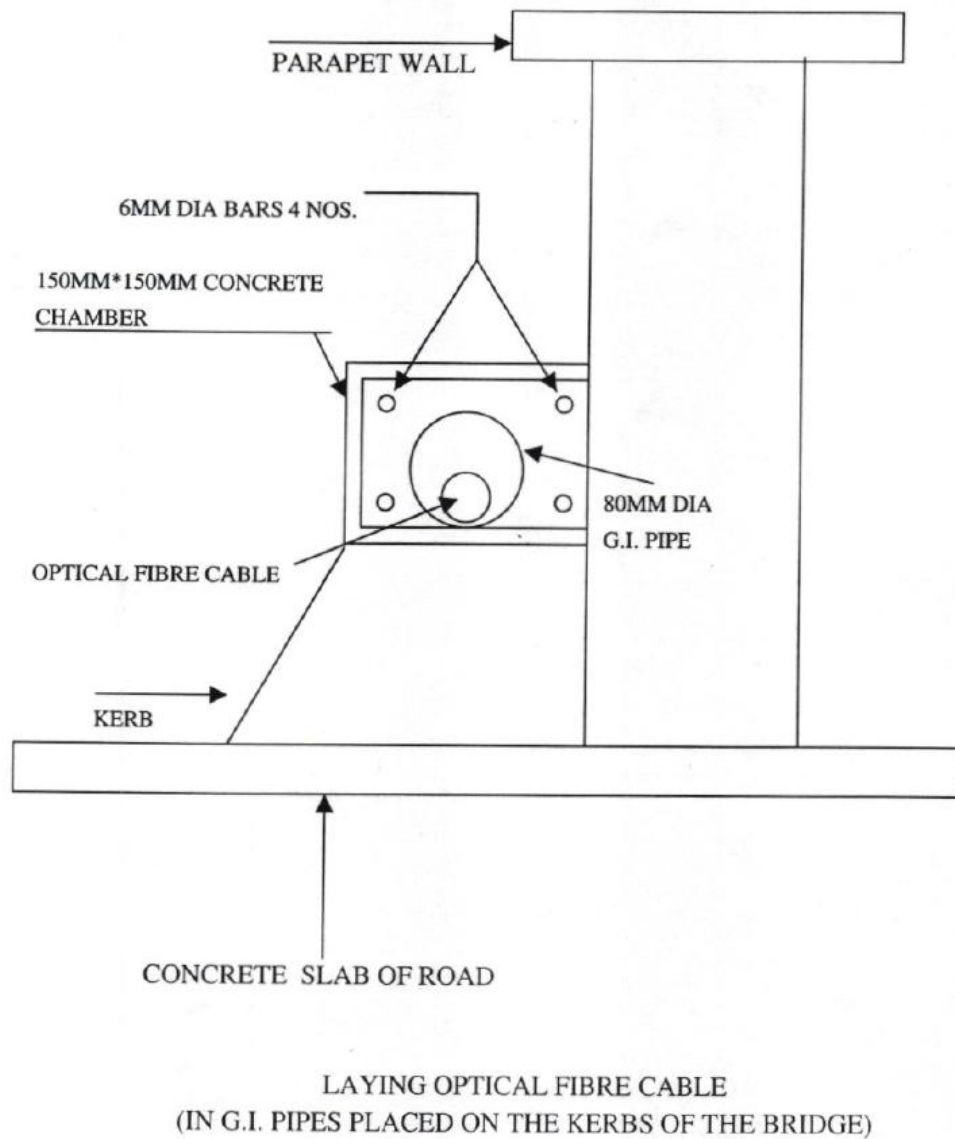
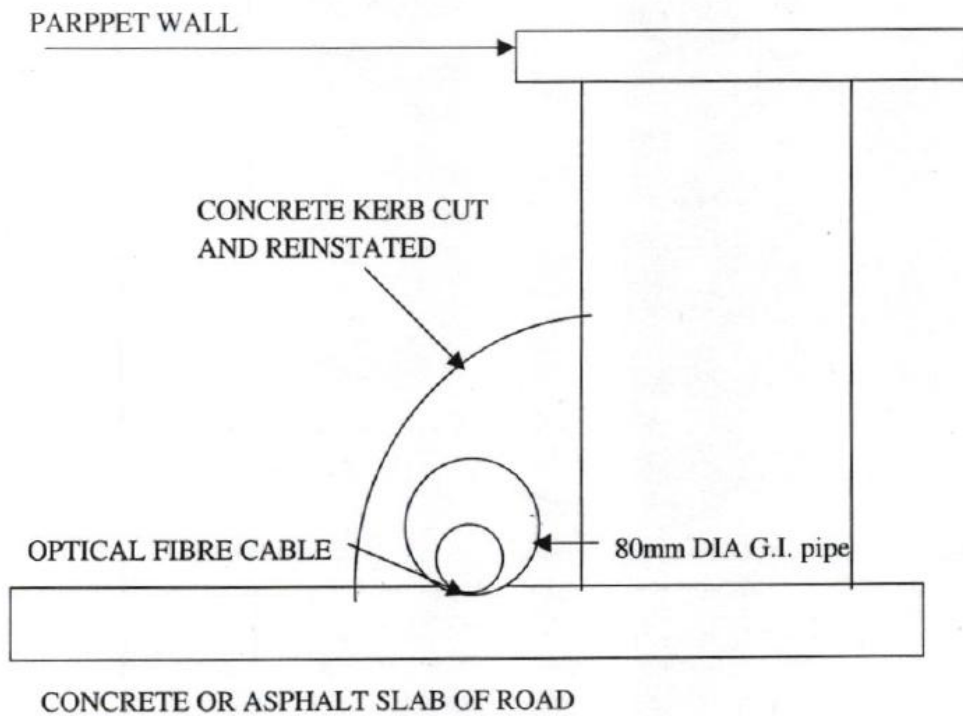


FIG.3

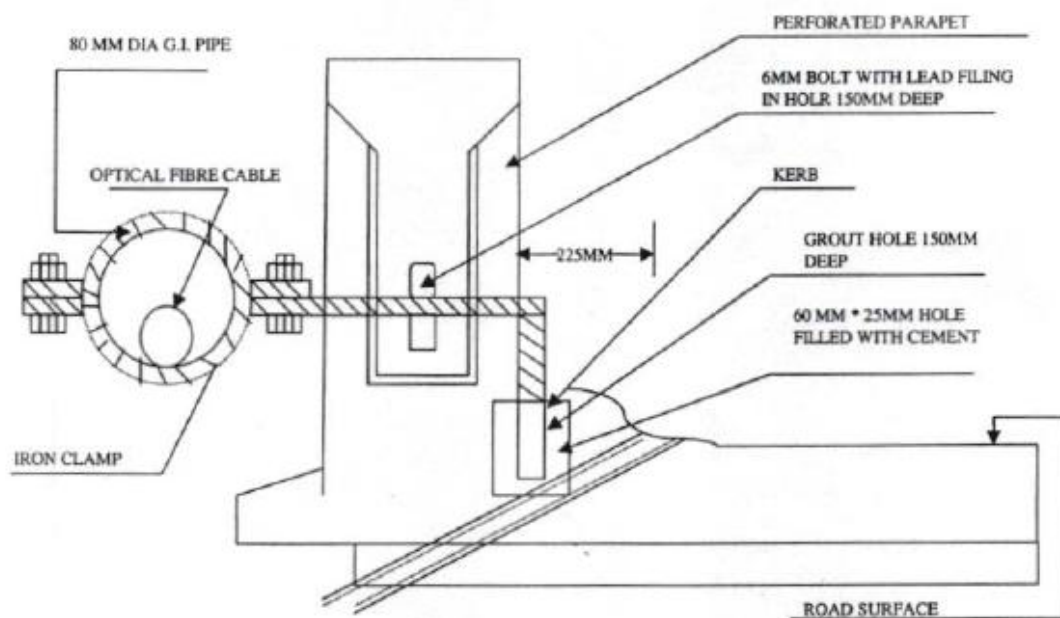


LAYING OPTICAL FIBRE CABLE  
 (IN G.I. PIPE BY CUTTING THE EXISTING KERB OF THE  
 BRIDGE & REINSTATED IT)

FIG.4

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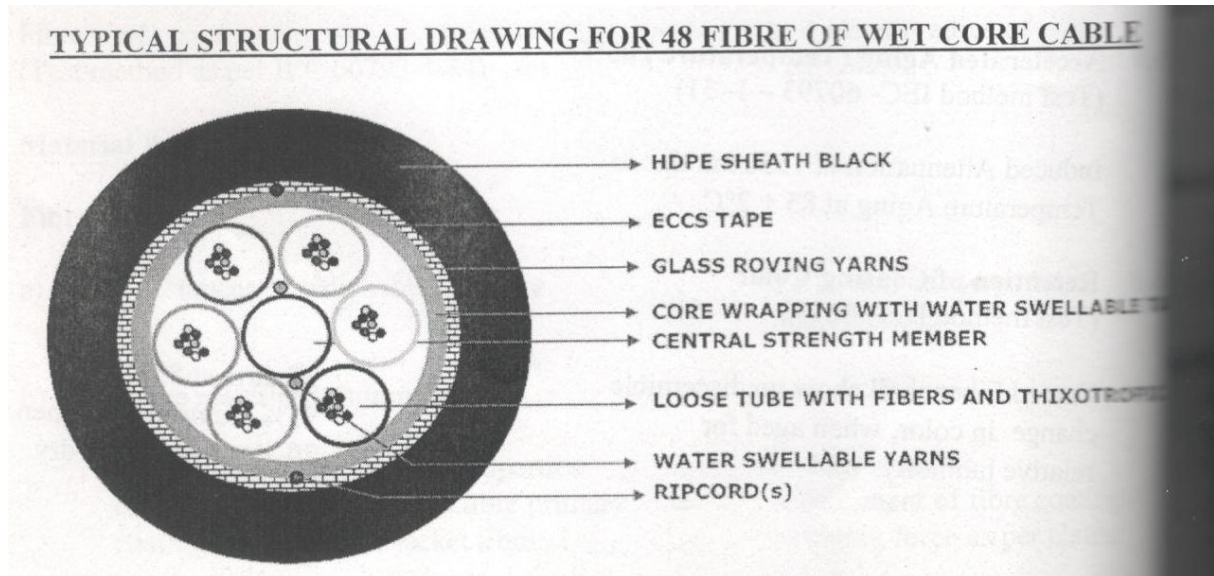


LAYING OPTICAL FIBER CABLE IN 80MM DIA G.I PIPE  
SUSPENDED BY MEANS IF CLAMPS OUT SIDE THE  
PARAPET WALL

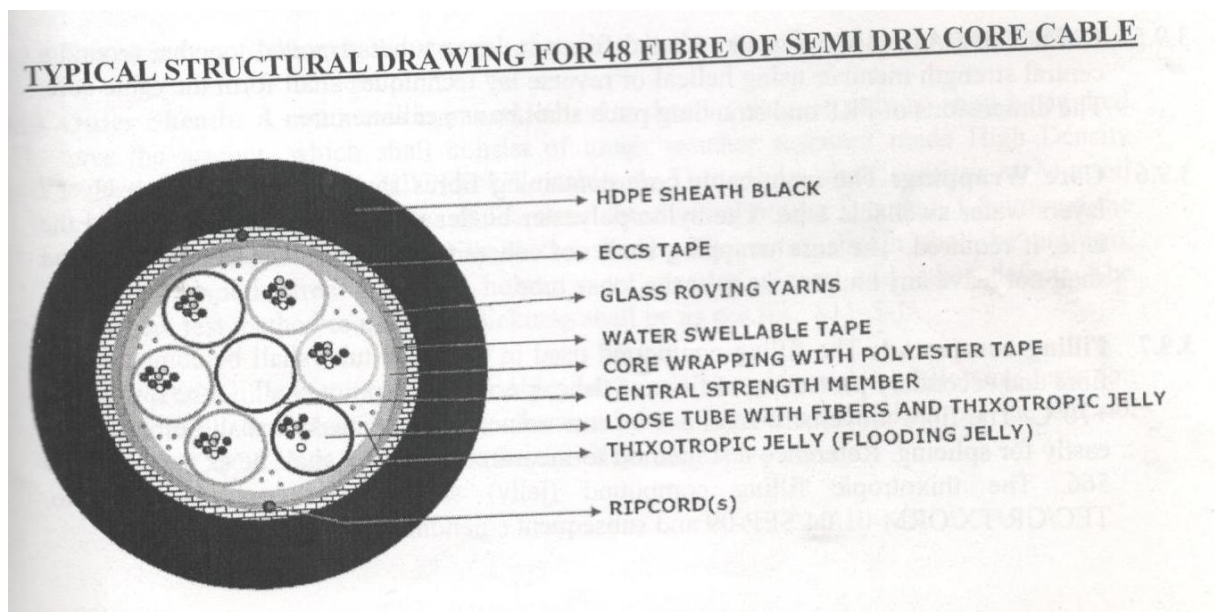
FIG - 5

## Annexure-C

## Cable cross-sectional diagram



Type-I (wet core)



Type-II (Semi-Dry core)

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**Earthing (Grounding) of the splice closure and the cable**

**Introduction-Why Earthing (in other words Grounding):** Proper grounding and bonding is required for the safe and effective dissipation of unwanted electrical current, and it promotes personal and site safety. Typically, fibre-optic systems do not carry electrical power, but the metallic components of a conductive cable are capable of transmitting current. This would occur if a metallic piece of the cable—such as the interlocking or corrugated armour—were to come into contact or close proximity with electrical current from sources such as exposed wiring, faulty electrical systems, lightning or other events. This creates the potential for the occurrence of several hazards, such as electrical shock, fire, damage to electronics and system failures resulting in downtime.

According to the industry standards, “Bonding” is the permanent connection of metallic parts to form an electrical path that will be conductive and continuous. “Grounding” is the act of connecting that path to the earth or some conducting body that serves as the earth. When all the components of a system are properly bonded together and grounded to the earth, the risk associated with electrical current harming personnel or damaging property and equipment is reduced.

The splice closure and the cable armour shall be earthed at regular intervals (may be at every splice point or alternate splice point) to avoid any damage to the cable/splice or the persons working on the cable. Though there are different types of Earthing techniques available, it is proposed to use “Spike Earth” to obtain necessary earthing potential of  $<5\Omega$ . It is suggested taking into consideration the limited space availability around the splice pit. Ground Conditions The spikes will be exposed to a range of soil types, including the following: • Clay - soft and compacted; • Granite and gravel; • Rock, shale and sandstone; • Sand; and • Alluvial sediment. Across this range of ground conditions, both the electrical conductivity and corrosive properties of the soils, vary markedly

**Spike Earth:**

The spike earth arrangement of earth electrode system may consist of one or more numbers of 25.0 mm or 38.0 mm dia. GI pipes, each of 275 cm or 375 cm length. Each pipe is used as earth spike and is so driven into the ground that its top remains at some depth below the ground surface. The spacing between any two spikes should not be less than 375 cm ordinarily. In no case, it should be less than 250 cm. A typical layout is shown in figure below. *There are different types of Earth rods are available and if required the installer may choose appropriate one for earthing to obtain  $<5\Omega$ . For e.g. one such earthing rod of 1853 mm (i.e. 25 + 1752 + 76) long fabricated from 20 mm dia M.S. Rod, the bottom of which to be made cut of the same rod in the shape of a cone – 76 mm long and the forged head made out of the same rod with 30 mm (dia) = 25 mm (height).*

The positions of the spikes (may be one or more, may be 4 nos at every corner of the pit) should be marked out around the splice pit and a trench no wider than necessary should be excavated. The trench should be 70 to 100 cms deep or it may be around the RCC splice chamber. The spike should be driven vertically into the trench until the top of the driving head is 30 cms above the bottom of the excavation. Spikes can be driven in quite easily with a sledge hammer for round electrodes. A new arrangement has been developed consisting of a sliding hammer placed on the electrode so that the work may be carried out at a level convenient to the workman without a ladder or auxiliary platform. The blows are delivered to the rod at a point near to the ground. The driving head or a suitable bolt is supplied with each earth spike and this must be used to prevent the top of the spike being damaged during the driving operation, when the spike has been driven fully into

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the ground, it will probably be found that the driving head will be tight fit on the spike and in these circumstances it may be left in position.

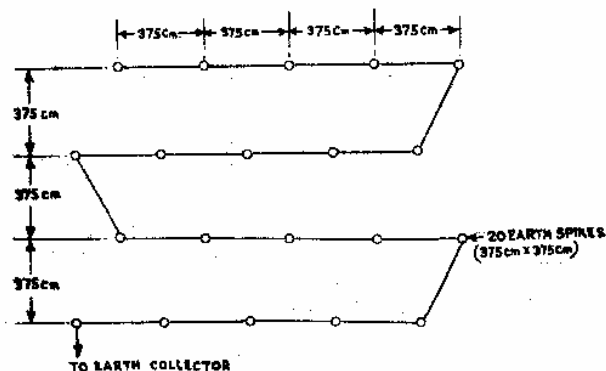
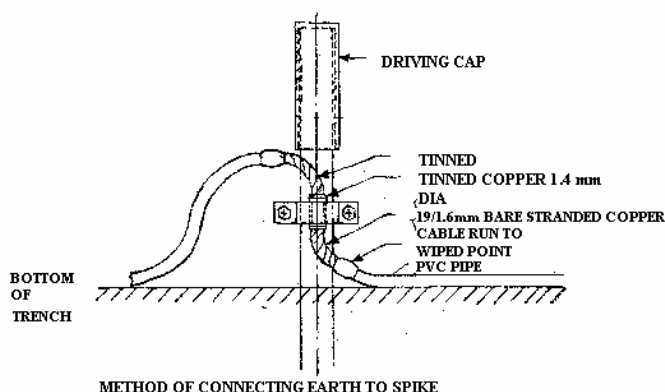
If the earthing requirement of  $<5\Omega$  is not achieved with one spike, then, multiple spikes are driven and the spikes should be connected together by a continuous main earth conductor, bare tinned copper protected by PVC pipe to prevent corrosion. The PVC pipe containing the earth conductor should be lightly dressed down and wiped on to the earth conductor at each side of the binder. The binder should be soft copper wire, 1.4 mm. diameter wound round the earth conductor at the points where it is held in the clamp on the spike as shown in the figure below. The PVC pipe used should be of sufficient diameter to carry the copper conductor and thickness. The binder and the exposed part of the earth conductor should be thoroughly tinned. Earth Enhancing Compound in the form of granular mixture of Calcium Bentonite (clay) & Gypsum may also be used were ever necessary.

Alternatively a pit of required diameter is dug up and the copper/GI rod is placed in the middle and driven into the ground to hold it in position, with the connecting point easily accessible (above the ground). The pit is then filled up using a mixture of charcoal/salt/sand/ in required combination. Earth Enhancing Compound in the form of granular mixture of Calcium Bentonite (clay) & Gypsum may also be used were ever necessary.

The earth conductor should be clamped at a point as low as possible on the spike and bent so as to lie along the bottom of the trench. All bolts, clamps, plumber's wipes and tinned copper wire adjacent to the wiped joints should be well coated with black paint suitable for iron work.

The main earth conductor shall then be brought to the splice closure as straight and short as possible from the electrode system to the earth connector on the splice closure and is connected tight. The electrode positions shall be marked (may be on the splice chamber) so that it can be watered during dry season when the conductivity is low

The earth is measured and the reading noted as reference. It may be noted on a paper and put inside the closure noting the date of measurement. On regular intervals or when attending to a cable/splicing fault, the earth may be measured and the same may be noted and also noted in the paper available inside the closure.

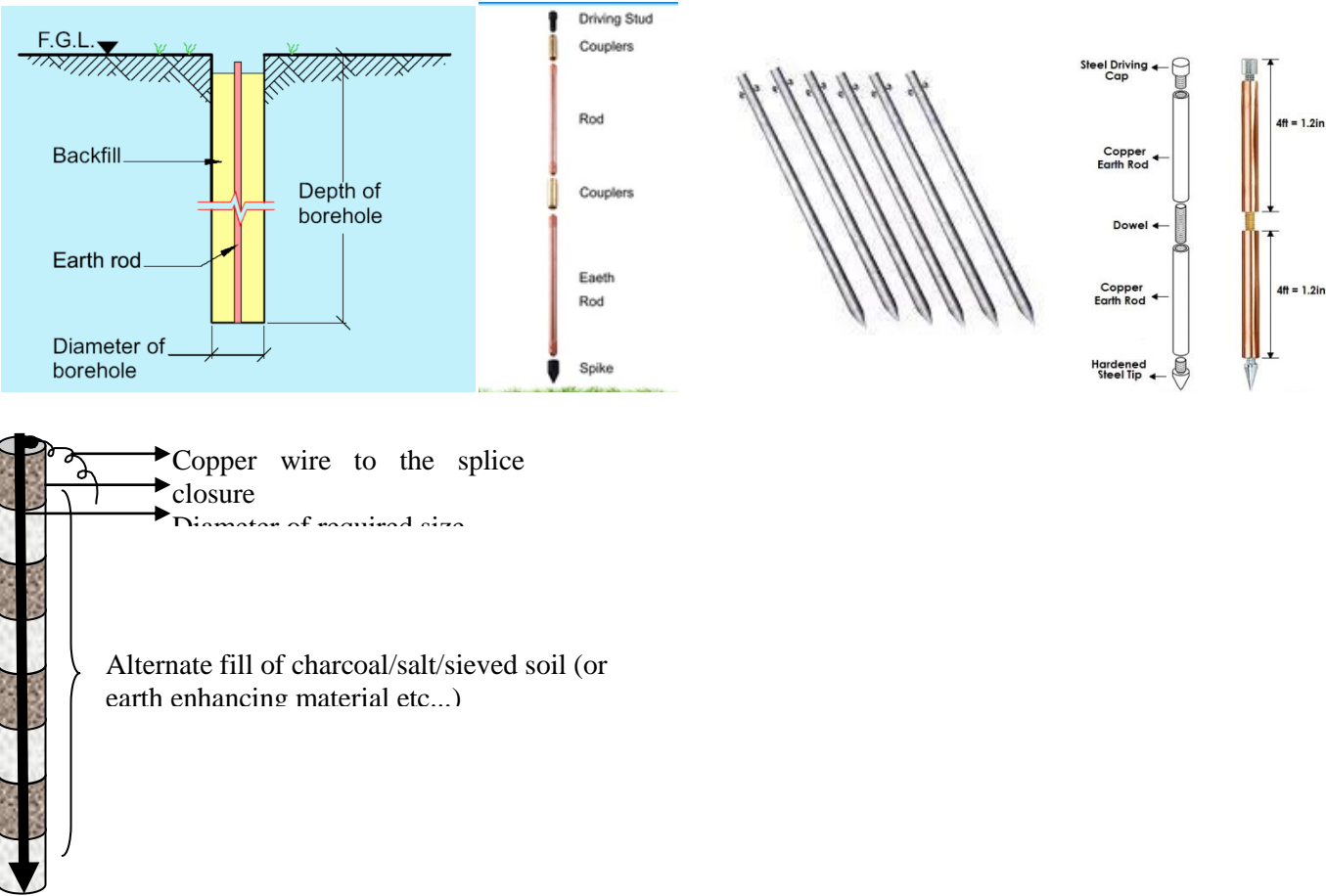
**Connecting the multiple spikes****Method of connecting earth to spike**

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**Abbreviations:**

BSNL - Bharat Sanchar Nigam Limited	m/M - Meter
cms - Centimeters	mm - Millimeter
D - Diameter	N - Newton
DWC - Double Walled Corrugated	NLD - National Long Distance
EI - Engineering Instructions	NW - Network
EPR - Earth Potential Raise	OF - Optical Fibre
FTB - Fibre Termination Box	OFC - Optical Fibre Cable
G.I. - Galvanized Iron	PLB - Permanently Lubricated
GR - Generic Requirements	PTCC - Power and Telecommunication Co-ordination Committee
HDD - Horizontal Directional Drilling	RCC - Reinforced Cement Concrete
HDPE - High Density Poly ethylene	SDCA - Switching Distance Charging Area
Kg - Kilogram	SDCC - Switching Distance Charging Centre
km/KM- Kilo meter	SSA - Secondary Switching Area
	TEC - Telecom Engineering Centre

**Reference:**

1. TEC GR: TBTO/INST.GUIDE/AOFC/44.JAN 2000
2. TEC GRs
3. EI on Earthing arrangement for transmission and switching systems
4. EI No: D – 001 issued by T&D circle on 31/01/2007
5. Earthing diagrams from google
6. Maintenance handbook on earthing & surge protection for S&T installations:  
CAMTECH/S/PROJ/10-11/HB-EARTHING/1.0 MAY 2011

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