



বাংলাদেশ টেলিকমিউনিকেশনস কোম্পানি লিমিটেড

TENDER DOCUMENT
FOR

PROCUREMENT OF PREVENTIVE AND CORRECTIVE
MAINTENANCE SERVICES OF BTCL OPTICAL FIBER

(PSN)

Invitation for Tender No :
Issued on :
Tender Package No :
Tender Lot No :

Annex Document BTCL PSN 2022



Handwritten signatures and initials of the officials involved in the procurement process.

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Section 1. Instructions to Tenderers

A. General

1. Scope of Tender	1.1 The Procuring Entity, as indicated in the Tender Data Sheet (TDS) issues this Tender Document for the procurement of non-Consulting Services as specified in the TDS and as detailed in Appendix A to the Contract. The name of the Tender and its number and identification is stated in the TDS. 1.2 The successful Tenderer will be expected to complete the performance of the Services by the Intended Completion Date as stated in the TDS.
2. Interpretation	2.1 Throughout this Tender Document: (a) the term "in writing" means communication written by hand or machine duly signed and includes properly authenticated messages by facsimile or electronic mail; (b) if the context so requires, singular means plural and vice versa; (c) "day" means calendar days unless otherwise specified as working days; (d) "Person" means and includes an individual, body of individuals, sole proprietorship, partnership, company, association or cooperative society that wishes to participate in Procurement proceedings; (e) "Tenderer" means a Person who submits a Tender; (f) "Tender Document" means the Document provided by a Procuring Entity to a Tenderer as a basis for preparation of the Tender; and (g) "Tender" depending on the context, means a Tender submitted by a Tenderer for execution of Works and physical services to a Procuring Entity in response to an Invitation for Tender
3. Source of Fund	3.1 The Procuring Entity has been allocated public funds as indicated in the TDS and intends to apply a portion of the funds to eligible payments under the Contract for which this Tender Document is issued. 3.2 For the purpose of this provision, "public funds" means any monetary resources appropriated to the Procuring Entity under Government budget, or loan, grants and credits placed at the disposal of the Procuring Entity through the Government by the development partners or foreign states or organisations. 3.3 Payments by the development partner, if so indicated in the TDS, will be made only at the request of the Government and

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	upon approval by the development partner or foreign state or Organisation in accordance with the applicable Loan / Credit / Grant Agreement, and will be subject in all respects to the terms and conditions of that Agreement.
4. Corrupt, Fraudulent, Collusive or Coercive Practices	4.1 The Government requires that Procuring Entities, as well as the Tenderers shall, during the procurement proceedings and the execution of Contracts under public funds, ensure- a. strict compliance with the provisions of Section 64 of the Public Procurement Act 2006 including amendments thereto; b. abiding by the code of ethics as mentioned in the Rule 127 of the Public Procurement Rules, 2008 including amendments thereto; c. that neither it's any officer nor any staff or any other agents or intermediaries working on its behalf engages in any practice as detailed in the Rule 127. 4.2 If corrupt, fraudulent, collusive or coercive practices of any kind is determined by the Procuring Entity against any Tenderer alleged to have carried out such practices, the Procuring Entity shall: a. exclude the concerned Tenderer from further participation in the particular procurement proceeding; or b. reject any recommendation for award that had been proposed for that concerned Tenderer; or c. declare, at its discretion, the concerned Tenderer to be ineligible to participate in further procurement proceedings, either indefinitely or for a specific period of time.
5. Eligible Tenderers	5.1 This Invitation for Tenders is open to all potential Tenderers. 5.2 Tenderers shall have the legal capacity to enter into the Contract under the Applicable Law. 5.3 Tenderers shall be enrolled in the relevant professional or trade organisations registered in Bangladesh. 5.4 Tenderers may be a physical or juridical individual or body of individuals, or company invited to take part in public procurement or seeking to be so invited or submitting a Tender in response to an Invitation for Tenders. 5.5 Tenderers shall have fulfilled its obligations to pay taxes under the provisions of laws and regulations of Bangladesh. 5.6 Tenderers and all parties constituting the Tenderer shall not have a conflict of interest. 5.7 Tenderer in its own name or its other names or also in the case of its Persons in different names, shall not be under a declaration of ineligibility for corrupt, fraudulent, collusive or coercive practices as stated under ITT Clause 4.2.



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6. Site Visit	6.1 Tenderers, at the Tenderers' own responsibility and risk, are encouraged to visit and examine the Site of required Services and its surroundings and, obtain all information that may be necessary for preparing the Tender and entering into a contract for the Services. The costs of visiting the Site shall be at the Tenderers' own expenses.
B. Tender Document	
7. Tender Document	7.1 The Sections comprising the Tender Document are listed below, and should be read in conjunction with any Addendum issued under ITT Clause 9. a. Section 1 Instructions to Tenderers (ITT) b. Section 2 Tender Data Sheet (TDS) c. Section 3 General Conditions of Contract (GCC) d. Section 4 Particular Conditions of Contract (PCC) e. Section 5 Tender and Contract Forms f. Section 6 Activity Schedule/ g. Section 7 Performance Specifications and Drawing
8. Clarification of Tender Document	8.1 A prospective Tenderer requiring any clarification of the Tender Document shall contact the Procuring Entity in writing at the Procuring Entity's address and, within time as specified in the TDS .
9. Addendum to Tender Document	9.1 At any time prior to the deadline for submission of Tenders, the Procuring Entity on its own initiative or in response to a clarification request in writing from a Tenderer, may revise the Tender Document by issuing an Addendum. 9.2 The Addendum issued under ITT Sub Clause 9.1 shall become an integral part of the Tender Document and shall have a date and an issue number and must be circulated by fax, mail or e-mail, to Tenderers who have purchased the Tender Documents, within five (5) working days of issuance of such Addendum, to enable Tenderers to take appropriate action. 9.3 If an Addendum is issued when time remaining is less than one-third of the time allowed for the preparation of Tenders, the Procuring Entity at its discretion shall extend the deadline by an appropriate number of days for the submission of Tenders, depending upon the nature of the Procurement requirement and the addendum. In any case, the minimum time for such extension shall

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	not be less than three (3) working days.
C. Qualification Criteria	
10. General Criteria	10.1 Tenderers shall possess the necessary professional and technical qualifications and competence, financial resources, equipment and other physical facilities, managerial capability, specific experience, reputation, and the personnel, to perform the contract, which entails setting pass/fail criteria, which if not met by the Tenderers, will result in consideration of its Tender as non-responsive. 10.2 In addition to meeting the eligibility criteria, as stated under ITT Clause 5, Tenderers must satisfy the other criteria stated in ITT Clauses 10 to 16 inclusive.
11. Experience Criteria	11.1 Tenderers shall have the following minimum level of experience to qualify for the performance of the non-Consultant Service under the Contract: a. a minimum number of years of general experience in contracting industries in public sector as Prime Service Provider/Sub Service Provider/Management Service Provider as specified in the TDS; b. a minimum number of years of specific experience (to comply with this requirement service contracts cited should be at least 70 percent complete) as Prime Service Provider in providing non-Consulting Service of a nature, complexity and methods/technology similar to the proposed non-Consulting Service in at least a number of contracts over the period, as specified in the TDS.
12. Financial Criteria	12.1 Tenderer shall have the following minimum level of financial capacity to qualify for the performance of the Services under the Contract. (a) the average annual turnover as specified in the TDS



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	during the period specified in the TDS; (b) availability of minimum liquid assets i.e. working capital or credit line(s) from any scheduled Bank of Bangladesh, net of other contractual commitments, of the amount as specified in the TDS.
13. Personnel Capacity	13.1 Tenderers shall have the minimum level of personnel capacity to qualify for the performance of the Services under the Contract consisting of key personnel with qualifications and experience as specified in the TDS.
14. Equipment Capacity	14.1 Tenderers shall own suitable equipment and other physical facilities or have proven access through contractual arrangement to hire or lease such equipment or facilities for the desired period, where necessary or have assured access through lease, hire, or other such method, of the essential equipment, in full working order, as specified in the TDS.
15. Joint Venture	15.1 No Joint Venture (JV) shall be permissible under this Invitation for Tenders. Tenders submitted in the form of JV shall be considered non-responsive.
16. Sub-Service Provider	16.1 The successful Tenderer shall under no circumstances assign the services or any part of it to the SubService Provider(s).
D. Tender Preparation	
17. Only One Tender	17.1 Tenderers shall submit only one (1) Tender for each package. Tenderer who submits or participates in more than one (1) Tender in one (1) package will cause all the Tenders of that particular Tenderer to be considered non-responsive.
18. Cost of Tendering	18.1 Tenderers shall bear all costs associated with the preparation and submission of its Tender, and the Procuring Entity shall not be responsible or liable for those costs, regardless of the conduct or outcome of the Tendering process.
	18.2 The Procuring Entity shall make Tender Documents available immediately to the potential Tenderers, requesting and willing to purchase at the corresponding price by the date the advertisement has been published in the newspaper.
19. Language of Tender	19.1 The Tender shall be written in the English language. Correspondences and documents relating to the Tender may be written in English or Bangla.
20. Contents of Tender	20.1 The Tender prepared by the Tenderer shall comprise the following: a. Tender Submission Letter (Form PSN-1) as stated under



	ITT Sub Clause 21.1; b. Tenderer Information (Form PSN-2) as furnished in Section 5: Tender Forms; c. the Priced Activity Schedule as stated under ITT Sub Clause 21.22 and 23; d. the Tender Security as stated under ITT Clauses 26 and 27. e. the written confirmation authorizing the signatory of the Tender to commit the Tenderer, as stated under ITT Sub Clause 30.2; f. the Valid Trade License; g. documentary evidence of Tax Identification Number (TIN) and VAT as a proof of fulfilment of taxation obligations as stated under ITT Sub Clause 5.5; h. documentary evidence as stated under ITT Clause 24 establishing the Tenderer's eligibility and minimum qualifications required to be met for due performance of the physical services under the Contract; and i. Curriculum vita of proposed manpower in case of outsourcing manpower. j. for physical service, along with academic & experience certificate in case of supply of man-power (outsourcing) as stated in section 6: Activity schedule. k. any other document as specified in the TDS.
21. Tender Submission Letter and Priced Activity Schedule	21.1 Tenderers shall submit the Tender Submission Letter (Form PSN-1), which shall be completed without any alterations to its format, filling in all blank spaces with the information requested, failing which the Tender may be considered non-responsive as being incomplete. 21.2 Tenderers shall submit the priced Activity Schedule using the form(s) furnished in Section 6: Priced Activity Schedule. 21.3 If in preparing its Tender, the Tenderer has made errors in the unit rate or price or the total price, and wishes to correct such errors prior to submission of its Tender, it may do so, but shall ensure that each correction is initialled by the authorised person of the Tenderer.
22. Tender Prices	22.1 The Contract shall be for the Services, as described in Appendix A to the contract and in Section 7: Performance Specifications and Drawing, based on the priced Activity Schedule, submitted by the Tenderer.



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	22.2 The Tenderer shall fill in rates or prices inclusive of profit, overhead, Applicable Tax & VAT for all items of the Services described in the Specifications and listed in the Activity Schedule. 22.3 The items quantified in the priced Activity Schedule for which no unit rates or prices have been entered by the Tenderer will not be paid for by the Employer when executed and shall be deemed covered by the other rates and prices in the Section 6: Activity Schedule. 22.4 All kinds of applicable taxes ,customs duties, fees, levies, VAT and other charges payable by the Service Provider under the Contract, or for any other cause, as of the date twenty-eight (28) days prior to the deadline for submission of Tenders, shall be included in the unit rates or prices and, the total Tender price submitted by the Tenderer. 22.5 The price of a Contract shall be fixed in which case the unit rates or prices may not be modified in response to changes in economic or commercial conditions. 22.6 In case of manpower supply, the remuneration of manpower shall be fixed as consolidated payment as per government circular plus applicable Tax & VAT. Tender shall quote only the commission as stated in section 6: Activity schedule. 22.7 Tenderer's quoting rate of service commission of the Tender ~~less~~the specific thresholdspecified in TDS & Section 6: Activity scheduleof the Tender Document as stated under ITT Sub 22.6, shall be rejected.
23. Tender Currency	23.1 Tenderers shall quote all prices in Bangladesh Taka (BDT) in the Tender Submission Letter and in the Activity Schedule .
24. Documents Establishing Eligibility and Qualification of the Tenderer	24.1 Tenderers shall complete and submit the documentary evidence, as applicable to satisfy the following: (a) complete the eligibility declarations in the Tender Submission Letter (Form PSN-1); (b) complete the Tenderer Information (Form PSN-2); (c) general experience in service providing as stated under ITT Sub Clause 11.1(a), substantiated by the year of registration/constitution/licensing in its country of origin; (d) specific experience in service providing under public sector of similar nature and size as stated ITT Sub Clause 11.1(b), substantiated by Completion Certificate (s) issued by the relevant Procuring Entity(s); (e) average annual turnover i.e. total certified payments

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	received for contracts in progress or completed under public sector for a period as stated under ITT Sub Clause 12.1(a), substantiated by Statement(s) of Receipts, from any scheduled Bank of Bangladesh, issued not earlier than twenty eight (28) days prior to the day of the original deadline for submission of Tenders;
	(f) adequacy of minimum liquid assets i.e. working capital substantiated by Audit Reports mentioned in (j) below or credit line(s), substantiated by any scheduled Bank of Bangladesh in the format as specified (Form PSN-5), without alteration, issued not earlier than twenty eight (28) days prior to the day of the original deadline for submission of Tenders for this Contract as stated under ITT Sub Clause 12.1(b); (g) key personnel along with their qualification and experience proposed for the Contract as stated under ITT Clause 13.1; (h) major items of service equipment proposed to carry out the Contract as stated under ITT Clause 14.1, substantiated by statement(s) in its letter-head pad declaring source of its availability; (i) authority (s) to seek references from the Tenderer's Bankers or any other sources in its letter-head pad; (j) reports on the financial standing of the Tenderer, such as profit and loss statements and audited balance sheet for the past years as specified in the TDS, substantiated by Audit Reports.



25. Validity Period of Tender	25.1 Tenders shall remain valid for the period specified in the TDS after the date of Tender submission deadline prescribed by the Procuring Entity. A Tender valid for a period shorter than that specified shall be considered as non-responsive. 25.2 In exceptional circumstances, prior to the expiration of the Tender Validity period, the Procuring Entity may solicit all the Tenderers' consent to an extension of the period of validity of their Tenders; provided that those Tenderers have passed the preliminary examination as stated under ITT Sub Clause 39.2. 25.3 The request and the responses shall be made in writing. Validity of the Tender Security provided under ITT Clause 25.2 shall also be suitably extended for twenty eight (28) days beyond the new date for the expiry of the Tender Validity. If a Tenderer does not respond or refuses the request it shall not forfeit its Tender Security, but its Tender shall no longer be considered in the evaluation proceedings. A Tenderer agreeing to the request will not be required or permitted to modify its Tender.
26. Tender Security	26.1 Tenderer shall furnish as part of its Tender, in favour of the Procuring Entity or as otherwise directed on account of the Tenderer, a Tender Security in original form (not copy) and in the amount, as specified in the TDS.
27. Form of Tender Security	27.1 The Tender Security shall be at the Tenderer's option, be either in the form of a Bank Draft or Pay Order or Bank Guarantee issued by any scheduled Bank of Bangladesh and, shall remain valid for at least twenty eight (28) days beyond the expiry date of the Tender Validity.
28. Return of Tender Security	28.1 No Tender Security shall be returned to the Tenderers before contract signing.
	28.2 Unsuccessful Tenderer's Tender Security will be discharged or returned as soon as possible but within twenty-eight (28) days after the expiry of the Tender Validity period as stated under ITT Sub Clauses 25.1.
	28.3 The Tender Security of the successful Tenderer will be discharged upon the Tenderer's furnishing of the performance security and signing of the Contract Agreement.



29. Forfeiture of Tender Security	29.1 Tender Security may be forfeited, if a Tenderer: (a) withdraws its Tender after opening of Tenders but within the validity of the Tender as stated under ITT Clause 25 ; or (b) refuses to accept a Letter of Acceptance as stated under ITT Sub Clause 50.2; or (c) fails to furnish Performance Security as stated under ITT Sub Clause 51.1 and 51.2; or (d) refuses to sign the Contract as stated under ITT Sub Clause 55.2; or (e) does not accept the correction of the Tender price following the correction of the arithmetic errors as stated under ITT Clause 43.2.
30. Format and Signing of Tender	30.1 Tenderers shall prepare one (1) original of the documents comprising the Tender as described in ITT Clause 20 and clearly mark it "ORIGINAL." In addition, the Tenderers shall prepare the number of copies of the Tender, as specified in the TDS and clearly mark each of them "COPY." All copies shall be made from the signed original. In the event of any discrepancy between the original and the copies, the ORIGINAL shall prevail. 30.2 The original and each copy of the Tender shall be typed or written in indelible ink and shall be signed by the Person duly authorized to sign on behalf of the Tenderer. This Tender specific authorization shall be attached to the Tender Submission Letter (Form PSN-1). The name and position held by each Person(s) signing the authorization must be typed or printed below the signature. All pages of the original and of each copy of the Tender, except for un-amended printed literature, shall be numbered sequentially and signed by the person signing the Tender. 30.3 Any interlineations, erasures, or overwriting will be valid only if they are signed or initialled by the Person(s) signing the Tender.
E. Tender Submission	
31. Sealing, Marking and Submission of Tender	31.1 Tenderers shall enclose the original in one (1) envelope and all the copies of the Tender, in another envelope, duly marking the envelopes as "ORIGINAL (O)" and "COPY". These sealed envelopes will then be enclosed and sealed in one (1) single outer envelope with all the relevant particulars of the Tender on the envelopes. In case of manpower supply, Technical & financial envelope shall be submitted separately in a outer envelope.
32. Deadline for Submission of Tender	32.1 Tenders shall be delivered by hand or by mail, including courier services at the address not later than the date and time, as specified in the TDS.



	32.2 The Procuring Entity may, at its discretion, extend the deadline for submission of Tender as stated under ITT Sub Clause 32.1, in which case all rights and obligations of the Procuring Entity and Tenderers previously subject to the deadline will thereafter be subject to the new deadline as extended.
33. Late Tender	33.1 Any Tender received by the Procuring Entity after the deadline for submission of Tenders as stated under ITT Sub Clause 32.1 shall be declared LATE, excluded, and returned unopened to the Tenderer.
34. Modification, or Withdrawal of Tender	34.1 Tenderers may modify or withdraw its Tender after it has been submitted by sending a written notice duly signed by the authorized signatory and properly sealed, and shall include a copy of the authorization confirmed by an affidavit authenticated by a Notary Public; provided that such written notice including the affidavit is received by the Procuring Entity prior to the deadline for submission of Tenders as stated under ITT Clause 32.
35. Tender Modification	35.1 Tenderers shall not be allowed to retrieve its original Tender, but shall be allowed to submit corresponding modification to its original Tender marked as " MODIFICATION ".
36. Withdrawal of Tender	36.1 Tenderers shall be allowed to withdraw its Tender by a Letter of Withdrawal marked as " WITHDRAWAL ".
F. Tender Opening and Evaluation	
37. Tender Opening	37.1 Tenders shall be opened immediately after the deadline for submission of Tenders at the primary place as specified in the TDS but not later than ONE HOUR after expiry of the submission deadline at the same primary place. In case of manpower supply, Financial envelope shall not be open with technical tender. 37.2 In case of manpower supply, financial envelope shall be open publicly after approval of technical evaluation report. The financial envelope of only successful tender (i.e. technically responsive with pass mark) shall be opened by TEC like one stage two envelope method. Rest financial envelope shall be returned unopened. 37.3 Tenderers' representatives shall be duly authorised by the Tenderer. Tenderers or their authorised representatives will be allowed to attend and witness the opening of Tenders, and will sign a register evidencing their attendance.

	37.4 The authenticity of withdrawal of, or modifications to original Tender, if any made by a Tenderer in specified manner, shall be examined and verified by the Tender Opening Committee (TOC) based on documents submitted as stated under ITT Sub Clause 34.1. 37.5 Ensuring that only the correct (M) and (O) envelopes are opened, details of each Tender will be dealt with as follows: The Chairperson of the Tender Opening Committee will read aloud each Tender and record in the Tender Opening Sheet (TOS) : - the name and address of the Tenderer; - state if it is a withdrawn, modified or original Tender; - the Tender price - the number of initialled corrections; - the presence or absence of any requisite Tender Security; - such other details as the Procuring Entity, at its discretion, may consider appropriate. 37.6 Upon completion of Tender opening, all members of the Tender Opening Committee and the Tenderers or Tenderer's duly authorised representatives attending the Tender opening shall sign by name, address, designation and their National Identification Numbers (if any) the Tender Opening Sheet, copies of which shall be issued to the Head of the Procuring Entity or an officer authorised by him or her and also to the members of the Tender Opening Committee and any authorised consultants and, to the Tenderers immediately. 37.7 No Tender will be rejected at the Tender opening stage except the LATE Tenders as stated in the ITT Clause 33.
38. Evaluation Process	38.1 Tender Evaluation Committee (TEC) may consider a Tender as responsive in the Evaluation, only if it is submitted in compliance with the mandatory requirements set out in the Tender Document. The evaluation process should begin immediately after Tender opening following four steps: - Preliminary Examination; - Technical Examinations and Responsiveness; - Financial evaluation and price comparison; - Post-qualification of the Tender.



39. Preliminary Examination	39.1 TEC shall examine the Tenders to confirm that all documentation requested in ITT Clause 20 has been provided, to determine the completeness of each document submitted. 39.2 TEC shall confirm that the following documents and information have been provided in the Tender. If any of these documents or information is missing, the Tender shall be rejected. (a) Tender Submission Letter; (b) Priced Activity Schedule; (c) Written confirmation of authorization to commit the Tenderer; and (d) Valid Tender Security.
40. Technical Examination and Responsiveness	40.1 If a Tender is not responsive to the mandatory requirements set out in the Tender Document, shall not subsequently be made responsive by the Tenderer by correction of the material deviation, reservation, or omission. 40.2 There shall be no requirement as to the minimum number of responsive Tenders. 40.3 There shall be no automatic exclusion of Tenders which are above or below the official estimate. 40.4 TEC shall examine the adequacy and authenticity of the documentary evidence as stated under ITT Clause 24. 40.5 TEC shall further examine the terms and conditions specified in Section 7: Performance specifications 40.6 If after the examination, TEC determines that the Tender has complied the terms and conditions and the technical aspects, set out in ITT Sub Clause 40.4 & 40.5, it shall be considered responsive. 40.7 TEC as a whole and each of its members themselves individually shall separately evaluate and marking as set forth in the TDS and rank the tender on the basis of technical point as stated in TDS in case of out sourcing (Man-power supply).as stated in ITT 20.1 & 22.6. 40.8 Technical points (Tp) as stated under ITT 40.7, not securing the precise minimum as specified in the TDS, shall be consider non-responsive.
41. Clarification on Tender	41.1 TEC may ask Tenderers for clarifications of their Tenders, including breakdowns of unit rates, in order to assist the examination and evaluation of the Tenders. 41.2 Any request for clarifications by the TEC shall not be directed towards making an apparently non-responsive Tender responsive and reciprocally the response from the concerned Tenderer shall not be articulated towards any addition, alteration or

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GM (Procurement)

BTCL

Bharat Petroleum Corporation Limited

New Delhi

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	modification to its Tender. 41.3 If a Tenderer does not provide clarifications of its Tender by the date and time, its Tender shall not be considered in the evaluation.
42. Correction of Arithmetical Errors	42.1 Provided that the Tender is responsive, the TEC shall correct arithmetical errors on the basis that; (a) if there is a discrepancy between the unit price and the line item total price that is obtained by multiplying the unit price and quantity, the unit price will prevail and the line item total price shall be corrected (b) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected and, (c) if there is a discrepancy between words and figures, the amount in words shall prevail. 42.2 Any arithmetical error or other discrepancies as stated in ITT Sub Clause 42.1 will be immediately notified by the TEC to the concerned Tenderer for acceptance.
43. Financial Evaluation	43.1 TEC shall evaluate each Tender that has been determined, up to this stage of the evaluation, to be responsive to the requirements set out in the Tender Document. 43.2 To evaluate a Tender, the TEC shall consider the Tender price after adjustments for correction of arithmetical errors, as stated under ITT Sub Clause 42.1. 43.3 Variations, deviations, alternative offers and other factors which are in excess of the requirements of the Tender Document or otherwise result in unsolicited benefits for the Procuring Entity will not be taken into account in Tender evaluation. 43.4 In case of out-sourcing (Man-power supply), the tender shall be rejected, if the tenderer quoted the price less than the threshold provided by PE as stated in section 6. Activity schedule.
44. Price Comparison	44.1 TEC will compare all responsive Tenders to determine the lowest-evaluated Tender, in accordance with ITT Clause 43. 44.2 In the extremely unlikely event that there is a tie for the lowest evaluated price, the Tenderer with the superior past performance with the Procuring Entity shall be selected, whereby factors such as Service period, quality of Service provided, complaints history and performance indicators could be taken into consideration. 44.3 The successful Tenderer as stated under ITT Sub Clauses 44.1 and 44.2 shall not be selected through lottery under any circumstances. 44.4 In case of tie for the evaluated price, the tender shall be selected based on the highest technical point scorer in regards to out-



	sourcing (Manpower).
45. Negotiations	45.1 No negotiations shall be held during the Tender evaluation or award with the lowest or any other Tenderer.
46. Post-Qualifications	46.1 The determination on Post-Qualification shall be based upon an examination of the documentary evidence of the Tenderer's eligibility and qualifications submitted by the Tenderer, pursuant to ITT Clause 24, clarifications in accordance with ITT Clause 41 and the qualification criteria indicated in ITT Clause 10,11,12,13 and 14. Factors not included therein shall not be used in the evaluation of the Tenderer's qualification. 46.2 In the event that the Tenderer with lowest evaluated Tender price fails the Post-qualification, the TEC shall make a similar determination for the Tenderer with the next lowest evaluated Tender price and so on from the remaining responsive Tenders, if the evaluated cost of the Tender is acceptable to the TEC.
47. Rejection of All Tenders	47.1 The Procuring Entity reserves the right to accept any Tender or to reject any or all the Tenders any time prior to contract award and, to annul the Procurement proceedings with prior approval of the Head of the Procuring Entity, any time prior to the deadline for submission of Tenders following specified procedures, without thereby incurring any liability to Tenderers, or any obligations to inform the Tenderers of the grounds for the Procuring Entity's action. 47.2 The Procuring Entity may, in the circumstances as stated under ITT Sub Clause 47.3 reject all Tenders following recommendations from the TEC only after the approval of such recommendations by the Head of the Procuring Entity. 47.3 All Tenders can be rejected, if - (a) the price of the lowest evaluated Tender substantially exceeds the official estimate, provided the estimate is realistic; or (b) there is evidence of lack of effective competition; such as non-participation by a number of potential Tenderers; or (c) Tenders are not responsive; or (d) evidence of professional misconduct, affecting seriously the Procurement process, is established as per Chapter Seven of the Public Procurement Rules, 2008.
48. Informing Reasons for Rejection	48.1 Notice of the rejection will be given promptly within seven (7) days of decision taken by the Procuring Entity to all Tenderers and, the Procuring Entity will, upon receipt of a written request, communicate to any Tenderer the reason(s) for its rejection but is



	not required to justify those reason(s).
G. Contract Award	
49. Award Criteria	49.1 Prior to the expiry of the Tender Validity period and within one (1) week of receipt of the approval of the award by the Approving Authority, the Procuring Entity shall issue the Letter of Acceptance (LOA) to the successful Tenderer.
50. Letter of Acceptance	50.1 The LOA, attaching the contract as per the sample (Form PSN-4) to be signed, shall state : (a) the acceptance of the Tender by the Procuring Entity; (b) the price at which the contract is awarded; (c) the date and time within which the Contract shall be signed.
	50.2 The LOA shall be accepted by the successful Tenderer within seven (7) working days from the date of its issuance.
	50.3 Until a formal contract is signed, the LOA will constitute a Contract, which shall become binding upon the signing of the Contract by both parties.
51. Performance Security	51.1 The Performance Security shall be provided by the successful Tenderer in currency at the percentage as specified in the TDS. 51.2 The Procuring Entity, upon recommendation of the TEC, may increase the amount of the Performance Security above the amounts as stated under ITT Sub Clause 51.1 but not exceeding twenty five (25) percent of the Contract price, if it is found that the Tender is significantly below the official estimated cost or unbalanced as a result of front loading. 51.3 The proceeds of the Performance Security shall be payable to the Procuring Entity unconditionally upon first written demand as compensation for any loss resulting from the Service Provider's failure to complete its obligations under the Contract.
52. Form and Time Limit for Furnishing of Performance Security	52.1 The Performance Security, as stated under ITT Clause 50, may be in the form of a Pay Order or Bank Draft, or an irrevocable Bank Guarantee in the format (Form PSN-7), issued by any scheduled Bank of Bangladesh acceptable to the Procuring Entity. 52.2 Within fourteen (14) days from the date of acceptance of the LOA but not later than the date specified therein, the successful Tenderer shall furnish the Performance Security for the due performance of the Contract in the amount as stated under ITT



	Sub Clauses 51.1 or 51.2.
53. Validity of Performance Security	53.1 The Performance Security shall be required to be valid until a date twenty eight (28) days beyond the Intended Completion Date as specified in Tender Document.
54. Authenticity of Performance Security	54.1 The Procuring Entity shall verify the authenticity of the Performance Security submitted by the successful Tenderer by sending a written request to the branch of the bank issuing the Pay Order, Bank Draft or irrevocable unconditional Bank Guarantee in specified format.
55. Contract Signing	55.1 Within twenty-eight (28) days of issuance of the LOA, the successful Tenderer and the Procuring Entity shall sign the contract provided that the Performance Security submitted by the Tenderer is found to be genuine.
	55.2 Failure of the successful Tenderer to sign the Contract, as stated under ITT Sub Clause 49.1, shall constitute sufficient grounds for the annulment of the award and forfeiture of the Tender Security. In that event the Procuring Entity may award the Contract to the next lowest evaluated responsive Tenderer, who is determined by the TEC to be qualified to perform the Contract satisfactorily.
56. Publication of Award of Contract	56.1 The LOA for Contracts of Taka one (1) crore and above shall be notified by the Procuring Entity to the Central Procurement Technical Unit within seven (7) days of issuance of the LOA for publication in their website and, that of below Taka one (1) crore shall be immediately published by the Procuring Entity on its Notice Board and where applicable on the website of the Procuring Entity.
57. Debriefing of Tenderers	57.1 Debriefing of Tenderers by the Procuring Entity shall outline the relative status and weakness only of his or her Tender requesting to be informed of the grounds for not accepting the Tender submitted by him or her without disclosing information about any other Tenderer. In the case of debriefing, confidentiality of the evaluation process shall be maintained.
58. Debriefing of Tenderers	58.1 Tenderer has the right to complain in accordance with the Public Procurement Act 2006 and the Public Procurement Rules, 2008.



Section 2: Tender Data Sheet

Instructions for completing TDS are provided in italics in parenthesis for the relevant ITT clauses

ITT Clause	Amendments of, and Supplements to, Clauses in the Instructions to Tenderers
	IFT IDENTIFICATION NO:
A. General	
ITT 1.1	The Employer is Managing Director, Bangladesh Telecommunications Company Limited(BTCL),Telejogajog Bhaban,37/E Eskaton Garden,Dhaka-1000. Represented by: GM (Procurement),BTCL, Annex Building, BTCL Sher-E-Bangla Nagar,Dhaka. The Name of the Service is: Procurement of Preventive and Corrective Maintenance Services of Optical Fiber of BTCL Brief Description: Maintain and Repair OFC Network of BTCL in prescribed areas Tender Ref: LOT-A ○ Preventive and Corrective Maintenance Services of Optical Fiber of BTCL at (Khulna, Jashore, satkhira, Kushtia, Jhinaidha, Narail, Magura, Faridpur, Rajbari, Chuadanga, Mehorepur, Bagerhat, Madaripur, Sariatpur, Barishal, Bhola, Zalokati, Patuakhali, Bargona, Pirojpur, Gopalganj, Sirajganj, Pabna, Natore, Rajshahi, Nawabganj, Naogaon, Bogra, Joipurhat, Gaibandha, Rangpur Lalmonirhat, Kurigram, Nilphamari, Dinajpur, Thakurgaon and Panchagarh) LOT-B ○ Preventive and Corrective Maintenance Services of Optical Fiber of BTCL at (Tangail, Mymensingh, Netrokuna, Kishoreganj, Jamalpur, Sherepur, Dhaka, Gazipur, Manikganj, Narayanganj, Narsingdi, Munshiganj, Cumilla, Noakhali, Feni, Laksmipur, Chadpur, Sylhet, Sunamganj, Hobiganj, Moulovibazar, B-Baria, Rangamati, Khagrachari, Bandarban, Chattogram and Coxbazar)



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ITT 1.2	The Intended Completion Date of the Contract is: 1 (one) year from the Starting date of providing Services.
ITT 3.1	The source of fund is BTCL fund. Fund will be allocated from <i>BTCL</i> .
B. Tender Document	
ITT 8.1	For <u>clarification of Tender Document purposes</u> only, the Procuring Entity's address is: Attention: GM (Procurement), BTCL Address :Annex Building, BTCL Sher-E-Bangla Nagar,Dhaka Telephone : +880 2 E-mail :gm.procurement@gmail.com Website : www.btcl.com.bd
C. Qualification Criteria	
ITT 11.1(a)	The minimum of years of general experience of the Tenderer in the supply of Goods and related services as Service Provider shall be 3 (Three) years..
ITT 11.1(b)	The minimum specific experience as Service Provider in supply of similar Services of at least <i>01 (One)</i> contract(s) successfully completed within the last <i>05 (Five)</i> years, each with a value of at least Tk. Two Crore <i>TenLakh (2.1 Crore)</i> for Lot LOT-A, and 2 Crore Ninety Lakh(2.9 Crore) for LOT-B Services means Procurement of Preventive and Corrective Maintenance Services of Optical Fiber of BTCL.
ITT 12.1(a)	The required average annual turnover of the Tenderer shall be at least of the amount of Tk 1.5 core for LOT-A and Tk 2 Crore for LOT-B over the last three years
ITT 12.1(b)	The minimum amount of liquid assets i.e., working capital or credit line(s) of the Tenderer shall be Tk 1.25 Crore for LOT A and 1.75 Crore for LoT B

ITT 13.1	A Contract Supervisor shall have the following qualifications and experience: in each regional office and site office				
	No	Position	Total Works Experience (Years)	Experience in similar works (Years)	Team For
	1	B. Sc in Engg.Civil – 1 (one) no	3 (three)	2 (two)	Regional Office
	1	Diploma Engineer Civil – 2 (Two) nos Electrical-01(one)	3 (three)	2 (two)	For each Regional and Local office
	2	OFC jointer– 3(three) nos	2 (two)	2 (two)	For each Regional and Local office
	As required	Preventive Service Checker	2 (two)	2 (two)	For each Regional and Local office
	As required	Guard Eight Pass	No Need	No Need	Local Office
ITT 14.1	The Tenderer shall own or have proven access to hire or lease of the major Service equipment, in full working order as follows as stated in Section 6 & 7				
D. Tender Preparation					
ITT 20.1(k)	The Tenderer shall submit with its Tender the following additional documents: <i>That the tenderer or his partner or his sister concern is not an NTTN operator or does not have NTTN licences. Submit form Form-10</i> If Tenderer does not provide such statement, then Tenderer will be Non Responsive and his Tender will not proceed further.				
ITT 22.7	Threshold limit of service commission not less than [insert percentage]				
ITT 24.1(j)	The required reports on the financial standing, such as profit and loss statements and audited balance sheet shall be for the past one year.				
ITT 25.1	The Tender Validity period shall be 90(Ninety) days.				
ITT 26.1	The amount of the Tender Security shall be Tk. 31 (Thirty One) Lakh for LoT-A and Tk 42 (Forty Two) Lakh for Lot-B in favour of GM (Procurement),BTCL Bangladesh Telecommunications Company Limited (BTCL) Annex Building, BTCL Sher-E-Bangla Nagar,Dhaka				



E. Tender Submission	
ITT 30.1	In addition to the Original of the Tender, 3 (Three) Copy/copies shall be submitted.
ITT 32.1	For <u>Tender submission purposes</u> only, the Procuring Entity's address is: Attention: GM (Procurement),BTCL Address: Annex Building, BTCL Sher-E-Bangla Nagar,Dhaka The deadline for the submission of Tenders is: Time & Date: As mentioned in Tender Notice
F. Tender Opening and Evaluation	
ITT 37.1	The Tender opening shall take place at: Address: <i>BTCL Head Office Telejogajog Bhavan 37/E Eskaton Garden Dhaka.</i> Time & Date: Time & Date: As mentioned in Tender Notice
ITT 40.7	The point to be given as following:(in case of man-power supply) Not Applicable
ITT 40.8	The minimum technical points (Tp) required to pass is 70% in case of manpower supply for individually and aggregated. Not Applicable.
G. Contract Award	
ITT 51.1	The amount of Performance Security shall be 10% (ten percent) of the Contract price in the currency of Bangladesh Taka. The amount of Performance Security may be progressively reduced in proportion to performance of services.



Section 3. General Conditions of Contract

A. General

1 Definitions

1.1 In the Conditions of Contract, which include Particular Conditions and these General Conditions; the following words and expressions shall have the meanings hereby assigned to them. Boldface type is used to identify the defined terms:

(a) **Approving Authority** means the authority which, in accordance with the Delegation of Financial Powers, approves the award of Contract for the Procurement of Goods, Works and Services;

(b) **Appropriate Authority** means the authority that gives decision on specific issues as per delegation of administrative and/or financial powers;

(c) **Completion** means the fulfilment of the Services by the Service Provider in accordance with the terms and conditions set forth in the Contract;

(d) **Completion Date** is the date of actual completion of the fulfilment of the Services certified by the Employer, in accordance with GCC Clause 49.1;

(e) **Contract Agreement** means the Agreement entered into between the Employer and the Service Provider together with the Contract Documents;

(f) **Contract Documents** means the documents listed in the Agreement, including any Addendum thereto, that is these General Conditions of Contract (GCC), the Particular Conditions of Contract (PCC), and the Appendices;

(g) **Contract Price** means the price to be paid for the performance of the Services, in accordance with GCC Clause 41.1;

(h) **Day** means calendar day unless otherwise specified as working days;

(i) **Effective Date** means the date on which this Contract comes into force pursuant to GCC Clause 11.1;

(j) **Employer** is the party named in the PCC who engages the Service Provider to perform the Services;

(k) **Force Majeure** means an event which is beyond the reasonable control of a Party, is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of a Party, and which makes a Party's performance of its obligations hereunder impossible or so impractical as reasonably to be considered impossible in the circumstances, and includes, but is not limited to, war, riots, civil disorder, earthquake, fire, explosion, storm, flood, epidemics, or other adverse weather conditions, strikes, lockouts or



	other industrial action (except where such strikes, lockouts or other industrial action are within the power of the Party invoking Force Majeure to prevent), confiscation or any other action by Government agencies. Force Majeure shall not include insufficiency of funds or failure to make any payment required hereunder; (l) GCC means the General Conditions of Contract; (m) Government means the Government of the People's Republic of Bangladesh; (n) Intended Completion Date is the date on which it is intended that the Service Provider shall complete the Services as specified in the PCC; (o) Month means calendar month; (p) Party means the Employer or the Service Provider, as the case may be, and "Parties" means both of them; (q) Personnel means professionals and support staff provided by the Service Provider and, assigned to perform the Services or any part thereof; (r) Reimbursable expenses mean all assignment-related costs other than Service Provider's remuneration. (s) Remuneration means all costs related to payments of fees to the Service Provider for the time spent by the professional and other staff on assignment related activities; (t) PCC means the Particular Conditions of Contract by which the GCC may be amended or supplemented; (u) Services means the work to be performed by the Service Provider pursuant to this Contract, as described in Appendices A to E of the Contract Agreement; (v) Service Provider is a Person or a corporate body whose tender to provide the Services has been accepted by the Employer and as specified in the PCC; (w) Third Party means any person or entity other than the Government, the Employer and the Service Provider; (x) Writing means communication written by hand or machine duly signed and includes properly authenticated messages by facsimile or electronic mail.
2. Communications and Notices	2.1 Communications between Parties (notice, request or consent required or permitted to be given or made by one party to the other) pursuant to the Contract shall be in writing to the address as specified in the PCC.
3. Governing Law	3.1 The Contract shall be governed by and interpreted in accordance with the laws of the People's Republic of Bangladesh.

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4. Governing Language	4.1 The Contract shall be written in English. All correspondences and documents relating to the Contract may be written in English or Bangla.
5. Documents Forming the Contract and Priority of Documents	5.1 The documents forming the Contract Agreement shall be interpreted as in the Contract Agreement in Section 5
6. Assignment	6.1 The Service Provider shall not assign, transfer, pledge or make other disposition of this Contract or any part thereof, or any of the Service Provider's rights, claims or obligations under this Contract except with the prior written approval of the Employer.
7. Eligible Services	7.1 The Service Provider shall be a national of Bangladesh.
8. Taxes and Duties	8.1 The Service Provider shall be entirely responsible for all applicable taxes, custom duties, other levies imposed or incurred inside and outside Bangladesh. 8.2 Tenderer is subjected to local Taxes as per the applicable Law, in case out-sourcing (Man power supply). AIT deducted from the commission at source, or as per legislative change. 8.3 Tenderer and his deployed workers/manpower is subjected to VAT on amounts payable by the client as per the applicable Law in case out-sourcing (Man power supply) which will be deducted at source.
9. Corrupt, Fraudulent, Collusive or Coercive Practices	9.1 The Government requires that Employer, as well as Service Provider shall, during the Procurement proceedings and the execution of Contracts under public funds, ensure- (a) strict compliance with the provisions of Section 64 of the Public Procurement Act, 2006; (b) abiding by the code of ethics as mentioned in the Rule 127 of the Public Procurement Rules, 2008; (c) that neither it, nor any other member of its staff, or any other agents or intermediaries working on its behalf engages in any such practice as detailed in GCC Sub Clause 9.1(b). 9.2 Should any corrupt or fraudulent practice of any kind come to the knowledge of the Employer, it shall, in the first place, allow the Service Provider to provide an explanation and shall take actions only when a satisfactory explanation is not received. Such decision and the reasons therefore, shall be recorded in the procurement proceedings and promptly communicated to the Service Provider concerned. Any communications between the Service Provider and the Employer related to matters of alleged fraud or corruption shall be in writing.



	9.3 If corrupt, fraudulent, collusive or coercive practices of any kind determined by the Employer against the Service Provider alleged to have carried out such practices, the Employer will : (a) exclude the Service Provider from further participation in the particular Procurement proceeding; or (b) declare, at its discretion, the Service Provider to be ineligible to participate in further Procurement proceedings, either indefinitely or for a specific period of time.
B. Commencement, Completion and Modification	
10. Program	10.1 Before commencement of the Services, the Service Provider shall submit to the Employer for approval a Program showing the general methods, arrangements, order and timing for all activities. The Services shall be carried out in accordance with the approved Program as updated.
11. Effectiveness of Contract	11.1 The Contract shall come into force on the date the Contract is signed by both Parties and such other date as specified in the PCC.
12. Starting Date	12.1 The Service Provider shall commence carrying out the Services not later than the number of days as specified in the PCC, after the date the Contract becomes effective.
13. Intended Completion Date	13.1 Unless terminated earlier pursuant to GCC Clauses 48 to 57, the Service Provider shall complete the activities by the Intended Completion Date as specified in the PCC.
14. Modifications or Variations	14.1 The Employer may notify the Service Provider to alter, amend, omit, add to, or otherwise vary the services, provided that the changes in the Services involved are necessary for the satisfactory completion of the assignment.
	14.2 Any modification or variation of the terms and conditions of the Contract, including any modification or variation of the Scope of the Services, may only be made by written agreement between the Parties. Each Party shall give due consideration to any proposals for modification or variation made by the other Party.
C. Service Provider's Personnel	
15. General	15.1 The Service Provider shall employ and provide such qualified and experienced Personnel as are required to carry out the Services under the Contract.



16. Description of Personnel	16.1 The title, agreed job description, precise minimum qualification and period of engagement in carrying out of the Services of each of the Service Provider's Key Personnel are described in Appendix C , to the Contract.
	16.2 The periods of engagement of Key Personnel set forth in Appendix-C may be increased by agreement in writing between the Employer and the Service Provider, if additional work is required beyond the Scope of the Services specified in Appendix A to the Contract. In case that will cause payments under the Contract to exceed the ceiling set forth in GCC Sub Clause 40.1 of this Contract, this will follow procedures as stated under GCC Clause 14.1, including prior review where necessary.
17. Approval of Personnel	17.1 The Employer approves the Key Personnel listed by title as well as by name in Appendix C to the Contract. In respect of other Personnel that the Service Provider proposes to use in carrying out of the Services, the Service Provider shall submit to the Employer for review and approval a copy of their Curricula Vitae (CVs).
18. Removal and/or Replacement of Personnel	18.1 Except as the Employer may otherwise agree, no changes shall be made in the Personnel. If, for any reason beyond the reasonable control of the Service Provider, it becomes necessary to replace any of the Personnel, the Service Provider shall forthwith provide as a replacement a person of equivalent or higher qualifications acceptable to the Employer.
D. Obligations of the Service Provider	
19. General	19.1 The Service Provider shall perform the Services and carry out its obligations hereunder with all due diligence, efficiency and economy, in accordance with generally accepted professional standards and practices, and shall observe sound management practices, and employ appropriate technology and safe and effective equipment, machinery, materials and methods. The Service Provider shall always act, in respect of any matter relating to this Contract or to the Services and, shall at all times support and safeguard the Employer's legitimate interests in any dealings with Third Parties.
20. Conflict of Interests	20.1 The Service Provider shall hold the Employer's interests paramount, without any consideration for future work, and strictly avoid conflict with other assignments or their own corporate interests, pursuant to Rule 55 of the Public Procurement Rules, 2008 including amendment thereto.



21. Service Provider Not to Benefit from Commissions Discounts etc.	21.1 The Service Provider shall not accept for their own benefit any trade commission, discount or similar payment in connection with activities pursuant to this Contract or in the discharge of their obligations hereunder, and the Service Provider shall use their best efforts to ensure that any Personnel and agents of either of them, similarly shall not receive any such additional remuneration.
22. Service Provider and Affiliates not to Engage in Certain Activities	22.1 The Service Provider agrees that, during the term of this Contract and after its termination, the Service Provider and any entity affiliated with the Service Provider, shall be disqualified from providing goods, works or services (other than the services or continuation thereof for any project resulting from or closely related to this service.
23. Prohibition of Conflicting Activities	23.1 The Service Provider, during the term of this Contract, shall not engage, and shall cause their Personnel not to engage, either directly or indirectly, in any business or professional activities in Bangladesh that would conflict with the activities assigned to them under this Contract.
24. Confidentiality	24.1 The Service Provider and the Personnel shall not at any time disclose any proprietary or confidential information relating to the Project, the Services, this Contract, or the Employer's business or operations without the prior written consent of the Employer.
25. Indemnification	25.1 The Service Provider shall indemnify, hold and save harmless, and defend, at its own expense, the Employer, its officials, agents, and employees from and against all suits, claims, demands, and liability of any nature or kind, including their costs and expenses, arising out of acts or omissions of the Service Provider, or the Service Provider's officers, agents, and employees, in the performance of this Contract. This provision shall extend, inter alia, to claims and liability in the nature of Employer's liability and Workmen's compensation, products liability and liability arising out of the use of patented inventions or devices, copyrighted material or other intellectual property by the Service Provider, its officers, agents and employees. 25.2 The obligations as stated under GCC Sub Clause 19.1 shall not lapse upon conclusion or termination of this Contract provided that the Service provider is notified of such actions, claims, losses or damages not later than the number of months as specified in the PCC.



26. Insurance to be taken out by the Service Provider	26.1 The Service Provider, if so specified in the PCC, (a) shall take out and maintain at their own cost, but on terms and conditions approved by the Employer, insurance against the risks, and for the coverage; and (b) at the Employer's request, shall provide evidence to the Employer showing that such insurance has been taken out and maintained and that the current premiums have been paid.
27. Accounting, Inspection and Auditing	27.1 The Service Provider shall (a) keep accurate and systematic accounts and records in respect of the Services hereunder, in accordance with nationally/internationally accepted accounting principles and in such form and detail as will clearly identify all relevant changes in time and costs, and the bases thereof; and (b) periodically permit the Employer or its designated representative up to five (5) years from the conclusion or termination of this Contract, to inspect the same and make copies as well as to have them audited by auditors appointed by the Employer, if so required by the Employer.
28. Service Provider's Actions Requiring Employer's Prior Approval	28.1 The Service Provider shall obtain the Employer's prior approval in writing before taking any of the following actions: (a) any change or addition to the Personnel listed in Appendix C to the Contract; (b) any change in the Program of activities; and (c) any other action that may be specified in the PCC.
29. Reporting Obligations	29.1 The Service Provider shall submit to the Employer the reports and documents specified in Appendix B to the Contract hereto, in the form, in the numbers and within the time periods set forth in the Appendix B.
30. Proprietary Rights on Documents Prepared by the Service Provider	30.1 All plans, maps, diagrams, drawings, specifications, designs, statistics, reports, other documents, data and software compiled or prepared by the Service Provider for the Employer under this Contract shall become and remain the absolute property of the Employer, and the Service Provider shall, not later than upon conclusion or termination of this Contract, deliver all such documents to the Employer, together with a detailed inventory.



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31. Liquidated Damages	31.1	If the Service Provider does not complete the activities by the Intended Completion Date, it shall be liable to pay liquidated damage as stated under GCC Sub Clause 31.2.
	31.2	The Service Provider shall pay liquidated damages to the Employer at the rate per day stated in the PCC for each day that the Completion Date is later than the Intended Completion Date. The total amount of liquidated damages shall not exceed the amount defined in the PCC. The Employer may deduct liquidated damages from payments due to the Service Provider. Payment of liquidated damages shall not affect the Service Provider's liabilities.
32. Correction for Over-payment	32.1	If the Intended Completion Date is extended after liquidated damages have been paid, the Employer shall correct any overpayment of liquidated damages by the Service Provider by adjusting the next payment certificate. The Service Provider shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in GCC Sub Clause 45.1.
33. Lack of Performance damages claim	33.1	If the Service Provider has not corrected a Defect within the time specified in the Employer's notice, damages for Lack of performance will be paid by the Service Provider. The amount to be paid will be calculated as a percentage of the cost of having the Defect corrected, assessed as described in GCC Sub clause 53.1 and, as specified in the PCC.
34. Performance Security	34.1	The Employer shall notify the Service Provider of any claim made against the Bank issuing the Performance Security.
	34.2	The Employer may claim against the security if any of the following events occurs for fourteen (14) days or more. (a) The Service Provider is in breach of the Contract and the Employer has duly notified him or her; and (b) The Service Provider has not paid an amount due to the Employer and the Employer has duly notified him or her.
	34.3	In the event the Service Provider is liable to pay compensation under the Contract amounting to the full value of the Performance Security or more, the Employer may call the full amount of the Performance Security.
E. Obligations of the Employer		
35. Assistance and Exemptions	35.1	The Employer shall use its best efforts to ensure that the Government shall:



	(a) provide the Service Provider and Personnel with documents as shall be necessary to enable the Service Provider or Personnel to perform the Services; (b) issue to officials, agents and representatives of the Government all such instructions as may be necessary or appropriate for the prompt and effective implementation of the Services; (c) assist the Service Provider in obtaining necessary licenses and permits needed to carry out the Services; and (d) provide to the Service Provider and Personnel any such other assistance as may be specified in the PCC.
36. Change in the Applicable Law Related to Taxes	36.1 If, after the date of signing of the Contract, and during the performance of the Contract, there is any change in the Applicable Law with respect to taxes which increases or decreases the cost incurred by the Service Provider in performing the Services, then the amounts otherwise payable to the Service Provider under this Contract shall be increased or decreased accordingly by agreement between the Parties hereto, and corresponding adjustments shall be made to the ceiling amount specified in GCC Sub Clause 40.1.
37. Services and Facilities	37.1 The Employer shall make available to the Service Provider, for the purposes of the Services, free of any charge, the services and facilities described in Appendix E to the Contract at the times and in the manner specified.
38. Payment	38.1 In consideration of the Services performed by the Service Provider under this Contract, the Employer shall make to the Service Provider such payments and in such manner as stated under GCC Clauses 39 to 48.
F. Payments to the Service Provider	
39. Payments: General	39.1 All payments under this Contract shall be made to the account of the Service Provider as specified in the PCC.
40. Lump-Sum Payment	40.1 The total payment due to the Service Provider shall not exceed the Contract Price which is an all-inclusive fixed lump-sum covering all costs required to carry out the Services described in Appendix A ; except as stated under GCC Sub Clause 42.1.
41. Contract Price	41.1 The Contract Price is set forth in the PCC.
42. Payment for Additional Services	42.1 Payment for additional Services shall be made as agreed under GCC Sub Clause 14.



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43. Terms and Conditions of Payment	43.1	Payments in respect of the Services shall be made according to the payment schedule stated in the PCC after the conditions listed in the PCC for such payment have been met, and the Service Provider has submitted an invoice, not later than fifteen (15) days after the condition met, to the Employer specifying the amount due. The Employer shall pay the Service Provider within thirty (30) days after the receipt of the invoices.
	43.2	Payment will be made individually to the each deployed manpower and Service Provider's commission to their individual account by cross cheque or pay advice subjected to submitted and approved invoice as stated in GCC 43.1 in case of out sourcing (Man-power supply) .
	43.3	In the event of termination of this Contract pursuant to GCC Clauses to 48 to 57, the Employer shall make the payments to the Service Provider for Services satisfactorily performed prior to the effective date of termination.
44. Advance Payment	44.1	If so specified in the PCC , an Advance Payment for Mobilization, Materials and Supplies shall be made to the Service Provider, of the amount and within the number of days after the Effective Date as specified in the PCC . The Advance Payment shall be made against the provision by the Service Provider of an unconditional Bank Guarantee for the same amount which shall: (a) remain effective until the Advance Payment has been fully amortized as specified in the PCC ; and (b) be in the format as shown in PSN-8
	44.2	Advance Payments will be amortized by the Employer in instalments as specified in the PCC until fully amortized.
45. Interest on Delayed payment	45.1	If the Employer has delayed payment beyond thirty (30) days after the due date, interest at the annual rate as specified in the PCC shall become payable as from the above due date on any amount due by, but not paid on, such due date.
46. Amendment to Contract	46.1	The amendment to Contract shall generally include extension of time to the Intended Completion Date, increase or decrease in original Contract price and any other changes duly approved under the Conditions of the Contract.
	46.2	The Employer contracting shall amend the Contract incorporating the required approved changes subsequently introduced to the original Terms and Conditions of the



	Contract in line with the Rules.
47. Final Payment	47.1 The final payment under this Contract shall be made only after the final report and a final statement, identified as such, shall have been submitted by the Service Provider and approved as satisfactory by the Employer.
48. Suspension of Payments	48.1 The Employer may, by written notice of suspension to the Service Provider, suspend all or part of the payments to the Service Provider hereunder if the Service Provider fails to perform any of its obligations under this Contract, including the carrying out of the Services, provided that such notice of suspension: (a) shall specify the nature of the failure, and (b) shall request the Service Provider to remedy such failure within a period not exceeding thirty (30) days after receipt by the Service Provider of such notice of suspension.
G. Time Control	
49. Completion of Services	49.1 The Service Provider shall carry out the Services in accordance with the Programme submitted by the Service Provider, as updated with the approval of the Employer and complete them by the Intended Completion Date as stated under GCC Clause 17.1.
50. Extension of the Intended Completion Date	50.1 In the event the Service Provider is unable to complete the assignment by the Intended Completion Date it may request the Employer to extend the Intended Completion Date giving reasons. The Employer shall extend the Intended Completion Date in the circumstances of Force Majeure defined under GCC Sub Clause 1.1 (k).
51. Progress Meeting	51.1 The Employer and the Service Provider shall arrange progress meetings at regular intervals to review the progress and performance of the works.
H. Quality Control	
52. Identifying Defects	52.1 The principle and modalities of Inspection of the Services by the Employer shall be as indicated in the PCC. The Employer shall check the Service Provider's performance and notify him or her of any Defects that are found. Such checking shall not affect the Service Provider's responsibilities.



53. Correction of Defects, and Lack of Performance Penalty	53.1 If the Service Provider has not corrected a Defect within the time specified in the Employer's notice, the Employer will assess the cost of having the Defect corrected, the Service Provider will pay this amount, and a Penalty for Lack of Performance calculated as described in GCC Sub Clause 33.1.
I. Termination	
54. Termination for Default	54.1 The Employer or the Service Provider, without prejudice to any other remedy for breach of Contract, by notice of default sent to the other party, may terminate the Contract in whole or in part if the other party causes a fundamental breach of contract. In such an occurrence one party shall give not less than thirty (30) days' written notice of termination to the other party.
55. Termination for Insolvency	55.1 The Employer and the Service Provider may at any time terminate the Contract by giving notice to the other party if: (a) the Employer becomes bankrupt or otherwise insolvent; (b) the Service Provider becomes insolvent or bankrupt or enter into any agreements with their creditors for relief of debt or take advantage of any law for the benefit of debtors or go into liquidation or receivership whether compulsory or voluntary; or (c) in such event, termination will be without compensation to any party, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to the other party.
56. Termination for Convenience	56.1 The Employer, by notice sent to the Service Provider, may in its sole discretion and for any reason whatsoever, terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Employer's convenience, the extent to which performance of the Service Provider under the Contract is terminated, and the date upon which such termination becomes effective.
57. Termination because of Force Majeure	57.1 The Employer and the Service Provider may at any time terminate the Contract by giving notice to the other party if, as the result of Force Majeure , the Service Provider is unable to perform a material portion of the Services for a period of not less than sixty (60) days.



J.Settlement of Disputes	
58. Amicable Settlement	58.1 The Employer and the Service Provider shall use their best efforts to settle amicably all disputes arising out of or in connection with this Contract or its interpretation.
59. Adjudication	59.1 The Adjudicator named in the PCC is jointly appointed by the parties. In case of any disagreement between the parties at a later stage, the Appointing Authority as specified in the PCC shall appoint the Adjudicator within fourteen (14) days of receipt of such request from either party.
	59.2 If any dispute arises between the Employer and the Service Provider in connection with, or arising out of, the Contract or the provision of the Services, whether during carrying out the Services or after their completion, the matter shall be referred to the Adjudicator within fourteen (14) days of the notification of disagreement of one party to the other.
	59.3 The Adjudicator shall give a decision in writing within twenty eight (28) days of receipt of a notification of a dispute.
	59.4 The Adjudicator shall be paid by the hour at the rate specified in the PCC, together with reimbursable expenses of the types specified in the PCC, and the cost shall be divided equally between the Employer and the Service Provider, whatever decision is reached by the Adjudicator. Either party may refer a decision of the Adjudicator to an Arbitrator within twenty eight (28) days of the Adjudicator's written decision. If neither party refers the dispute to arbitration within the above twenty eight (28) days, the Adjudicator's decision will be final and binding.
	59.5 Should the Adjudicator resign or die, or should the Employer and the Service Provider agree that the Adjudicator is not functioning in accordance with the provisions of the Contract, a new Adjudicator will be jointly appointed by the Employer and the Service Provider. In case of disagreement between the Employer and the Service Provider, the Adjudicator shall be appointed by the Appointing Authority as specified in the PCC at the request of either party, within fourteen (14) days of receipt of such request.
60. Arbitration	60.1 If the Parties are unable to reach a settlement within twenty-eight (28) days of the first written correspondence on the matter of disagreement, then either Party may give notice to the other party of its intention to commence arbitration. Arbitration may be commenced prior to or after delivery of the Services under the Contract. Arbitration proceedings shall be conducted in accordance with the Arbitration Act



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	(Act No 1 of 2001) of Bangladesh as at present in force at the location specified in the PCC.
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Section 4. Particular Conditions of Contract

GCC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
	IFTIDENTIFICATION NO:
1.1 (j)	The Employer is: Managing Director, Bangladesh Telecommunications Company Limited (BTCL), Telejogajog Bhaban, 37/E Eskaton Garden, Dhaka-1000 The Service Provider is [name, address and name of authorized representative]
1.1 (n)	The Intended Completion Date of the Contract is: 1 (one) year from the Starting date of providing Services. The Contract may be extended by the Employer, if necessary.
GCC 2.1	The addresses for Communications and Notices are: Employer GM (Procurement), BTCL Bangladesh Telecommunications Company Limited (BTCL) Annex Building, BTCL Sher-E-Bangla Nagar, Dhaka Facsimile : +880 2 41020700 E-mail : gm_procurement@gmail.com Service Provider Attention : Facsimile : E-mail :
GCC 11.1	The date on which this Contract shall come into force is on the date the Contract is signed by both parties 10 days . [usually the date on which the Contract is signed or a date after any conditions of effectiveness of the Contract are met, e.g. receipt by the

AK. 







	Service Provider of Advance Payment and by the Employer of the Advance Payment Guarantee; refer GCC Sub Clause 50]
GCC 12.1	The Starting Date for commencement of Services shall be Ten(10) days after the date the Contract becomes effective.
GCC 13.1	The Intended Completion Date of the Contract is: 1 (one) year from the Starting date of providing Services.
GCC 25.2	The Service Provider is notified of such actions, claims, losses or damages not later than [insert number] after conclusion or termination of the Services.
GCC 26.1(a)	The risks and the coverage shall be as follows: Not required. Insurance against loss of or damage to (i) office space and its fittings and fixtures under this Contract, and (ii) the Service Provider's property used in the performance of the Services <i>Sum insured [insert 10 percent of the Contract price]</i>
GCC 28.1(c)	The other actions that shall require Employer's approval are: Change of OFC if not assigned to do so, to do any activities related to OFC which are not assigned and declared to do in this tender. .
GCC 31.2	The Liquidated Damages is maximum 1% of the Contract Price per day of delay of Completion of the Services. Not Applicable. This contract is depending on daily work of building of new OFC, maintaining the OFC, Patrolling the OFC, providing security of OFC, Maintaining MTTR and Availability of Links. So there is no schedule structure of work which will complete in a prescribed period. So This rule will not applicable here. The maximum amount of the Liquidated Damages for the whole Contract is [insert percentage] of the final Contract Price.
GCC 33.1	The percentage of the cost of having a Defect assessed to be used for the calculation of Lack of Performance Penalty will be followed accordingly to the Clause 17 of Section 7.
GCC 35.1(d)	Assistance and exemptions for carrying out the Services to be provided by the Employer are : None
GCC 39.1	The particulars of the Bank Account nominated are as follows : Title of the Account : [insert title to whom the Contract awarded] Name of the Bank : [insert name with code, if any] Name of the Branch : [insert branch name with code ,if any] Account Number : [insert number] Address : [insert location with district]



[Handwritten signatures and initials]

	Tel: Fax: e-mail address: [information furnished by the Service Providers shall be substantiated by the concerned Bank and authenticated by the Employer] Individual bank account of each workers shall be provided after the contract, in case of manpower supply contract
GCC 41.1	The Contract ceiling amount is:
GCC 43.1	Progress payments shall be made on quarterly basis subject to certification by the officer from relevant DGM Transmission wing of BTCL that the Services have been rendered satisfactorily. The Service Provider will submit an invoice of any month within fifteen (15) days of the next month to the Employer (BTCL) specifying the amount due. The Employer shall pay the Service Provider within thirty (30) days after the receipt of the invoices. As per Government rule Vat/Taxes and other impositions will be deducted from the monthly bill of the service provider.
GCC 44.1	Advance Payment: [insert percentage] percent of the Contract Price shall be paid within [insert number] days after the Effective Date against the submission of an unconditional Bank Guarantee in prescribed format (PSN-8) for the same. (Not Applicable) Bank Guarantee shall remain effective until [insert date]. Advance Payment will be amortized by the Employer in the following manner: [The amortization of the Advance Payment shall commence when the progress payments have reached twenty (20) percent of the Contract Price and, be completed when the progress payments have reached eighty (80) percent of the Contract Price. The Bank Guarantee for Advance Payment shall be released when the Advance Payment has been fully amortized]
GCC 45.1	The Service Provider shall be entitled to receive financing charges for delayed payment during the period of delay at the rate of [insert percentage] Not Applicable
GCC 52.1	The principle and modalities of inspection of the Services by the Employer are as follows: <i>Employer will check and inspect each and every core of the Optical fiber in every link, check the quality of laying of OFC and check the patrolling. May inspect and raise complain to Service provider</i> The Defects Liability Period is three months.

	months; the date counted accordingly]
GCC 59.1	The Adjudicator jointly appointed by the parties is: Name: Phone no: Fax No: none In case of disagreement between the parties at the subsequent stage, the Appointing Authority for the Adjudicator is the President of the Institution of Engineers, Bangladesh.
GCC 59.4	The Adjudicator will be paid at the rate of Tk (mention the amount in figures and words)per hour of work. The following reimbursable expenses are admissible: Report preparation, communication, transports etc not exceeding (mention the amount against each head): will be decided later jointly.
GCC 59.5	In case of disagreement between the parties, the appointing Authority for the Adjudicator is the president of the institute of Engineers, Bangladesh (IEB)
GCC 60.1	The place of Arbitration is: 37/E Eskaton Garden, Telejogajog Bhaban, BTCL, Dhaka.



Section 5: Tender and Contract Forms

Form	Title
Tender Forms	
PSN – 1	Tender Submission Letter
PSN – 2	Tenderer Information
PSN – 3	Personnel Information
PSN – 4	Bank Guarantee for Tender Security (<i>when this option is chosen</i>)
PSN - 5	Letter of Commitment (<i>when this option is chosen</i>)

Forms PSN -1 to PSN -5 comprises part of the Tender Format and should be completed as stated in ITT Clauses 20.

Form	Title
Contract Forms	
PSN – 6	Letter of Acceptance
PSN – 7	Contract Agreement (<i>includes Appendices</i>)
PSN – 8	Bank Guarantee for Performance Security (<i>when this option is chosen</i>)
PSN -9	Bank Guarantee for Advance Payment (<i>if applicable</i>)

Forms PSN -6 to PSN -9 comprise part of the Contract Format as stated in GCC Clause 5.



Tender Submission Letter (Form PSN-1)

[This letter should be completed and signed by the Authorised Signatory preferably on the Letter-Head Pad of the Tenderer]

To:

[Contact Person]

[Name of Procuring Entity]

[Address of Procuring Entity]

Date:

Invitation for Tender No:

[indicate IFT No]

Tender Package No:

[indicate Package No]

We, the undersigned, offer to execute in conformity with the Conditions of Contract and associated Contract documents, the following non-Consultant Services, viz:

In accordance with ITT Clauses 22 and 23, the following prices apply to our Tender:

The Tender Price is:

Tk*[in figures]*

(ITT SubClause22.2)

Taka *[in words]*

[In case of manpower supply, this submission letter shall be submitted without tender price in the technical envelope and the same submission letter with tender price shall be submitted in the financial envelope.]Note:Other than manpower supply, delete this box during preparation of tender document

In signing this letter, and in submitting our Tender, we also confirm that:

- (a) our Tender shall be valid for the period stated in the Tender Data Sheet (ITT SubClause25.1) and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (b) a Tender Security is attached in the form of a *[pay order/bank draft/bank guarantee]* in the amount stated in the Tender Data Sheet (ITT SubClause 26.1) and valid for a period of twenty eight (28) days beyond the Tender validity date;
- (c) if our Tender is accepted, we commit to furnish a Performance Security within the time stated under ITT Sub Clause 52.2 in the amount stated in the Tender Data Sheet (ITT SubClauses51.1 and 51.2) and in the form specified (ITT SubClause52.1)valid for a period of twenty eight (28) days beyond the date of issue of the Completion Certificate of the non-Consultant Service;
- (d) we have examined and have no reservations to the Tender Document, issued by you on *[insert date]*; including Addendum to Tender Document No *[insert*



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numbers] , issued in accordance with the Instructions to Tenderers (ITT Clause 9). [insert the number and issuing date of each addendum; or delete the underlined sentence if no Addendum has been issued];

- (e) we declare that we are not associated, nor have been associated in the past, directly or indirectly, with a consultant or any other entity that has prepared the design, specifications and other documents in accordance with ITT Sub Clause 5;
- (f) we have not been declared ineligible by the Government of Bangladesh on charges of engaging in corrupt, fraudulent, collusive or coercive practices in accordance with ITT Sub Clause 5.7;
- (g) furthermore, we are aware of ITT Clause 4 concerning such practices and pledge not to indulge in such practices in competing for or in executing the Contract;
- (h) we confirm that we do not have a record of poor performance, such as abandoning the works, not properly completing contracts, inordinate delays, or financial failure, and that we do not have, or have had, any litigation against us, other than that stated in the Tenderer Information (**Form PSN-2**);
- (i) we are not participating as Tenderers in more than one Tender in this Tendering process. We understand that your written Letter of Acceptance constitute the acceptance of our Tender and shall become a binding Contract between us, until a formal Contract is prepared and executed;
- (j) we confirm that we do not have a record of insolvency, receivership, bankrupt or being wound up, our business activities were not been suspended, and it was not the subject of legal proceedings;
- (k) we confirm that we have fulfilled our obligations to pay taxes and social security contributions applicable under the relevant national laws and regulations of Bangladesh in accordance with ITT Sub Clause 5.5;
- (l) we accept the appointment of [insert the name proposed in the PCC] as the Adjudicator with hourly fees and reimbursable as stated in GCC Sub Clause 59.1;
- (m) we understand that you reserve the right to reject all the Tenders or annul the Tender proceedings, without incurring any liability to Tenderers, in accordance with ITT Clause 47.

Signature:

[authorised representative of the Tenderer]

Name:

[insert full name of signatory with National ID Number]

In the capacity of:

[insert capacity of signatory]

Duly authorised to sign the Tender for and on behalf of the Tenderer

Attachment :

[ITT Sub Clause 30.2]

Written confirmation authorising the above signatory to commit the Tender



Tenderer Information (Form PSN-2)

[This Form should be completed only by the Tenderer, preferably on its Letter-Head Pad]

Invitation for Tender No:

[indicate IFT No]

Tender Package No:

[indicate Package No]

1. Eligibility Information of the Tenderer [ITT - Clauses 5 & 24]				
1.1	Nationality of individual			
1.2	Tenderer's legal title			
1.3	Tenderer's registered address			
1.4	Tenderer's legal status <i>[complete the relevant box]</i>			
	Proprietorship			
	Partnership			
	Limited Liability Concern			
	Government-owned Enterprise			
	Others <i>[please describe, if applicable]</i>			
1.5	Tenderer's year of registration			
1.6	Tenderer's authorised representative details			
	Name			
	National ID number, if any			
	Address			
	Telephone / Fax numbers			
	e-mail address			
1.7	Tenderer to attach photocopies of the original documents mentioned aside	[All documents required under ITT Clauses 5 and 25]		
1.8	Tenderer's Value Added Tax Registration (VAT) Number			
1.9	Tenderer's Tax Identification Number(TIN)			
2. Qualification Information of the Tenderer [ITT Clause 24]				
2.1	General Experience in non-Consultant Services of Tenderer			
	Start Mont h Year	End Mont h Year	Year s Contract No and Name of Contract Name and Address of Procuring Entity	Role of Tenderer [Prime/Sub/Management]



[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

			Brief description of Services	
2.2	Specific Experience in non-Consultant Services of Tenderer Completed Contracts of similar nature, complexity and methods/technology			
	Contract No Name of Contract	[insert reference no] of [insert year] [insert name]		
	Role in Contract [tick relevant box].	Prime Service Provider	SubService e Provider	Management Service Provider
	Award date Completion date Total Contract Value	[insert date] [insert date] [insert amount]		
	Procuring Entity's Name Address Tel / Fax e-mail Brief justifications of the similarity	[state justification in support of its similarity compared to the proposed Services]		
2.4	Annual Turn Over of the Tenderer [ITT Sub Clause 12.1(a)] [total certified payments received for contracts in progress or completed for each year]			
	Year	Amount in BDT		
2.5	Financial Resources available to meet the cash flow for performance of Services [ITT SubClause 12.1(b)]			
	No	Source of Financing	BDT Amount Available	
In order to confirm the above statements the Tenderer shall submit , as applicable, the documents mentioned in ITT Sub Clause 24.1(a), (b), (c), & (d).				
	Contact Details [ITT Sub Clause 24.1 (j)]			
	Name, address, and other contact details of Tenderer Bankers and other Procuring Entity(s) that may provide references, if contacted by this Procuring Entity			
2.6	Qualifications and experience of Contract Supervisor proposed for Contract administration and management [ITT SubClause 24.1(g)]			
	Name	Position	Qualifications	Years of Experience
				Total Works Experience
				Similar Works Experience



[Tenderer to complete details of as many personnel as are applicable. Each personnel listed above should complete the Personnel Information (Form PSN-3)]

2. 7	Equipment proposed to carry out the Contract [ITT Sub Clause 24.1(h)]		
	Item of Equipment	Condition (new, good, average, poor)	Owned, leased or to be purchased (state owner, lessor or seller)
<i>[Tenderer to list details of each item of major equipment, as applicable]</i>			



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[Handwritten signatures and initials]

Personnel Information (Form PSN-3)

[This Form should be completed for each person proposed by the Tenderer in Form PSN-2]

Name of the Tenderer:	<i>[insert Title]</i>		
Invitation for Tender No:	<i>[indicate IFT No]</i>		
Tender Package No	<i>[indicate Package No]</i>		
A. Proposed Position (tick the relevant box)			
☐ Contract Supervisor	☐ Key Personnel		
B. Personal Data			
Name:			
Date of Birth:			
Years works experience:			
National ID Number, if any:			
Years of Employment with the Tenderer:			
Professional Qualifications:			
C. Present Employment <i>[to be completed only if not employed by the Tenderer]</i>			
Name of the Employer:			
Address of the Employer:			
Present Job Title:			
Years with the present Employer:			
Tel No:	Fax No:	e-mail address:	
Contact <i>[manager/personnel officer]</i> :			
D. Professional Experience (Not Applicable)			
Summarise professional experience over the last ten (10) years, in reverse chronological order. Indicate particular technical and managerial experience relevant to the project			
	From	To	Company / Project / Position / Relevant Experience
1			



2			
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(Name and Signature of the Proposed Personnel)



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[Signature]

[Signature]

[Signature]

[Signature] 46

Bank Guarantee for Tender Security (Form PSN-4)

[This is the format for the Tender Security to be issued by a scheduled Bank of Bangladesh in accordance with ITT Clause 26 & 27]

Invitation for Tender No:

Date:

Tender Package No:

To:

Name and address of the Procuring Entity

TENDER GUARANTEE No:

We have been informed that *[name of Tenderer]* (hereinafter called "the Tenderer") intends to submit to you its Tender dated *[date of Tender]* (hereinafter called "the Tender") for the performance of the Services of *[description of Services]* under the above Invitation for Tenders (hereinafter called "the IFT").

Furthermore, we understand that, according to your conditions, the Tender must be supported by a Bank Guarantee for Tender Security.

At the request of the Tenderer, we *[name of bank]* hereby irrevocably undertake to pay you, without cavil or argument, any sum or sums not exceeding in total an amount of Tk*[insert amount in figures and words]* upon receipt by us of your first written demand accompanied by a written statement that the Tenderer is in breach of its obligation(s) under the Tender conditions, because the Tenderer:

- (a) has withdrawn its Tender after opening of Tenders but within the validity of the Tender Security; or
- (b) refused to accept the Letter of Acceptance (LOA) within the period as stated under ITT; or
- (c) failed to furnish Performance Security within the period stipulated in the LOA; or
- (d) refused to sign the Contract Agreement by the time specified in the LOA; or
- (e) did not accept the correction of the Tender price following the correction of the arithmetic errors as stated under ITT.

This guarantee will expire

- (a) if the Tenderer is the successful Tenderer, upon our receipt of a copy of the Contract Agreement signed by the Tenderer or a copy of the Performance Security issued to you in accordance with the ITT; or
- (b) if the Tenderer is not the successful Tenderer, twenty eight (28) days after the expiration of the Tenderer's Tender validity period, being *[date of expiration of the Tender validity plus twenty eight (28) days]*.



Consequently, we must receive at the above-mentioned office any demand for payment under this guarantee on or before that date.

Name and Signature

Name and Signature

Letter of Commitment for Bank's undertaking for Line of Credit (Form PSN-5)

[This is the format for the Credit Line to be issued by any scheduled Bank of Bangladesh in accordance with ITT Clause 24.1 (f)]

Invitation for Tender No:

Date:

Tender Package No:

Lot No (when applicable)

To:

[Name and address of the Procuring Entity]



CREDIT COMMITMENT No: [insert number]

We have been informed that *[name of Tenderer]* (hereinafter called "the Tenderer") intends to submit to you its Tender (hereinafter called "the Tender") for the execution of the Works of *[description of works]* under the above Invitation for Tenders (hereinafter called "the IFT").

Furthermore, we understand that, according to your conditions, the Tenderer's Financial Capacity i.e. Liquid Asset must be substantiated by a Letter of Commitment of Bank's Undertaking for Line of Credit.

At the request of, and arrangement with, the Tenderer, we *[name and address of the Bank]* do hereby agree and undertake that *[name and address of the Tenderer]* will be provided by us with a revolving line of credit, in case awarded the Contract, for execution of the Works viz. *[insert name of works]*, for an amount not less than BDT *[in figure]* (*in words*) for the sole purpose of the execution of the above Contract. This Revolving Line of Credit will be maintained by us until issuance of "Completion Certificate" by the Procuring Entity.

In witness whereof, authorised representative of the Bank has hereunto signed and sealed this Letter of Commitment.

Signature

Signature

[Signature]

[Signature]

[Signature]



[Signature]

Letter of Acceptance (Form PSN-6)

Contract No:

Date:

To:

[Name of the Service Provider]

This is to notify you that your Tender dated [insert date] for the performance of Services for [name of project/Contract] for the Contract price of Tk[insert amount in figures and in words], as corrected and modified in accordance with the Instructions to Tenderers, has been approved by [insert name of the Procuring Entity].

You are thus requested to take following actions:

- i. accept in writing the Letter of Acceptance within seven (7) working days of its issuance pursuant to ITT Sub Clause 50.2.
- ii. furnish a Performance Security in the form as specified and in the amount of Tk[insert amount in figures and words], within fourteen (14) days of acceptance of this Letter of Acceptance but not later than (specify date), in accordance with ITT Clause 52.2
- iii. sign the Contract within twenty eight (28) days of issuance of this Letter of Acceptance but not later than (specify date), in accordance with ITT Sub Clause 49.1.

You may proceed with the execution of the said Contract for the provision of Services in accordance with the Contract documents only upon completion of the above tasks. You may also please note that this Letter of Acceptance shall constitute the formation of this Contract which shall become binding upon you.

We attach the draft Contract and all other documents for your signature and return.

Signed

Duly authorised to sign for and on behalf of [insert name of Procuring Entity]

Date:



Contract Agreement (Form PSN-7)

Lump-sum

THIS AGREEMENT made on this [day] day of [month][year] between [name and address of Employer] (hereinafter called "the Employer") of the one part and [name and address of the Service Provider] (hereinafter called "the Service Provider") of the other part:

WHEREAS the Procuring Entity invited Tenders for certain Services named [brief description of Service] and has accepted the Tender submitted by the Tenderer for providing those Services in the sum of Taka [Contract price in figures and in words] (hereinafter called "the Contract price").

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the General Conditions of Contract hereafter referred to.
2. The documents forming the Contract shall be interpreted in the following order of priority:
 - (a) the signed Contract Agreement
 - (b) the Letter of Acceptance
 - (c) the Service Provider's completed Tender
 - (d) the Particular Conditions of Contract
 - (e) the General Conditions of Contract
 - (f) the Performance Specifications and Drawing
 - (g) the priced Activity Schedule
 - (h) any other document listed in the PCC forming part of the Contract
3. In consideration of the payments to be made by the Employer to the Service Provider as hereinafter mentioned, the Service Provider hereby covenants with the Employer to provide and complete the services and to remedy any defects therein in conformity in all respects with the provisions of the Contract.
4. The Employer hereby covenants to pay the Service Provider in consideration of the performance and completion of the Services and the remedying of defects therein, the Contract price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of Bangladesh on the day, month and year first written above.

For the Employer

For the Service Provider

Signature
Name
National ID No.
Title
In the presence of
Name
Address



Bank Guarantee for Performance Security (Form PSN-8)

[This is the format for the Performance Security to be issued by a scheduled bank of Bangladesh in accordance with ITT Clause 52 & 53]

Contract No: [insert reference number]

Date: [insert date]

To:

[insert Name and address of Procuring Entity]

PERFORMANCE GUARANTEE No:

We have been informed that [insert name of the Service Provider] (hereinafter called "the Service Provider") has undertaken, pursuant to Contract No [insert reference number of Contract] dated [insert date of Contract] (hereinafter called "the Contract"), the performance of Service [description of Services] under the Contract.

Furthermore, we understand that, according to your conditions, the Contract must be supported by a Bank Guarantee for Performance Security.

At the request of the Service Provider, we [name of bank] hereby irrevocably undertake to pay you, without cavil or argument, any sum or sums not exceeding in total an amount of Tk [insert amount in figures and in words] upon receipt by us of your first written demand accompanied by a written statement that the Service Provider is in breach of its obligation(s) under the Contract conditions, without you needing to prove or show grounds or reasons for your demand of the sum specified therein.

This guarantee is valid until [date of validity of guarantee]; consequently, we must receive at the above-mentioned office any demand for payment under this guarantee on or before that date.

Name and Signature

Name and Signature



AMC Document BTCL PSN 2022

52

Bank Guarantee for Advance Payment (Form PSN-9)

[This is the format for the Advance Payment Guarantee to be issued by a scheduled bank of Bangladesh in accordance with GCC Clause 44]

Contract No: [insert reference number]

Date: [insert date]

To:

[insert Name and address of the Procuring Entity]

ADVANCE PAYMENT GUARANTEE No:

We have been informed that [name of the Service Provider] (hereinafter called "the Service Provider") has undertaken, pursuant to Contract No [insert reference number of Contract] dated [insert date of Contract] (hereinafter called "the Contract"), the performance of Service [description of Services] under the Contract.

Furthermore, we understand that, according to your Conditions of Contract under GCC Clause 44 the Advance Payment on Contract must be supported by a Bank Guarantee.

At the request of the Service Provider, we [insert name of bank] hereby irrevocably undertake to pay you, without cavil or argument, any sum or sums not exceeding in total an amount of Tk [insert amount in figures and in words] upon receipt by us of your first written demand accompanied by a written statement that the Service Provider is in breach of its obligation(s) under the Contract conditions, without you needing to prove or show grounds or reasons for your demand of the sum specified therein.

We further agree that no change, addition or other modification of the terms of the Contract to be performed, or of any of the Contract documents which may be made between the Employer and the Service Provider, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee is valid until [insert date of validity of guarantee]; consequently, we must receive at the above-mentioned office any demand for payment under this guarantee on or before that date.

Name and Signature



Name and Signature



Affidavit (Form-10)

[Company Name] is a [type of company] company incorporated in [name of country] having registered address at [full address] (hereinafter may be referred to as tenderer)

I am [name of authorized person], [designation] of [name of company], having NID number [NID for authorized person] is being authorized as signatory for the tender [tender name and reference]. I do hereby solemnly declare and affirm as follows:

That the tenderer or his partner or his sister concern is not NTTN operator or does not have NTTN licences.

That the statement made above is true and correct to the best of my knowledge and belief and in verification whereof I affirm and sign this affidavit regarding the tender on this [date] before the Notary Public, [name of place and country].

[Signature of deponent]
(Authorized person for this tender)

[Notary public authentication]

[Signature of Notary Public]

1. For tenderer, they have to submit the affidavit on Non-Judicial stamp of value taka 200 and shall be notarized by Notary Public of Bangladesh.
2. The affidavit would be as following format:



Document BTOL PSN 2022

(Signature)

(Signature)

(Signature)

(Signature)

Section 6. Activity Schedule

(ITT Sub Clause 22.2)

[This is a Sample Format. The Procuring Entity may require customizing this Format to fit in the Service specific needs. *Refer to Explanatory Notes]

A. This sample Format for non-consultancy service stated in Guidance Notes on the Use of the Standard Tender Document

1) Preventive and Corrective Maintenance LOT-A

Item No	Description of Items of Service ¹ (in sufficient details)	Unit ²	Quantity ³	Unit Rate in BDT ⁴	Amount in BDT
				<u>in fig</u> in words	
To be filled in by the Procuring Entity				To be filled in by the Tenderer	
1		2	3	4	5
	Preventive and Corrective Services	Unit	Km	Taka/km	Total 5 (4x3) =
1	Communicating	Lot	4000	500	
	Patrolling				
	Guarding				
	Monitoring				
	Reporting				
	Splicing 4/6/12/24/48/72/96/144 core OFC at TJ and Joint box				
	Laying of Overhead OFC to restore service				
	Laying of OFC temporary from Handhole to Handhole				
	Find the CP and Find OFC				

	Digging for OFC				
	Making open cut Trance to lay OFC after restoration of Service				
	Consultation				
	HDD work, lay and pull OFC in the fault area, CP to CP and Hand hole to Hand hole				
	Other Related works				
2	Supply of Materials and Consumable				
	All kind of OFC (4/6/12/24/48/72/96/144)	Will be supplied by BTCL (Service Provider may supply instantly to restore service, BTCL will reimburse it)			
	HDPE Duct				
	Supply of Materials and Consumable				
	Overhead Clamps	Nos	4000		
	Terminal Joint Box	Nos	400		
	Bamboo Closure box for Overhead OFC	Nos	200		
	144 OFC Closure	Nos	10		
	96 OFC Closure	Nos	20		
	48 OFC Closure	Nos	200		
	24 OFC Closure	Nos	200		
	12 OFC Closure	Nos	200		
	144 port ODF with 4 MFT trays	Nos	2		
	48 port ODF with 4 MFT trays	Nos	6		
	24 port ODF with 2 MFT trays	Nos	10		
	12 Port Rack mounted ODF	Nos	10		
	5m SC-LC/FC-FC/FC-LC Patch Cord	Nos	50		
	10m SC-LC Patch Cord	Nos	10		

	10m LC-LC/FC-LC/FC-FC Patch Cord	Nos	40		
	4" dia GI Pipe	Meter	500		
	2" dia GI Pipe	Mete	500		
	GI Wire	Meter	1000		
	DWC	Meter	500		
	Flexible PVC(1" dia)	Meter	1000		
	Bamboo 15-20ft	Nos	500		
	RCC Pole 30ft	Nos	100		
	Adapter (LC/LC)	Nos	50		
	3 meter pigtails with FC connector	Nos	100		
New work (If Require) except preventive and Corrective Maintenance					
3	Works	Unit	Quantity		Amount in BDT
	Mobilization of HDD Machine	No	100		
	Horizontal Directional Drilling	Meter	25000		
	Excavation and Trenching	Meter	14000		
	Conduit work for Bridge/ Culvert crossing	Meter	500		
	Indoor Cabling	Meter	100		
	Laying of Overhead OFC	Meter	50000		
	Vertical OFC Works	Meter	800		
4	Services (If Require) except preventive and Corrective Maintenance				
	Terminal Joint Box(TJ)	No	100		
	Bamboo Closure box for Overhead OFC	No	90		
	ODF Splicing	No	10		
	144 OFC Closure Splicing Charge	No	20		

	96 OFC Closure Splicing Charge	No	5		
	48 OFC Closure Splicing Charge	No	90		
	24 OFC Closure Splicing Charge	No	160		
	12 OFC Closure Splicing Charge	No	140		
5	HDD Accessories (If require) except Preventive and Corrective Maintenance				
	Splice Protector	Number	1000		
	Simple Plug	Number	900		
	Push Pit Coupler	Number	50		
	Two part Coupler	Number	80		
	End-plug	Number	100		
	Civil Works Accessories and Hand hole (If Require) except Preventive and Corrective Maintenance work				
6	Complete Hand hole	Number	10		
Total Costs:					

Note: Price Quotation for all the 6 item is mandatory and will be evaluated accordingly but contract price will be determined only the summation of item no A&B. PE could implement item C,D,E and F, time to time during the tenure of the contract.

¹ Items required for the entire Contract Period for providing the Services should be indicated by the Procuring Entity.

² Units and quantities shall be provided by the Procuring Entity.

³ Unit rates or prices for each item shall be entered by the Tenderer which shall be inclusive of profit and overhead for all items of the Services described in the Activity Schedule. All kinds of applicable taxes, custom duties, fees, levies, VAT and other charges payable by the Service Provider under the Contract, or for any other cause shall also be included in the unit rates or prices and, the total Tender price submitted by the Tenderer in accordance with ITT Sub Clause 24.4.

⁴ No provision on account of physical contingency shall be kept when the scope of Service has been precisely defined.

II) Preventive and Corrective Maintenance LOT-B

Item No	Description of Items of Service ¹ (in sufficient details)	Unit ²	Quantity ³	Unit Rate in BDT ⁴	Amount in BDT
				<u>in fig</u> in words	
To be filled in by the Procuring Entity				To be filled in by the Tenderer	
1		2	3	4	5
	Preventive and Corrective Services	Unit	Km	Taka/km	Total 5 (4x3) =
1	Communicating	Lot	5000	500	
	Patrolling				
	Guarding				
	Monitoring				
	Reporting				
	Splicing 4/6/12/24/48/72/96/144 core OFC at TJ and Joint box				
	Laying of Overhead OFC to restore service				
	Laying of OFC temporary from Handhole to Handhole				
	Find the CP and Find OFC				
	Digging for OFC				

	Making open cut Trance to lay OFC after restoration of Service				
	Consultation				
	HDD work, lay and pull OFC in the fault area, CP to CP and Hand hole to Hand hole				
	Other Related works				
2	Supply of Materials and Consumable				
	All kind of OFC (4/6/12/24/48/72/96/144)	Will be supplied by BTCL (Service Provider may supply instantly to restore service, BTCL will reimburse it)			
	HDPE Duct				
	Supply of Materials and Consumable				
	Overhead Clamps	Nos	6000		
	Terminal Joint Box	Nos	600		
	Bamboo Closure box for Overhead OFC	Nos	300		
	144 OFC Closure	Nos	10		
	96 OFC Closure	Nos	20		
	48 OFC Closure	Nos	200		
	24 OFC Closure	Nos	225		
	12 OFC Closure	Nos	250		
	144 port ODF with 4 MFT trays	Nos	2		
	48 port ODF with 4 MFT trays	Nos	6		
	24 port ODF with 2 MFT trays	Nos	10		
	12 Port Rack mounted ODF	Nos	10		
	5m SC-LC/FC-FC/FC-LC Patch Cord	Nos	50		
	10m SC-LC Patch Cord	Nos	10		
	10m LC-LC/FC-LC/FC-FC Patch Cord	Nos	40		
	4" dia GI Pipe	Meter	500		



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	2" dia GI Pipe	Meter	500		
	GI Wire	Meter	1000		
	DWC	Meter	700		
	Flexible PVC(1" dia)	Meter	1000		
	Bamboo 15-20ft	Nos	6000		
	RCC Pole 30ft	Nos	150		
	Adapter (LC/LC)	Nos	20		
	3 meter pigtails with FC connector	Nos	100		
New work (if Require) except preventive and Corrective Maintenance area.					
3	Works	Unit	Quantity		Amount in BDT
	Mobilization of HDD Machine	No	200		
	Horizontal Directional Drilling	Meter	20000		
	Excavation and Trenching	Meter	6000		
	Conduit work for Bridge/ Culvert crossing	Meter	800		
	Indoor Cabling	Meter	800		
	Laying of Overhead OFC	Meter	60000		
	Vertical OFC Works	Meter	600		
4	Services (If Require) except preventive and Corrective Maintenance Work				
	Terminal Joint Box(TJ)	No	200		
	Bamboo Closure box for Overhead OFC	No	80		
	ODF Splicing	No	10		
	144 OFC Closure Splicing Charge	No	20		
	96 OFC Closure Splicing Charge	No	15		

	48 OFC Closure Splicing Charge	No	90		
	24 OFC Closure Splicing Charge	No	200		
	12 OFC Closure Splicing Charge	No	200		
5	HDD Accessories (If Require) except Preventive and Corrective Maintenance work				
	Splice Protector	Number	3000		
	Simple Plug	Number	2000		
	Push Pit Coupler	Number	100		
	Two part Coupler	Number	100		
	End-plug	Number	100		
Civil Works Accessories and Hand hole					
6	Complete Hand hole	Number	15		
Total Costs:					

Note: Note: Price Quotation for all the 6 item is mandatory and will be evaluated accordingly but contract price will be determined only the summation of item no A&B. PE could implement item C,D,E and F, time to time during the tenure of the contract.

¹Items required for the entire Contract Period for providing the Services should be indicated by the Procuring Entity.

²Units and quantities shall be provided by the Procuring Entity.

³Unit rates or prices for each item shall be entered by the Tenderer which shall be inclusive of profit and overhead for all items of the Services described in the Activity Schedule. All kinds of applicable taxes, custom duties, fees, levies, VAT and other charges payable by the Service Provider under the Contract, or for any other cause shall also be included in the unit rates or prices and, the total Tender price submitted by the Tenderer in accordance with ITT Sub Clause 24.4.

No provision on account of physical contingency shall be kept when the scope of Service has been precisely defined.



LOT-A

A. IN CASE OF OUT SOURCING (MANPOWER-SUPPLY) Not Applicable

Sl. No	Designation	Unit	Quantity	Unit Rate	Amount (BDT)
				In Fig. & Words	
1	2	3	4	5	6
A. Proposed Manpower					
01	Example: [Driver]				
	Sub Total-A (01 to n):				
B.	Tenderer's Commission (competitive) but not less than threshold stated in ITT 22.7				
	Total Cost of the service (A+B)				
C.	VAT: [insert the percent] of Sub-Total (A+B)				
	Total (A+B+C)				
D.	Provisional sums (if any)				
E.	Total Contract price(A+B+C+D)				

LOT-B

A. IN CASE OF OUT SOURCING (MANPOWER-SUPPLY) Not Applicable

Sl. No	Designation	Unit	Quantity	Unit Rate	Amount (BDT)
				In Fig. & Words	
1	2	3	4	5	6
A. Proposed Manpower					
01	Example: [Driver]				
	Sub Total-A (01 to n):				
B.	Tenderer's Commission (competitive) but not less than threshold stated in ITT 22.7				
	Total Cost of the service (A+B)				
C.	VAT: [insert the percent] of Sub-Total (A+B)				

	<i>Total (A+B+C)</i>				
D.	Provisional sums (if any)				
E.	Total Contract price(A+B+C+D)				

- Note:**
1. Proposed Manpower (A) : Column 1,2,3, 4, 5 & 6 shall be filled by PE.
 2. Tenderer's Commission (B) : Column 1,2,3 & 4 to be filled by PE and Column 5 & 6 filled by Tenderer.
 3. Rows C & E shall be filled by Tenderer and Row D by PE.
 4. A Tenderer quoting less than the rate of commission mentioned in TDS (ITT 22.7) shall be declared non-responsive.
 5. AIT shall be deducted from the commission during payment at source.
 6. Tenderer and his deployed workers/manpower is subjected to VAT on amounts payable by the client as per the applicable Law in case out-sourcing (Man power supply) which will be deducted at source.



Section 7. Performance Specifications and Drawings

Background

1. INTRODUCTION

BTCL is a state owned company which has several licenses like Nationwide Telecommunications Transmission Network (NTTN). BTCL has 34000km Optical Fiber Network covering 64 districts, 473 upazillas and 1216 unions. Many telecom operators, Government entities use NTTN facilities, infrastructure and Optical Fibers up to union level. These are Bangladesh Army, BGB, Bangladesh Police, RAB, NAVY, Air force, Bangladesh secretariat, DC offices, Teletalk, Robi, GP, Banglalink, Gas files, Passport offices, SB offices at various immigration point, Finance department, corporate offices and other private operators. BTCL plays a vital role to fiberization and expand of 5G network in Bangladesh.

BTCL need to provide quality and available resilience services to all valuable customers. Now a days telecommunications plays a vital role for ensuring the Digitalization of Bangladesh and it is an essential things in daily life.

BTCL maintain their own network by their own manpower and with Service Providers. In the market the MTTR for other NTTN is less than 5 hours. So BTCL need to implement Annual Maintenance Contract (AMC) with vendors who will ensure MTTR in less than 5 hours.

2. Purpose of the Service (Overall Scope of Service)

- 2.1. The Service Provider shall provide the Maintenance Services of the laid Optical Fiber Cable for BTCL network in response to telephonic/email/SMS complains as per the specified Response Time & Restoration Time and terms and conditions mentioned in the relevant section(s) of this agreement.
- 2.2. The Service Provider shall maintain detailed and complete records of the Services supplied to BTCL, and furnish any such details to BTCL, if required or on demand asked by BTCL.
- 2.3. Service Provider shall provide Maintenance service in different road as prescribed by BTCL. The Service Provider shall furnish all necessary labors, materials, tools, equipments, spare parts, temporary works, transportation and all necessary accessories, auxiliaries and incidentals to accomplish the said job. Moreover, the Service Provider shall provide the Preventive Maintenance ('PM') Services and Corrective Maintenance ('CM') Services as and when required basis and all requisite assistance to resolve the problems/faults of fiber up to the full satisfaction of BTCL in accordance with the terms and conditions of this Agreement.
- 2.4. Service Provider should provide labor with necessary tools and materials for civil



- preparation and fiber overhead for fiber splicing and any other requested cases.
- 2.5. The Tenderer must not be an NTTN operator (Must submit affidavit of the statement see clause ITT20.1(k) and must submit the document according to **Form-10**).
 - 2.6. The Tenderer or his partner or his sister concern does not have NTTN licences. (Must submit affidavit of the statement see clause ITT20.(k))
 - 2.7. The service provider will maintain the availability of each link within 99.98% and MTTR within 5 hours for each link, if it degrades the service provider will take necessary steps with the consultation of BTCL.
 - 2.8. The service provider must collect the Keys of BTS, BSC or Core of MNO from their respective places and attend the fault. The service provider must return the key to the respective places after attending the fault.

03. PATROLLING:

Each route, patrolling will be 2 times/day (patrolling will be started from a starting point of a route and will be ended to the same starting point through the same route). Average patrolling distance 40 km. Patrolling team needs to send start-end SMS to SOC/assigned number/group for regular patrolling job. Motor vehicle movement tracking device to be implemented by the Service Provider for monitoring and tracking of that vehicle deployed for patrolling of optical fiber route. BTCL to be provided with number of clients of that monitoring system.

Fiber Patrolling need to be conducted 4 days (Saturday, Sunday, Tuesday, Thursday) a week.

0.4 GUARD DEPLOYMENT:

Service provider should deploy guard in applicable cases. Following are the criteria where guard to be deployed. Service provider need to identify places where below types activity is carried out and there is potential threat of fiber cut.

1. RHD Road Expansion/Construction work.
2. HDD work by any authority like(WASA, NTTN/MNO or their engaged vendors etc).
3. Excavation work perform by any authorities.
4. During any activities perform by Gas and petroleum Corporations
5. Drainage/Road Maintenance/Construction by city corporation.
6. Any other activity by any authority/personnel that have potential chance of fiber cut.
7. Any other area where BTCL appointed personnel identify as potential threat.
8. Pole shifting activity

0.5 MONITORING:

Service provider shall set up real time patrolling monitoring in digital map and provide support at BTCL premises if required. It should be web based application and visualization in map should be



possible any time. BTCL will develop a Dashboard through which whole real time activities will be monitored.

06. REPORTING:

- Patrol team(s) will report via SMS to SOC/Assigned Number after starting and ending patrolling.
- Patrol team will have to update the activities through Dashboard created for the AMC
- Patrol team(s) have to send photo from spot after every 10 K.M patrol along the route with GPS.
- Patrol team have to send working place photo from spot with Guard Photo with GPS.
- Every morning by 10:00 Service Provider shall provide updated(till date) guard list(name, contact), guard deployed location (specific) and patrolling personnel list and contact.
- Every by 10:00 A.M the Service Provider has to provide all vulnerable spots based on patrolling report.
- Service Provider shall share Quarterly audit report and fiber layout diagram.

07. THE SERVICE PROVIDER'S RESPONSIBILITY:

- The Service Provider team shall maintain communication with different authority and their vendors forongoing and upcoming projects/activity.
- The Service Provider shall manage different authority to save from fiber cut.
- The Service Provider shall manage/collect permission of different authority/personnel for rectification work.
- The Service Provider shall ensure that fiber is connected and no service is disrupted in the event fiber is damaged due to expansion/construction works
- The Service Provider shall maintain monthly Fiber cut KPI.
- The Service Provider team shall patrol each route twice a day and perform each and every activity stated at section 6.
- The Service Provider shall deploy guard in vulnerable/working spots/suggested by BTCL.

08. PATROLLING ROUTE PLAN:

Patrolling, Operation Maintenance and Preventive Maintenance Route: Length to be measured according to path distance and all fiber along any single path is considered as single path distance. Total fiber patrolling and maintenance routes mentioned at point#16.

7. Areas included in the Scope of Services



The areas where the service is required to be provided in the following areas:

The main purposes of this AMC is to provide quality and resilient NTTN (Nationwide Telecommunications Transmission Network), OFC (Optical Fiber Cables) and data services to BTCL's valuable customers like Bangladesh Army, BGB, Bangladesh Police, Bangladesh Bank, National Revenue Board, Finance Divisions, RAB, NAVY, Air force, Bangladesh secretariat, DC offices, Teletalk, Robi, GP, Banglalink, Gas fields, Passport offices, SB offices, DG Health, Community Vision Center and Elections commissions etc.

BTCL's main challenges to maintain quality services to keep the MTTR at minimum level and fix the availability of services at 99.98%. The BTCL existing networks are shown at Annexure-1, Annexure-2, Annexure-3, Annexure-4 and Annexure-5.

The service provider will maintain the availability of each link within 99.98% and MTTR within 5 hours for each link, if it degrades the service provider will take necessary steps with the consultation of BTCL. BTCL and the service provider will shift or relocate the OFC as required.

BTCL may increase or decrease network length time to time according to the field requirement if necessary. The scope of the services is covered at the following LOT.

LOT-A

- Preventive and Corrective Maintenance Services of Optical Fiber of BTCL at (Khulna, Jashore, satkhira, Kushtia, Jhinaidha, Narail, Magura, Faridpur, Rajbari, Chuadanga, Meherpur, Bagerhat, Madaripur, Sariatpur, Barishal, Bhola, Zalokati, Patuakhali, Bargona, Pirojpur, Gopalganj, Sirajganj, Pabna, Natore, Rajshahi, Nawabganj, Naogaon, Bogra, Joipurhat, Gaibandha, Rangpur Lalmonirhat, Kurigram, Nilphamari, Dinajpur, Thakurgaon and Panchagarh)

LOT-B

- Preventive and Corrective Maintenance Services of Optical Fiber of BTCL at (Tangail, Mymensingh, Netrokuna, Kishoreganj, Jamalpur, Sherepur, Dhaka, Gazipur, Manikganj, Narayanganj, Narsingdi, Munshiganj, Cumilla, Noakhali, Feni, Laksmipur, Chadpur, Sylhet, Sunamganj, Hobiganj, Moulovibazar, B-Baria, Rangamati, Khagrachari, Bandarban, Chattogram and Coxbazar)

8. Detailed definition of Services

Description of Services

The Service Provider shall be responsible to provide Services including Preventive maintenance, Corrective maintenance, patrolling of Fibre route and planned maintenance task under the bundle of monthly service fee followed by agreed KPI, SLA and LD with guidelines.



- Additional Fibre splicing when required.
- Checking and Rectification of civil related issues regarding hand holes, slabs, ducts, GI pipe, cement concrete, reinforced cement concrete after getting such requirement.
- Checking the hand holes to remove dirt/sand, hand-hold marker is present, check cable-loop length if necessary and instructed by BTCL's in charge.
- Testing of all nonworking Fibre using OTDR if necessary and instructed by BTCL's in charge.
- Checking the Optical Fibre route for open ducts if necessary and instructed by BTCL's in charge...
- The Service Provider will communicate, co-ordinate and negotiate with all the relevant authorities (Such as City Corporation, Pourashava, Union Parishad, LGED, R&HD, PGCB, Bangladesh Railway, Bridge Authority, Municipality, Gas transmission Authorities etc.) for all the corrective maintenance issues if necessary.
- The Service Provider will regularly maintain a liaison with all the other authorities about their upcoming activities which might affect Fibre network and if needed will shift Fibre to a suitable position temporarily/ permanently as per the instructions of the authorities (HDD/Trenching/Temporary overhead Fixing roadside electric pole/Bamboo support method or any other solution).
- The Service Provider will collect the detail contact information of all the concerned authorities and will submit it to BTCL and update in the Dashboard.
- The Service Provider may regularly update BTCL Coordinator about the ongoing activities and upcoming activities of any other authorities along the Fibre route.
- The Service Provider will supply all the services and required materials of civil works and Fibre rectification/shifting activities.
- The Service Provider will update the existing as-built drawing in every six months and submit both hard & soft copy of it.
- If needed, The Service Provider will complete splicing works for additional fibres in the mentioned handholds/ODFs to increase the capacity.



- The Service Providers shall share Proof of evidence of installation material and maintenance. After each maintenance Service Provider shall share updated Fiber layout diagram such as OH/UG (if any changes from existing one).
- The coordinator will visit the area of rectification need & report to be submitted by the Service Provider within three days of visit completion
- All the deficiencies found during the preventive maintenance survey shall be rectified by the Service Provider within five days from the day of survey report submission.
- The Service Provider will supply all the services and required materials except HDPE and OFC of civil works and Fibre rectification/shifting activities.
- The Service Provider will update the existing as-built drawing in every six months and submit both hard & soft copy of it.
- For any continuous development works (by RHD/LGED/any other govt. /non-government, organization) along the fibre routes, the Service Provider will ensure the presence at least one representative daily to avoid any incidents of fibre cut.
- The Service Provider representative will be present in the running excavation/drainage works spot up to completion of the work.
- The field team must complete checking each segment of fiber route by walking in each quarter (3 months) to avoid rat cut etc
- The Service Provider is expected to start this service at the agreed Service Commencement Date.
- The Service Provider will follow the activities demand in the Dashboard created for the AMC contract.
- The preventive maintenance is to complete as per agreed schedule.

8.1 CORRECTIVE MAINTENANCE (CM)

Services shall include **Corrective Maintenance** to minimize the network interruption and ensure the quality and reliability of the Fiber Optic Network of BTCL.

The Service Provider has to update as built drawing and preserve it. Also, they should submit a updated copy of fibre route drawing to BTCL after the completion of CM.



-
- The Service Provider will preserve all pictorial evidences (wherever requires like HH, Bridge, crossings, Pala siding etc.) and must submit to BTCL when required.
 - The corrective maintenance covers repairing of any breakdown of the Fiber Optic Network due to causes mentioned below:
 - ✓ Splicing loss at any spliced point should not exceed .03 dB
 - ✓ End to End fiber link RSL should be within threshold.
 - ✓ After restoring the FO, the duct should be laid at least 1.2 m vertically under the ground level and backfilled as per standard procedure
 - ✓ Sharp edges and severe pending should be avoided during Fibre dressing inside closer, ODF and hand hole
 - ✓ Central team need to setup at Dhaka who will dedicatedly communicate and update with BTCL SOC/Fiber team and update in the Dashboard and coordinate with BTCL's Central NOC.
 - ✓ The Service Provider will update the progress of rectification works to concern BTCL Engineer at least once in every 30 mins until all the traffic carrying Fibre are restored/reconnected and update in the Dashboard..
 - ✓ After completed rectification works, Service Provider will provide the estimated quantities of consumable items (OF used length, closure box, duct, etc.) along with pic through email to the concern BTCL Engineer within 3 days and update in the Dashboard and BTCL's Central NOC.
 - ✓ Acceptance papers of any Fibre cut/rectification works should be submitted to BTCL within 3 days and update in the Dashboard.
 - ✓ Acceptance papers of rectification works should include the GPS reading of the splicing points and update in the Dashboard.
 - ✓ The Service Provider will supply all the service and required materials as per specification for corrective maintenance activities.
 - ✓ If service providers need to enter in the BTS/BSC/installation of MNO then the service provider will collect key by authorized persons from respective MNO or others to complete the corrective activities and returns the same after rectification of work.
 - ✓ The team has to start OTDR from the nearest station within 30 mins after notifying any Fibre cut



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- The Service Providers shall share Proof of evidence of installation material and maintenance. After each maintenance Service Provider shall share updated Fiber layout diagram such as OH/UG (if any changes from existing one).
- The coordinator will visit the area of rectification need & report to be submitted by the Service Provider within three days of visit completion
- All the deficiencies found during the preventive maintenance survey shall be rectified by the Service Provider within five days from the day of survey report submission.
- The Service Provider will supply all the services and required materials except HDPE and OFC of civil works and Fibre rectification/shifting activities.
- The Service Provider will update the existing as-built drawing in every six months and submit both hard & soft copy of it.
- For any continuous development works (by RHD/LGED/any other govt. /non-government, organization) along the fibre routes, the Service Provider will ensure the presence at least one representative daily to avoid any incidents of fibre cut.
- The Service Provider representative will be present in the running excavation/drainage works spot up to completion of the work.
- The field team must complete checking each segment of fiber route by walking in each quarter (3 months) to avoid rat cut etc
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 - ✓ The Service Provider will update the progress of rectification works to concern BTCL Engineer at least once in every 30 mins until all the traffic carrying Fibre are restored/reconnected and update in the Dashboard..
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 - ✓ Acceptance papers of any Fibre cut/rectification works should be submitted to BTCL within 3 days and update in the Dashboard.
 - ✓ Acceptance papers of rectification works should include the GPS reading of the splicing points and update in the Dashboard.
 - ✓ The Service Provider will supply all the service and required materials as per specification for corrective maintenance activities.
 - ✓ If service providers need to enter in the BTS/BSC/installation of MNO then the service provider will collect key by authorized persons from respective MNO or others to complete the corrective activities and returns the same after rectification of work.
 - ✓ The team has to start OTDR from the nearest station within 30 mins after notifying any Fibre cut



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- ✓ Fiber restoration time will be measured from the time of fiber link down and up as per system data.
- ✓ If any single/multiple fiber link is broken/unusable(from device) for traffic will also be considered as fiber cut .
- The causes of the breakdowns of the Fiber Optic Network shall include, but may not be limited to, the following:
 - Third party damages by accident: Sabotage, Theft, Road accidents, due to development/ repair work by Roads & Highways Department, WASA, GAS, Patrolium, Electric authorities, City corporations, Poursavas and other authorities etc.
 - Damages by act of Nature: The act of nature such as excessive rain fall, landslide, earthquake and flood can also cause damages to the fibernetwork.

In case of severe damages cause by vandalisms, civil wars and severe calamities such as flash floods, devastating storms, cyclones, earthquake, tsunami, etc, the issue shall be resolved through mutual understanding on case by case basis. In case of such damages the Service Provider shall duly notify BTCL and BTCL shall review the causes and will respond accordingly. Such notification of damages shall be submitted by the Service Provider within three days of receipt of any such complaint.

8.2 PREVENTIVE MAINTENANCE (PM):

- The service providers will follow the instructions stated in previous sections in Patrolling, Monitoring, deployment guards, Reporting section.
- The service provider will maintain the availability of each link within 99.98% and MTTR within 5 hours for each link, if it degrades the service provider will take necessary steps with the consultation of BTCL. BTCL and the service provider will shift or relocate the OFC as required.
- If service provider will no able to maintain availability in 99.98% for each link and MTTR within 5 hours then The service provider will have LD accordingly.
- It consists of routine preventive maintenance of fibre route: Once in a year
- The preventive maintenance shall be carried out as per check-list defined by BTCL and update in the Dashboard.
- The Service Provider must fill-up all information mentioned in checklist and submit it to BTCL within one week after the completion of PM of every route and update in the Dashboard.



- The Service Provider has to update as built drawing and preserve it. Also, they should submit a updated copy of fibre route drawing to BTCL after the completion of PM.
- Service Provider will preserve all pictorial evidences (wherever requires like HH, Bridge, crossings, Pala siding etc.) and must submit to BTCL when required.
- Minimum 30% HH of a particular route should be exposed to measure loop length, HH depth and HH filling condition etc. The report of specific GPS position, loop length, H Depth etc. need to be submitted to BTCL after completion of PM.
- The rectification process of any observation found during PM will be under scope of as usual fibre maintenance service.
- ODF preventive maintenance is also a part of fibre preventive maintenance.
- Continuity test is mandatory for unused spare fibres (ODF to ODF). Service Provider must submit the continuity test report & loss report of spare fibres to BTCL after the completion of each preventive maintenance.
- 100% fibre continuity needs to be maintained for all fibre core and update in the Dashboard.
- The Service Provider has to ensure the existence of all HH marker, painting and marking of all HH marker pillar & HH cover during PM. If any deviation is found during audit, penalty will be imposed as per contract.
- Quality of preventive maintenance will be measured as per checklist provided by BTCL. Any deviation of quality standard below the KPI level will be penalized as per contract.
- Quarterly fiber protection check by disconnecting physical fiber from ODF.
- As built drawing update once a year and provide to BTCL.

(b) Detailed Days and Times

for Corrective Maintenance

Immediate effect (within 30 minutes) after received the information/telephonic/SMS/Email in 24/7.

For Patrolling, Monitoring, Preventive Maintenance, reporting is described above.

(c) General Specifications



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Co-ordination of correctivemaintenance

The co-ordination for corrective maintenance will be done by the Service Provider. Any kind of permission, co-ordination, liaison and persuasion needed with the relevant Authorities for such preventive and corrective maintenance work, shall be arranged and managed by BTCL and the Service Provider help in this case.

For Corrective Maintenance, the Service Provider will facilitate the required resources to provide necessary remedial services. The Service Provider will coordinate with the relevant authorities and any other third parties on behalf of BTCL. If any road cutting compensation is needed, Service Provider will pay the claimed amount and then raise an invoice to be reimbursed by BTCL.

(d) First Line Maintenance Package Scope of Work:

9. Details of CorrectiveMaintenance

The Service Provider will rectify the reported faults/damages related to the Fiber Cable Network, its infrastructure and services which includes repair and maintenance activities on cable accessories (Joint boxes, ODF and sleeves) in the underground cable network.

The Service Provider will analyze and estimate the time required to rectify the faults and damages and inform BTCL NOC/SOC/ authority accordingly. The Service Provider will rectify the reported faults/damage of Fibre cable network for 24X7 basis across the issued TT/mail/other source communication within stipulated time line and LD clause.

The following Points to be maintained during the corrective maintenance: (Dual Reminder)

1. Splicing loss at any spliced point should not exceed 0.03dB.
2. End to End fiber link RSL should be within threshold. End to End loss should be $\leq [(Loss\ of\ an\ undisturbed\ segment\ in\ the\ same\ route - Total\ splicing\ loss\ in\ that\ segment - Total\ connector\ loss\ in\ that\ segment) / Segment\ Length] * End\ to\ End\ Total\ Length + Total\ no\ of\ Splicing\ Points * Standard\ Loss\ per\ Splice\ (0.03dB) + Number\ of\ End\ to\ End\ Connectors * Loss\ per\ Connector\ (0.2dB).$
3. After restoring, FO the duct should be laid at least 1.2 m vertically under the ground level for Open Cut and 5 meter (mid-point) for HDD. For HDD a tracking system shall be used to ensure minimum depth of the laid cable.
4. Sharp edges and bending shall be avoided during fiber dressing inside closer, ODF and handhole



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5. If the depth could not be maintained or if the fiber is in risk (near fuel pump, shop, road crossing, culvert, bridge etc), GI pipe and RCC should be used to secure the fiberduct.

6. Backfilling procedure (From bottom totop):

- a. 1.2 m deep trench
- b. 75mm of sand
- c. Duct containing Fiber Optic Cable
- d. 75mm of sand
- e. 63.5mm of Brick (width 250mm)
- f. 75mm of sand
- g. Warning tape
- h. Dense soil (to be compressed) up to Ground Level

After rectification every sites backfilling color picture must be supplied to Engineers of BTCL to ensure the work has been done properly and update in the Dashboard.

7. Service Provider will update the progress of rectification works to concern BTCL Engineer at least once in every 30 minute until all the traffic carrying fiber are restored/reconnected. The fault must be repaired within 5(five) hours.
8. The team has to start OTDR from the nearest station within 30 mins after notifying any Fibre cut
9. Fiber restoration time will be measured from the time of fiber link down and up as per system data.
10. If any single/multiple fiber link is broken/unusable(from device) for traffic will also be considered as fiber cut.

After the rectification works completed the Service Provider will provide the estimated quantities of consumable items (length of OFC used, Number of Joint Closure Box, Length of Duct, etc.) through SMS/email to the concern BTCL authority and BTCL regional office will ensure the activity.

To confirm the length of laying OFC, Service Provider must mention the starting and end meter reading of OFC with the report.

After rectification of every sites; the color picture of OFC laying, splicing of joint closure/ TJ Box and other activities must be supplied to Engineers of BTCL to ensure the work has been done properly. DGM will certify based on this document.

11.

- a) Acceptance papers of any fiber cut/rectification works and As build Drawing should be submitted to BTCL authority within 3 days of such rectification.
- b) Acceptance papers of rectification works should include the GPS reading of the splicing points.



-
12. The BTCL will supply required all OFC (Optical Fiber Cable) and HDPE duct for corrective maintenance activities. The Service Provider will collect the materials from the nearest BTCL office and concern persons.
 13. If Materials are not available at BTCL sites, Service Provider will supply materials and restore the fault in stipulated time. BTCL will reimburse materials in monthly basis.

10. Flowchart of Correctivemaintenance

The corrective maintenance will follow the flowchart given below:



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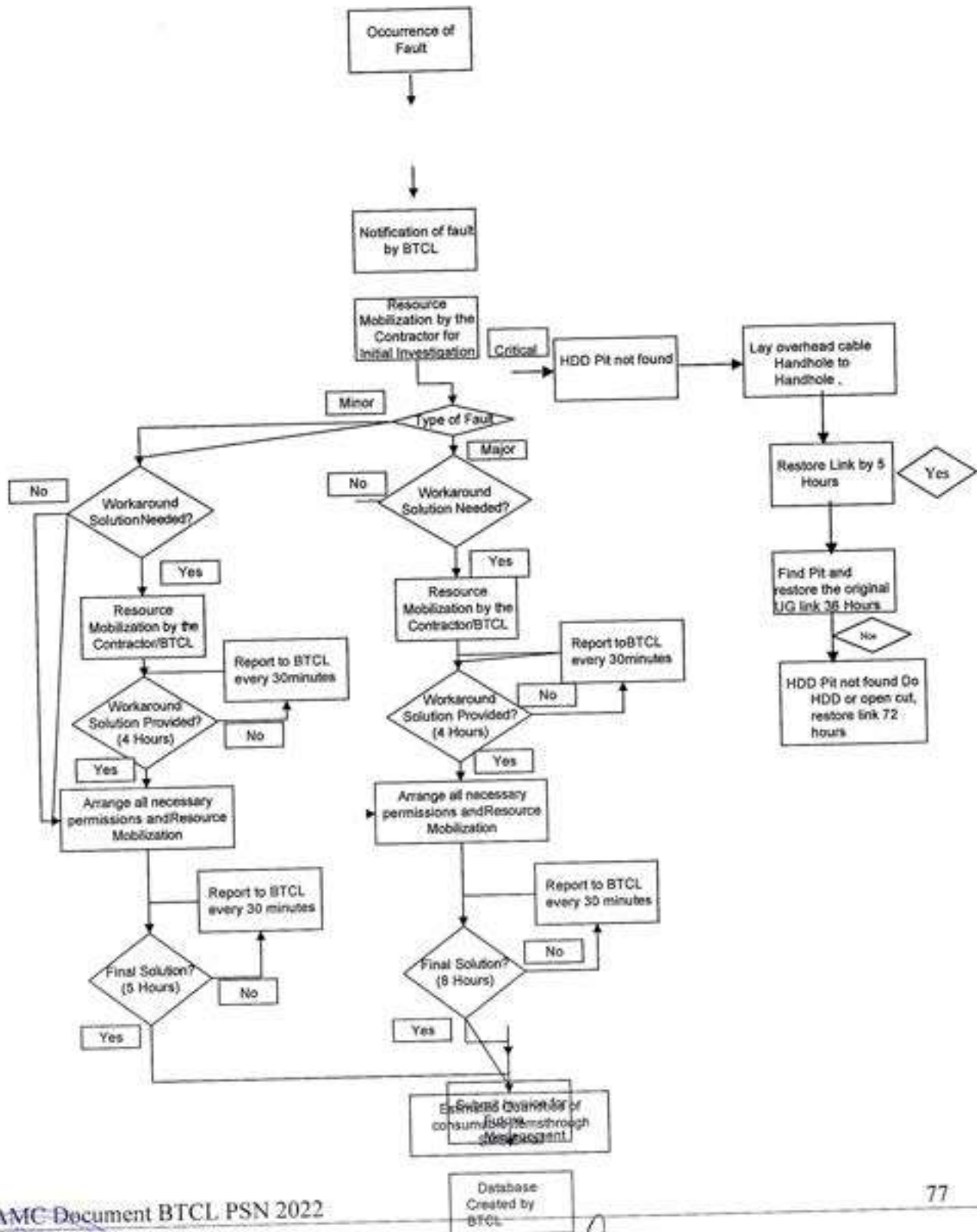
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1. Corrective Maintenance Flow Diagram



11. First Line Maintenance Support Teams

The Service Provider's maintenance teams shall consist of skilled engineers & labors to perform the operation and maintenance for telecommunication infrastructure (Fiber Optic Cable, Duct Systems, etc) related tasks.

Route wise number of Region office and office organogram will be as follows:

a) No. of offices:

LOT-A

1. Mymensingh
2. Kishoreganj
3. Jamalpur
4. Tangail
5. Rajshahi
6. Bogra
7. Rangpur
8. Kurigram
9. Dinajpur
10. Sirajganj
11. Kushtia
12. Khulna
13. Satkhira
14. Faridpur
15. Barishal
16. Bhola
17. Patuakhali
18. Barguna

LOT-B

1. Dhaka
2. Manikganj
3. Gazipur
4. Cumilla
5. Feni
6. Laksmipur



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7. Chattragram
 8. Khagrasari
 9. Coxsbazar
 10. BBaria
 11. Moulovibazar
 12. Sylhet
 13. Sunamganj
- b) Maintenance office distance should be within 25 KM inside city corporation and 35 KM outside city corporation area. One Maintenance office should contain minimum one experienced team lead (Engineer) and two splicing technician/splicer, Patrolling Engineer, Guard (for OFC when necessary), Labour (at least two persons). Each office should have splicing machine, OTDR, Power meter, leaser source, different types of fiber, consumable materials(different type of OFC, HDPE, Clouser, Overhead accessories, GI wires, Pigtails, different type of Patch cords, ODF, different tools) vehicle and logistic support. Based on more fiber connectivity and vulnerability, need to increase team based on request from BTCL after mutual agreed by both parties.
- c) **Manpower list (Regionoffice):**
1. OneEngineer
 2. Two splicing technicians /Splicers
 3. Labor (Two persons)
 4. Necessary Engineers for Patrolling
 5. Necessary Guard for OFC link during construction work of RHD, LGED,GAS, Electricity and others.

The list of tasks will include the following

- Development of a basic plan for corrective maintenanceworks
- Coordination for fault handling and faultclearance
- Monitor and control the maintenanceteams
- Update "As-builtdrawing"
- Splicing works in all existing route to add more fibers/reroute existing connectivity for additional capacity
- Update the Dashboard



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12. Field Force Mobilization

In case of failure of the operation of the Fiber Optic Network, the network operation center of BTCL will generate a fault report and will forward it with all necessary data to the Service Provider. The service provider will rectify the fault according to the procedures stated before in this document.

The service provider will maintain the availability of each link within 99.98% and MTTR within 5 hours for each link, if it degrades the service provider will take necessary steps with the consultation of BTCL.

13. Access to Records

BTCL shall provide reasonable access for selected employees of the Service Provider to the related Fiber Optic Link database and Dashboards to enable them correct records to be accessed and updated. This database shall consist of all routes (trunk route maps), detailing hand holes, Distances, splicing losses, Coupler Points, Joints and Splicing Records.

In addition, the rectification report, as build Drawing which covers preventive and corrective maintenance shall be submitted to BTCL within 3 days after clearance of fault.

14. Communication and Reports

14.1 The Service Provider shall communicate solely with a designated contact person of BTCL (hereinafter referred to as the "Coordinator").

14.2 The Service Provider shall supply the Coordinator with the telephone number(s) of the "CallCenter/Helpdesk"

where the complaint will be lodged. An email address of the Complaint Center will also be furnished by the Service Provider.

14.3 For fault management, a web based ticket generating system will also be implemented.

14.4 A Portal and Dashboard will be given to Service Provider to update the clearance and activities of fault.

14.5 A group will be created to organize, mobilize and engage in activities

15. Storage of materials for repairing



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All repairing materials (except OFC and HDPE) will be provided by the Service Provider and be kept at the office of the Service Provider for repairing purpose with its own responsibility. The minimum recommended materials to be made available in the Service Provider's store are listed in the following table.

The Service Provider will keep BTCL updated on usage of the materials regularly. In the event, the quantity of any item goes below the minimum order quantity, the Service Provider will inform BTCL and the additional purchasing will be the responsibility of BTCL and update in the Dashboard. BTCL will provide resources (OFC and HDPE) to the service provider

The other miscellaneous materials as detailed in attached list will be provided by the Service Provider:

15.1 Minimum recommended materials to be made available in each office location of the Service Provider:

SL NO	DESCRIPTION	QTY	UNIT
1	a) 19 inch wide splice/patch shelf, 88 mm height, capacity 4 trays of 12 fibers without connectors, no pigtails – ODF	1	No
	Or b) UCAO 4-9 with 8 MFT trays, closures with tensions, strain relief with screw and contact plate, sealing wedge with metal bracket, sealing tape, sealing, screw for sealing wedge, dummy plug, wrap gage, grounding screw, shield connection lead, installation instruction, tray holder for MFT splice trays, buffer holder, strain relief for central member and necessary accessories for 144, 96, 48, 24 and 12 core Cable	1	No
2	Adapter (LC/LC/FC/SC)	10	No.
3	3 meter pigtails (900 um single mode) with LC Connector	10	No
4	5 meter patch cord (3mm single mode) with LC- LC connectors	10	No
5	10 meter patch cord (3mm single mode) with LC- LC connectors	10	No
6	15 meter patch cord (3mm single mode) with LC- LC connectors	10	No



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7	Joint Closure with 8 Trays (including splice kits)	12	Set
8	Splice Protector	100	Pack
9	Optical Fiber Cable (144/48/24/12 Cores) each	4000	m
10	6 core overhead OFC (Armored)	2000	m
11	12 core overhead OFC (Armored)	2000	m
12	40/32 diameter pin point HDPE Duct	2000	m
13	HDPE Accessories: Coupler, Push pit	20	No
14	HDPE Accessories: Coupler, Long pit	20	No



S L N O	DESCRIPTI ON	QT Y	UNI T	SERVICE PROVIDER
15	HDPE Accessories: Two part coupler	20	No	To be mentioned
16	HDPE Accessory: Simple plug	20	No	To be mentioned
17	HDPE Accessories: End plug	20	No	To be mentioned

15.2 Miscellaneous Material/Services to be made available by the Service Provider in each office location:

SL	DESCRIPTION	QT Y	UNIT	SERVICE PROVIDER
1	4" dia GI Pipe and accessories (Gold)	30	M	To be mentioned
2	2" dia GI pipe and accessories (Gold)	30	M	To be mentioned
3	Filling sand	10	m ³	Local
4	Flexible PVC pipe 1" dia	100	M	To be mentioned

15.3 Tools and Test Equipment peroffice:

The maintenance team at each site office and local office should be equipped with at least the following tools and test equipment:

Sl	Description	Qty	Unit
1	Splicing Machine	1	No
2	Cleaver	2	No
3	Stripper	2	No
4	OTDR	1	No
5	Splicing Tools set/case	1	Set
6	Power meter	1	Set
7	Portable Small generator	1	No
8	Testing Fiber - 1 Km (approximately)	1	Dru m
9	Vehicle(Microbus/Pickup with necessary materials carrying capacity)	1	No
10	Rotary duct cutter	1	No
11	Rotary cable cutter	1	No
12	Light	4	No
13	Camera having the option of capturing the date & time	1	No
14	GPS for measuring co-ordinates of existing & new HH/CP	1	No
15	Shade for conducting splicing during Rain/Inclement weather	1	No
16	Wheel Meter	1	No
17	Yellow Stick	1	No



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16. Restoration Time

For the single cut, two teams will move from nearest two offices and they will gather in the spot. Time response is measured from receiving the notification from BTCL till restoration of the working fiber and the traffic. Repairing time depends on the type of the faults and varies on case-by-case basis.

The service provider will maintain the availability of each link within 99.98% and MTTR within 5 hours for each link, if it degrades the service provider will take necessary steps with the consultation of BTCL.

All Fiber cut will fall into three categories and their restoration times will be as follows:

Fiber Cut Categories	Definition	Work around to restore the live fibers	Final Restoration time (only cable repair)
Minor Cut	Single splicing needed	2 hours	3 hours
Major Cut	2 or more splicing needed	4 hours	5 hours
Critical/Severe Cut	The cut that may happen from uncontrollable factors such as Force Majeure, civil war, earthquake, etc.	Case-by-case basis (Maximum 24 hours)	Case-by-case basis (Maximum 24 hours)

In case of Major and critical fault restoration if it is unable to find CP and fault of OFC, Service Provider shall lay overhead OFC Handhole to Handhole and restore the link within 3 hours. No additional payment will be made for this purpose and Service Provider will rectify the original fault in Shortest possible time and replace the overhead OFC from the system.

All mentioned time in the table is counted from receiving of the fault notification from BTCL. However, it will be effective in circumstances beyond the Service Provider's direct control which include:

- Unworkable environment such as storm, heavy raining, flood, calamities, etc.
- Strikes or due to unfavorable law and orders situation.

For the civil work restoration time, Service Provider will assess the time required with notification to BTCL.

The Service Provider shall make available, at its own cost, all necessary equipment, machinery and materials as required to adequately perform the services including but not limited to: (Include detailed equipment & consumables or any other ancillary facilities or other essentials that will be required for good and acceptable performance)



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17. Liquidated Damage

In the event that the restoration time is more than 10 hours, penalty will be imposed BDT 10,000/per hour delay for restoration.

Severity	Performance Indicator	Target (SLA)	Achievements	LD	CAP
Major	Fiber Cut/Quarter (number)	Fiber cut:	>250 <=400	2%	Total LD for all KPIs including fiber will not be more than 10% of quarterly fee of BTCL own fiber (KPI will be measured on quarterly basis)
			>400	4%	
Major	Patrolling	All fiber route as per AMC	All route	Tk.5000/day (any route fail)	
Critical	Fiber MTTR (Hour)	5 Hours	>5.00 to 7:00	3%	
			>7:00	5%	
Critical	High fiber loss MTTR (Hours)	18.00 Hours	>18:00	1%	

- If the **Availability** of each link is failed (less than 99.98%) in each month then penalty of BDT 15000/per 0.05% of non-availability of each link. To avoid it, the service provider has to confirm the Patrolling of the link.

18. Additional/Deduction of Length of the Route

BTCL shall have the authority to add extra length or reduce of OFC/OFC Link to this project as per requirement and future expansion. The assignment for additional length shall need to be notified to the Service Provider in writing and the Payment for such additional or reduction length shall be paid as per agreed rate. However, payment for such additional length shall be paid on actual time frame basis.

19. Equipment and Consumables

20. Rates of Materials to be used for Corrective Maintenance (If Required) as quoted at Tender

Item No	Description of Items of Service ¹ (in sufficient details)	Unit ²	Quantity ³
<i>To be filled in by the Procuring Entity</i>			
1	Mention here	Unit	



21. Quotations for Corrective Maintenance:

21.1 Quoted Prices for Corrective Maintenance and Preventive Maintenance

The prices for estimated materials and services to be required for corrective maintenance and Preventive Maintenance for 2 years' period are as quoted at BoQ part of this Tender in the Section 6

22. Total Cost for Maintenance Service:

Total price for maintenance services of both kinds of services (preventive and corrective maintenance) with respect to the scope of services outlined above.

The total estimated cost shall be added to the price of Goods/Works to get the total bid price and will be used for evaluation.

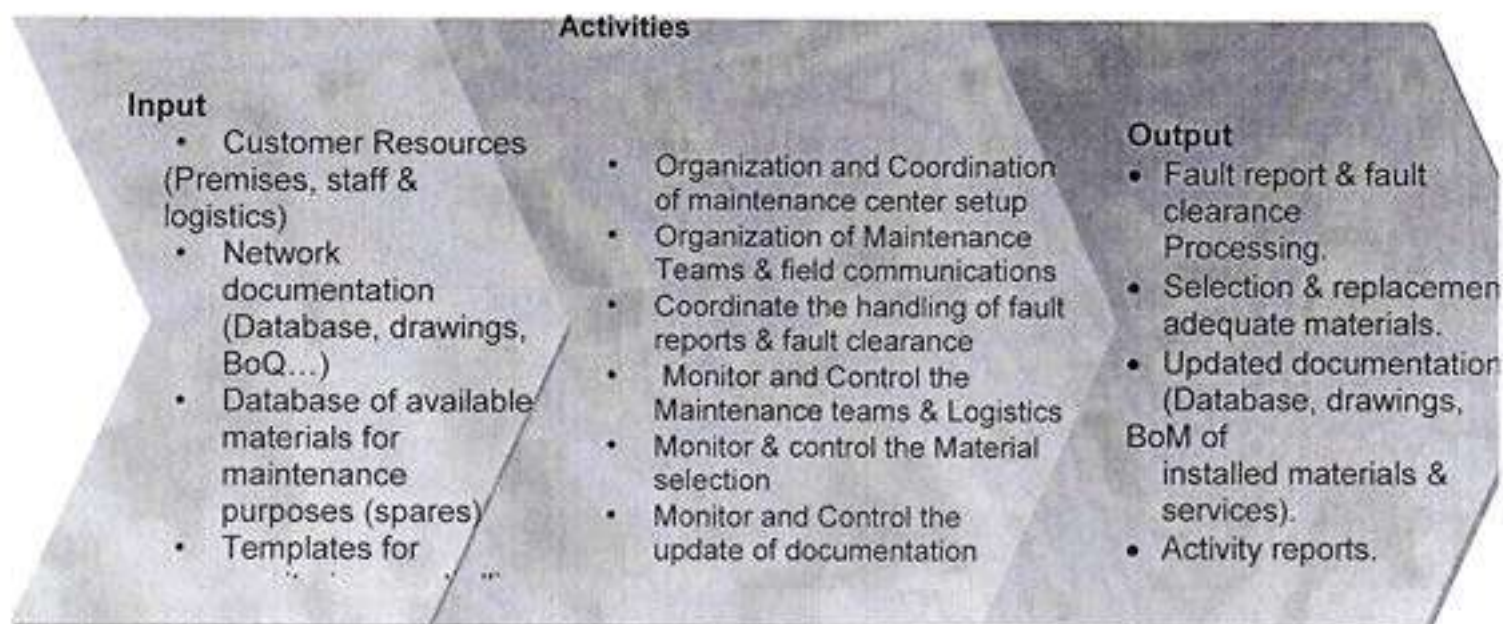
The payment for maintenance will be made based on invoice raised to CGM, Transmission East for LOT-B and CGM, Transmission West for LOT-A upon actual repair work done by the Service Provider for a particular case of cable damage.

The payment in both cases will be done after certification of BTCL.

BTCL will verify the MTTR, availability and restoration record with their own and verify & take certification with MNOs about each link MTTR, availability before payment of the invoice of the service provider.

23. OVERVIEW OF INFRASTRUCTURE MAINTENANCE ACTIVITIES

Maintenance activities shall be conducted in accordance with the following flow chart:



In case of failure of the operation of the Fiber Optic Network, the Network Operation Center (NOC) of BTCL will generate a fault ticket and will forward it with all necessary data to the Service Provider.



25. ACCESS TO RECORDS

BTCL shall provide reasonable access for selected employees of the Service Provider to the related Fiber Optic Link database, Dashboards, Portals to enable them correct and update records. This database shall consist of all routes (trunk route maps), detailing of hand holes, Distances, Splicing losses, Coupler Points, Joints and Splicing Records.

In addition, the rectification report which covers corrective maintenance shall be submitted to BTCL within 7 days after clearance of fault.

26. COMMUNICATION AND REPORTS

1. The Service Provider shall communicate solely with designated personnel of BTCL (hereinafter referred to as the "Coordinator").
2. The Service Provider shall supply the coordinator with the telephone number(s) of the "Call Center/Helpdesk" where the complaint will be lodged. An email address of the complaint center will also be furnished by the Service Provider/Service Provider.
3. For fault management, a web-based ticket generating system will be applied.

The Service Provider will keep BTCL updated on usage of the materials regularly. In the event of falling below the minimum quantity of any item, the Service Provider will arrange replenishment of the item(s) at its own responsibility with notification to BTCL.

27. RATES FOR SERVICE AND MATERIALS

Invoice for maintenance service shall be prepared and submitted following the rates as per Tender price schedule.

- 28. Dispute Resolution:** In case of any dispute the parties will try their level best to solve the issue amicably. In case the issue remains unresolved even after the best effort from both parties, follow the GCC clause 69.6.

29. RESPONSIBILITY MATRIX:

SL. No.	ACTIVITY	RESPONSIBILITY	
R→ Responsibility, A→ Assist			
		BTCL	SERVICE PROVIDER/SERVICE PROVIDER
1.	OPENING FAULT TICKET	R	
2.	MOBILIZING RESOURCES		R
3.	ATTENDING FAULTS		R
4.	ARRANGING ACCESS PERMISSION (RAILWAY/PGCB SITES/OTHERS)	A	R
5.	IDENTIFICATION OF FAULT		R
6.	NOTIFYING ABOUT PROGRESS		R

	OF RECTIFICATION EVERY 60 MINUTES		
7.	PLAN THE STRATEGY OF RECTIFICATION (WORK AROUND/PERMANENT)		R
8.	PROVIDING WORK AROUND SOLUTION		R
9.	PERMANENT RESTORATION OF FAULT		R
10.	TEST THE RECTIFICATION		R
11.	NOTIFY NOC ABOUT THE RECTIFICATION		R
12.	CLEARANCE FROM NOC ABOUT RECTIFICATION	R	
13.	PLACEMENT OF REQUIREMENT FOR FUTURE EXPANSION RELATED TO MINIMIZATION OF FAULT	R	
14.	PREPARE ESTIMATED COST FOR FUTURE EXPANSION RELATED TO MINIMIZATION OF FAULT		R
15.	APPROVAL OF ESTIMATE AND ISSUANCE OF WORK ORDER	R	
16.	GENERATION OF INVOICE		R
17.	VERIFICATION AND PROCESSING INVOICE	R	
18.	PAYMENT OF INVOICE	R	
19.	MAINTENANCE OF STORE		R
20.	ACCEPTANCE PAPER OF FIBER CUT		R
21.	COLLECT KEY AND RETURN AFTER WORK	A	R

30. EVALUATION: Tenderer will be awarded according to the lowest rate provided at Item no 1, 2 of Activity Schedule and PE could implement Item 3,4,5 and 6 time to time if require in future during the tenure of the contract. Item no 3,4,5 and 6 will be evaluated but will not awarded during the contract.



B. Performance Monitoring

1. Objective:

CGM, Transmission East, CGM Transmission West, their team and the Service Provider will meet at the management level at least once every One months or as often as necessary to review the performance of the services provided with a view to ensuring quality standard in the services. The two parties shall have shared responsibilities in optimizing the resources and facilities that have been deployed for the service. There would be several Governance meeting with employer and the service provider.

2. Progress Meetings

The BTCL will designate field level Governance committee and Mid level Governance committee who is involved in one way or the other in the administration of the cleaning services at the organizational level and performance of the activities, short comings and take necessary steps to be taken for overcoming the shortfalls.

First level will meet Bi weekly and Mid-level will meet monthly and top level management will meet once quarterly. Progress meetings are meant to review on the services provided to the organization as a whole and they are not meant to substitute the regular consultations and meetings that are usually held at ground level for day to day matters.

The scope of work of the designated officer shall be for:

- (a) Reviewing major shortcomings that have occurred on the sites in the past months and measures taken thereon;
- (b) Taking cognizance of complaints made by the Employer's representatives and action taken by the Service Provider;
- (c) Attending to weaknesses in respect of facilities deployed by the Service Provider on the sites and need for improvement;
- (d) Assessing the arrangements made by the Service Provider in terms of human resource and logistics; and
- (e) Attending to other matters related to contractual obligations of the Service Provider.

Appropriate records of the Progress Meetings shall be kept by the officer. Performance of Service Provider will be certified by this officer which shall be the basis for quarterly payment to the Service Provider.

3. Post Contract Evaluation Report

After the completion of the contract period, BTCL will prepare a performance report that shall reflect the service level based on recorded facts. A copy of the report shall be forwarded to the Service Provider for its information and allowing the latter at the same time the possibility to express its disagreement with the report, if any. A copy of the report and response of the Service Provider shall be kept in the procurement file for all intent and purposes.



ANNEXURE-II

TECHNICAL SPECIFICATION OF GOODS AND SERVICES

1. Installation of Underground Optical Fiber Cable

1.1 General Scope

Fiber Optic Cable is to be laid through 40/32mm HDPE duct of approved quality employing Horizontal Directional Drilling (HDD) technology. The quality of the HDPE duct should be such that it does not get elongated during installation through HDD method. The HDPE duct will be laid by trenchless technology as per the specification and the drawings. The reamer size must be at least 1.5 times bigger than that of the outside diameter of the HDPE duct. The duct joints should be minimum 200 to 250 meter apart if not otherwise instructed by BTCL Engineer. The ducts will be laid at a minimum depth of 5 (Five) meter (in the middle of the span). However, the depth may be less at duct joints and Hand hole as required according to Hand-hole position and as per approved design. The scope of work under the tender document shall also include the following:

- a) All preliminary work such as site clearance in all types of conditions, marking of alignment etc. as required for such work shall be carried out by the Service Provider without any extra payment to the Service Provider.
- b) Preparatory works such as checking of data for soil conditions and characteristics, section lengths, alignment of duct line for approval of the BTCL Engineer.
- c) Preliminary information regarding the existence of underground utility services like, Gas, Water, Electricity, Sewerage Pipes or underground OFC/Cables laid by any Telecom/Data Service Operator is to be gathered beforehand by the concerned Service Provider. Required "Test Pits" to locate such utilities are the responsibility of the Service Provider.
- d) Service Provider will be responsible to rectify any damage done to any such utility services or telecom/data cable at its own cost.
- e) Excavation of pits for all works and other ancillary works including dewatering if any on all sorts of strata including refilling of the same, disposal of surplus soil and site clearance works.
- f) Removal of defects in laying and jointing works of all pipe/duct in the newly laid portion or in inter-connections till the final commissioning of the links.
- g) Liaison with agencies such as DESCO, DESA, TITAS GAS, CITY CORPORATION, PAUROSAVA, Telecom/Data/NTTN operators and other agencies as applicable to smoothly carry on all related activities.



- h) Service Provider shall immune the BTCL of any claim from any authority/ organizations / individuals in delivering the works and obligations under this contract.

1.2 Scope of Work for HDD Method

- 1) All Cable shall run through 40/32mm HDPE Duct.
- 2) Pits will be excavated during execution of HDD works where the minimum depth of the Pits will be 2m from the Ground Level. In case of any deviation approval shall be taken from BTCL.
- 3) The depth of the cable and the route of the cable will be as permitted by the Road Authority and as approved by BTCL. The issues of presence of other utility services need to be considered during planning and execution of the HDD work. However, the design shall be made so that the cable route shall maintain a minimum distance from the Road/Highway so that the "Road Cutting Compensation" becomes minimum.
- 4) A tracking system shall be used to ensure the bore follows the required installation profile and achieves required clearances to underground obstructions in addition to ensuring the minimum depth of the laid cable.
- 5) HDPE Duct shall be installed through the bore. During installation of the HDPE duct care shall be taken so that the duct doesn't get damaged. Different sections of the duct shall be jointed using "Coupler Joints". Adequate measures shall be taken to make these joints sealed to make sure water doesn't leak through.
- 6) For Jointing the Cables industry standard water-proof "Cable Joints" shall be used. Hand holes shall be erected at each "Cable Joint" unless it is otherwise specified.
- 7) "Cable Blower" shall be used for blowing the cables through ducts once the ducts are laid and appropriately jointed using Couplers. Damage to the conduit shall be avoided during blowing of the cable.
- 8) All cable ducts and Optical Fiber shall have "BTCL" printed on it at every 2m interval. The marker in the cable shall be printed in a way so that after blowing of the cable the marker shall remain intact.
- 9) After blowing and installation of the cable all dirt including any foreign material shall be cleaned to keep the conduit dirt-free. The Service Provider shall carry all the responsibilities and have to do all the rework if the conduit is not properly cleaned or jointed.
- 10) The Service Provider shall submit a design drawing showing the boring depth and distance of the cable from the center of the Road. Once BTCL approves this drawing, the Service Provider shall execute the work in accordance with the approved



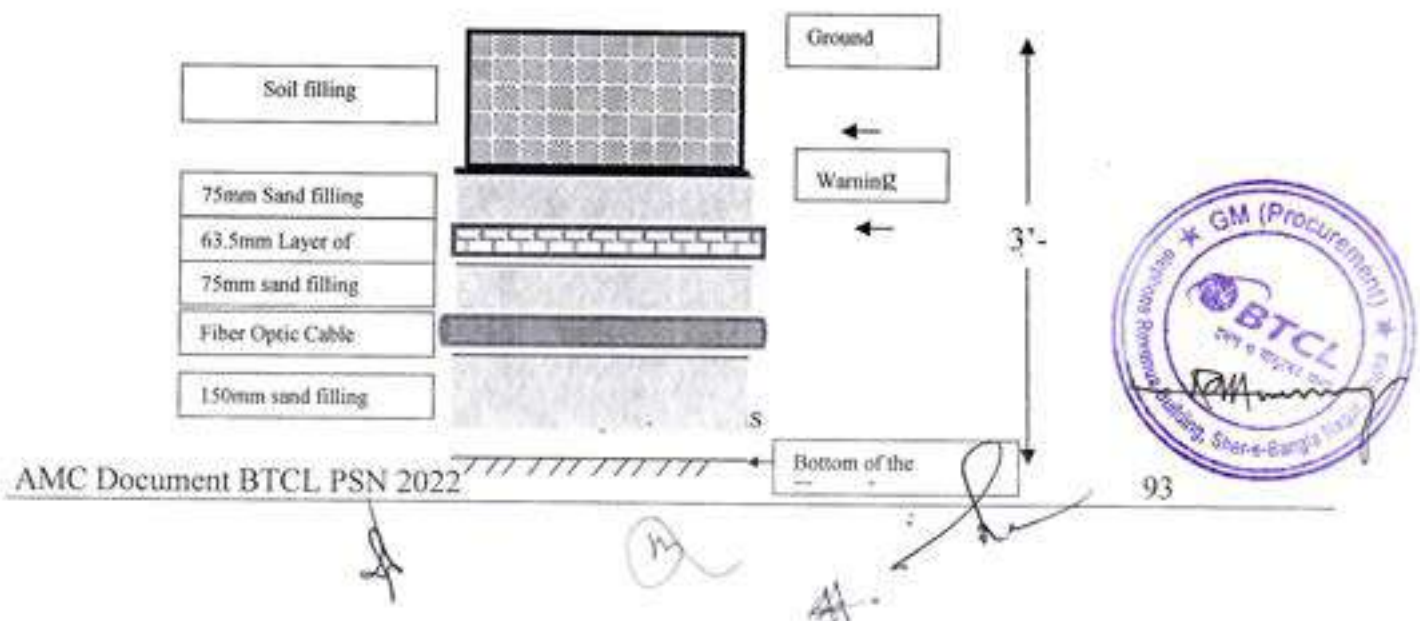
drawing.

- 11) Excavated Pits, where hand holes are not supposed to be prepared, shall be immediately filled up with dug out soils once the coupler joints are in place. However, even pits dug out where hand holes are to be prepared might need to be filled up temporarily if it creates significant discomfort for the passers-by.

1.3 Scope of Work for Open Cut Method

The Service Provider shall have to conduct all installation works related to Open Cut Method abiding by the following specific procedures. Any deviation from these procedures shall have to be pre-approved by BTCL.

- 1) Trench walls shall be vertical. Widths of trenches for HDPE duct shall be minimum required to install HDPE ducts and protective bricks. The widths of trenches are max 30 cm for bottom and for top for 1-way duct. Unnecessary disturbance of surrounding earth shall be avoided wherever possible.
- 2) The depth of the Trenches shall be at least 3'-6" in depth.
- 3) After proper excavation, the bottom of the trench shall be properly tamped, carefully leveled, compacted and dried.
- 4) The Service Provider shall ensure that there are no sharp materials or leftover garbage present inside the trench once the work is completed.
- 5) At the bottom of the Trench a 150 mm width sand bedding shall be prepared before laying the duct. On top of the duct a 75 mm width sand bedding will be accomplished. Then one layer of brick will be placed on top of the bedding with the bricks placed across the trench making the width at least 63.5 mm. On top of the brick a 75 mm sand bedding needs to be placed. The warning tape will be placed then and finally the trench will be backfilled with the excavated soil free of any dirt particle other than the soil.



- 6) For all major roads, railway and waterway crossings hand holes shall be constructed at either side of such crossings with instruction of BTCL.
- 7) All Cable shall run through HDPE Duct.
- 8) The warning tape should be of yellow color and should read cautionary marks mentioning "CAUTION: BTCL OFC BELOW" in English and Bangla $\text{Ómveavbt bx}\ddot{\text{P}} \text{ বিটসিএল অৱকাব্জ দৱবেজি }\ddot{\text{P}} \text{ কেজ}\&\acute{\text{O}}$ at every two-meter interval. The dimension of the warning tape shall be 5cm width and 0.15mm thickness.

1.4 Work for Bridge/Culvert/Waterway Crossing

- 1) Fiber optic cables in bridges and culverts etc. should be placed in 40mm HDPE duct and the HDPE duct itself will be placed inside a 120mm DWC pipe.
- 2) The Service Provider shall lay the optical cables alongside the roads and highways keeping distance as maximum as possible from the edge side of road to protect OFC from damage during expansion of the road with following conditions but not limited to.
 - a) 120mm DWC pipe duct will be fixed to bridge /culvert using galvanized clamps with royal bolts at each 1m distance where the bridge/culvert authorities do not permit to place the duct at the inner side of the bridge/culvert. But where possible 120mm DWC pipe duct should be placed on the footway of the bridge/culvert. 120mm DWC pipe should be covered with concrete (17 cm x 17 cm).
 - b) Cable splicing on bridges should be avoided.
 - c) In bridges, having high vibration risk (expansion) or excessive bending risk (section linking bridges and steep banks), cables should be adequately secured by means of protective pipe, elastic padding or flexible mounting.
 - d) Ducts of HDPE shall be used all through the route.
- 3) As the cable will be along the highway, crossing the water surface will be preferably through bridges or culverts. In case where crossing of bridges is not possible due to weak construction of the bridge or if the crossing along the bridge is not permitted by the Highway Authority, water course crossing will have to done in consultation with BTCL.
- 4) Hand-holes shall be constructed at either side of the Bridge/Culvert/Waterway.



1.5 Work for Intra-Building Cabling

- 1) While installing cables inside buildings, adequate bend radii, protection against stress and guard against excessive tensile and bending loads shall be strictly maintained.
- 2) Cables entering buildings must end with branching or termination splices placed in durable closures or junction boxes, well protected against unauthorized interference.
- 3) Cables installed in cable tray, shafts, risers or very steep ducts should be fastened with grips at intervals no greater than 3m. In case of longer shafts (above 30m), reinforcement with a layer of aramid yarn or glass fiber should be made.
- 4) Cables installed in shafts longer than 10 m should be filled with non-dripping gel or have partitioned cores, preventing gel from dripping inside cable coatings. Partitions should be made of epoxide resins or materials with similar sealing characteristics and should be distributed at intervals not longer than 10m. The bottom section of a cable in a shaft should be joined to the outgoing cable in such a way that the junction prevents leakage of gel.
- 5) All Cable shall run through PVC Pipe.

2. Work for Excavation

The following requirements shall be fulfilled for excavation work to be done for construction of Hand-hole and Trenching for Open Cut method.

- 1) All excavation/HDD Work shall be done following industry standard with due workmanship in accordance with the detailed approved drawings and the specifications and under the guidance of BTCL.
- 2) Service Provider will ascertain the type of permits that are required to do the necessary excavation/HDD Work and will obtain the permits after carrying out all the formalities. The permit may include official permission from Municipal Authorities, Roads & Highways Department, Railway Department, Authorities for Electricity, Water, Sewerage, Gas and similar other organizations. Necessary application will be made by the purchaser as and when it will be requested by the Service Provider and payments to respective authorities will be made by the purchaser once such claims are collected by the Service Provider from concerned authorities and are handed over to the purchaser.
- 3) The Service Provider/successful bidder shall pay compensation claimed by the government, semi- government and autonomous organizations against Road Excavation/HDD Work as "Road Cutting Compensation Cost" and will raise invoice to BTCL claiming the said amount. On positive validation OAC will be issued and the Service Provider will be reimbursed with the invoiced amount. The Service Provider shall be held responsible for any delay, without any acceptable reasoning to BTCL, in managing such permission and subsequent execution of works within the time frame fixed by the concerned authorities issuing the permission.
- 4) Service Provider shall obtain all pertinent records from the Electric company, Water Supply Authority, Gas Supply Company and Sewerage Authority, Telecom & Data Communication Operators or any other organizations having underground utilities in

order to execute the work safeguarding the utilities.

- 5) Service Provider shall take all precautions necessary for safety of general public and for protecting and preserving any temporary or permanent utilities.
- 6) If during the execution of the construction and installation of optical fiber cable, existing underground facilities are interrupted, or any part thereof is disturbed, Service Provider shall immediately notify the facts to BTCL and owner of the utility.
- 7) If Service Provider is obliged to change the location of excavation/HDD Work due to apprehension of presence of any existing underground facility found during execution of HDD, additional cost on the works for the above route/location change shall be borne by Service Provider.
- 8) Service Provider is directly responsible for all damages to existing utilities including telecommunication/data communication facilities and shall restore all such damages immediately at own expense.
- 9) If the presence of underground facilities is expected or if it is required by BTCL, Service Provider shall at its own expense excavate "Test pits" at the location in question.
- 10) If any obstruction is encountered during excavation of hand hole or performing HDD activity, Service Provider shall consult with BTCL about modification of drawing to be made for approval of the same.
- 11) Service Provider shall dispose of all excavated materials except stuff which are to be used for backfilling.
- 12) Service Provider shall at all times adequately protect the sides of the excavation against collapsing. Such sheeting, shoring and supporting work shall be applied at Service Provider's own expenses.
- 13) Service Provider shall confer with the proper road administrative authority and ensure that the proposed depth of hand holes and conduits conform to the final grades of carriageways and footways.
- 14) Service Provider shall excavate insofar as possible to comply with the trench width requirements. Any excess in this width, unless specifically authorized by BTCL, shall be at his own expense. This includes extra restoration expenses or pavements, macadam's and /or tiles.
- 15) Upon completion of trenching, all hand holes which will contain metallic sheath cable shall be earthed.
- 16) Service Provider shall at his own expense protect from damaging any type of hardware like Pipe, Conduit, Cable, Wires or any other items belonging to any utility service organization or Telecom/Data Communication organization during the excavation/HDD Work. Service Provider is obligated to rectify all such damages, if occur even after taking the fullest protection, and to restore all services to their original conditions and to the satisfaction of BTCL and owners of such plants.

3. Works for Installation of Hand-hole

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Hand holes shall be constructed to secure splice closures and excess cable length as well as for ease of drawing of optical fiber cable. Two types of Hand holes shall be constructed as follows:

3.1 Hand-hole on Carriage Way

- a) The Hand holes that are to be positioned along the Bituminous/RCC/CC Roads or at the vicinities of such Roads where there is every possibility of loaded vehicles to travel very frequently
- b) Reinforced Cement Concrete (RCC) hand holes placed on a concrete or gravel foundation to prevent their sinking in the soil are to be used. The nominal dimensions of the hand-hole shall be as follows:
 - Length: 1000mm (inside)/1300mm (outside)
 - Width: 800mm (inside)/1100mm (outside)
 - Depth: 1000mm (inside)/1120mm (outside, without cover slab)
 - Wall Thickness: 150mm
 - Floor Thickness: 120mm
 - Cover slab thickness: 150 mm
 - Number of parts in the Cover: 3(three)
 - Caging Type: Double

3.2 Hand-hole on Beyond Carriage Way

The Hand holes that are to be positioned neither along the Bituminous/RCC/CC Roads nor at the vicinities of such Roads and there is very seldom that vehicles can travel stamping their top Reinforced Cement Concrete (RCC) hand holes placed on a concrete or gravel foundation to prevent their sinking in the soil are to be used. The nominal dimensions of the hand-hole shall be as follows:

- Length: 1200mm (inside)/1440mm (outside)
- Width: 1000mm (inside)/1240mm (outside)
- Depth: 1000mm (inside)/1120mm (outside, without cover slab)
- Wall Thickness: 120mm
- Floor Thickness: 120mm
- Cover slab thickness: 120 mm
- Number of parts in the Cover: 3(three)
- Caging Type: Single

3.3 Variation in Hand-hole Dimensions

The inside dimensions for both types of hand-hole shall have the following tolerances:

Length : ± 25 mm

Width : ± 15 mm

Height : ± 15 mm

Important ! The bidder should take note that if any mismatch is found between the dimension mentioned above and shown in the drawing, the dimensions given above shall prevail and the drawings shall be revised accordingly.

5.4 Composition of Hand-hole Materials

Composition of concrete for RCC/CC works will be as follows:

- Stone chips (20 mm downgraded): Sand (Sylhet): Portland cement= 3:1.5:1
- Once the Hand-hole is completed, it shall be filled with sand for controlling water deposition inside the Hand-hole

3.5 General Requirement

- 1) Duct entry to the hand hole should be done using bell mouth with rubber end cap with appropriate hole for HDPE ducts. All unused duct entry through bell mouth must be sealed by rubber/plastic end cap. The duct entry to the handhole should be done at least 3.5 feet bellow of the top of the handhole. The trench from the way of duct to the bottom of the handhole must be covered with 1ft*6inch*3ft RCC work to protect the duct and OFC.
- 2) Outside city/town areas, hand holes will be at 2km interval for straight road section and at the points of splicing, while on the zigzag road section, the hand-hole span will be about 1km considering optical fiber cable pulling tension of 2000 Newton. Also in case of long bridge (30m or more) crossing, there will be hand holes at both ends of the bridge.
- 3) Hand-hole cover will be made of 3 parts reinforced concrete pieces for easy opening. The top surface of hand-hole cover shall have the "BTCL" mark on the cover center. Handhole cover must have at least two lifter handle on the handhole cover.
- 4) If the handhole will be placed on the edge of the road and if any possibilities to run vehicle over it, then top edge of the handhole must be framed with iron sheet or frame.
- 5) In city/town areas hand holes will be installed at an average spacing of around 200m. However, the precise location and numbers of hand holes shall be decided after survey by the successful Service Provider, subsequent submission of the drawing & design and the approval of the same by BTCL.
- 6) Tentative numbers of hand holes and their positions are given in the respective BoM forms/diagrams.
- 7) Cables splicing and branching, if required, shall be done in hand-holes.

3.6 Installation Procedures for Hand-holes



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Service Provider shall have to conduct all installation works related to hand-holes abiding by the following specific procedures. Any deviation from these procedures shall have to be pre-approved by BTCL.

- After proper excavation, the bottom of the structure shall be properly tamped, carefully leveled, compacted and dried.
- The foundation for hand-holes shall be prepared as follows:
 - Metal forms, with error free surfaces and proper attachments shall be used for all structures.
 - All RCC & CC works shall be constructed by ready mixed or site-mixed concrete.
 - The Service Provider shall confirm that before start of the concrete deposition the bed of the structure will remain completely dry.

3.7 Marker post installation

Cable runs should be identified by means of marker posts according to BTCL requirement and standard. The marker posts shall be installed at the locations without creation of any hindrance to the traffic flow. The exact location will be selected during survey and indicated in the drawing which shall be approved by BTCL.

3.8 Excess Cable in Hand-holes

The excess cable will conform to the following policies:

- 1) Excess cable of at least 20m along OFC lines should be placed at every non-splice hand holes. If in any case more than 20m loop cable is used the purchaser will not be obliged to pay for the excess amount.
- 2) Excess cable at a splice hand-hole should be at least 40m (20m/side * 2 for both side) and be coiled, properly tied up and secured against mechanical damage. . If in any case more than 20m loop cable is used for any side, the purchaser will not be obliged to pay for the excess amount.

4. Specifications of Optical Fiber Cable and Accessories

4.1 General Requirement

The bidders are requested to follow the specifications and guidelines outlined below. If the bidder feels that one or more additional item/items will be required for the turn-key completion of the network, which is somehow skipped in the estimated Bill of Materials (BoM), the bidder shall quote that item as a mandatory item.

However, bidders are encouraged to provide other alternate solution or any additional elements as optional showing detail advantages and disadvantages only after offering the main offer fulfilling the requirement of the specifications.

4.2 Cabling System

A Structured Cabling System (SCS) should be maintained following the specifications defined in ANSI/ TIA/EIA-568-B.3 standards. All the fibers shall be laid underground and shall follow ducts up to the building where those will be terminated. In the Building where termination of fibers will be made, no fiber shall remain hanging overhead. Inside the building, all fibers shall run through PVC pipes or channels or over ladders wherever

applicable. The fiber providers shall be responsible to fulfill and maintain all these requirements.

4.3 Optical Fiber Cable

4.3.1 Optical Fiber Characteristics

The Optical fiber shall conform to the latest relevant ITU-Recommendations and the requirements as specified in this document.

The Fiber shall comply with the design data given in ITU- Recommendation G.652D.

4.3.2 Optical Fiber Structure

ITEM		Specification/Standard
Type		Single Mode
Material	Core	Germanium doped Silica
	Cladding	Silica
	Coating	Dual Layers of UV-cured Acrylate, Color coded (both core and tube)
Mode Field Diameter		9.2 ± 0.4 μm for 1310 nm 10.4 ± 0.8 μm for 1550 nm
Cladding Diameter		125 ± 1 μm
Coating Diameter		242 ± 10 μm
Coating – Cladding Concentricity		< 12.0 μm
Concentricity Error		≤ 1.0 μm
Non circularity of Cladding		≤ 2 %
Curl radius		≥ 4 m
Cable Cut-off Wavelength (λ _{cc})		≤ 1260 nm
Zero Dispersion Wavelength		1300 – 1322 nm
Zero Dispersion Slope		≤ 0.095 ps/(nm ² x km)
Dispersion Coefficient		≤ 3.5 ps/(nm x km) 1310 nm ≤ 18 ps/(nm x km) 1550 nm
Attenuation		< 0.36 dB/Km at 1310nm < 0.22 dB/Km at 1550 nm
Refractive Index Profile		Matched Cladding Step Index

4.3.3 Optical Fiber Cable Structure

For double sheath single armored cable

Item		Construction
Type		Jellyfilled,loosetube,SingleArmored, Ducttype/direct
Strength Member		Fiber Reinforced Plastic (FRP)
Buffer Tubes		Color Coded Loose Buffer Tubes stranded around the strength member. The tubes to be filled with Thixotropic Jelly and necessary plastic fillers to have circular cable core
Core Wrapping		Non Hygroscopic Tape
Core Filling Material		Petroleum Jelly
Inner Sheath	Material	Black Polyethylene
	Thickness	1.00 ± 0.10 mm
Armoring	Material	Corrugated steel tape or tube, copolymer coated on both sides
	Thickness	Minimum 0.10mm
	Application	Overlapping



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Item		Construction
Outer Sheath	Material	Black Polyethylene
	Thickness	2.00 ± 0.20 mm
Cable Diameter		≤17mm
Maximum Permissible Tensile Force		>2000 Newton
Minimum Permissible Bending Radius		Dynamic: 25xDiameter Static (Unloaded): 12.5 x Diameter
Permissible Stress	Compressive	3000 Newton / 100 mm
Number of fiber per Buffer Tube		04/06/12
Number of Buffer Tubes		As per requirement
Cable Length in Drum		Minimum 2Km, with a lower level variation of 10% for all types of OFC.
Cable Marking		Length Marking: at intervals of every odd meter Number of Fibers in the Cable, Running length, Year of Manufacturer & Name of the Manufacturer

4.4 Fiber Identification

Each fiber shall be identified by providing suitable individual colors having good fast color properties. Colorless fibers shall not be accepted.

4.5 Fiber Stranding

A number of protected optical fiber shall be stranded together in such a way that if the mechanical and temperature limits are exceeded during transportation, Storage, handling, installation and operation, the fibers should remain undamaged.

4.6 Longitudinal Water penetration

1. The space around the fibers and filler shall be completely filled with jelly/grease throughout the cable components.
 2. The jelly/grease characteristics shall be quoted, which shall be compatible with the components.
 3. The jelly/grease shall not affect the color of the primary coatings, be easily removed, shall be non-toxic, and free from bad smell and shall not affect the human skin.
 4. The jelly/grease shall comply with the standard test procedure/ requirement
 5. Cross wound core binding yarns shall be applied during the stranding of the cable core and cable core shall be wrapped with a non-hygroscopic core wrapping tape helically/longitudinally with minimum 10% overlap.
- 1) Delivery and Cable Marking The optical fiber cable shall be delivered in drum with the following information to be painted on flange of drum:

- Type of Cable
- Length of Cable
- Drum Number



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- Year of Manufacture
 - Gross & Net Weight
 - Manufacturer name & Country
- 2) Cable identification mark along the length of the cable and distance marking shall be provided in meters. Cable ends shall be sealed to prevent the entrance of moisture.
 - 3) Optical Fiber cable should function normally under the following environmental conditions:
 1. Operating temperature: 5°C to 60°C
 2. Operating relative humidity: 60% to 100%
 3. Storage temperature: 5°C to 60°C
 4. Storage relative humidity: 60% to 100%

4.7 Fiber Optic Connector

The Fiber Connectors shall be SC/PC or FC/PC type for Pig Tail and also for patch panels. The patch cord for connection between Patch Panel to active device shall be out of scope of this tender.

The Service Provider shall confirm that the connector **Insertion Loss** and **Return Loss** conforms to ITU-T L.36 Table 9-1 Grade C and Table 9-2 Grade 3 – (extract below), of all connectors on each span:

- Typical Insertion Loss (IL) of a connection shall be: < 0.25 dB average
- Maximum Insertion Loss (IL) of connection shall be: < 0.5 dB in 97 %
- Maximum Return Loss (RL) of a connection shall be > 35dB

4.8 Terminations

All Fiber Cables shall be terminated through Fiber Patch Panels. Pigtails shall be used for fiber termination at the Fiber Patch Panel and Fiber Patch Cords shall be used for connecting Switch / Servers/ Routers / Transmission Equipment to the Fiber Patch Panel. Supply of Fiber Patch Cords shall be out of scope of this tender. Fusion splicing method shall be used for connecting the pigtails with the external fiber.

4.9 Fiber Optic Connector and Optical "I" Link

The Fiber Connectors shall be SC/FC/LC type for Pig Tail and also for Optical I Link for Patch Panels. The Patch Cord for connection between Patch Panel to Active devices shall be out of scope of this tender.

The Service Provider shall confirm that the connector insertion loss and return loss conforms to ITU-T L.36 table 9- 1 Grade C and table 9-2 Grade 3 – (extract below), of all connectors on each Span:

Typical insertion loss (IL) of a connection shall be: < 0.25 dB Maximum insertion loss (IL) of connection shall be: < 0.5 dB Maximum return loss (RL) of a connection shall be > 35dB

4.10 Optical Fiber Splices

The Service Provider shall confirm that the splice insertion loss and return loss conforms to ITU-T L.36 Table 9-1 Grade C and Table 9-2 Grade 3 – (extract below), for all splices on each splicing point:



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- Typical Insertion Loss (IL) of single splice shall be: < 0.1 dB
- Maximum insertion loss (IL) of single splice shall be: < 0.2 dB
- Maximum Return Loss (RL) of single splice shall be: > 60 dB

4.11 Fiber Distribution Systems

Fiber distribution system shall include (but limited to) the following items meeting the requirements and specifications defined in ANSI/TIA/EIA Standards.

- a. Fiber Runner for routing the fiber properly.
- b. Fiber Manager / Adapter Panel
- c. Accessories Kit.

4.12 Fiber Patch Panel/Optical Distribution Frame (ODF)

1. The Optical Distribution / termination Frame shall be rack (19 inches. Standard rack) mountable type and will be installed in suitable position in the equipment room.
2. **Optical "I" Links** in the Optical Distribution / termination Frame shall be high grade LC type.
3. There shall be easy access for splicing and conducting the maintenance facility of the Optical Fiber Cable inside the ODF.
4. There shall be provision for cable entry either from above or from the left-hand side, allowing the cable to enter the bay either from above or left side.
5. The capacity of the Optical Distribution/termination Frame shall be same as the number of available cores at that site. The vendor will provide Pigtails and I Links for all the ports in the ODF for termination of all the available cores.
6. There shall be provision for inspection and cleaning the internal fiber connectors.

4.13 Fiber Pigtail & Patch Cord

- 1) Patch cords for fiber connectivity between patch panel/ODF for patching terminating cable and the patch panel / ODF of existing fibers shall not be less than 5 (Five) meters.
- 2) For fiber termination, 1.5 meter pigtail shall be preferable.
- 3) The other specifications must meet the requirements and specifications defined in ANSI/TIA/EIA-568-B.3 standards.

4.14 Labeling System

The labeling system includes marking all the network elements such as racks, splicing boxes, rooms, connectors, patch panels, spaces etc. The labels must be auto-adhesive to the components and shall not be loose and lost easily. This system shall meet all the requirements and specifications defined in TIA/EIA-606-A standards.

4.15 Modality in case of deviation



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The Service Provider shall lay the fiber by HDD (Horizontal Direct Drilling) method. If at any point it is not possible, the Service Provider shall provide adequate reason/evidence to satisfy the project authority for deviation. But in no case, the cable shall be overhead except within the buildings. The Service Provider shall do the required survey and submit a design of the fiber links which shall have to be approved by the project office before actual implementation of the links starts.

4.16 Other Accessories

1. PVC Pipe Dimensions: The detailed dimensions of PVC pipe are given in the following table:

SL No	Item	Specific value
1.	Outside diameter	110mm
2.	Tolerance for mean outside diameter	$\pm 0.6\text{mm}$
3.	Length (including socket)	6 meter
4.	Tolerance for length	$\pm 10\text{mm}$
5.	Wall thickness	4.5mm
6.	Tolerance for wall thickness	$\pm 0.25\text{mm}$

2. The pipe and couplers shall have smooth outside and inside surface, smooth edges and shall be free from injurious flaws like streaks, cracks, twists and other defects.
3. The pipe shall be practically straight in form.
4. Both ends of the pipe shall be cut exactly perpendicular to the pipe axis and shall be free from chips and edges.
5. The pipe and coupler shall be manufactured by an extrusion process from material composed of polyvinyl chloride polymer to which suitable additives are added.
6. No constituent material which will adversely affect long term mechanical strength, creep, fabrication, solvent-welding and weathering properties of the PVC, shall be used.
7. PVC raw material must include 92%-95% of pure resin. The tolerated adjunct (in the limits of 5%-8%) as stabilizers, filters, colorings, anti-oxidizers, etc., must be free from any plasticizer or volatile components.
8. All constituents shall be uniformly and fully dispersed.
9. The color of pipes shall be any color.
10. PVC compound shall contain stabilizer, lubricant, filler and pigment consisting of standard polymers.
11. The pipes and couplers must have resistance to acid, alkalis, oxidizing and reducing agent, weather and rust.
12. The pipes and couplers must remain unaffected by fungus, bacteria and termites.

4.16.1 Universal Joint/Splice Closure Kit

1. The splice closure shall be waterproof type, which will accommodate the joint part of the



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cable, should be suitable for installation in manhole or hand hole or be directly buried.

2. Fiber splice tray/holder shall be provided inside the closure to accommodate the splice protector and surplus length of fiber after splicing.
3. The material of the sleeve for the closer shall consist of plastic material containing the glass fiber. The metal material for the closer shall be anti-corrosive & anti-rusting.
4. The closer should have following characteristics:
 - a. No leakage of air for 24 hours after applying 0.5 ± 0.1 kg/cm gas pressure.
 - b. No invasion of water after 1 hour with 1.0 ± 0.1 kg/cm water pressure.
 - c. No malfunction for 1 minute at 1500V DC between metal core and closer surface.
5. Splice closures should be easy to open with no special or specific tools and should be reusable without the necessity of cable cutting.
6. The joint closure must be 4 way. It should be possible to make 4-way interconnection to different directions with the closure.
7. Adequate number of Tray/Cassette shall be provided to hold 24/48 fiber splices depending on the size of the cable.
8. Full technical and constructional details of the closure are to be submitted along with the Bid.

4.16.2 HDPE pipe specification

HDPE pipe shall be of following minimum standard and shall have to satisfy following technical specification.

- The manufacturer of the offered HDPE duct must have valid ISO 9001 certification.
- Specifications for 40mm permanently lubricated HDPE Telecom ducts.

HDPE pipe Technical Specification:

S/L. No.	Item	Unit	Value	Test Standard
1	Material Density	930 to 958 kg/m ³ at 27° C		ASTM, D1238
2	Heat Reversion	Dimension shall not change by more than 3%		ISO2505/ASTM, D1238
3	Crash Resistance	Deflection with load not greater than 10%		ASTM, D2412
4	Tensile Strength	Newton / mm ²	Minimum 20	ASTM F2160/BS 2782
5	Elongation at break	%	Minimum 350	ASTM F2160/BS 2782



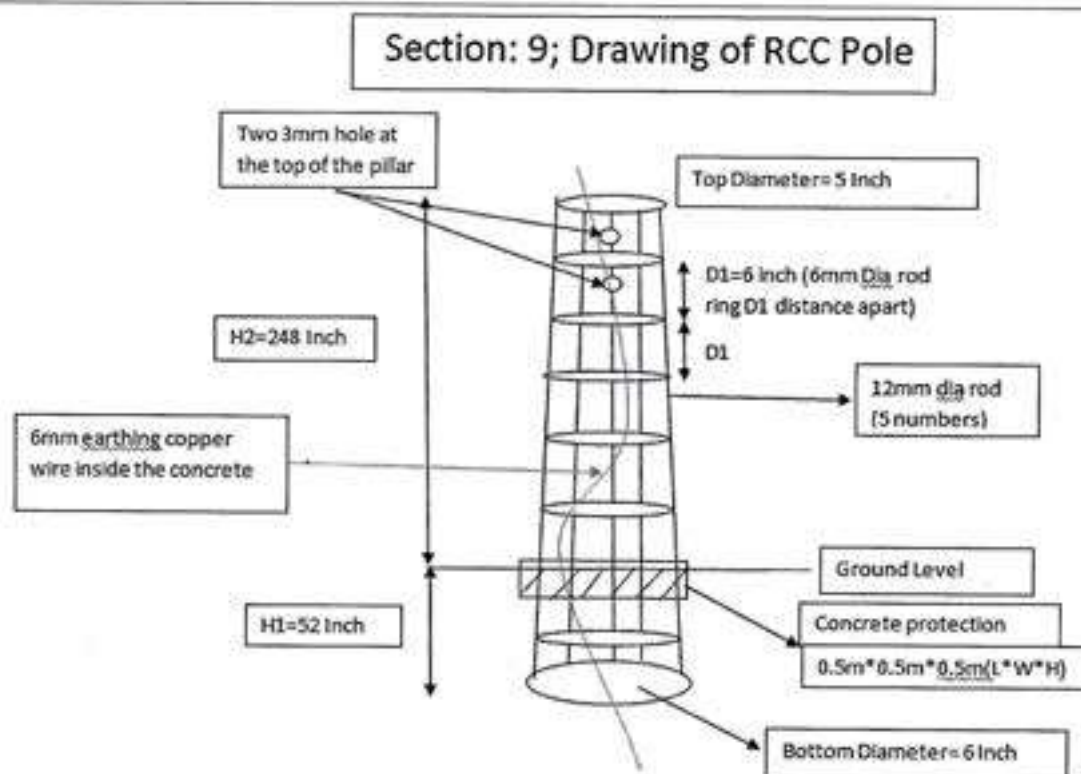
S/L. No.	Item	Unit	Value	Test Standard
6	Environmental Stress Cracking Resistance (ESCR)	Duct Shall not crack or split		ASTM D1693
7	Impact Strength	No crack or split		D2444
8	Hydro Static Pressure Test	No swelling, leakage or bursting		ISO1167
9	Coefficient of friction		<0.1	
10	Type of HDPE duct		Ribbed	
11	Lubricated Layer	Must have solid lubricant, clearly visible and white in color, uniform layer		
12	Lubricated Layer thickness	Should be minimum 10% of wall thickness		
13	Duct Size (nominal)		40/32 mm	
13a	Outer Diameter		40±0.5 mm	
13b	Wall thickness		4±0.25mm	
13c	Minimum coil length		500 meter	
14	Color			Preferably Black

4.16.3 Bamboo

Technical specifications for Bamboo will be instructed by BTCL Engineer in charge.



4.16.4RCC Pole

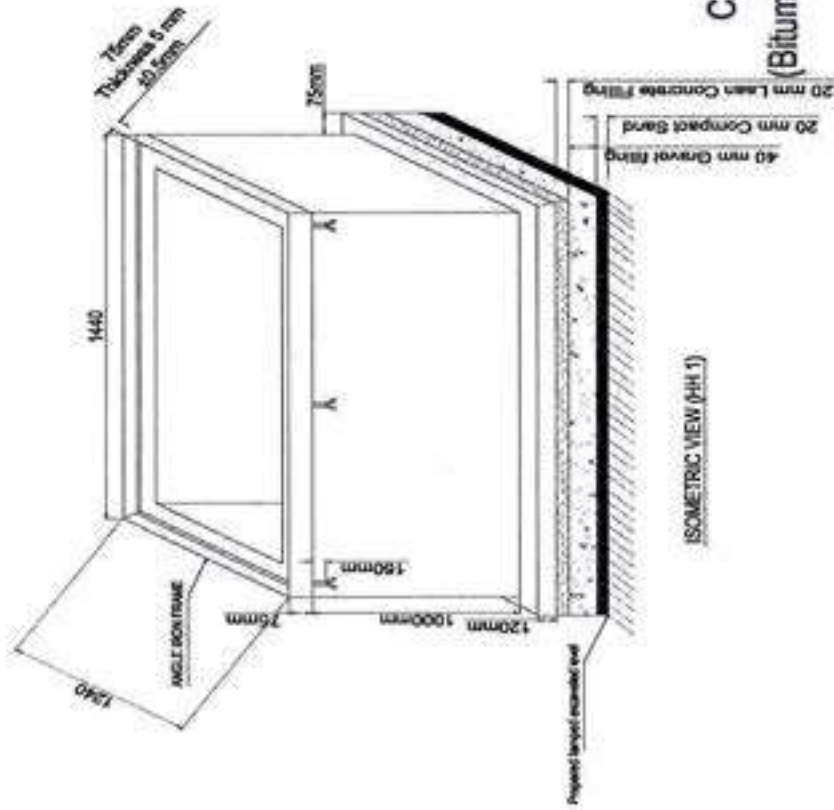


The pole/Tower specification will be as the following:

- ❖ Height: 300 Inch
- ❖ Shape: Solid conical reinforce cement concrete
- ❖ Brick Chip : Sand : Portland Cement= 3 : 1.5 : 1
- ❖ Bottom Diameter: 6 Inch
- ❖ Top Diameter: 5 Inch
- ❖ 6mm rod ring 6inch apart from Top to Bottom
- ❖ Number of vertical rod: 5*12mm
- ❖ Horizontal ring spacing: 6 Inch apart
- ❖ Concrete protection dimension: $0.6m \times 0.6m \times 0.6m (L \times W \times H)$
- ❖ 6mm earthing copper wire inside the concrete
- ❖ Two 3mm hole at the top of the pillar

Note: Some of pole may have to break as a choice of fortune to test the

NOTE:
All dimension in mm
Angle frame 75 mm
(thickness-4mm)



CARRIAGE WAY
(Bituminuse ,C.C and R C C Road)

ISOMETRIC VIEW (HH 1)

HANDHOLE COVER DETAILS (HH 1)

Prepared By:	Not To Scale
Drawn By:	
Checked By:	
Approved By:	Page 05



Annexure-VI

Carriage Way Hand-hole
Design (Page-2/4)



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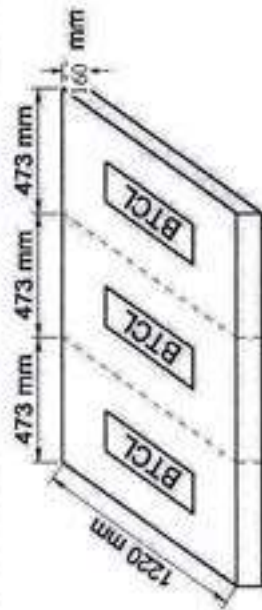
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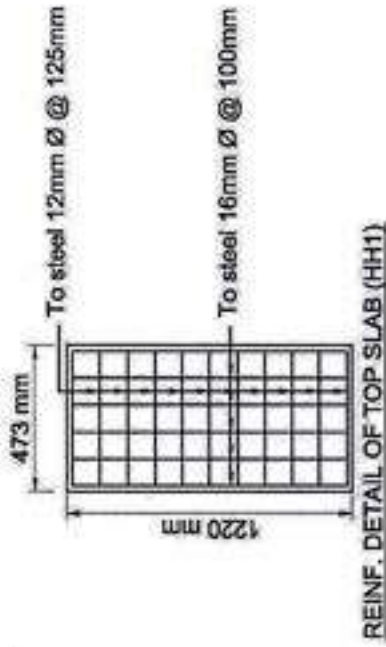
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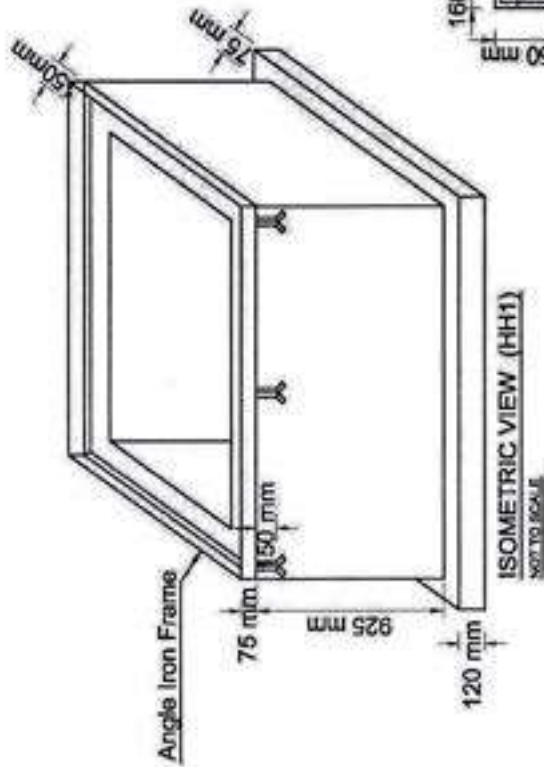
2. STRUCTURAL DIAGRAM M.H & H.H (9/9)



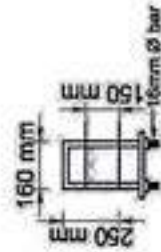
PROPOSAL FOR THREE PART TOP SLAB (HH1)



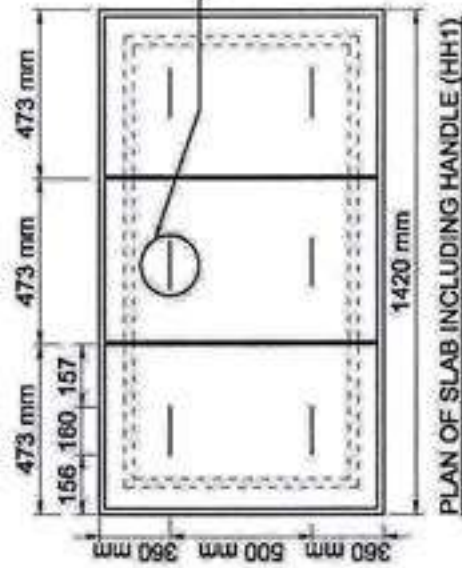
REINF. DETAIL OF TOP SLAB (HH1)



NOTE: ALL DIMENSIONS IN MM



DETAIL OF HANDLE 'D'



HANDHOLE COVER DETAILS-HH1



10

10

10

Annexure-VI

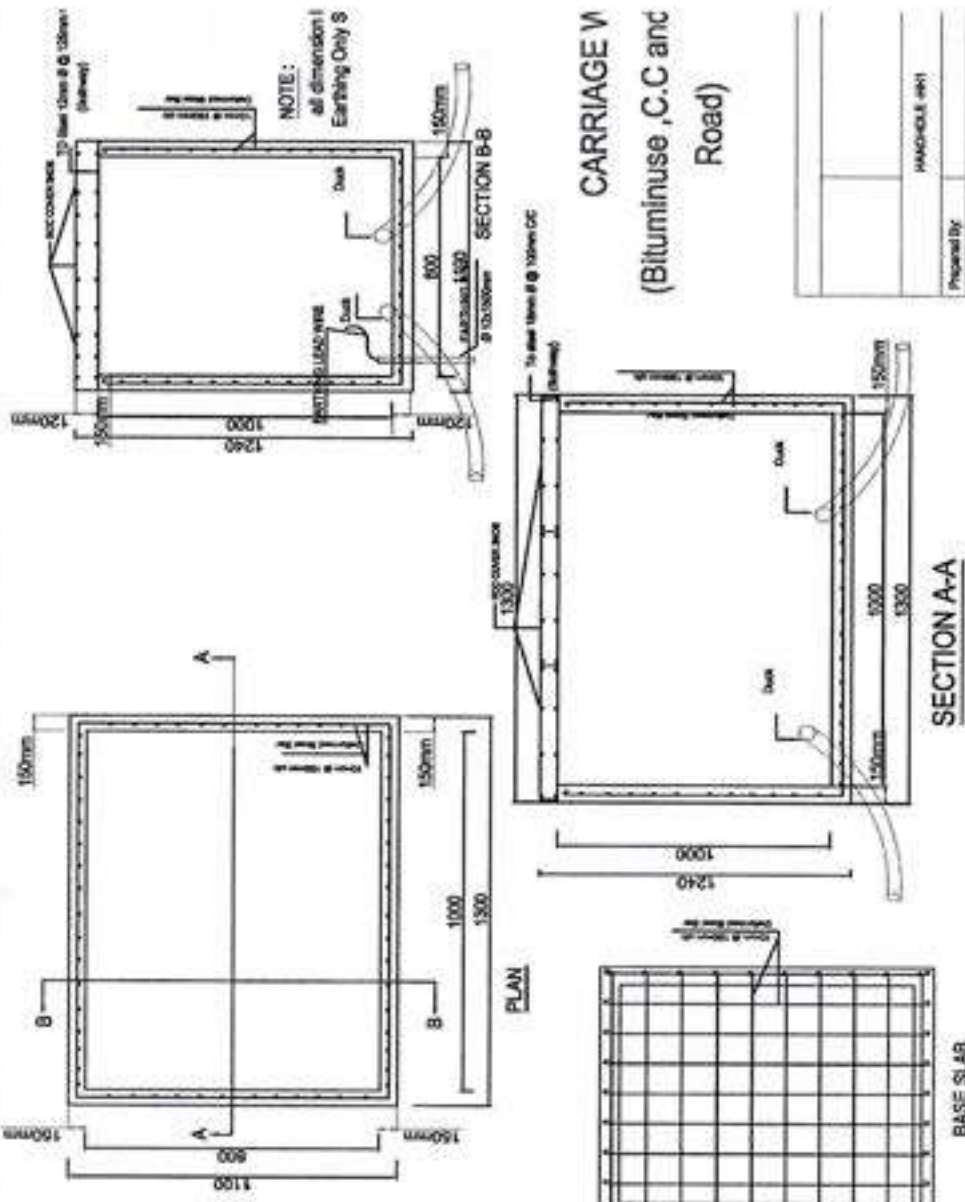
Carriage Way Hand-hole Design

(Page-3/4)

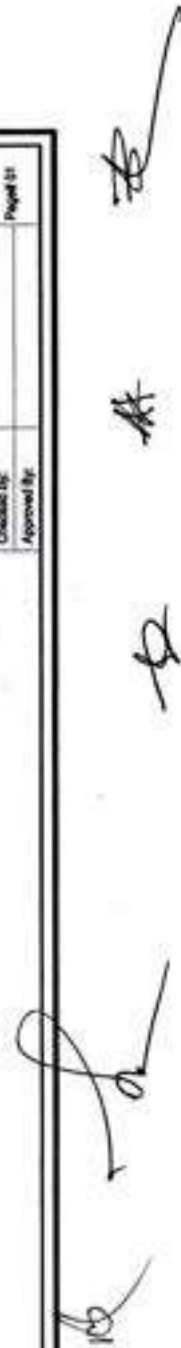




(Page-4/4)



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Annexure-VII

Beyond Carriage Way Hand-hole Design

(Page-3/4)

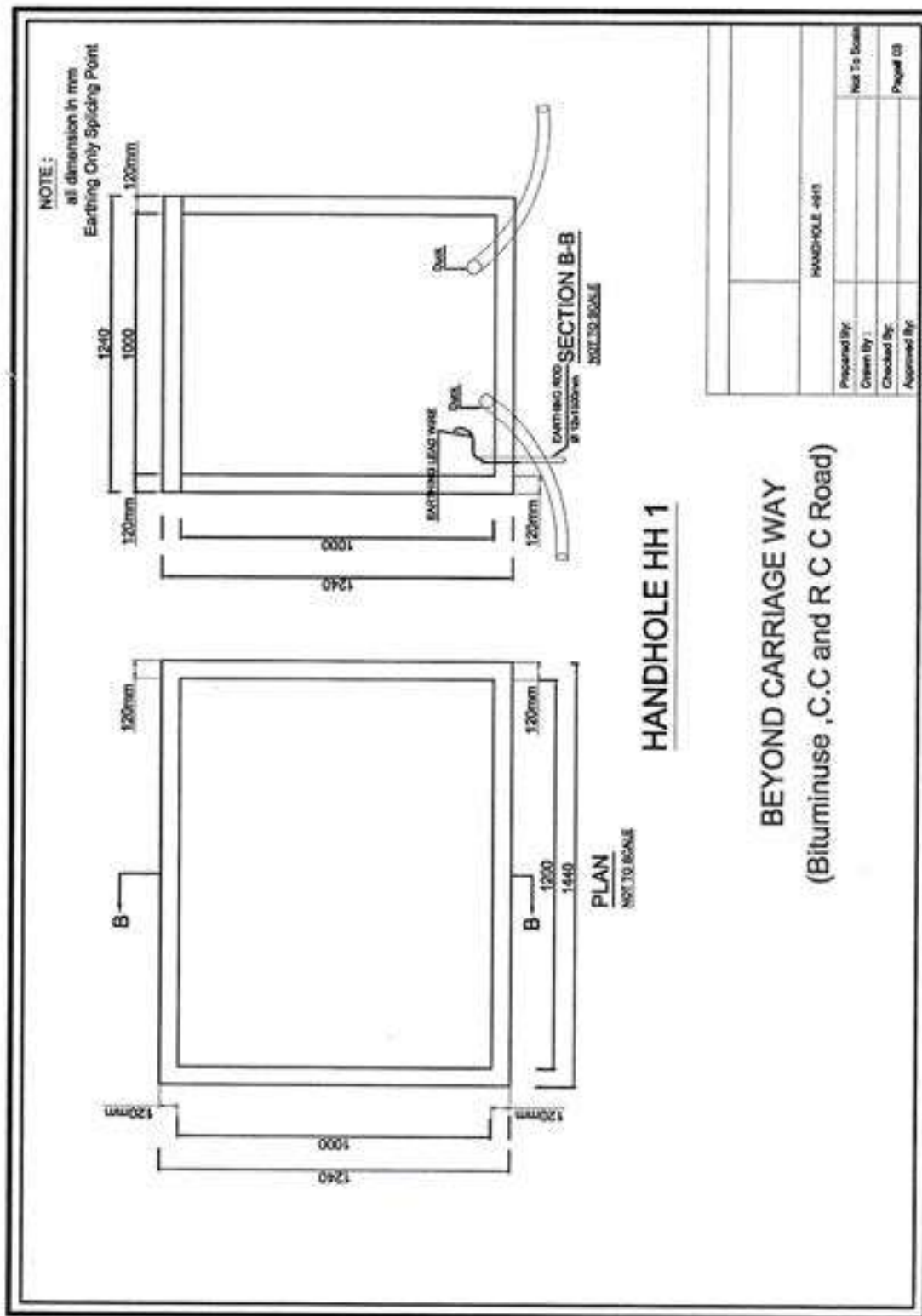
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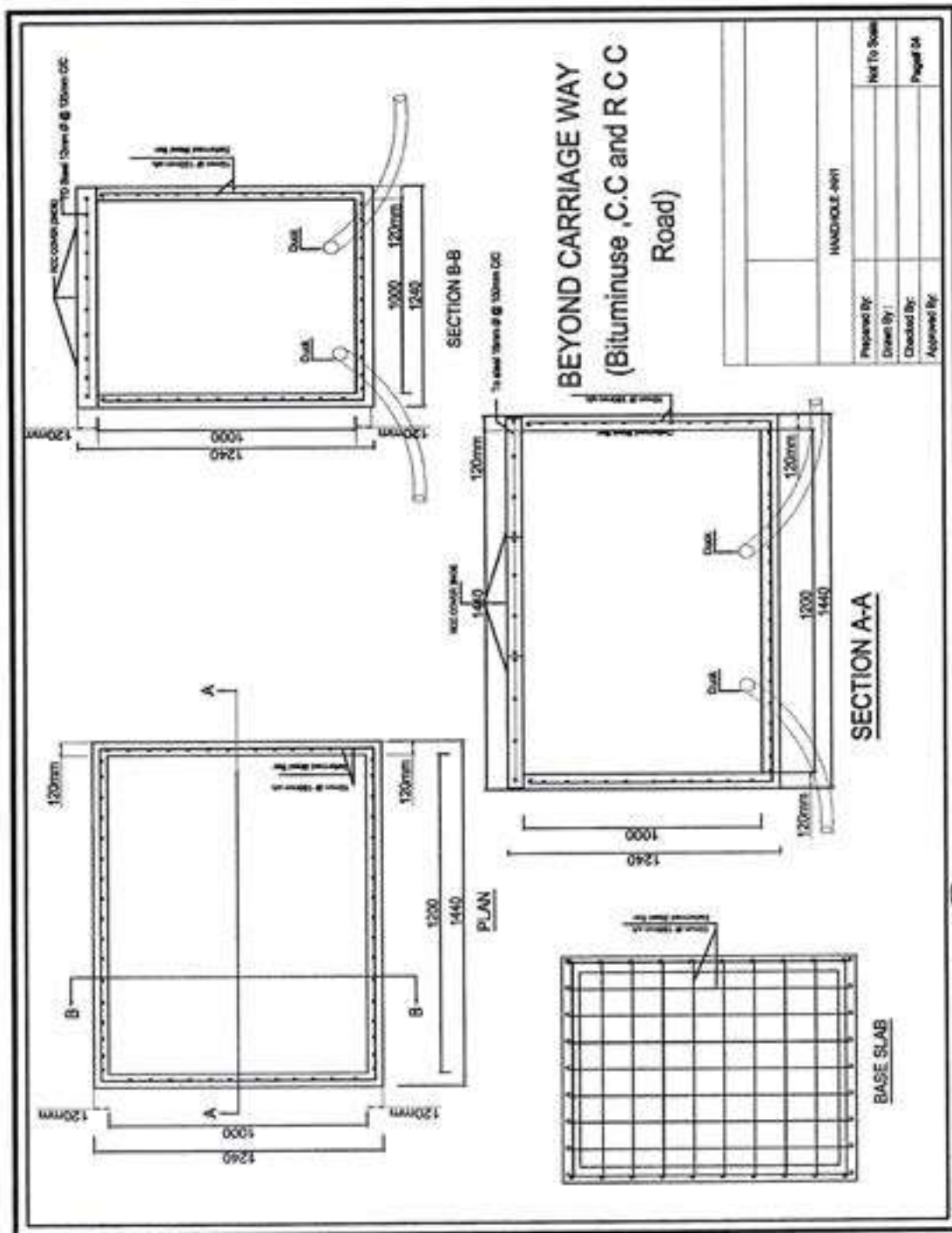
4

5





Annexure-VII
Beyond Carriage Way Hand-hole Design
(Page-4/4)











Details of Fiber Routes

Scope and Responsibility Matrix mentioned above which will be same for all AMC. Only fiber route will be different.

Below is the fiber route mentioned- in Annexure-1, Annexure-2, Annexure-3, Annexure-4 and Annexure-5,

ANNEXURE-I

[A] List of District to District Link need to be Maintain

Sl. No.	Name of Link	Length	No of fiber
1	Dhaka (Moghbar)-Comilla	103.7	18
2	Comilla-B.Baria	81.56	12
3	Comilla-Chandpur	72	24
4	Comilla-Feni	69.79	18
5	Feni-Chowmuhoni	36.11	12
6	Chowmuhoni-Noakhali	10	12
7	Chowmuhoni-Laxmipur	30.3	12
8	Feni-Chittagong	102.43	18
9	Chittagong-Chiringa	100.2	24
10	Chiringa-Cox's Bazar	61.34	24
11	Satkania-Bandarban	20.68	24
12	Chittagong-Hothazari	14	24
13	Hathazari-Rangamati	51.5	12
14	Dhaka (Ramna)-Munshigonj	56	24
15	Dhaka(Moghbar)-Narsingdi	64.19	24
16	Narsingdi-Bhairab	38.11	24
17	Bhairab-B.Baria	32.05	24
18	b.Baria-Hobigonj	88.33	24
19	Hobigonj-Moulavi Bazar	91.95	24
20	Moulavi Bazar-Sylhet	68.15	24
21	Sylhet-Tamabil	51.6	24
22	Dhaka(Moghbar)-Gazipur	37.6	18
23	Gazipur-Mymensingh	97.8	12
24	Mymensingh-Tangail	98.78	12
25	Mymensingh-Kshoregonj	76.53	24
26	Mymensingh-Netrokona	41.56	12
27	Mymensingh-Sherpur	72.16	12
28	Sherpur-Jamalpur	21.48	24
29	Gazipur-Tangail	74.66	24
30	Tangail-Sirajgonj	46.96	12

31	Sirajgonj-Bogra	72.8	12
32	Bogra-Natore	71.58	24
33	Natore-Rajshahi	51.3	24
34	Bogra-Palashbari	58.51	12
35	Palashbari-Gaibandha	21.9	24
36	Plashbari-Rangpur	57.89	12
37	Rangpur-Kurigram	56.75	12
38	Rangpur-Lalmonirhat	43.04	12
39	Rangpur-Nilphamari	64.39	12
40	Rangpur-Dinajpur	90.69	12
41	Dinajpur-Thakurgaon	59.54	12
42	Thakurgaon-Panchogar	39.26	12
43	Bogra-Joypurhat	65.88	24
44	Sirajgonj-Pabna	80	48
45	Pabna-Ishwardy	22	24
46	Pabna-Kushtia	58.886	48
47	Kushtia-Meherepur	64.596	12
48	Meherepur-Chuadanhga	32.29	48
49	Chuadanga-Jhenaidah	44.505	12
50	Jhenaidah-Magura	29.42	24
51	Kushtia-Rajbari	75.2	48
52	Magura-Faridpur	56	24
53	Rajbari-Faridpur	33	24
54	Faridpur-Madaripur	91	24
55	Faridpur-Banga	36	48
56	Banga-Gopalpur	89	72
57	Magura-Jashora	46.5	24
58	Jashor-Narail	37.12	24
59	Jashore-Khulna	58.95	24
60	Jashore-Banapole	50.6	24
61	Benapole-satkhira	63	12
62	Satkhira-Khulna	70	24
63	Khulna-Bagerhat	47.5	24
64	Bagerhat-Gopalganj	59	24
65	Gopalganj-Agailzara	59	12
66	Agailzara-Barishal	50	48
67	Bagerhat-Pirojpur	29	24
68	Pirojpur-Jhalokati	37.8	48
69	Jhalokati-Barishal	21.9	24
70	Barishal-Patuakhali	51	24
71	Patuakhali-Kuakata	79.5	72
72	Jhalokati-Barguna	92	18
73	Barishal-Madaripur	71	24
74	Madaripur-Sariatpur	19	48



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[B] List of Upazilla Link need to be Maintenance

2.

ক্রম: ক্র: নং	বিভাগ	ক্র. নং	জেলা	ক্র. নং	উপজেলা	ফাইবারদূরত্ব
১	১. ঢাকা	১	ঢাকা	১	নবাবগঞ্জ	৪০
২				২	দোহার	৫৫
৩				৩	কেরানীগঞ্জ	১৪
৪				৪	ধামরাই	১৮
৫				৫	সাতার	২৬
৬		২	মুন্সীগঞ্জ	১	Narayanganj	১৮
৭				২	সিরাজদিখান	২৪
৮				৩	শ্রীনগর	৩৪
৯				৪	লৌহজং	১৭
১০				৫	গজারিয়া	১২
১১				৬	টংগীবাড়ি	১১
১২		৩	নাইরায়গঞ্জ	১	সদর	
১৩				২	বন্দর	৩০
১৪				৩	সোনারগাঁও	৩১
১৫				৪	বুপগঞ্জ	৪২
১৬				৫	আড়াইহাজার	৩৯
১৭		৪	নরসিংদী	১	সদর	
১৮				২	পলাশ/ঘোড়াশাল	২২
১৯				৩	রায়পুরা	৫০
২০				৪	শিবপুর	২১
২১				৫	বেলাবো	৩৮
২২				৬	মনোহরদী	৩৩
২৩		৫	মানিকগঞ্জ	১	সদর	
২৪				২	হরিরামপুর	৩৮
২৫				৩	দৌলতপুর	৩৭
২৬				৪	শিবালয়	২৪
২৭				৫	ফিওর	২৫
২৮				৬	সাতুরিয়া	২৩
২৯				৭	সিংগাইর	২৫
৩০		৬	টাংগাইল	১	সদর	
৩১				২	ঘাটাইল	২৩
৩২				৩	কালিহাতী	৩৪
৩৩				৪	মধুপুর	৫১
৩৪				৫	মির্জাপুর	৬৩
৩৫				৬	ধনবাড়ী	৬৮
৩৬				৭	গোপালপুর	৪৯



৩৭				৮	ভূয়াপুর	৩২
৩৮				৯	দেলদুয়ার	২৫
৩৯				১০	নাগরপুর	৩৭
৪০				১১	বাসাইল	১৭
৪১				১২	সখীপুর	৪১
৪২		৭	গাজীপুর	১	সদর	
৪৩				২	কালিয়াকৈর	২৫
৪৪				৩	কালীগঞ্জ	৩৮
৪৫				৪	কাপাসিয়া	৩৬
৪৬				৫	শ্রীপুর	৪৬
৪৭		৮	পোপালগঞ্জ	১	সদর	
৪৮				২	কোটালীপাড়া	৩৯
৪৯				৩	টুঙ্গীপাড়া	২০
৫০				৪	মুকসুদপুর	৬৩
৫১				৫	কাশিয়ানি	৬৫
৫২		৯	মাদারীপুর	১	সদর	
৫৩				২	রাঙ্গৈর	৩৩
৫৪				৩	কালকিনি	১৬
৫৫				৪	শিবচর	৩৬
৫৬		১০	কিশোরগঞ্জ	১	সদর	
৫৭				২	ভৈরব	৬০
৫৮				৩	করিমগঞ্জ	১৪
৫৯				৪	তাড়াইল	২৬
৬০				৫	অষ্টগ্রাম	
৬১				৬	হোসেনপুর	১৭
৬২				৭	নিকলী	৩২
৬৩				৮	ইটনা	
৬৪				৯	মিঠামইন	৪০
৬৫				১০	কটিয়াদি	৩১
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৭১				৩	ভাঙ্গা	৩৬
৭২				৪	চরভদ্রাশন	৪৯
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৭৫				৭	নগরকান্দা	২৮
৭৬				৮	সালথা	৩৩
৭৭				৯	সদরপুর	৩৭
		১২	রাজবাড়ী	১	সদর	৪৯



৭৯				২	পাংশা	২৭
৮০				৩	কালুখালী	২০
৮১				৪	গোয়ালন্দ	২০
৮২				৫	বালিয়াকান্দি	২২
৮৩		১৩	শরীয়তপুর	১	সদর	
৮৪				২	জাজিরা/জাজিরা	১৯
৮৫				৩	ডামুড্যা	২২
৮৬				৪	গোসাইরহাট	২৯
৮৭				৫	ভেদরগঞ্জ	২১
৮৮				৬	নড়িয়া	১৬.৫
৮৯	২.ময়মনসিংহ	১	ময়মনসিংহ	১	সদর	২০
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৯১				৩	নান্দাইল	৬৫
৯২				৪	ত্রিশাল	৬৩
৯৩				৫	মুন্সীগঞ্জ	
৯৪				৬	তারাকান্দা	২০.৫
৯৫				৭	ধোবাউড়া	২১.৫
৯৬				৮	গৌরীপুর	২৮.৫
৯৭				৯	ফুলপুর	১৬.৫
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৯৯				১১	গফরগাঁও	
১০০				১২	ফুলবাড়ীয়া	৩১
১০১				১৩	ভালুকা	৫২
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১০৫				৪	বগ্নীগঞ্জ	৫৬
১০৬				৫	মিলানদাহা	১৭
১০৭				৬	ইসলামপুর	৩১
১০৮				৭	দেওয়ানগঞ্জ	৪৪
১০৯		৩	শেরপুর	১	সদর	
১১০				২	শ্রীবর্দি	২৩
১১১				৩	ঝিনাইগাতী	৩০
১১২				৪	নকলা	২২
১১৩				৫	নালিতাবাড়ী	৩০
১১৪		৪	নেত্রকোনা	১	সদর	
১১৫				২	আটপাড়া	২৫
১১৬				৩	মদন	৩৫
১১৭				৪	খালিয়াজুরী	২০
১১৮				৫	কেন্দুয়া	৩২
১১৯				৬	দুর্গাপুর	৪৬
১২০				৭	কলমাকান্দা	৪০



১১১				৮	পূর্বধলা	১৯
১১২				৯	বারহাটা	২৫
১১৩				১০	মোহনগঞ্জ	৪০
১১৪	৩.চট্টগ্রাম	১৮	কুমিল্লা	১	সদর	
১১৫				২	দাউদকান্দি	৫৫
১১৬				৩	হোমনা	৬৩
১১৭				৪	চান্দিনা	২৫
১১৮				৫	চৌদ্দগ্রাম	৩৪
১১৯				৬	নাঙ্গালকোট	৪৪
১২০				৭	লাকসাম	৩২
১২১				৮	বরুড়া	২৭
১২২				৯	দেবিদ্বার	৩৩
১২৩				১০	মুরাদনগর	৪০
১২৪				১১	মনোহরগঞ্জ	৪৫
১২৫				১২	তিতাস	৬৩
১২৬				১৩	মেঘনা	৬৭
১২৭				১৪	বুড়িচং	১৭
১২৮				১৫	ব্রাহ্মনপাড়া	২৫
১২৯				১৬	সদরদক্ষিণ	
				১৭	লালমাই	১০
					কোম্পানীগঞ্জ	৩৭
					কুমিল্লাক্যান্ট	১০
					বর্ধপিজিসিবি	১৬
					সাউথপিজিসিবি	৬
১৪০		১৯	নোয়াখালী	১	সদর	
১৪১				২	বেগমগঞ্জ/চৌমুহনী	১২
১৪২				৩	কোম্পানীগঞ্জ	
১৪৩				৪	বসুরহাট	২৮
১৪৪				৫	সুবর্ণচর	৩২
১৪৫				৬	সোনাইমুড়ী	২০
১৪৬				৭	সেনবাগ	২২
১৪৭				৮	চাটখিল	২০
১৪৮				৯	কবিরহাট	২০
১৪৯		২০	ফেনী	১	সদর	৩৭
১৫০				২	দাগনভূঁইয়া	১৫
১৫১				৩	সোনাপাড়া	২৪
১৫২				৪	ফুলগাজি	২০
১৫৩				৫	পরশুরাম	২৬
১৫৪				৬	হাগলনাইয়া	১৬
১৫৫		২১	ব্রাহ্মণবাড়ীয়া	১	সদর	
১৫৬				২	আখাউড়া	২৫
১৫৭				৩	আশুগঞ্জ	২৯



১৫৮				৪	সরাইল	১৮
১৫৯				৫	বিজয়নগর	৩২
১৬০				৬	নাসিরনগর	৩৬
১৬১				৭	কসবা	৩১
১৬২				৮	নবীনগর	৩০
১৬৩				৯	বানসারামপুর	৬১
১৬৪		২২	লক্ষীপুর	১	সদর	৩১
১৬৫				২	রামগতি	৪৪
১৬৬				৩	কমলনগর	৩০
১৬৭				৪	রায়পুর	২২
১৬৮				৫	রামগঞ্জ	২৩
১৬৯		২৩	চাঁদপুর	১	সদর	
১৭০				২	হাজীগঞ্জ	২১
১৭১				৩	কচুয়া	১৯
১৭২				৪	শাহরাস্তা	১৮
১৭৩				৫	হাইমচর	২২
১৭৪				৬	মতলব-দঃ	২১
১৭৫				৭	মতলব-উঃ	২৮
১৭৬				৮	ফরিদগঞ্জ	২১
১৭৭		২৪	রাংগামাটি	১	সদর	
১৭৮				২	বাঘাইছড়ি	
১৭৯				৩	বরকল	
১৮০				৪	বিলাইছড়ি	
১৮১				৫	জুড়াইছড়ি	
১৮২				৬	লংগদু	
১৮৩				৭	নানিয়ারচর	৪২
১৮৪				৮	রাজস্থালী	৯৩
১৮৫				৯	কাউখালী	৩০
১৮৬				১০	কাপ্তাই	৪০
১৮৭		২৫	খাগড়াছড়ি	১	গুইমারা	৪৪
১৮৮				২	দিঘীনালা	২২
১৮৯				৩	পানছড়ি	৩৩
১৯০				৪	মহালছড়ি	৪৩
১৯১				৫	লক্ষীছড়ি	
১৯২				৬	খাগড়াছড়িসদর	
১৯৩				৭	মানিকছড়ি	৫৫
১৯৪				৮	মাটিরাঙ্গা	১৮
১৯৫				৯	রামগড়	৪৩
১৯৬		২৬	বান্দরবান	১	সদর	
১৯৭				২	রোয়াংছড়ি	১৫
১৯৮				৩	আলীকদম	৩৬
১৯৯				৪	লামা	২৫



২০০				৫	রুমা	৪৩
২০১				৬	ধানচি	৮০
২০২				৭	নাইকংছড়ি	১৭
২০৩		২৭	চট্টগ্রাম	১	চন্দনাইশ	৪৮
২০৪				২	হাটহাজারী	২২
২০৫				৩	পটিয়া	২৫
২০৬				৪	সন্দীপ	
২০৭				৫	সাতকানিয়া	৭২
২০৮				৬	কর্ণফুলি	
২০৯				৭	রাঙ্গুনিয়া	৪৮
২১০				৮	বীশখালী	৫০
২১১				৯	লোহাগাড়া	৬৫
২১২				১০	বোয়ালখালী	২০
২১৩				১১	সীতাকুন্ড	৪৩
২১৪				১২	আনোয়ারা	২২
২১৫				১৩	মিরেরখরাই	৬৯
২১৬				১৪	ফটিকছড়ি	৪৯
২১৭				১৫	রাউজান	৩৭
২১৮		২৮	কক্সবাজার	১	সদর	
২১৯				২	চকোরিয়া	৬৫
২২০				৩	কুতুবদিয়া	
২২১				৪	মহেশখালী	৫২
২২২				৫	পেকুরা	৩০
২২৩				৬	রামু	২৪
২২৪				৭	উখিয়া	৩৫
২২৫				৮	টেকনাফ	৭৮
২২৬	৪. রংপুর	২৯	রংপুর	১	সদর	
২২৭				২	বদরগঞ্জ	৩৩.৭
২২৮				৩	কাউনিয়া	৩০.৭
২২৯				৪	পীরগাছা	৩১.৩
২৩০				৫	পীরগঞ্জ	৪৭.২
২৩১				৬	তারাগঞ্জ	৩১.৪
২৩২				৭	গজাচড়া	১৫.৩
২৩৩				৮	মিঠাপুকুর	২৪.৫
২৩৪		৩০	গাইবান্ধা	১	সদর	
২৩৫				২	পলাশবাড়ী	৩৩.৭
২৩৬				৩	গোবিন্দগঞ্জ	৩৭.৫
২৩৭				৪	সানুয়াপুর	১৩.৭
২৩৮				৫	সাঘাটা (বোনারপাড়া)	২২.১
২৩৯				৬	সুন্দরগঞ্জ	৪২.৬
২৪০				৭	ফুলছড়ি (কালিরবাজার)	১৪.৪
২৪১		৩১	কুড়িগ্রাম	১	সদর	



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২৪২				২	উলিপুর	21
২৪৩				৩	রাজারহাট	12
২৪৪				৪	চিলমারী	33.2
২৪৫				৫	নাগেশ্বরী	26.4
২৪৬				৬	ফুলবাড়ী	19.7
২৪৭				৭	ভুরুঙ্গামারী	19.4
২৪৮				৮	রৌমারী	
২৪৯				৯	রাজিবপুর	
২৫০		৩২	লালমনিরহাট	১	সদর	
২৫১				২	আদিতমারী	11.6
২৫২				৩	কালিগঞ্জ	24
২৫৩				৪	হাতিবাঁকা	27.6
২৫৪				৫	পাটগ্রাম	34.9
২৫৫		৩৩	নীলফামারী	১	সদর	
২৫৬				২	সৈয়দপুর	22.179
২৫৭				৩	ডোমার	26.076
২৫৮				৪	ভিমলা	24.934
২৫৯				৫	জলঢাকা	28.397
২৬০				৬	কিশোরগঞ্জ	28.076
২৬১		৩৪	দিনাজপুর	১	সদর	
২৬২				২	বিরামপুর	16
২৬৩				৩	বৌচাগঞ্জ	37
২৬৪				৪	ফুলবাড়ী	68
২৬৫				৫	হাকিমপুর	14
২৬৬				৬	বিরল	13
২৬৭				৭	কাহারোল	12.22
২৬৮				৮	বীরগঞ্জ	36.272
২৬৯				৯	খানসামা	
২৭০				১০	চিরিরবন্দর	21.5
২৭১				১১	পার্বতীপুর	40.841
২৭২				১২	নবাবগঞ্জ	23.605
২৭৩				১৩	ঘোড়াঘাট	
২৭৪		৩৫	ঠাকুরগাঁও	১	সদর	
২৭৫				২	বালিয়াডাঙ্গী	25.306
২৭৬				৩	রানীসংকৈল	24.338
২৭৭				৪	হরিপুর	22
২৭৮				৫	পীরগঞ্জ	32.67
২৭৯		৩৬	পঞ্চগড়	১	সদর	
২৮০				২	বোদা	18.0000
২৮১				৩	দেবীগঞ্জ	24.685
২৮২				৪	আটোয়ারী	24
২৮৩				৫	ভৈতুলিয়া	40.27

২৮৪	৫. রাজশাহী	৩৭	রাজশাহী	১	মোহনপুর	২৬.০০
২৮৫				২	পবা/নওহাটা	১১.০০
২৮৬				৩	পুঠিয়া	৩২.০০
২৮৭				৪	আনোর	৩১.০০
২৮৮				৫	বাঘা	৫২.০০
২৮৯				৬	চারঘাট	২২.০০
২৯০				৭	দুর্গাপুর	৩২.৫০
২৯১				৮	বাগমারা	৭১.০০
২৯২				৯	গোদাগাড়ী	৪৫.০০
২৯৩		৩৮	নওগাঁ	১	সদর	
২৯৪				২	আব্রাই	৩৬.০০
২৯৫				৩	রানীনগর	১২.৫০
২৯৬				৪	সাপাহার	৬৬.৭০
২৯৭				৫	বদলগাছি	২৩.২০
২৯৮				৬	পোরশা	২৩.১০
২৯৯				৭	পন্নীতলা	৪৩.৭০
৩০০				৮	ধামুরহাট	৬১.০০
৩০১				৯	মহাদেবপুর	৬২.২০
৩০২				১০	মানদা	৩৭.৫০
৩০৩				১১	নিয়ামতপুর	৫৯.০০
৩০৪		৩৯	বগুড়া	১	সদর	৪.৫০
৩০৫				২	দুপচাচিয়া	৩৪.০০
৩০৬				৩	নন্দিগ্রাম	৩০.০০
৩০৭				৪	শেরপুর	২০.০০
৩০৮				৫	শাজাহানপুর	৬.০০
৩০৯				৬	ধুনট	৩৮.০০
৩১০				৭	সারিয়াকান্দি	৩৩.০০
৩১১				৮	গাবতলী	১৮.০০
৩১২				৯	সোনাতলা	৪৪.০০
৩১৩				১০	আদমদিঘী	৫৪.০০
৩১৪				১১	শিবগঞ্জ	৩৫.৫০
৩১৫				১২	কাহালু	১৬.৬০
৩১৬		৪০	সিরাজগঞ্জ	১	সদর	
৩১৭				২	উল্লাপাড়া	৩৫.০০
৩১৮				৩	শাহজাদপুর	৫৪.০০
৩১৯				৪	কাজিপুর	৩২.৫০
৩২০				৫	রায়গঞ্জ	২৪.০০
৩২১				৬	তাড়াশ	৪৮.০০
৩২২				৭	বেলকুচি	২৪.০০
৩২৩				৮	কামারখন্দ	১৫.০০
৩২৪				৯	চৌহালী	
৩২৫		৪১	জয়পুরহাট	১	সদর	



কিমি				২	কালাই	১৪.০০
৩২৭				৩	ফেতলাল	১৭.৫০
৩২৮				৪	আক্কেলপুর	২১.৫০
৩২৯				৫	পাঁচবিবি	১৩.০০
৩৩০		৪২	পাবনা	১	সদর	
৩৩১				২	আটঘড়িয়া	১৪.০০
৩৩২				৩	বেড়া	৪৮.০০
৩৩৩				৪	ঈশ্বরদী	২৯.০০
৩৩৪				৫	সুজানগর	২৬.০০
৩৩৫				৬	চাটমোহর	৩৬.০০
৩৩৬				৭	সাঁথিয়া	৪০.০০
৩৩৭				৮	ভাঙ্গুড়া	৪৯.০০
৩৩৮				৯	বনওয়ারীনগরফরিদপুর	৬৪.০০
৩৩৯		৪৩	চাঁ: নবাবগঞ্জ	১	সদর	
৩৪০				২	গোমতাপুর	৫৩.০০
৩৪১				৩	শিবগঞ্জ	২২.৫০
৩৪২				৪	নাচোল	২৪.০০
৩৪৩				৫	ভোলাহাট	৮০.০০
৩৪৪		৪৪	নাটোর	১	সদর	
৩৪৫				২	সিংড়া	২২.৪০
৩৪৬				৩	গুরুদাসপুর	৪৫.২০
৩৪৭				৪	বড়ইগ্রাম (বনপাড়া)	২০.৩০
৩৪৮				৫	নলডাঙ্গা	১৭.২০
৩৪৯				৬	লালপুর	৪৭.০০
৩৫০				৭	বাগাতিপারা	২৩.০০
৩৫১	৬.সিলেট	৪৫	সিলেট	১	সদর	
৩৫২				২	দক্ষিনসুরমা	122
৩৫৩				৩	ওসমানীনগর	27
৩৫৪				৪	বিশ্বনাথ	22.847
৩৫৫				৫	বালাগঞ্জ	44
৩৫৬				৬	ফেঞ্চুগঞ্জ	30.15
৩৫৭				৭	পোলাপগঞ্জ	21.6
৩৫৮				৮	বিয়ানীবাজার	55.4
৩৫৯				৯	জকিগঞ্জ	65
৩৬০				১০	কানাইঘাট	56.46
৩৬১				১১	গোয়াইনঘাট	56.95
৩৬২				১২	জৈন্তাপুর	27
৩৬৩				১৩	কোম্পানীগঞ্জ	37
৩৬৪		৪৬	সুনামগঞ্জ	১	সদর	
৩৬৫				২	ধর্মপাশা	72.5
৩৬৬				৩	ছাতক	35.44
৩৬৭				৪	বিশ্বম্ভরপুর	20.6



৩৬৮			৫	সুনামগঞ্জদক্ষিন	18.5
৩৬৯			৬	জগন্নাথপুর	47.8
৩৭০			৭	দিরাই	41.56
৩৭১			৮	তাহেরপুর	39.29
৩৭২			৯	শাল্লা	63.56
৩৭৩			১০	দোয়ারাবাজার	27.2
৩৭৪			১১	জামালগঞ্জ	42.7
৩৭৫		৪৭	১	মৌলভীবাজার	সদর
৩৭৬			২	শ্রীমঙ্গল	23
৩৭৭			৩	রাজনগর	14
৩৭৮			৪	কমলগঞ্জ	25
৩৭৯			৫	বড়লেখা	65
৩৮০			৬	কুলাউড়া	37
৩৮১			৭	জুড়ি	51
৩৮২		৪৮	১	হবিগঞ্জ	সদর
৩৮৩			২	মাধবপুর	39.3
৩৮৪			৩	লাখাই	21
৩৮৫			৪	নবীগঞ্জ	32
৩৮৬			৫	বাহুবল	25.4
৩৮৭			৬	বানিয়চং	22
৩৮৮			৭	চুনাবুঘাট	23
৩৮৯			৮	শায়েস্তাগঞ্জ	16
৩৯০			৯	আজমিরীগঞ্জ	41.5
৩৯১	৭.খুলনা	৪৯	১	সাতক্ষীরা	সদর
৩৯২			২	তালা	৩৭.৩৩
৩৯৩			৩	শ্যামনগর	৬৩.৫
৩৯৪			৪	দেবহাটা (সখিপুর)	৩০.৬
৩৯৫			৫	আশাশুনি	২৬.৯
৩৯৬			৬	কলারোয়া	২১.১২
৩৯৭			৭	কালিগঞ্জ	৪৮.৮
৩৯৮		৫০	১	নড়াইল	সদর
৩৯৯			২	লোহাগড়া	১৮.৪২
৪০০			৩	কালিয়া	৬২.৩
৪০১		৫১	১	কিনাইদহ	সদর
৪০২			২	হরিণাকুন্ডু	২৫.১৭
৪০৩			৩	কালিগঞ্জ	১৫.৫৫
৪০৪			৪	কোটচাঁদপুর	৩২.০৫
৪০৫			৫	মহেশপুর	৪৭.৯
৪০৬			৬	শৈলকুপা	২০.৮৫
৪০৭		৫২	১	মাগুরা	সদর
৪০৮			২	শালিখা	১৫.৭৫
৪০৯			৩	শ্রীপুর	১৭.০৫
৪১০			৪	মহম্মদপুর	২৮.১৫



৪১১		৫৩	কুষ্টিয়া	১	সদর	
৪১২				২	ভেড়ামারা	২৪.০৬
৪১৩				৩	মিরপুর	১৫.৯৯
৪১৪				৪	দৌলতপুর	৪২.০৭
৪১৫				৫	খোকসা	২৮.২০২
৪১৬				৬	কুমারখালী	১৭.৫২৮
৪১৭		৫৪	বাগেরহাট	১	সদর	
৪১৮				২	ফকিরহাট	৩০.
৪১৯				৩	মোল্লাহাট	৫৯.৩৪
৪২০				৪	শরনখোলা	৪৮.১৮
৪২১				৫	কচুয়া	১৮.২৯
৪২২				৬	মংলা	৬৩.৫
৪২৩				৭	চিতলমারী	২৭.৩৮
					মংলাইপিজেড	৫৭.১৯
৪২৪				৮	মোড়েলগঞ্জ	৩৯.৯৭
৪২৫				৯	রামপাল	৪৮.৩৫
৪২৬		৫৫	চুয়াতাক্ষা	১	সদর	
৪২৭				২	জীবননগর	৩৩.৭৯১
৪২৮				৩	দামুড়হদা	১০.৬৭৬
৪২৯				৪	আলমতাক্ষা	২১.৪৮৯
৪৩০		৫৬	মেহেরপুর	১	সদর	
৪৩১				২	গাংনী	১৪.০৮২
৪৩২				৩	মুজিবনগর	১৯.৯৬৭
৪৩৩		৫৭	যশোর	১	সদর	
৪৩৪				২	অভয়নগর	৩৪.৫৫
৪৩৫				৩	ঝিকরগাছা	২৪.০৫
৪৩৬				৪	শার্শা	৩৮.৩৫
৪৩৭				৫	মনিরামপুর	২১.৯
৪৩৮				৬	কেশবপুর	৩৬.৫৫
৪৩৯				৭	চৌগাছা	২৭.০৩
৪৪০				৮	বাঘারপাড়া	২১.৩৬
৪৪১		৫৮	খুলনা	১	খুলতলা	১৮.৫
৪৪২				২	রূপসা	২০.৩২
৪৪৩				৩	দিঘলীয়া	৭.২৭
৪৪৪				৪	বটিয়াঘাটা	১৯.৪৫
৪৪৫				৫	দাকোপ	৩৯.৮
৪৪৬				৬	ডুমুরিয়া	২৩.৭৪
৪৪৭				৭	তেঁতুলবাড়ী	৪৭.৩৭
৪৪৮				৮	কয়রা	৩৬.৮৬
৪৪৯				৯	পাইকগাছা	৭৬.১৩
				১০	মংলা	৫৯.৫৬
৪৫০	৮. বরিশাল	৫৯	বরিশাল	১	সদর	
৪৫১				২	বাবুগঞ্জ	১৯.
৪৫২				৩	গৌরনদি	৪৩

৪৫৩				৪	হিজলা	
৪৫৪				৫	মেহেদীগঞ্জ	
৪৫৫				৬	মুলাদী	
৪৫৬				৭	উজিরপুর	27
৪৫৭				৮	আগৈলঝরা	51
৪৫৮				৯	বানারীপাড়া	29
৪৫৯				১০	বাকেরগঞ্জ	29
৪৬০		৬০	পিরোজপুর	১	সদর	
৪৬১				২	ভাভারিয়া	37
৪৬২				৩	মঠবাড়িয়া	72
৪৬৩				৪	নাজিরপুর	20
৪৬৪				৫	জিয়ানগর	20
৪৬৫				৬	নেছারাবাদ	41
৪৬৬				৭	কাউখালী	22.59
৪৬৭		৬১	কালকাঠি	১	সদর	
৪৬৮				২	নলছিটি	21.76
৪৬৯				৩	কাঠালিয়া	43
৪৭০				৪	রাজাপুর	18
৪৭১		৬২	ভোলা	১	সদর	
৪৭২				২	দৌলতখান	25
৪৭৩				৩	বোরহানউদ্দিন	29
৪৭৪				৪	তজুমুদ্দিন	51
৪৭৫				৫	লালমোহন	52
৪৭৬				৬	মনপুরা	
৪৭৭				৭	চরফ্যাশন	74
৪৭৮		৬৩	পটুয়াখালী	১	রাঙ্গাবালী	
৪৭৯				২	বাউফল	45
৪৮০				৩	দশমিনা	63
৪৮১				৪	গলাচিপা	105
৪৮২				৫	কলাপাড়া	54
৪৮৩				৬	পটুয়াখালীসদর	
৪৮৪				৭	দুমকি	23
৪৮৫				৮	মির্জাগঞ্জ	69.16
৪৮৬		৬৪	বরগুনা	১	তালতলী	68.02
৪৮৭				২	আমতলী	35.94
৪৮৮				৩	পাথরঘাটা	98
৪৮৯				৪	বামনা	87.4
৪৯০				৫	বরগুনাসদর	92
৪৯১				৬	বেতাগী	38.59
			মোট উপজেলার সংখ্যা			১৪৪৮৪

[C] List of ROBI Link need to be Maintenance



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**Robi Links which need to Maintain in AMC Model
Annexe-2**

Sl No	Link Name	Distance
1	RPPGN02-GBGBD21	34.00
2	GBGBD21-BOSDR59	36.80
3	BOSJP02-BOSDR59	7.10
4	CMDBD29-CMBRC25	9.96
5	CMMDN40-CMDBD41	8.60
6	CMDBD41-CMBMP19	5.90
7	CMSDR01-CMBRC25	7.65
8	CMDBD37-CMDBD29	5.00
9	CMMDN40-CMDBD37	6.35
10	BMSDR56-BMKS23	9.47
11	BMSDR56-BMSDR02	10.84
12	BMSDR44-BMSDR02	4.03
13	BMSDR61-BMSDR44	7.17
14	HH(BMSDR04)- BMSDR61	0.46
15	HH(NSBLB02)- BMSDR61	0.65
16	NTSDR02-HH(CityCell)	2.60
17	BSSDR21-BSSDR16	11.70
18	JKSDR12-BSSDR21	27.00
19	PPSDR17-JKSDR01	31.10
20	JHSDR36- HH(MRJD5187)	1.23
21	JHSDR36- HH(MRKT5362)	2.26
22	BSSDR16-BSGND06	29.90
23	JHSDR36-JHSDR06	13.80
24	KHRPS01-BGSDR03	30.80
25	KHSDR04-KHRPS01	18.00
26	MASDR35-JHSDR06	16.00
27	MDSDR06-BSGND06	33.20
28	MDSDR06-FPBHN19	29.00
29	PPSDR17-BGSDR03	23.70
30	TNMDP02-MYSDR03	42.00
31	TNMDP02-TNGTL27	21.00
32	TNKLH24-TNGTL27	24.00
33	GPSDR05-GPSDR04	27.00
34	MYBLK01-GPSDR04	27.00
35	MYSDR03-MYBLK01	42.00
36	NTSDR16-NTSDR02	3.03
37	NTSDR28-NTBRG19	17.30
38	NTSDR28-NTSDR16	4.10
39	Chinki Astana RW- CGMIR69	2.07



40	Dohajari RW- CGCND34	1.33
41	Laksham RW- CMSDD54	5.70
42	CGCDG04-CGBLK06	3.00
43	CGCND21-CGCND04	3.70
44	CGCND34-CGCND04	7.50
45	CGPTA29-CGBLK06	12.00
46	CGPTA48-CGPTA29	4.10
47	CGPTA48-CGPTA38	10.20
48	CGPTA56-CGCND21	3.60
49	CGPTA82-CGPTA38	4.00
50	CGPTA82-CGPTA56	5.80
51	CMSDD58-CMSDD54	8.00
52	CMSDD59-CMSDD58	8.00
53	Nazirhat RW-CGFTK85	2.47
54	CGHTZ18-CGFTK85	7.40
55	FNSDR89-Feni RW	3.85
56	CGCDG62-CGCDG04	1.40
57	CGCDG62-CGCDG22	1.00
58	CGCDGT1-CGCDG22	1.50
59	Soloshahar RW- CGPCH06	0.53
60	RJSDR01-Rajbari RW	0.2
61	FPSDR07-FP_BR	3.50
62	CGSKD68-Barabkunda RW	4
63	RJPNG19-Kalu_BR	8.15
64	Madhu_BR-FPMDH21	1.1
65	RJSDR04-RJSDR01	8.5
66	FPBHN19-Bhanga Railway Station	5.6
67	FPMDH21-FPMDH03	13.40
68	FPSDR36-FPMDH21	18.50
69	FPSDR36-FPSDR07	8.60
70	FPBHN19-FPBHN04	7.30
71	FPNGR02-FPBHN04	13.20
72	FPSDR42-FPNGR02	10.40
73	FPSDR42-FPSDR07	3.20
74	RJSDR03-RJSDR01	12.20
75	GGMKS02-FPBHN19	25.10
76	GGMKS02-GGKSN01	23.00
77	RJSDR03-FPSDR07	20.50
78	SYDKS30-SYBLG04	3.80
79	HGSDR02-HGCNR21	1.44
80	BMSDR61-BMASG02	11.40
81	BMSRL11-BMSDR04	5.70



82	BMSRL11-BMSDR61	10.40
83	HGCNR21-HGBBL03	21.80
84	HGNBG07-HGNBG03	7.60
85	HGNBG30-HGBBL03	8.20
86	HGNBG30-HGNBG03	6.60
87	HGSDR02-HGMDB03	25.10
88	SYBLG26-HGNBG07	16.30
89	SYBLG34-SYBLG04	3.60
90	SYBLG34-SYBLG26	7.00
91	MASDR37-FPMDH03	5.88
92	MASDR37-MASDR35	12.16
93	CPFDG37-CPFDG01	0.85
94	CPFDG40-CPFDG17	10.00
95	LXRGN15-CPFDG17	11.00
96	LXRGN15-LXRGN06	7.30
97	LXRGN46-LXRGN06	7.30
98	LXRPR30-CPFDG37	9.90
99	LXRPR30-LXRGN46	9.50
100	CPSDR54-CPFDG40	9.60
101	HGMDB01-BMSDR04	13.6
102	HGMDB03-HGMDB01	12.8
103	HGSDR04-HGSDR02	11.9
104	BMSDR61-BMNNG05	12.6
105	BMNNG17-BMNNG05	7.5
106	BMSDR44-BMSDR16	9.6
107	NSBLB02-KSBRB03	8.2
108	GGKSN01-Bhatrapara Railway Station	2
109	BMKSB23-BMKSB05	8.20
110	CMBMP19-BMKSB05	12.70
111	CMSDR24-CMSDR01	5.70
112	NOSBC05-LXRGT20	11.60
113	SYBNB40-SYBNB05	16
114	SYSDRD1-SYGLP01	15.6
115	MBSDR01-MBRZN22	8.7
116	MBSDR37-MBSDR01	2.948
117	MBSML02-MBSML01	2.2
118	SYSDRD1-SYDKS30	16.00
119	MBSDR37-HGNBG07	28.7
120	SYGLP01-SYBNB40	16
121	MBSDR01-MBKLR30	25.8
122	MBKLR30-MBJRI01	20
123	MBJRI01-MBBRL05	12
124	SYSDRD1-SYENC17	16.7
125	SYFNC17-SYFNC15	9.5



126	SYFNC15-MBRZN22	27.429
127	NOSBC05-NOMJD03	16.50
128	CPSRT18-CMBRR39	13
129	CPSRT18-CPHGN05	12
130	CPSDR51-CPHGN05	7.7
131	CPSDR54-CPSDR37	5.5
132	CPSDR37-CPSDR08	5.9
133	CPSDR15-CPFDG01	21.70
134	CPSDR54-CPSDR15	8.60
135	CPSDR51-CPSDR37	6
136	CPKCH16-CPKCH01	3
137	CPKCH12-CMBRR39	14
138	CPKCH26-CPKCH12	7.352
139	CPKCH26-CPKCH16	5.1
140	BMSDR04-BMBJN27	3.20
141	HGMDB03-BMBJN27	13.10
142	SYBNB15-MBBRL02	5.6
143	SYBNB15-SYBNB05	5.8
144	MBBRL05-MBBRL02	13
145	CGKTLB0-CGKTL03	0.70
146	CGKTLB0-CGKTL17	2.50
147	CGKTLE2-CGKTL17	1.20
148	CGPCH27-CGKTLE2	1.60
149	CGPCH27-CGPCH06	2.50
150	CGKTL03-CGDMG29	4.20
151	CPSDR54-CP_BR	4.70
152	NOMJD22-NOMJD03	9.61
153	NOSNB37-NOBGM55	9.317
154	NOSNB37-FNDGN24	17.604
155	FNDGN23-FNDGN03	9.169
156	FNDGN24-FNDGN03	5.906
157	NOBGM55-NOBGM07	12.662
158	NOMJD03-NOBGM07	13
159	FNSDRB1-FNDGN23	6.9
160	NOMJD26-LXSDR28	12.819
161	LXSDR79-LXSDR28	20.252
162	NOBGM95-NOBGM07	9.354
163	NOBGM95-NOBGM85	8.914
164	NOBGM85-LXSDR79	14.903
165	LXSDR79-LXSDR76	14.7
166	LXSDR76-LXSDR43	6.936
167	LXSDR72-LXSDR43	3.224
168	LXSDR72-LXKMN02	18.866
169	LXRG120-LXKMN02	16.814
170	NOMJD28-NOMJD23	18.171



171	NOMJD26-NOBGM07	18
172	NOSBC05-NOMJD23	8
173	NOMJD28-NOMJD26	11
174	CMSDD58-CMBRR14	5.1
175	CMSDD54-CMLXM15	9.4
176	CMSDR01-CMDBD39	14.5
177	BMSDR56-BMAKH16	8.1
178	HGLKH01-BMNNG17	14.50
179	Najirhat RW-CGFTK85	2.47
180	FNSDR71-FNSDR07	2.34
181	FNSDR30-FNSDR02	2.40
182	CGMIR68-CGMIR26	4.50
183	CGMIR42-CGMIR06	5.22
184	CGMIR69-CGMIR42	6.32
185	FNCGL22-CGMIR69	4.94
186	CGSKD57-CGSKD26	4.37
187	FNSDR97-FNSDR01	7.78
188	FNSDR59-FNSDR01	7.00
189	FNSDR59-FNCGL22	8.78
190	FNSDR03-FNSDR02	2.72
191	CMSDD55-CMSDD01	7
192	CMSDD55-CMCDG54	12
193	CMCDG54-CMCDG01	7.1
194	CMCDG65-CMCDG01	7.2
195	CMTTS13-CMHMN10	11
196	CMDKN19-CMDKN01	10.4
197	CPKCH14-CMDKN19	13.2
198	BMBNC12-BMBNC08	6.30
199	BMBNC26-BMBNC08	13.00
200	BMNBG35-BMNBG34	4.00
201	CMLXM45-CMBRR14	3.7
202	CMTTS13-CMDKN01	6.20
203	CMLXM45-CMBRR49	9.75
204	CMDBD44-CMDBD39	7.7
205	MASDR35-MASDR24	4.80
206	MASLK02-MASDR24	13.90
207	MASLK02-JSBGH10	8.00
208	JSSDR59-JSBGH10	22.50
209	JSSDR59-JSSDR10	11.40
210	CGSKD30-CGSKD09	5.28
211	CGSKD68-CGSKD09	6.05
212	CGSKD68-CGSKD62	4.36
213	FNSDRB1-FNSDR07	7.30
214	LXSDR76-LXSDR08	14.022
215	CGMIR74-CGMIR01	4.81



216	CGMIR74-CGMIR26	8.42
217	FNSDR97-FNSDR30	3.545
218	CMSDD59-CMSDD01	6.2
219	CPKCH14-CPKCH01	12.50
220	CMHMN23-CMHMN10	2.70
221	CMHMN23-BMBNC12	9.30
222	CMMDN37-BMNBG36	8.00
223	BMNBG35-BMBNC26	4.675
224	BMNBG36-BMNBG34	7.70
225	BMSDR16-BMSDR02	15
226	CMBRR49-CMBRR39	1.2
227	CMSDR24-CMSDD59	5.43
228	CMMDN59-CMHMN23	14.9
229	CMMDN59-CMMDN40	12.4
230	CMDKN44-CMDBD15	13.6
231	CMDKN44-CMDKN01	18.2
232	CMMDN40-CMMDN37	13
233	HGSDR04-HGLKH01	19
234	CMMDN40-CMMDN04	12.4
235	JSSDR10-JSABH20	9.8
236	KHPHL10-JSABH20	7.7
237	KHPHL10-KHPHL03	8.9
238	KHPHL03-KHKJA03	4
239	KHKJA03-KHDLP05	4
240	KHKLS14-KHDLP05	3.8
241	KHSDR04-KHKLS14	3.5
242	KCSDR04-KCSDR01	7.5
243	CGRNG38-CGRNG03	1.2
244	CGHTZ50-CGHTZ20	12.907
245	CGRZN16-CGHTZ50	11.346
246	CGRZN63-CGRZN16	4.418
247	CGRZN63-CGRNG03	18.404
248	RMKKL05-CGRNG38	8.978
249	CGHTZ24-CGHTZ20	5.295
250	CGHTZ24-CGHTZ18	5.506
251	RMSDR03-RMKKL05	13.699
252	RMSDR07-RMNNC02	20.5
253	RMSDR07-RMSDR03	16.1
254	KCSDR01-KCMHC02	14.7
255	RMNNC02-KCMHC02	18.2
256	CGHTZ20-CGHTZ11	1.11
257	GPSDR34-NSBLB02	75
258	BGFKR15-BGFKR12	8.4
259	BGMLH04-BGFKR12	15.6
260	GGSDR02-BGMLH04	11.6



261	GGSDR22-GGSDR02	6.12
262	GGSDR22-GGSDR03	5
263	GGSDR03-GGKOT16	15
264	CGFTK85-KCSDR04	67.1
265	BSGND06-BSAGL01	11.7
266	GGKOT16-BSAGL01	16.5
267	CGSKN27-CGSKN05	2.791
268	CGSKN27-CGSKN02	4.22
269	CGSKN05-CGCND34	3.974
270	CXCKR18-CXCKR02	1.531
271	CXSDR33-CXSDR18	2.116
272	CXSDR96-CXSDR08	3.122
273	CXSDR32-CXSDR08	5.374
274	CXSDR32-CXRMU39	5.38
275	CXRMU39-CXRMU29	11.658
276	CXSDR33-CXRMU29	5
277	CXSDR33-CXCKR09	8.862
278	CXCKR57-CXCKR09	5.696
279	CXCKR57-CXCKR15	6.914
280	CXCKR15-CXCKR02	5
281	CXCKR18-CXCKR17	7.668
282	CXCKR17-CXCKR13	7.958
283	CXCKR13-CGLHG39	10.083
284	CGLHG50-CGLHG39	3.5
285	CGLHG50-CGLHG12	3.5
286	CGLHG12-CGLHG01	3.852
287	CGLHG04-CGLHG01	4.244
288	CGSKN06-CGLHG04	5.157
289	CGSKN06-CGSKN02	6.638
290	CXSDR96-CXSDR27	0.7
291	CXSDR59-CXSDR27	6.1
292	CXSDR59-CXSDR41	4.6
293	CXSDR41-CXSDR18	6.8
294	RMKKL05-CGHTZ11	39.2
295	JSSDR51-JSSDR11	1.1
296	JSSDR51-JHKL20	21.3
297	JSSDR59-JSSDR12	5.3
298	JSSDR12-JSSDR11	2.5
299	FNSDR71-CMCDG65	10.9
300	SYSDR48-SYSDR75	2.2
301	SYSDR75-SYSDR32	6.5
302	SYKNG17-SYJNT06	26.1
303	SYZKG05-SYKNG17	8.5
304	SYSDR32-SYSDR26	5.4
305	CGMIR68-CGMIR06	4.5



306	CGSKD62-CGSKD26	12.8
307	CGSKD57-CGMIR01	14
308	SYSDR26-SYJNT06	28.8
309	SYZKG05-SYBNB40	15.1
310	CGSKD30-CGSKD01	7.2
311	CGSKD01-CGDMG29	11.8
312	CGCDGT1-CGCDG62	2.4
313	HGSDR02-BMSDR04	41.4
314	HGSDR02-HGNBG03	37
315	SYBLG04-HGNBG03	34
316	CMSDR01-CMDKN01	45.2
317	DHUTTB4-DHUTT04	0.5
318	PPBND12-JKRZP03	12.3
319	NSBLB02-BMSDR04	39.2
320	NGSNG01-CMDKN01	38.2
321	NGSNG01-NGBND30	4.7
322	DHGULM1-DHGUL48	2.4
323	JKSDR12-JKRZP03	19.6
324	PPMTB05-PPMTB01	4.8
325	KUSDR48-JHSLK06	4.6
326	JHSDR36-JHSDR02	0.45
327	JHSLK05-JHSDR02	8
328	JHSLK06-JHSLK05	10
329	KUSDR48-KUSDR02	0.4
330	KUSDR02-KUSDR01	24.5
331	JHSDR36-JHSDR04	8
332	JHSDR04-JHKLK19	7.2
333	JHKLK20-JHKLK19	16
334	KHSDR04-KHDMR17	14.1
335	KHDMR21-KHDMR17	16.3
336	SKTLA11-KHDMR21	17.1
337	SKTLA11-SKSDR23	12.2
338	SKSDR33-SKSDR23	13.6
339	SKSDR33-SKKOL13	6.6
340	SKKOL13-JSSRS27	13.8
341	JSSRS27-JSSRS24	12.5
342	JSSRS24-JSJKR01	21.7
343	PPMTB01-PPBND12	27.6
344	GPSDR05-GPSDR34	7
345	NGRPG01-GPSDR34	24
346	JSSDR59-JSJKR01	17
347	NGSNG01-GPSDR34	11.1
348	GPSDR34-GPKLG18	8.9
349	NGRPG47-GPKLG18	9
350	NGRPG47-NGRPG01	7.3



351	LXSDR08-LXRG06	12.7
352	CXSDR33-CXCKR02	25.2
353	CXSDR96-CXSDR34	2.804
354	KUSDR46-KUMRP02	9.9
355	MHGNG05-KUMRP02	25.9
356	MHSDR18-MHGNG05	19
357	MHSDR18-MHSDR01	1
358	CDSDR03-CDDMH01	19.4
359	MHMJB02-CDDMH01	27
360	MHSDR01-MHMJB02	11
361	CGPTA17-CGDMG29	8.7
362	CGPTA17-CGPTA03	2.1
363	CGPTA84-CGPTA03	4.5
364	CGPTA84-CGANW42	3.5
365	CGANW42-CGANW13	3.6
366	CGANW13-CGANW08	1.7
367	CGANW15-CGANW08	13.1
368	CGBSK22-CGANW15	5.3
369	CGBSK01-CGBSK22	6.7
370	CGBSK01-CGBSK33	6.2
371	CGBSK33-CGBSK04	5.3
372	CGBSK16-CGBSK04	5
373	CXPKA16-CGBSK16	9.8
374	CXPKA17-CXPKA16	6.2
375	CXPKA17-CXCKR08	6.5
376	CXCKR14-CXCKR08	6.5
377	CXCKR24-CXCKR14	3.90242
378	CXCKR24-CXCKR02	4.195
379	CGPTA03-CGDMG29	9.7
380	CGPTA03-CGBSK22	19.6
381	CXCKR08-CGBSK22	42.6
382	CXCKR08-CXCKR02	13.5
383	PPMTB05-BRPTG17	24.8
384	JKKTL02-JKKTL01	7.7
385	JKKTL02-BRPTG17	47.3
386	JKRZP03-JKKTL01	17.5
387	RPSDR62-RPSDR03	9
388	RPTRG06-RPSDR62	26
389	RPTRG06-NPSDP10	14
390	NPSDR19-NPSDP10	18
391	NPSDR19-NPSDR17	8
392	PGDBG03-NPSDR17	21
393	PGDBG03-PGDBG02	14
394	PGDBG02-PGATR07	19
395	PGSDR14-PGATR07	17



396	NPSDP10-DPPBT07	19
397	NPSDP10-DPCRB02	19
398	DPKHR09-DPCRB02	14
399	KUSDR01-KUMRP01	16.9
400	KUKMK01-KUKKS08	9.4
401	KUSDR03-KUSDR01	1.6
402	KUSDR46-KUSDR01	4.6
403	RJPNG19-KUKKS08	24.1
404	RPSDR03-RPPGN02	43.7
405	KSBRB17-BMASG02	6.153
406	KSBRB17-KSBRB03	0.796
407	BOSDR59-NASDRT1	2
408	NASDRT1-NTSDR02	7.05
409	NTSDR02-PBISRT1	7.05
410	BOSNT01-BOSDR59	2.82
411	GBSDR05-BOSNT01	3.32
412	RPKAUT1-GBSDR05	2.882
413	RPSDR03-RPKAUT1	3.1
414	DPPBTT1-RPSDR03	5.9
415	JYSDR01-DPPBTT1	0.55
416	NASDRT1-JYSDR01	0.55
417	MDSDR04-FPSDR07	11.9
418	BSSDR16-MDSDR04	12.2
419	BSSDR16-JKRZP03	14.6
420	JKRZP03-KHKLS14	8
421	JPSDR34-SRSDR21	8.7
422	CMSDD59-CPSDR54	6
423	RJPNG19-FPSDR07	2.950
424	MBKLRT1-SYSDR95	1.100
425	GPSDR05-MYGFG18	3.500
426	MYGFG18-MYSDRT1	0.300
427	NSSDRT1-GPSDR34	0.300
428	CDSDR03-KUMRP01	0.553
429	JHKLGT1-CDSDR03	0.260
430	JSSDRT1-JHKLGT1	1.270
431	KHSDR04-JSSDRT1	2.470
432	KUMRP01-KUSDR46	5.650
433	PBISRT1-KUMRP01	0.150
434	KUSDR46-RJPNG19	6.500
435	JPSDR34-JPSSB02	2.800
436	KSSDRT1-MYSDR03	4.900
437	MYSDR03-JPSDR34	3.800
438	MYSDR18-JPSDR14	18
439	JPSSB02-JPSDR38	19.1
440	JPSDR38-JPSDR04	12.2



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441	JPSDR14-JPSDR04	15.8
442	MYSDR53-MYSDR18	16
443	JPSDR34-Jamtalpur RW Station	5
444	MYSDR53-MYSDR03	7.5
445	SYSDR95-Sylhet BR	1.896
446	MYGFG18-Gaforgaon	0.476
447	CMSDDPGCB-CMSDD59	2.6
448	DPSDR03-DPKHR09	14.3
449	DPKHR09-DPBRG14	16.7
450	DPBRG14-DPBRG02	11
451	TGSDR23-DPBRG02	13.9
452	TGSDR23-PGATR07	21.9
453	PGATR07-PGSDR14	17
454	DPSDR04-DPSDR03	3.6
455	DPSDR04-DPCRB10	31
456	DPPBT02-DPCRB10	30
457	DPPBT02-DPFLB02	7.7
458	DPPBT07-DPFLB02	11.4
459	PGSDR14-Panchagarh PGCB	2.3
460	Purba Saidpur PGCB-DPKHR09	1
461	DPKHR09-Purba Saidpur PGCB	1
462	RPSDR03-Rangpur PGCB	3
463	Rangpur PGCB-RPSDR03	5
464	Saidpur PGCB-NPSDP10	6
465	NPSDP10-Saidpur PGCB	7
466	Thakurgaon PGCB-TGSDR27	6
467	TGSDR27-Thakurgaon PGCB	5
468	GGTNG01-BGCTL09	12.3
469	PPNZP02-BGCTL09	13.8
470	GGTNG01-GGSDR02	12.5
471	PPNZP02-PPNZP01	17.6
472	PPSDR17-PPNZP01	15.8
Total fiber length(KM)		5094.86



[D] List of GP Link need to be Maintenance

GP Links which need to Maintain in AMC Model
Annexe-4

Sl	Link Name	Distance
1	BGBDT1-BGMRG2	5200
2	BGBKG1-BGCTM1	8200
3	BGBLG1--BGBRP1	6070.1
4	BGBRK1-BGSRK1	17069
5	BGBRP1--BGFLA1	6590.25
6	BGCLK1--BGBLG1	3704.68
7	BGCOS1(t)-BGTWN1	2900
8	BGDRP1-BGBKG1	5160
9	BGFKH2(T-Joint)--BGCLK1 (PO Corrected from BGFKH1)	13602.68
10	BGFLA1--BGRMP1	11640.25
11	BGFLA1--BGRMP1 (Double Entry)	0
12	BGGDR1-BGGLK1	8985
13	BGGLK1-BGBDT1	7606
14	BGGLK1-BGBRK1	3390
15	JHHRK2-JHVLK1	5312
16	BGMGA1-BGMLL1	17770
17	BGMKT1-BGDRP1	5200
18	BGMLL1-BGGDR1	8603
19	BGRMP1-BGMGA1	16430
20	BGTWN1-BGMKT1	7677
21	BHBHG1 - BHTBG1	3065.35
22	BHBRU1 - BHBHG1	4595.5
23	BHDAO1 - BHLMN1	7726.5
24	BHGZR1 - BHJNT1	7736.6
25	BHJNT1 - BHC FN1	5716.6
26	BHKNJ1 - BHDAO1	6716.5
27	BHLMN1 - BHGZR1	10453.5
28	BHNRM1 - BHBRU1	6211.5
29	BHTBG1 - BHKNJ1	7004.35
30	BRAMG1 - BRAMT1	7585.1
31	BRAMT1 - BRAMT2	9443.5
32	BRAMT2 - PTKLP1	12251.3
33	BRCNK1 - BRAMG1	5969.1
34	BRSKB1 - BRCNK1	7484.1
35	BRSKB2 - BRSKB1	5645.9
36	BSBKG1 - PTAGR1	9014.25
37	JHSLK1-JHGRG1	7980
38	FPBKN1--FPTLM1	6941.73
39	FPDTR1--FPSLT1	10881.74
40	FPFKR1--FPMND1	10117.17
41	FPMND1--FPRJP1	7059.9



42	FPRJP1--FPBLM4	4527.83
43	FPSLT1--FPFKR1	4161.2
44	FPTLM1--FPDTR1	4302.6
45	JSBEN2--JSJKG4	10105.05
46	JSCHG1--JSSJB1	6817.5
47	JSJMT1--JSULS1	5287.35
48	JSPTB1--JSCHG1	5201.5
49	JSPTB1--JSCHG1 (Double Entry)	0
50	JSSJB1--JSSLU1	6363
51	JSSLU1--JSCMK1	8231.5
52	JSSRS1--JSBEN2	7721.45
53	JSSRS1--JSBENT	7474
54	JSSRS2--JSJMT1	5212.61
55	JSULS1--JSSRS1	9009.2
56	KHAGG1--KHGDP1	5684.28
57	KHATM1--SKTLA1	9483.9
58	KHCKNT--KHATM1	2599.74
59	KHGDP1--KHPKG1	3030
60	KHKPL1--KHAGG1	4646
61	KHMKL1--KHAMD1	7332.6
62	KHPKG1--KHMKL1	11796.8
63	GPMNA1--GPNYP1	4878.3
64	GPNYP1--MYVLK1	8514.3
65	MYVLK1--MYVLK2	8282
66	BMASA1--BMMAS1	5787.3
67	BMBAN1--BMASA1	3545.1
68	BMMAS1--BMRAS1	6504.4
69	LMADM1 - LMNMR1	5807.5
70	LMNMR1 - LMKKN1	6565
71	LMSTB1 - LMADM1	6262
72	LMTWNR - LMSTB1	7676
73	BMRAS1--BMNAB2	5060.1
74	T-Joint CGMOT1-CGANW1	13443.1
75	LMKKN1 - LMMDT1	15453
76	LMMDT1 - LMVTM1	3434
77	PTAMT1--PTDSM1	7908.3
78	PTBGP1--PTJFB1	4040
79	PTCNK1--PTTTL1	5656
80	PTCRF1--PTCNK1	5342.9
81	PTDSM1--PTBGP1	6292.3
82	PTGBL1--PTCRF1	7413.4
83	PTJFB1--PTPTP1	11110
84	PTPTP1--PTGBL1	3989.5
85	PTTTL1--PTGLP2	9120.3
86	RJBHP1--RJTTTL1	3408.75
87	RJ9BNB1--RJBHP1	8005.26



88	MNKSBI -- MNMLK1	8989
89	CGANW1--CGCPB1	12221
90	CGCPB1--CGRMD1	9696
91	CGRMD1--CGBHK1	9393
92	MGDTA2-MGSNG1	42824
93	MGDTA2-MGSNG1 (Double Entry)	0
94	SNWGK1--SNPAL1	10925.17
95	SNPAL1--SNBIS1	9537.43
96	SNBIS1--SNBAD3	5183.32
97	SNBAD3--SNANP1	7157.87
98	SNANP1--SNTAH1	7302.3
99	RPTWNR--RPDHP1	8231.5
100	RPDHP1--RPCOB1 (in PO but no fiber drop)-RPUTM1	5252
101	RPUTM1--RPPGP2	4999.5
102	RPPGP2--RPPGP1	3939
103	RPPGP1--RPIKC1	8534.5
104	RPIKC1--RPTRG1	10089.9
105	RPTRG1--RPCKB1	8372.9
106	RPCKB1--NPSYPR	10403
107	NPBRG1--NPDML1	11615
108	NPTGM2--NPDHL1	4696.5
109	NPDHL1--NPTGM1	4191.5
110	NPTGM1--NPCDP1	6363
111	NPCDP1--NPKSG1	4949
112	RJTTL1--RJBLK1	7253.82
113	RJTWNR--RJBNB1	12809.83
114	SKJDN1--SKKLR2	8739.53
115	SKKDT1--SKMDK1	6232.71
116	SKKJH1--JSSRS2	8839.52
117	SKKLR2--SKKJH1	646.4
118	SKMDK1--SKJDN1	3576.41
119	SKTLA1--KHKPL1	11892.75
120	SKTWN5(T-Joint)--SKKDT1	6544.8
121	KSTWNR--KSBIN1	5050
122	KSBIN1--KSRMB1	4040
123	KSRMB1--KSHOS1	7070
124	SRKHP1--SRJNG4	10524.2
125	SRJNG4--SRSBD1	8585
126	SRSBD1--JPBKJ1	7928.5
127	PBBGRR--PBVRM1	12120
128	PBVRM1--PBFRP1	9595
129	SYHOR1--SYDIG1	12888
130	HGDUR1--HGCHU1	12105
131	HGSTGT--HGDUR1	4190
132	SYBTR1--SYBTRT	13048



133	HGTWN3-HGALG1	17360
134	HGALG1-HGIMA1	5982
135	HGTWN3-HGLKR1	11305
136	HGLKR1-HGBUL1	8775
137	HGBUL1-HGLAK1	5572
138	SYBTRT-SYHOR1	4154
139	SYJAI1-SYJAI2	3763
140	SYDIG1-SYJAI1 water	8348
141	PBCKM1--PBDBL2	21050
142	PBDBL2-PBDBL1	5100
143	PBDBL1--PBTRB1	8070
144	PBVRM1-PBFRP1	9590
145	BOMKT1--BOBLA1	11975
146	NAMTH1--JYAKPR	23370
147	NWTWNT--NWRNH1	10670
148	NWRNH1-NWRSP1	5570
149	RSSBP1--RSDRP1	10420
150	MDSHC3-MDJNJ1	15000
151	KUMRP1(t)-KUNMT1	6300
152	KUNMT1-KUKLK1	11000
153	KUKLK1-MHBAT1	5800
154	KUVMRR-KUALG2	9100
155	NKTWNR--NKOVP1	14948
156	NKOVP1--NKATP2	10807
157	NKATP2--NKMDN1	11211
158	BGTLK1--KHILP1	9746.5
159	KHILP1--KHTKD2	18751.66
160	KHTKD2--NRKLA1	15649.95
161	MHGGN2-MHCRD1	30000
162	MHCRD1-MHAMJT	8200
163	CDTWNR-CDDGD1	9457
164	CDDGD1-CDDML1	13200
165	KUALG2-KUDLP1	8120
166	GBSHR1--GBSDP1	6615.5
167	GBSDP1--GBVTG1	7979
166	GBVTG1--GBMHP1	8989
167	GBTWNR--GBGDN1	16160
168	GBGDN1--GBNKH1	6161
169	GBDRM1--GBGBG1	8080
170	GBNKH1--GBDRM1	8585
171	KGHSP1--KGPCP1	11514
172	KGPCP1--KGMIN1	5100.5
173	KGMIN1--KGULP1	5353
174	LXHZT1--LXJMD1	13917.8
175	LXBNR1--LXTWN1	9090
176	LXJMD1--LXRMD1	9696

177	LXBNR1--LXTMC1	8837.5
178	LXTCH1--LXPHT1	7221.5
179	LXKLB1--LXPNP1	7221.5
180	LXPNP1--LXPNP2	5201.5
181	LXPHT1--LXKLB1	3181.5
182	SKALP1--SKKUL1	4928.8
183	SKKUL1--SKDHT1	13305.74
184	SKTWN5(T-Joint)--SKVMR1	18215.35
185	SKVMR1--SKALP1	10706
186	KHAMD1-KHKYR1	1000
187	BGTLK1-KHILP1	9870
188	KHILP1-KHTKD2	19000
189	KHTKD2-NRKLAI	15600
190	JHTWN5-JHHRK2	11900
191	BGSNB1-BGKCA1	16895
192	SKALP1-SKKUL1	1150
193	SKKUL1-SKDHT1	300
194	JSKDB1-JSMRP1	550
195	JSMRP1-JSMRP4	150
196	JSMRP4-JSTRMT	3000
197	JSTRMT-JSKSP1	1150
198	JSKSP1-JSKSP2	360
199	JSTRM1-JSKSP1	2950
200	MHBAT1-MHGGN2	4300
201	JSTWN1-JSKSM1	17900
202	JSKSM1-JSKJB1	7680
203	JSKJB1-JSPUL1	6280
204	JSPUL1-JSSMK1	9820
205	JSKJB1-JSRYP1	6250
206	JSRYP1-JSBGP1	7500
207	JSBGP1-JSNKB1	8645
208	JSTWN1-JSKDB1	23000
209	MATWN5-MAGNG1	10500
210	MAGNG1-MASRP1	4560
211	JHVLK1-JHHRK1	8243
212	KHBTG1-KHKTN1	9480
213	JHCTPR-JHKHP1	10090
214	JHKHP1-JHMHP1	760
215	KHKTN1-KHCLN1	11500
216	KHSDN1(i)-KHBTG1	19600
217	TNMDP1--TNMDP4	7726.5
218	TNMDP4--TNMDF1	10574.7
219	BMTWN5--BMTWNR	4300
220	BMRAS2--BMEKG1	10341.39
221	BMDAN1--BMNAS1	4221.8
222	BMEKG1--BMNAB1	9200



223	BMSAR1--BMDAN1	18200
224	BMBRA1--BMTWN5	13200

[E] List of Banglalink Link need to be Maintenance

Banglalink Links which need to Maintain in AMC Model Annexe-5			
Sl No	Link Name	Thana	Distance
1	CTG_X0363-CTG_X0094	Cumilla Sadar	6.5
2	CTG_X0094-CTG_X0692	Cumilla Sadar	2.6
3	CTG_X0692-CTG_X0088	Cumilla Sadar	1.3
4	CTG_X0088-CTG_X0097	Cumilla Sadar	1.2
5	CTG_X0097-CTG_X9003	Cumilla Sadar	10.1
6	KHU_X9003-KHU_X0448	Satkhira Sadar	11.5
7	KHU_X0448-KHU_X0035	Satkhira Sadar	1.1
8	KHU_X0035-KHU_X0099	Satkhira Sadar	15.5
9	KHU_X0099-KHU_X9002	Tala	10.5
10	KHU_X9005-KHU_X0619	Jessore Sadar	27.1
11	KHU_X0619-KHU_X0241	Maheshpur	7.1
12	KHU_X0241-KHU_X1064	Maheshpur	7.0
13	KHU_X1064-KHU_X0240	Maheshpur	8.0
14	KHU_X0240-KHU_X1070	Maheshpur	7.8
15	KHU_X1070-KHU_X0138	Kotchandpur	22.4
16	UT11_A-DHK_X1127	Uttara	0.1
17	DHK_X1127-DHK_X0710	Uttara	0.1
18	DHK_X0710-DHK_X2079	Uttara	1.3
19	DHK_X2079-DHK_X0050	Uttara	1.2
20	DHK_X0050-UT11_HH2	Uttara	0.5
21	AT05-CC06	Sonadanga	1.0
22	DHK_X0075-DHK_X1020	Narayanganj Sadar	2.8
23	DHK_X1020-DHK_X1115	Narayanganj Sadar	2.5
24	DHK_X1115-DHK_X1793	Narayanganj Sadar	2.0
25	DHK_X1793-DHK_X9002	Narayanganj Sadar	2.6
26	C0715 HH1-CTG_X0715	Khulshi	4.21
27	CTG_X0715-CTG_X0008	Kotwali Ctg.	0.7
28	CTG_X0008-CTG_X0028	Kotwali Ctg.	3.11
29	CTG_X0028-CTG_X0740	Panchlaish	1.21
30	CTG_X0740-CTG_X0743	Panchlaish	0.96
31	CTG_X0743-C0743 HH1	Panchlaish	2.01
32	CTG_X0363-CTG_X0037	Cumilla Sadar	13.7
33	CTG_X0037-CTG_X0092	Cumilla Sadar	1.2
34	CTG_X0092-CTG_X0365	Cumilla Sadar	2.2
35	CTG_X0365-CTG_X9003	Cumilla Sadar	12.4
36	UT11_HH-DHK_X2966	Uttara	0.1
37	DHK_X2966-DHK_X0051	Uttara	0.2



38	DHK_X0051-DHK_X0651	Uttara	0.2
39	DHK_X0651-DHK_X2223	Uttara	0.1
40	DHK_X2223-D2223 HH1	Uttara	0.2
41	UT11_A-DHK_X3255	Uttara	0.8
42	DHK_X3255-DHK_X3505	Uttara	1.7
43	DHK_X3505-DHK_X0282	Uttara	1.7
44	DHK_X0282-DHK_X2014	Uttara	0.9
45	DHK_X2014-D2223 HH1	Tongi	2.0
46	DHK_X0904-DHK_X2910	Rajbari Sadar	19.5
47	DHK_X2910-DHK_X2758	Rajbari Sadar	8.9
48	DHK_X2758-KHU_X0149	Pangsha	5.9
49	KHU_X0149-KHU_X0194	Khoksa	21.2
50	KHU_X0194-KHU_X0155	Kushtia Sadar	8.8
51	KHU_X0155-KHU_X0154	Kushtia Sadar	5.1
52	DHK_X2213-DHK_X2299	Gulshan	0.4
53	DHK_X2299-DHK_X0071	Gulshan	0.3
54	DHK_X0071-DHK_X0674	Gulshan	0.6
55	DHK_X0674-DHK_X1961	Gulshan	0.3
56	DHK_X1961-DHK_X1052	Gulshan	0.4
57	SYL_X0142-SYL_X0017	Beanibazar	59.6
58	SYL_X0017-SYL_X0181	Jaintiapur	21.5
59	SYL_X0181-RT02_B	Sylhet Sadar	11.5
60	UT11_HH2-DHK_X2226	Uttara	0.4
61	DHK_X2226-DHK_X0804	Uttara	0.6
62	DHK_X0804-DHK_X0280	Uttara	0.3
63	DHK_X0280-UT11_HH	Uttara	0.1
64	UT11_A-DHK_X0617	Uttara	0.2
65	DHK_X0617-DHK_X1706	Uttara	0.1
66	DHK_X1706-UT11_B	Uttara	0.2
67	DHK_X9020_A-DHK_X1098	Ramna	0.3
68	DHK_X1098-DHK_X0299	Motijheel	0.1
69	DHK_X0299-DHK_X0829	Motijheel	0.2
70	DHK_X0829-DHK_X0810	Motijheel	0.1
71	DHK_X0810-DHK_X9020_B	Motijheel	0.3
72	DHK_X4363-DHK_X3294	Sreenagar Mun.	28.8
73	DHK_X3294-DHK_X0477	Sreenagar Mun.	7.3
74	DHK_X0477-DHK_X9002	Munshiganj Sadar	5.4



Appendices

Appendix A - Description of the Services

Give detailed descriptions of the Services to be provided, dates for completion of various tasks, place of performance for different tasks, specific tasks to be approved by Employer, etc.

Appendix B - Schedule of Payments and Reporting Requirements

List all milestones for payments and list the format, frequency, and contents of reports or products to be delivered; persons to receive them; dates of submission; etc. If no reports are to be submitted, state here "Not applicable."

Appendix C - Key Personnel and SubService Providers

List under: C-1 Titles [and names, if already available], detailed job descriptions and minimum qualifications & experience

Appendix D—Format of CV [as per PE desire & marking criteria]

Appendix E - Services and Facilities Provided by the Employer



Invitation for Tenders

GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH			
1	Ministry/Division		V
2	Agency		V
3	Procuring Entity Name		
4	Procuring Entity Code	Not used at present	
5	Procuring Entity District	Dhaka	V
6	Invitation for	Procurement of physical service	V < select > V < select > V
7	Invitation Ref No		
8	Date		V
KEY INFORMATION			
9	Procurement Method		V < select > V
FUNDING INFORMATION			
10	Budget and Source of Funds		V
11	Development Partners (if applicable)		
PARTICULAR INFORMATION			
12	Project / Program Code (if applicable)		
13	Project Name (if applicable)		
14	Tender Package No.		
15	Tender Package Name		
16	Tender Publication Date	Date	V
17	Tender Last Selling Date (must be the date prior to the day of Tender Closing Date)	Date	V
18	Tender Closing Date and Time	Date	V
19	Tender Opening Date and Time (within one hour of Tender Closing)	Time	V
20	Name & Address of the office(s) - Selling Tender Document (Principal) - Selling Tender Document (Others)	Address	V
NO CONDITIONS APPLY FOR SALE, PURCHASE OR DISTRIBUTION OF TENDER DOCUMENTS			
- Receiving Tender Document			
- Opening Tender Document			
INFORMATION FOR TENDERER			
22	Eligibility of Tenderer	- Tenderers shall have the legal capacity to enter into the Contract under the Applicable Law. - Tenderers shall be enrolled in the relevant professional or trade organisations registered in Bangladesh. - Tenderers shall have fulfilled its obligations to pay taxes under the provisions of laws and regulations of Bangladesh	
23	Brief Description of Services		
24	Price of Tender Document (Tk)		



Pckge No	Identification of Package	Location	Tender Security Amount (Tk)	Completion Time in Weeks / Months
PROCURING ENTITY DETAILS				
30	Name of Official Inviting Tender			
31	Designation of Official Inviting Tender			
32	Address of Official Inviting Tender			
33	Contact details of Official Inviting Tender			
34	The Procuring Entity reserves the right to reject all the Tenders or annul the Tender proceedings			

(Details of Procuring Entity/authorized officer)



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