



ISO 9001:2015 & ISO 45001:2018 Certified

Dhaka Electric Supply Company Limited (DESCO)

22/B, Kobi Farrukh Sarani, Nikunja-2, Khilkhet, Dhaka-1229, Bangladesh

TENDER DOCUMENT

FOR

**Procurement of works and related services for Installation, Testing &
Commissioning of 33kV and 11kV Underground Cable Line.**

Invitation for Tender No: DPSESP/01/2025

Issued on: 05/09/2025

Invitation Reference No: 27.24.0000.078.014.001.25.590

Total Number of Lots: 03 (Three)

September- 2025



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Abbreviations

PE	: Procuring Entity
SOP	: Standard Operating Procedure
GIS	: Geographical Information System
RMU	: Ring Main Unit
EEW	: Execution of Engineering Works
P&D	: Planning & Design
S&D	: Sales and Distribution Division
F&A	: Finance & Accounts
PPR	: Public Procurement Rules
PPA	: Public Procurement Acts
STD	: Standard Tender Document
URSPD	: Unified Rate Schedule of Power Division
BPDB	: Bangladesh Power Development Board
PWD	: Public Works Department
PWDRS	: Public Works Department Rate Schedule
BNBC	: Bangladesh National Building Code
ISO	: International Organization for Standardization
BDS	: Bangladesh Standard
BS	: British Standard
BOQ	: Bill of Quantity
NOA	: Notification of Award
JV	: Joint Venture
LTDB	: Low Tension Distribution Box
OPUC	: Optical Fiber Underground Cable
HDPE	: High Density Polyethylene
HDD	: Horizontal Directional Drilling
OHSAS	: Occupational Health and safety Assessment Series
IEEE	: Institute of Electrical and Electronic Engineers
IEB	: Institute of Engineers Bangladesh.
As-built Drawings	: As-built Drawings means a set of drawings submitted by a contractor upon completion of a project or a particular job in geographical map with GPS location showing roads, rail line, mosque, temple or prominent places for identification. They reflect all changes made in the specifications and working drawings during the execution process, and show the exact dimensions, geometry, and location of all elements of the work or a particular job completed under the contract.

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 Works and physical services incidental thereto as specified in the **TDS** and as detailed in **Section 6: Bill of Quantities**. The name of the Tender and the number and identification of its constituent lot(s) are stated in the **TDS**.

1.2 The successful Tenderer shall be required to execute the Works and physical services as specified in the General Conditions of Contract.

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 Funds

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 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, Coercive or Obstructive in case of

4.1 The Government and the Development Partner, if applicable requires that the Procuring Entity as well as the Tenderers and Contractors (including, sub-contractors, agents, personnel,

Development Partner)
Practices

consultants, and service providers) shall observe the highest standard of ethics during implementation of procurement proceedings and the execution of Contracts under public funds.

4.2 For the purposes of ITT Sub Clause 4.3, the terms set forth below as follows:

- (a) "corrupt practice" means offering, giving or promising to give, receiving, or soliciting either directly or indirectly, to any officer or employee of the Procuring Entity or other public or private authority or individual, a gratuity in any form; employment or any other thing or service of value as an inducement with respect to an act or decision or method followed by the Procuring Entity in connection with a Procurement proceeding or Contract execution;
- (b) "fraudulent practice" means the misrepresentation or omission of facts in order to influence a decision to be taken in a Procurement proceeding or Contract execution;
- (c) "collusive practice" means a scheme or arrangement between two (2) or more Persons, with or without the knowledge of the Procuring Entity, that is designed to arbitrarily reduce the number of Tenders submitted or fix Tender prices at artificial, non-competitive levels, thereby denying the Procuring Entity the benefits of competitive price arising from genuine and open competition;
- (d) "coercive practice" means harming or threatening to harm, directly or indirectly, Persons or their property to influence a decision to be taken in the Procurement proceeding or the execution of a Contract, and this will include creating obstructions in the normal submission process used for Tenders.
- (e) "Obstructive practice" (applicable in case of Development Partner) means deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede an investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and /or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation.

4.3 Should any corrupt, fraudulent, collusive, coercive (or obstructive in case of Development Partner) practice of any kind is determined by the Procuring Entity or the Development Partner, if applicable, this will be dealt in accordance with the provisions of the Public Procurement Act and Rules and Guidelines of the Development Partners as stated in the ITT Sub Clause 3.3. In case of obstructive practice, this will be dealt in accordance with Development Partners Guidelines.

4.4 If corrupt, fraudulent, collusive, coercive (or obstructive in case of Development Partner) practices of any kind is determined by the Procuring Entity against any Tenderer or Contracts (including sub-contractors, agents, personnel, consultants, and service providers) in competing for, or in executing, a contract under public fund:

- (a) Procuring Entity and/or the Development Partner shall exclude the concerned Tenderer from further participation in the concerned procurement proceedings;
- (b) Procuring Entity and/or the Development Partner shall reject any recommendation for award that had been proposed for that concerned Tenderer;
- (c) Procuring Entity and/or the Development Partner shall 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;
- (d) Development Partner shall sanction the concerned Tenderer or individual, at any time, in accordance with prevailing Development Partner' sanctions procedures, including by publicly declaring such Tenderer or individual ineligible, either indefinitely or for a stated period of time: (i) to be awarded a Development Partner-financed contract; and (ii) to be a nominated sub-contractor, consultant, manufacturer or Contractor, or service provider of an otherwise eligible firm being awarded a Development Partner-financed contract; and
- (e) Development Partner shall cancel the portion of the loan allocated to a contract if it determines at any time that representatives of the Procuring Entity or of a beneficiary of the loan engaged in corrupt, fraudulent, collusive, coercive or obstructive practices during the procurement or the execution of that Development Partner financed contract, without the Procuring Entity having taken timely and appropriate action satisfactory to the Development Partner to remedy the situation.

4.5 Tenderer shall be aware of the provisions on corruption, fraudulence, collusion, coercion (and obstruction, in case of Development Partner) of the Public Procurement Act, 2006, the Public Procurement Rules, 2008 and others as stated in GCC Clause 38.

4.6 In further pursuance of this policy, Tenderers, Contractors and their sub-contractors, agents, personnel, consultants, service providers shall permit the Government and the Development Partner to inspect any accounts and records and other documents relating to the Tender submission and contract performance, and to have them audited by auditors appointed by the Government and/or the Development Partner during the procurement or the execution of that Development Partner financed contract.

5. Eligible Tenderers

- 5.1 This Invitation for Tenders is open to all potential Tenderers from all countries, except for any specified in the **TDS**.
- 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, association or any combination of them in the form of a Joint Venture (JV) 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 and social security contributions under the provisions of laws and regulations of the country of its origin.
- 5.6 Tenderers should not be associated, or have been associated in the past, directly or indirectly, with a consultant or any of its affiliates which have been engaged by the Procuring Entity to provide consulting services for the preparation of the design, specifications, and other documents to be used for the procurement of the works to be performed under this Invitation for Tenders.
- 5.7 Tenderers 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 Sub Clause 4.4 (or obstructive practice, in case of Development Partner) in relation to the Development Partner's Guidelines in projects financed by Development Partner.
- 5.8 Tenderers are not restrained or barred from participating in Public Procurement on grounds of poor performance in the past under any Contract.
- 5.9 Tenderers shall not be insolvent, be in receivership, be bankrupt, be in the process of bankruptcy, be not temporarily barred from undertaking business and it shall not be the subject of legal proceedings for any of the foregoing.
- 5.10 Government-owned enterprise in Bangladesh may also participate in the Tender if it is legally and financially autonomous, it operates under commercial law, and it is not a dependent agency of the Procuring Entity.
- 5.11 Tenderers shall provide such evidence of their continued eligibility satisfactory to the Procuring Entity, as the Procuring Entity will reasonably request.
- 5.12 These above requirements for eligibility will extend, as applicable, to each JV partner and Subcontractor proposed by the Tenderers.
- 5.13 Tenderers shall have the up-to-date valid license(s), issued by the corresponding competent authority, as specified in

- the **TDS**.
6. **Eligible Materials, Equipment and Associated Services**
- 6.1 All materials, equipment and associated services to be supplied under the Contract are from eligible sources, unless their origin is from a country specified in the **TDS**.
- 6.2 For the purposes of this Clause, "origin" means the place where the Materials and Equipments are mined, grown, cultivated, produced or manufactured or processed, or through manufacturing processing, or assembling, another commercially recognized new product results that differs substantially in its basic characteristics from its components or the place from which the associated services are supplied.
- 6.3 The origin of materials and equipment and associated services is distinct from the nationality of the Tenderer.
7. **Site Visit**
- 7.1 Tenderers are advised to visit and examine the Site of Works and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the Tender and entering into a contract for construction of the Works. The costs of visiting the Site shall be at Tenderer's own expense.

B. Tender Document

8. **Tender Document: General**
- 8.1 The Sections comprising the Tender Document are listed below, and should be read in conjunction with any Addendum issued under ITT Clause 11.
- Section 1 Instructions to Tenderers (ITT)
 - Section 2 Tender Data Sheet (TDS)
 - Section 3 General Conditions of Contract (GCC)
 - Section 4 Particular Conditions of Contract (PCC)
 - Section 5 Tender and Contract Forms
 - Section 6 Bill of Quantities (BOQ)
 - Section 7 General Specifications
 - Section 8 Particular Specifications
 - Section 9 Drawings
- 8.2 The Procuring Entity is not responsible for the completeness of the Tender Document and their addenda, if these were not purchased directly from the Procuring Entity, or through its agent as specified in the **TDS**.
- 8.3 Tenderers are expected to examine all instructions, forms, terms, and specifications in the Tender Document as well as in addendum to Tender, if any.
9. **Clarification of Tender Document**
- 9.1 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**.
- 9.2 The Procuring Entity is not obliged to answer any clarification request received after that date as stated under

ITT Sub Clause 9.1.

- 9.3 The Procuring Entity shall respond in writing within five (5) working days of receipt of any such request for clarification received under ITT Sub Clause 9.1.
- 9.4 The Procuring Entity shall forward copies of its response to all those who have purchased the Tender Document, including a description of the enquiry but without identifying its source.
- 9.5 Should the Procuring Entity deem it necessary to revise the Tender Document as a result of a clarification, it will do so following the procedure under ITT Clause 11.

10. Pre-Tender Meeting

- 10.1 To clarify issues and to answer questions on any matter arising in the Tender Document, the Procuring Entity may, if stated in the TDS, hold a pre-Tender Meeting at the place, date and time as specified in the TDS. All potential Tenderers are encouraged and invited to attend the meeting, if it is held.
- 10.2 Tenderers are requested to submit any questions in writing so as to reach the Procuring Entity not later than one day prior to the date of the meeting.
- 10.3 Minutes of the pre-Tender meeting, including the text of the questions raised and the responses given, together with any responses prepared after the meeting, will be transmitted within five (5) working days after holding the meeting to all those who purchased the Tender document and to even those who did not attend the meeting. Any revision to the Tender Document listed in ITT Sub Clause 8.1 that may become necessary as a result of the pre-Tender meeting will be made by the Procuring Entity exclusively through the issue of an Addendum pursuant to ITT Sub Clause 11 and not through the minutes of the pre-Tender meeting.
- 10.4 Non-attendance at the Pre-Tender meeting will not be a cause for disqualification of a Tenderer.

11. Addendum to Tender Document

- 11.1 At any time prior to the deadline for submission of Tenders, the Procuring Entity, on its own initiative or in response to an inquiry in writing from a Tenderer, having purchased the Tender Document, or as a result of a pre-Tender meeting may revise the Tender Document by issuing an Addendum.
- 11.2 The Addendum issued under ITT Sub Clause 11.1 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.
- 11.3 The Procuring Entity shall also ensure posting of the relevant addenda with the reference number and date on their websites including notice boards, where the Procuring Entity had originally posted the ITTs.
- 11.4 To give a prospective Tenderer reasonable time in which to take an addendum into account in preparing its Tender, the

Procuring Entity may, at its discretion, extend the deadline for the submission of Tenders, pursuant to ITT Sub Clause 42.2.

- 11.5 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 not be less than three (3) working days.

C. Qualification Criteria

12. General Criteria

- 12.1 Tender 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.
- 12.2 In addition to meeting the eligibility criteria, as stated in ITT Clause 5, Tenderers must satisfy the other criteria stated in ITT Clauses 13 to 18 inclusive
- 12.3 To qualify for multiple number of contracts/lots in a package made up of this and other individual contracts/lots for which Tenders are invited in the Invitation for Tenders, the Tenderers shall demonstrate having resources sufficient to meet the aggregate of the qualifying criteria for the individual contracts. The requirement of general experience as stated under ITT Sub Clause 14.1(a) and specific experience, unless otherwise of different nature, as stated under ITT Sub Clause 14.1(b) shall not be separately applicable for each individual lot.

13. Litigation History

- 13.1 Litigation history shall comply with the requirement as stated under ITT Sub Clause 15.1(c).

14. Experience Criteria

- 14.1 Tenderers shall have the following minimum level of construction experience to qualify for the performance of the Works under the Contract:
- (a) a minimum number of years of general experience in the construction of works as Prime Contractor or Subcontractor or Management Contractor as specified in the TDS; and
 - (b) specific experience as a Prime Contractor or Subcontractor or Management Contractor in construction works of a nature, complexity and methods/construction technology similar to the proposed Works, in at least a number of contract(s) and, each with a minimum value over the period, as specified in the TDS.

15. Financial Criteria

15.1 Tenderers shall have the following minimum level of financial capacity to qualify for the performance of the Works under the Contract.

- (a) the average annual **construction** turnover as specified in the **TDS** during the period specified in the **TDS**;
- (b) availability of minimum liquid assets i.e. working capital or credit facilities from any scheduled Bank of Bangladesh, net of other contractual commitments, of the amount as specified in the **TDS**;
- (c) satisfactory resolution of all claims under litigation cases and shall not have serious negative impact on the financial capacity of the Tenderers. All pending litigation shall be treated as resolved against the Tenderers; and
- (d) The Minimum Tender Capacity as specified in the **TDS**.

16. Personnel Capacity

16.1 Tenderers shall have the following minimum level of personnel capacity to qualify for the performance of the Works under the Contract consisting of a Construction Project Manager, Engineers, and other key staff with qualifications and experience as specified in the **TDS**.

17. Equipment Capacity

17.1 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**.

18. Joint Venture (JV)

18.1 Tenderers may participate in the procurement proceedings forming a Joint Venture(JV) by an agreement, executed case by case on a non-judicial stamp of value as specified in the **TDS** or alternately with the intent to enter into such an agreement supported by a Letter of Intent along with the proposed agreement duly signed by all legally authorised partners of the intended JV and authenticated by a Notary Public, with the declaration that the partners will execute the JV agreement in the event the Tenderer is successful.

18.2 The figures for each of the partners of a JV shall be added together to determine the Tenderer's compliance with the minimum qualifying criteria; however, for a JV under ITT Sub Clause 18.1, with number of partners as specified in the **TDS** to qualify, Leading partner and other partners must meet the criteria as specified in the **TDS**. Failure to comply with these requirements will result in non-responsiveness of the JV Tender.

18.3 Each partner of the JV shall be jointly and severally liable for the execution of the Contract, all liabilities and ethical and legal obligations in accordance with the Contract terms.

18.4 JV shall nominate the **Leading Partner** as **RPRESENTATIVE**

being entrusted with the Contract administration and management at Site who shall have the authority to conduct all business for and on behalf of any and all the partners of the JV during the Tendering process and, in the event the JV is awarded the Contract, during contract execution including the receipt of payments for and on behalf of the JV.

19. Subcontractor(s)

- 19.1 Tenderers may intend to subcontract an activity or part of the Works; in which case such elements and the proposed Subcontractor shall be clearly identified.
- 19.2 The Procuring Entity may require Tenderers to provide more information about their subcontracting arrangements. If any Subcontractor is found ineligible or unsuitable to carry out the subcontracted tasks, the Procuring Entity may request the Tenderers to propose an acceptable substitute.
- 19.3 A Subcontractor may participate in more than one Tender, but only in that capacity.
- 19.4 The Procuring Entity may also select in advance Nominated Subcontractor(s) to execute certain specific components of the Works and if so, those will be specified in the TDS.
- 19.5 The successful Tenderer shall under no circumstances assign the Works or any part of it to a Subcontractor.

D. Tender Preparation

20. Only one Tender

- 20.1 Tenderers shall submit only one (1) Tender for each lot, either individually or as a JV. Tenderer who submits or participates in more than one (1) Tender in one (1) lot of a package or in one (1) package with one (1) lot will cause all the Tenders of that particular Tenderer to be rejected.

21. Cost of Tendering

- 21.1 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.

22. Issuance and Sale of Tender Document

- 22.1 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.
- 22.2 There shall not be any pre-conditions whatsoever, for sale of Tender Documents and the sale of such Document shall be permitted up to the day prior to the day of deadline for the submission of Tender.

23. Language of Tender

- 23.1 Tenders shall be written in the English language. Correspondences and documents relating to the Tender may be written in English or *Bangla*. Supporting documents and printed literature furnished by the Tenderers that are part of the Tender may be in another language, provided they are accompanied by an accurate translation of the relevant

passages in the English or *Bangla* language, in which case, for purposes of interpretation of the Tender, such translation shall govern.

- 23.2 Tenderers shall bear all costs of translation to the governing language and all risks of the accuracy of such translation.

24. Contents of Tender

- 24.1 The Tender prepared by the Tenderers shall comprise Two Envelope submitted simultaneously, one called the **Technical Offer (Envelope -01)** containing the documents listed in ITT 24.2 and other called the **Financial Offer** containing the documents listed in 24.3, both envelopes enclosed together in an outer Single envelope.

- 24.2 The **Technical Offer (Envelope-01)** prepared by the Tenderers will comprise the following:

- (a) the Technical Offer Submission Letter (**Form PW3A-1a**), as stated under ITT Sub Clause 25.1;
- (b) the Tenderer Information as stated under ITT Clauses 5, 29 and 32 (**Form PW3A-2**);
- (c) the Tender Security as stated under ITT Clauses 35, 36 and 37;
- (d) the alternatives, if permissible, as stated under ITT Clause 26;
- (e) the written confirmation authorizing the signatory of the Tender to commit the Tenderer, as stated under ITT Sub Clause 40.3;
- (f) the Valid Trade license;
- (g) documentary evidence of Tax Identification Number (TIN) and Value Added Tax (VAT) as a proof of taxation obligations as stated under ITT Sub Clause 5.5;
- (h) the Technical Proposal describing work plan & method, personnel, equipment and schedules as stated under ITT Clause 31;
- (i) documentary evidence as stated under ITT Clause 29 and 32 establishing the Tenderer's eligibility and the minimum qualifications of the Tenderers required to be met for due performance of the Works and physical services under the Contract;
- (j) document establishing legal and financial autonomy and compliance with commercial law, as stated under ITT Sub Clause 5.10 in case of government owned entity;
- (k) any other document as specified in the TDS.

- 24.3 The Financial Offer (**Financial Envelope -02**) prepared by the Tenderers will comprise the following:

- (a) the Financial Offer Submission Letter (**Form PW3A-1b**), as stated under ITT Sub Clause 25.1;
- (b) the **priced BOQ** for each lot in accordance with ITT

Clauses 25,27 and 28;

(c) the written confirmation authorizing the signatory of the Tender to commit the Tenderer, as stated under ITT Sub Clause 40.3;

(d) any other document as specified in the TDS.

25. Tender Submission Letter and Bill of Quantities

25.1 Tenderers shall submit the Technical Offer Submission Letter (**Form PW3A-1a**), 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 rejected as being incomplete.

25.2 Tenderers shall submit the Financial Offer submission letter (**Form PW3A-1b**) along with priced BOQ using the form(s) furnished in **Section 6: Bill of Quantities**.

25.3 If in preparing its Tender, the Tenderer has made errors in the unit rate 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.

26. Alternatives

26.1 Unless otherwise specified in the TDS, alternative technical solutions shall not be considered.

26.2 When specified in ITT clause 26.1, Tenderers are permitted to submit alternative technical solutions for specified parts of the Works, and such parts will be identified in the TDS.

26.3 Only the technical alternatives, if any, of the lowest evaluated Tenderer conforming to the basic technical requirements will be considered by the Procuring Entity.

27. Tender Prices, Discounts and Price Adjustment

27.1 The prices and discounts shall be quoted by the Tenderers in the Financial Offer Submission Letter (**Form PW3A-1b**).

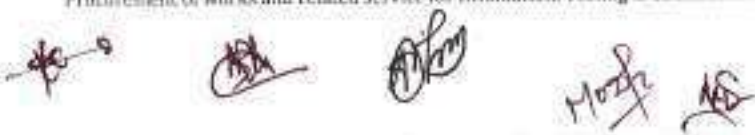
27.2 Tenderers shall fill in unit rates for all items of the Works both in figures and in words as described in the BOQ, excluding any discount offered.

27.3 The items quantified in the BOQ for which no unit rates have been quoted by the Tenderer will not be paid for, by the Procuring Entity when executed and shall be deemed covered by the amounts of other rates in the BOQ and, it shall not be a reason to change the Tender price.

27.4 The price to be quoted in the Financial Offer Submission Letter (**Form PW3A-1b**), as stated under ITT Sub Clause 25.2, shall be the total price of the Tender, **excluding any discounts offered**.

27.5 Tenderers shall quote any unconditional discounts in the Financial Offer Submission Letter as stated under ITT Sub Clause 25.2.

27.6 Tenderers wishing to offer any unconditional discount to any package or lot as applicable shall mention discount in percentage (%) in the **Financial Offer Submission Letter (Form PW3A-1b)**. Discount shall be equally applicable on



all the items of BOQ and shall be applied after arithmetic correction of the tender.

- 27.7 All applicable taxes, custom duties, VAT and other levies payable by the Contractor under the Contract, or for any other causes, as of the date twenty-eight (28) days prior to the deadline for submission of Tenders, shall be included in the unit rates and the total Tender price submitted by the Tenderers.
- 27.8 Unless otherwise specified in the TDS and provided in the Contract, the price of a Contract shall be fixed in which case the unit rates may not be modified in response to changes in economic or commercial conditions.
- 27.9 If so stated under ITT Sub Clause 27.9, Tenders are being invited with a provision for price adjustments. The unit rates quoted by the Tenderers are subject to adjustment during the performance of the Contract in accordance with the provisions of General Condition of Contract (GCC) Clause 69 and, in such case the Procuring Entity shall provide the indexes and weightings or coefficients in **Appendix to the Tender (Table 1.1 and Table 1.2)** for the price adjustment formulae as specified in the Particular Conditions of Contract (PCC).
28. Tender Currency 28.1 Tenderers shall quote all prices in the Financial Offer Submission Letter and in the BOQ in Bangladesh Taka (BDT) currency.
29. Documents Establishing Eligibility of the Tenderer 29.1 Tenderers, if applying as a sole Tenderer, shall submit documentary evidence to establish its eligibility as stated under ITT Clause 5 and, in particular, it shall:
- (a) complete the eligibility declarations in the Technical Offer Submission Letter (**Form PW3A-1a**);
 - (b) complete the Tenderer Information (**Form PW3A-2**);
 - (c) complete Subcontractor Information (**Form PW3A-4**), if it intends to engage any Subcontractor(s).
- 29.2 Tenderers, if applying as a partner of an existing or intended JV shall submit documentary evidence to establish its eligibility as stated under ITT Clause 5 and, in particular, in addition to as stated under ITT Sub Clause 29.1, it shall:
- (a) provide for each JV partner, completed JV Partner Information (**Form PW3A-3**);
 - (b) provide the JV agreement or Letter of Intent along with the proposed agreement of the intended JV as stated under ITT Sub Clause 18.1
30. Documents Establishing the Eligibility and Conformity of Materials, Equipment and 30.1 Tenderers shall submit documentary evidence to establish the origin of all Materials, Equipment and services to be supplied under the Contract as stated under ITT Clause 6.

Services

30.2 To establish the conformity of the Materials, Equipment and services to be supplied under the Contract, the Tenderers shall furnish, as part of its Tender, the documentary evidence (which may be in the form of literature, specifications and brochures, drawings or data) that these conform to the technical specifications and standards specified in **Section 7, General Specifications** and **Section 8, Particular Specifications**.

31. Documents Establishing Technical Proposal

31.1 Tenderers shall furnish a Technical Proposal including a statement of work methods, equipment, personnel, schedule and any other information as stipulated in **TDS**, in sufficient detail to demonstrate the adequacy of the Tenderer's proposal to meet the work requirements and the completion time.

32. Documents Establishing the Tenderer's Qualification

32.1 Tenderers shall complete and submit the Tenderer Information (**Form PW3A-2/PW3A-3**) and shall include documentary evidence, as applicable to satisfy the following:

- (a) general experience, of the entity(s) participating in the Tender, in construction works as stated under ITT Sub Clause 14.1(a), substantiated by the year of registration/constitution/licensing in its country of origin;
- (b) specific experience, of the entity(s) participating in the Tender, in construction works under public sector of similar nature and size as stated under ITT Sub Clause 14.1(b), substantiated by Completion Certificate (s) issued by the relevant Procuring Entity(s);
- (c) average annual **construction** turnover i.e. total certified payments received for contracts in progress or completed under public sector for a period as stated under ITT Sub Clause 15.1(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;
- (d) adequacy of minimum liquid assets i.e. working capital substantiated by Audit Reports mentioned in (i) below or credit line(s) substantiated by any scheduled Bank of Bangladesh in the format as specified (**Form PW3A-7**), 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 15.1(b);
- (e) information regarding claims under litigation, current or during the last years as specified in the **TDS**, in which the Tenderer is involved, the parties concerned, and value of claim as stated under ITT Sub Clause 15.1(c), substantiated by statement(s) of the entity(s) participating in the Tender in its letter-head pad;
- (f) technical and administrative personnel along with their



- qualification and experience proposed for the Contract as stated under ITT Clause 16;
- (g) major items of construction equipment proposed to carry out the Contract as stated under ITT Clause 17, substantiated by statement(s) of the entity(s) participating in the Tender in its letter-head pad declaring source of its availability;
 - (h) authority(s), to seek references from the Tenderer's Bankers or any other sources, of the entity(s) participating in the Tender in its letter-head pad;
 - (i) 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**, of the entity(s) participating in the Tender, substantiated by Audit Reports.
- 33. Validity Period of Tender** 33.1 Tenders shall remain valid for the period as specified in the **TDS** after the date of Tender submission deadline. A Tender valid for a period shorter than that specified will be considered, non-responsive.
- 34. Extension of Tender Validity and Tender Security** 34.1 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 51.3.
- 34.2 The request for extension of Tender Validity period shall state the new date of the validity of the Tender.
- 34.3 The request and the responses shall be made in writing. Validity of the Tender Security provided under ITT Clause 35 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.
- 35. Tender Security** 35.1 Tenderers shall furnish tender security as part of its **Technical offer**, 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**.
- 35.2 If the Tender is a Joint Venture, the Tenderer shall furnish as part of its Tender, in favour of the Procuring Entity or as otherwise directed on account of the title of the existing or intended JV or any of the partners of that JV or in the names of all future partners as named in the Letter of Intent of the JV, a Tender Security in original form and in the amount as stated under ITT Sub Clause 35.1.
- 35.3 In case of substitution of the Tender as stated under ITT

Clause 46 a new Tender Security shall be required in the substituted Tender.

36. Form of Tender Security

36.1 The Tender Security shall:

- (a) at the Tenderer's option, be either:
 - i. in the form of a Bank Draft or Pay Order; or
 - ii. in the form of an irrevocable unconditional Bank Guarantee issued by any scheduled Bank of Bangladesh, in the format **(Form PW3A-6)**, without any alteration, furnished in **Section 5: Tender and Contract Forms**;
- (b) be payable promptly upon written demand by the Procuring Entity in the case of the conditions as stated under ITT Sub Clause 39.1 being invoked; and
- (c) remain valid for at least twenty-eight (28) days beyond the expiry date of the Tender Validity in order to make a claim in due course against a Tenderer in the circumstances as stated under ITT Sub Clause 39.1.

37. Authenticity of Tender Security

37.1 The authenticity of the Tender Security submitted by a Tenderer may be examined and verified by the Procuring Entity at its discretion in writing from the Bank issuing the security.

37.2 If a Tender Security is found to be not authentic, the Procuring Entity may proceed to take measures against that Tenderer as stated under ITT Sub Clause 4.4.

37.3 A Tender not accompanied by a valid Tender Security will be considered non-responsive.

38. Return of Tender Security

38.1 No Tender Security shall be returned to the Tenderers before contract signing.

38.2 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 33.1.

38.3 The Tender security of non-responsive tenderers shall be returned immediately after the evaluation report approved by the Approving Authority.

38.4 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.

39. Forfeiture of Tender Security

39.1 The 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 33 and 34; or
- (b) refuses to accept a Notification of Award as stated under ITT Sub Clause 64.3; or
- (c) fails to furnish Performance Security as stated under

ITT Sub Clause 65.1 and 65.2; or

- (d) refuses to sign the Contract as stated under ITT Sub Clause 70.2; or
- (e) does not accept the correction of the Tender price following the correction of the arithmetic errors as stated under ITT Clause 55.

40. Format and Signing of Tender

- 40.1 Tenderers shall prepare one (1) original of the documents comprising the **Technical Offer** as described in ITT Clause 24.2 and clearly mark it "**ORIGINAL OF TECHNICAL OFFER**". In addition, the Tenderers shall prepare the number of copies of the Technical Offer, as specified in the TDS and clearly mark each of them "**COPY OF THE TECHNICAL OFFER**". In the event of any discrepancy between the original and the copies, the **ORIGINAL** shall prevail.
- 40.2 Tenderers shall prepare one (1) original of the documents comprising the Financial Offer as described in ITT Clause 24.3 and clearly mark it "**ORIGINAL OF FINANCIAL OFFER**". In addition, the Tenderers shall prepare the number of copies of the Financial Offer, as specified in the TDS and clearly mark each of them "**COPY OF THE FINANCIAL OFFER**". In the event of any discrepancy between the original and the copies, the **ORIGINAL** shall prevail.
- 40.3 Alternatives, if permitted as stated under ITT Clause 26, shall be clearly marked "Alternative".
- 40.4 The original and each copy of the Offer 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 Technical Offer Submission Letter (**Form PW3A-1a**) and Financial Offer Submission Letter (**Form PW3A-1b**). 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.
- 40.5 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

41. Sealing, Marking and Submission of Tender

- 41.1 Tenderers shall enclose the original of **Technical Offer** in one (1) envelope and all the copies of the **Technical Offer**, including the alternatives, if permitted under ITT Clause 26, in another envelope, duly marking the envelopes as "**ORIGINAL OF TECHNICAL OFFER**", "**ALTERNATIVES**" (if permitted), "**COPY OF TECHNICAL OFFER**", "**ALTERNATIVES**" (if permitted). These sealed envelopes for the original and copies of the technical Tender shall then be enclosed and sealed in one single envelope and clearly mark it "**Envelope-01: TECHNICAL OFFER**".

- 41.2 The inner and outer envelopes of Technical Offer shall:
- (a) be addressed to the Procuring Entity at the address as stated under ITT Sub Clause 42.1;
 - (b) bear the name of the Tender and the Tender Number as stated under ITT Sub Clause 1.1;
 - (c) bear the name and address of the Tenderer;
 - (d) bear a statement "DO NOT OPEN BEFORE -----" the time and date for Tender opening as stated under ITT Sub Clause 48.1;
 - (e) bear any additional identification marks as specified in the TDS.
- 41.3 Tenderers shall enclose the original of **Financial Offer** in one (1) envelope and all the copies of the **Financial Offer** in another envelope, duly marking the envelopes as "**ORIGINAL OF FINANCIAL OFFER**" & "**COPY OF FINANCIAL OFFER**". These sealed envelopes for the original and copies of the Financial Tender shall then be enclosed and sealed in one single envelope and clearly mark it "**ENVELOPE-02: FINANCIAL OFFER**".
- 41.4 The inner and outer envelopes of Financial Offer shall:
- (a) be addressed to the Procuring Entity at the address as stated under ITT Sub Clause 42.1;
 - (b) bear the name of the Tender and the Tender Number as stated under ITT Sub Clause 1.1;
 - (c) bear the name and address of the Tenderer;
 - (d) bear a statement "DO NOT OPEN BEFORE THE TECHNICAL OFFER EVALUATION AND APPROVAL".
 - (e) bear any additional identification marks as specified in the TDS.
- 41.5 **The Envelope-01** as stated in ITT Clause 41.1 and Envelope-02 as in ITT Clause 41.3 shall then be enclosed and sealed in one single outer envelope which shall contain the information as stated under ITT Clause 41.2 (a) to (e) & ITT Clause 41.4 (a) to (d)
- 41.6 Tenderers are solely and entirely responsible for pre-disclosure of Tender information if the envelope(s) are not properly sealed and marked.
- 41.7 Tenders shall be delivered by hand or by mail, including courier services at the address(s) as stated under ITT Sub Clause 42.1.
- 41.8 The Procuring Entity will, on request, provide the Tenderer with acknowledgement of receipt showing the date and time when it's Tender was received.

42. Deadline for Submission of Tender	42.1 Tenders shall be delivered to the Procuring Entity at the address specified in the TDS and not later than the date and time specified in the TDS. 42.2 The Procuring Entity may, at its discretion, extend the deadline for submission of Tender as stated under ITT Sub Clause 42.1, 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. 42.3 If submission of Tenders is allowed in more than one location, the date and time, for submission of Tenders for both the primary and the secondary place(s), shall be the "same and not different" as specified in the TDS. 42.4 The Procuring Entity shall ensure that the Tenders received at the secondary place(s) are hand-delivered at the primary place as stated under ITT Sub Clause 42.1, within THREE (3) HOURS after the deadline for submission of Tenders at the secondary place (s), in case of MULTIPLE DROPPING as stated under ITT Sub Clause 42.3, as specified in the TDS.
43. Late Tender	43.1 Any Tender received by the Procuring Entity after the deadline for submission of Tenders as stated under ITT Sub Clause 42.1 shall be declared LATE TENDER and returned unopened to the Tenderer.
44. Modification, Substitution or Withdrawal of Tender	44.1 Tenderers may modify, substitute 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; 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 42.
45. Tender Modification	45.1 Tenderers shall not be allowed to retrieve its original Tender, but shall be allowed to submit corresponding modification either to its original Technical Offer or Financial Offer or both, marked as "MODIFICATION FOR TECHNICAL OFFER (MTO)" or "MODIFICATION FOR FINANCIAL OFFER (MFO)" with two separate envelopes. The envelope/envelopes marked as MTO and/or MFO then be enclosed and sealed in one single outer envelope with a written notice duly as stated under ITT Sub Clause 44.1. The outer envelope shall contain the information as stated under ITT Sub Clause 41.2(a) to (d) and clearly marked as "MODIFICATION (M)".
46. Tender Substitution	46.1 Tenderers shall not be allowed to retrieve its original Tender, but shall be allowed to submit another Technical Offer or Financial Offer or both, marked as "SUBSTITUTION FOR TECHNICAL OFFER (STO)" or "SUBSTITUTION FOR FINANCIAL OFFER (SFO)" with two separate envelopes. The envelope/envelopes marked as STO and/or SFO then be enclosed and sealed in one single outer envelope with a written notice duly as stated

under ITT Sub Clause 44.1. The outer envelope shall contain the information as stated under ITT Sub Clause 41.2(a) to (d) and clearly marked as "SUBSTITUTION (S)".

47. Tender Withdrawal

- 47.1 Tenderers shall be allowed to withdraw its Tender by a Letter of Withdrawal marked as "WITHDRAWAL (W)".

F. Tender Opening and Evaluation

48. Tender Opening

- 48.1 Only the **Technical Offer (Envelope-1)** 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 unless otherwise stated under ITT Sub Clause 48.2. Tender opening shall not be delayed on the plea of absences of Tenderers or his or her representatives. Financial offer (**Envelop-02**) shall not open with Technical offer (**Envelop-1**) and shall be kept unopened at the Custody of the Head of the Procuring Entity or his Authorised Officer (AO).
- 48.2 Persons not associated with the Tender may not be allowed to attend the public opening of Technical Offers.
- 48.3 Tenderers' representatives shall be duly authorised by the Tenderer. Tenderers or their authorised representatives will be allowed to attend and witness the opening of Technical Offers, and will sign a register evidencing their attendance. Technical Offers Opening shall not be delayed on the plea of absence of Tenderers or his or her representatives.
- 48.4 The authenticity of withdrawal or substitution 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 44.1 any envelope related to financial modification; substitute shall be recorded but not open with technical offer.
- 48.5 Verify (M), (S), (W), (A), (O) by following step by steps
- (a) **Step 1:** envelopes marked "Withdrawal (W)" shall be opened and "Withdrawal" notice read aloud & recorded in the opening sheet. After verify the withdrawal letter is genuine, corresponding tender shall not be opened, but returned unopened to the Tenderer by Procuring Entity (PE) at a late time. No Tender withdrawal shall be permitted unless the corresponding withdrawal notice shall be as stated in 44.1& 47.1 and in such case the Tender shall be opened and recorded.
- (b) **Step 2:** the remaining Tenders will be sorted out and those marked "SUBSTITUTION (S)" or "MODIFICATION (M)" of Tender will be linked with their corresponding Original Tender.

- (c) **Step 3:** outer envelopes marked "SUBSTITUTION (S)" shall be opened. The inner envelopes containing the "Substitution of Technical Offer (STO)" and/or "Substitution of Financial Offer (SFO)" shall be exchanged for the corresponding envelopes being substituted, which are to be returned to the Tenderer unopened by the Procuring Entity at a later time immediately after opening of Technical Offers. Only the Substitution of Technical Offer, if any, shall be opened, read out, and recorded. Substitution of Financial Offer will remain unopened in accordance with ITT Sub Clause 48.1. No envelope shall be substituted unless the corresponding substitution notice contains a valid authorization to request the substitution and is read out and recorded at Technical Offer opening.
- (d) **Step 4:** outer envelopes marked "MODIFICATION (M)" shall be opened. No Technical Offer and/or Financial Offer shall be modified unless the corresponding modification notice contains a valid authorization to request the modification and is read out and recorded at the opening of Technical Offers. Only the Technical Offers, both Original as well as Modification, are to be opened, read out, and recorded at the opening. Financial Offers, both Original as well as Modification, will remain unopened in accordance with ITT Sub Clause 48.1
- (e) **Step 5:** if so, specified in this Tender Document, the envelopes marked "Alternative of Technical Offer (ATO)" shall be opened and read aloud with the corresponding Technical Offer and recorded.

48.6 Ensuring that only the correct (MTO), (STO), (ATO), (OTO) envelopes are opened, details of each Technical Offer will be dealt with as follows:

- (a) the Chairperson of the TOC will read aloud each Technical Offer and record in the Technical Offer Opening Sheet (TOOS):
 - (i) the name and address of the Tenderer;
 - (ii) state if it is a withdrawn, modified, substituted or original Technical Offer;
 - (iii) any alternatives;
 - (iv) record the rejection of the Tender which submitted Technical Offer and Financial Offer together in one envelope.
 - (v) the presence or absence of any requisite Tender Security; and
 - (vi) such other details as the Procuring Entity, at its discretion, may consider appropriate.
- (b) Only Technical Offer and alternatives read aloud at the

Technical Offer Opening will be considered in evaluation.

- (c) all pages of the original version of the Technical Offer, except for un-amended printed literature, will be initialled by members of the TOC. **Remember, No financial Offer shall be open with Technical Offer**

48.7 Upon completion of Technical Offer opening, all members of the TOC and the Tenderers or Tenderer's duly authorised representatives attending the Technical Offer opening shall sign by name, address, designation, the TOS, 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 TOC and any authorised Consultants and, to the Tenderers immediately.

48.8 The omission of a Tenderer's signature on the record shall not invalidate the contents and effect of the record under ITT Sub Clause 48.7

48.9 No Tender i.e., Technical or Financial Offer shall be rejected at the Tender opening stage except the LATE Tenders as stated in the ITT Clause 43.

49. Evaluation of Tenders

49.1 Technical Offers shall be examined and evaluated only on the basis of the criteria specified in the Tender Document.

49.2 **Tender Evaluation Committee (TEC)** shall examine, evaluate and compare Tenders that are responsive to the requirements of Tender Documents in order to identify the successful Tenderer.

50. Evaluation Process

50.1 TEC may consider a Tender Offer 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 Technical Offer opening following Two steps;

- (a) Preliminary examination
- (b) Technical examination and responsiveness

51. Preliminary Examination

51.1 TEC shall examine the Technical Offers to confirm that all documentation as stated under ITT Clause 24 has been provided, to determine the completeness of each document submitted.

51.2 TEC shall confirm that the following documents and information have been provided in the Technical Offer. If any of these documents or information is missing, the Tender shall be considered rejected.

- (a) Tender Submission Letter;
- (b) Written confirmation authorizing the signatory of the Tender to commit the Tenderer; and
- (c) Valid Tender Security.

52. Technical Responsiveness and Technical Evaluation

52.1 TEC's determination of a Tender's responsiveness is to be based on the contents of the Technical itself without



recourse to extrinsic evidence.

- 52.2 A responsive Tender is one that conforms in all respects to the requirements of the Tender Document without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that:
- (a) affects in any substantial way the scope, quality, or performance of the Works and physical services specified in the Contract; or
 - (b) limits in any substantial way, or is inconsistent with the Tender Documents, the Procuring Entity's rights or the Tenderer's obligations under the Contract; or
 - (c) if rectified would unfairly affect the competitive position of other Tenderers presenting responsive Tenders.

During the evaluation of Technical Offer, the following definitions shall apply:

"**Deviation**" is a departure from the requirements specified in the Tender Document;

"**Reservation**" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Tender Document; and

"**Omission**" is the failure to submit part or all of the information or documentation required in the Tender Document.

- 52.3 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.
- 52.4 There shall be no requirement as to the minimum number of responsive Tenders.
- 52.5 TEC shall evaluate the aspects of the Tender submitted as stated under ITT Clauses 29, 30, 31 and 32 and, to confirm that all requirements specified in **Section 7: General Specifications and Section 8: Particular Specifications** of the Tender Document have been met without any material deviation, reservation or omission.
- 52.6 Provided that a Tender is responsive, TEC may request that the Tenderer submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities or omissions in the Technical Offer related to documentation requirements. Such omission shall not be related to any aspect of the rates of the Tender reflected in the Priced BOQ or any mandatory criteria. Failure of the Tenderer to comply with the request may result in the consideration of its Tender as non-responsive.
- 52.7 TEC may regard a Tender as responsive even if it contains;
- (a) minor or insignificant deviations which do not meaningfully alter or depart from the technical specifications, characteristics and commercial terms and, conditions or other mandatory requirements set

- out in the Tender Document; or
- (b) errors or oversights, that if corrected, would not alter the key aspects of the Technical Offers.
- 53. Clarification on Technical Offer**
- 53.1 TEC may ask Tenderers for clarification of their Technical Offers, including breakdowns of unit rates, in order to facilitate the examination and evaluation of Technical Offers. The request for clarification by the TEC and the response from the Tenderer shall be in writing, and Technical Offers clarifications which may lead to a change in the substance of the Technical Offers or in any of the key elements of the Technical Offers as stated under ITT Sub Clause 52.2, will neither be sought nor be permitted.
- 53.2 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 modification to its Technical Offer.
- 53.3 If a Tenderer does not provide clarifications of its Technical Offer by the date and time, its Tender shall not be considered in the evaluation
- 54. Restrictions on Disclosure of Information**
- 54.1 Following the opening of Technical Offers until issuance of Notification of Award no Tenderer shall, unless requested to provide clarification to its Tender or unless necessary for submission of a complaint, communicate with the concerned Procuring Entity
- 54.2 Tenderers shall not seek to influence in anyway, the examination and evaluation of the Tenders
- 54.3 Any effort by a Tenderer to influence the Procuring Entity in its decision concerning the evaluation of Tenders, Contract awards may result in the non-responsiveness of its Tender as well as further action in accordance with Section 64 (5) of the Public Procurement Act, 2006.
- 54.4 All clarification requests shall remind Tenderers of the need for confidentiality and that any breach of confidentiality on the part of the Tenderer may result in their Tender being non-responsive.
- 55. Approval of Technical Offer**
- 55.2 TEC shall prepare the Technical Offer Evaluation Report and shall directly submit the Evaluation Report to the Head of the Procuring Entity **(HOPE) or Authorized Officer for approval.**
- 56. Financial Offer Opening**
- 56.1 After getting approval of the Technical Offer Evaluation Report, Financial Offer **(Envelope-02)** of only the Responsive Tenderers who have been determined as qualified to the requirements of the Technical Offer, shall be opened publicly. The Date, time and place of Financial Offer Opening shall be communicated to the Responsive Tenderers in writing by issuing a Financial Offer Opening notice not less than seven days before the opening.

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56.2 Ensuring that only the correct MFO, SFO, OFO envelopes of the Responsive Tenderers shall be opened, in the presence of the Responsive Tenderer's representatives who choose to attend, on the date, time and at the place as notified by the Procuring Entity in accordance with ITT Clause 56.1. Details of each Technical Offer will be dealt with as follows:

(a) the Chairperson of the Tender Evaluation Committee will read aloud each Financial Offer and record in the Financial Offer Opening Sheet (FOOS):

- (i) the name and address of the Tenderer;
- (ii) state if it is a modified, substituted or original Financial Offer;
- (iii) the Tender Price;
- (iv) the number of initialed corrections;
- (v) any discounts; and
- (vi) any other details as the Procuring Entity, at its discretion, may consider appropriate

(b) only the discounts and alternatives read aloud and recorded at the Financial Offer Opening will be considered in Financial Offer Evaluation. No Tenders shall be rejected at the opening of the Financial Offer.

(c) all pages of the original version of the Financial Offer, except for un-amended printed literature, will be initialed by members of the Tender Evaluation Committee.

(d) The Procuring Entity shall, in writing, notify the Non-responsive Tenderers who have not been determined as qualified to the requirements of the Technical Offer and shall return their Financial Offers (**Envelope-02**) unopened after signing the Contract Award with the evaluated lowest responsive Tenderer.

57. Clarification on Financial Offer

57.1 TEC may ask Tenderers for clarification of their Financial Offers, about the breakdowns of unit rates, in order to facilitate the examination and evaluation of Financial Offers. The request for clarification by the TEC and the response from the Tenderer shall be in writing.

57.2 Changes in the Tender price shall not be sought or permitted, except to confirm the correction of arithmetical errors discovered by the TEC in the evaluation of the Tenders, as stated under ITT Sub Clause 58.1.

57.3 If a Tenderer does not provide clarifications of its Financial Offer by the date and time, its Tender shall not be considered in the evaluation.

57.4 Requests for clarifications on Financial Offers shall be duly signed only by the TEC Chairperson.

58. Correction of Arithmetical Errors

58.1 During the evaluation of Financial Offers, the TEC shall correct arithmetical errors on the following basis:

- (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, unless in the opinion of the TEC there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted will govern and the unit price will be corrected; and
- (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, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.

58.2 TEC shall correct the arithmetic errors and shall promptly notify the concerned Tenderer(s). If the Tenderer does not accept the correction of arithmetic errors, its Tender shall be rejected.

59. Financial Evaluation

59.1 TEC will evaluate each Financial Offer that has been opened duly.

59.2 To evaluate a Financial Offer, the TEC will consider the following:

- (a) the Tender price, excluding Provisional Sums and the provision, if any, for contingencies in the priced BOQ, but including Daywork items;
- (b) adjustments for correction of arithmetical errors, as stated under ITT Sub Clause 58.1;
- (c) adjustments in order to take into consideration the unconditional discounts as stated under ITT Sub Clause 27.5 and 27.6, if any.

59.3 Variations, deviations, alternatives 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 Financial Offers evaluation.

59.4 The estimated effect of any price adjustment provisions under GCC Clause 71, applied over the period of execution of the Contract, will not be taken into account in Financial Offers evaluation.



- 59.5 If so, indicated in the ITT Sub Clause 1.1 the Procuring Entity may award one or multiple lots to one Tenderer following the methodology specified in ITT Sub Clause 59.6.
- 59.6 To determine the lowest-evaluated lot/package the TEC will take into account:
- (a) the lowest-evaluated Tender for each lot;
 - (b) the resources sufficient to meet the qualifying criteria for the individual lot or aggregate of the qualifying criteria for the multiple lots;
 - (c) the price reduction on account of discount per lot/package as offered by the Tenderer in its Tender; and
 - (d) the Contract-award sequence that provides the optimum economic combination on the basis of least overall cost of the total Contract package taking into account any limitations due to constraints in Works or execution capacity determined in accordance with the tender capacity as stated in ITT Sub Clause 15.1 (d) and post-qualification criteria as stated under ITT Clause 62.
- 59.7 TEC may recommend to increase the amount of the Performance Security above the amounts as stated under ITT Sub Clause 68.1 but not exceeding twenty-five (25) percent of the Contract Price, if in the opinion of TEC, it is found that the Tender is unbalanced as a result of front loading.

60. Price Comparison

- 60.1 TEC shall compare all responsive Financial Offers to determine the lowest-evaluated Tender, as stated under ITT Clause 59.
- 60.2 In the extremely unlikely event that there is a tie for the lowest evaluated price, the Tenderer with the superior past performance as stated in ITT sub-clause 50.2 shall be selected.
- 60.3 In the event that there is a tie for the lowest price and none of the Tenderers has the record of past performance with the Procuring Entity as stated under ITT Sub Clause 60.2, then the Tenderer shall be selected, subject to firm confirmation through the post-qualification process, after consideration as to whether the Tenderer has demonstrated in its Tender superior past performance with the other Procuring Entities or a more efficient work programme and work methodology.
- 60.4 The successful Tenderer as stated under ITT Sub Clause 60.1, 60.2 and 60.3 shall not be selected through lottery under any circumstances.

61. Negotiations

- 61.1 No negotiations shall be held during the Tender evaluation or award, with the lowest or any other Tenderer.
- 61.2 The Procuring Entity through the TEC may, however, negotiate with the lowest evaluated Tenderer with the objective to reduce the Contract Price by reducing the

scope of works or a reallocation of risks and responsibilities, only when it is found that the lowest evaluated Tender is significantly higher than the official estimated cost; the reasons for such higher price being duly investigated and found realistic.

61.3 If the Procuring Entity decides to negotiate for reducing the scope of the requirements under ITT Sub Clause 61.2, it will be required to guarantee that the lowest Tenderer remains the lowest Tenderer even after the scope of work has been revised and shall further be ensured that the objective of the Procurement will not be seriously affected through this reduction.

61.4 In the event that the Procuring Entity decides because of a high Tender price to reduce the scope of the requirements to meet the available budget, the Tenderer is not obliged to accept the award and shall not be penalised in any way for un-accepting the proposed award.

62. Post-qualification

62.1 The determination on post-qualification shall be based upon an examination of the documentary evidence of the Tenderer's qualifications submitted by the Tenderer, pursuant to ITT Clause 32, clarifications as stated under ITT Clause 53 and the qualification criteria indicated in ITT Clauses 12 to 17. Factors not included therein shall not be used in the evaluation of the Tenderer's qualification.

62.2 An affirmative determination shall be a prerequisite for award of the Contract to the Tenderer. A negative determination shall result in non-responsiveness of the Tenderer's Tender, in which event the Procuring Entity shall proceed to the next lowest evaluated Tender to make a similar determination of that Tenderer's capabilities to perform the Contract satisfactorily, if awarded.

62.3 TEC may verify information contained in the Tender by visiting the premises of the Tenderer as a part of the post qualification process, if practical and appropriate.

63. Procuring Entity's Right to Accept any or to Reject Any or All Tenders

63.1 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.



64. Rejection of All Tenders

- 64.1 The Procuring Entity may, in the circumstances as stated under ITT Sub Clause 64.2 reject all Tenders following recommendations from the TEC only after the approval of such recommendations by the Head of the Procuring Entity,
- 64.2 All Tenders can be rejected, if -
- (a) the price of the lowest evaluated Tender exceeds the official estimated cost, provided the estimate is realistic, subject to ITT Sub Clause 61.2; or
 - (b) there is evidence of lack of effective competition, such as non-participation by a number of potential Tenderers; or
 - (c) the Tenderers are unable to propose completion of the contract within the stipulated time in its Tender, though the stipulated time is reasonable and realistic; or
 - (d) all Tenders are non-responsive; or
 - (e) evidence of professional misconduct, affecting seriously the Procurement process, is established pursuant to Rule 127 of the Public Procurement Rules, 2008
- 64.3 Notwithstanding anything contained in ITT Sub-Clause 64.2 Tenders may not be rejected if the lowest evaluated price is in conformity with the market price.

65. Informing Reasons for Rejection

- 62.1 Notice of the rejection will be given promptly within seven (7) working 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

66. Award Criteria

- 66.1 The Procuring Entity shall award the Contract to the Tenderer whose Tender is responsive to all the requirements of the Tender Document and that has been determined to be the lowest evaluated Tender, provided further that the Tenderer is determined to be post-qualified in accordance with ITT Clause 62.
- 66.2 Tenderer will not be required, as a condition for award, to undertake responsibilities not stipulated in the Tender Documents, to change its price, or otherwise to modify its Tender.

67. Notification of Award

- 67.1 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 Notification of Award (NOA) to the successful Tenderer.
- 67.2 The NOA, attaching the contract as per the sample (Form PW3A-B) 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 amount of the Performance Security and its format;
	(d) the date and time within which the Performance Security shall be furnished; and
	(e) the date and time within which the Contract shall be signed.
	67.3 The NOA shall be accepted by the successful Tenderer within seven (7) working days from the date of its issuance.
	67.4 Until a formal contract is signed, the NOA will constitute a Contract, which shall become binding upon the furnishing of a Performance Security and the signing of the Contract by both parties.
68. Performance Security	68.1 Performance Security shall be provided by the successful Tenderer in BDT currency, of the amount as specified in the TDS .
	68.2 The Procuring Entity shall increase the amount of the Performance Security on the recommendation of TEC above the amounts as stated under ITT Sub Clause 59.7.
	68.3 The proceeds of the Performance Security shall be payable to the Procuring Entity unconditionally upon first written demand as compensation for Contractor's failure to complete its obligations under the Contract.
	68.4 In the event a Government owned enterprise as stated under ITT Sub Clause 5.10 is the successful Tenderer, Performance Security, as stated under ITT Sub Clause 65.1, shall not be required and, in lieu, there shall be Retention Money as specified in the TDS .
69. Form and Time Limit for Furnishing of Performance Security	69.1 Performance Security, as stated under ITT Clause 68, may be in the form of a Bank Draft, Pay Order or an irrevocable unconditional Bank Guarantee in the format (Form PW3A-10), without any alteration, issued by any scheduled Bank of Bangladesh acceptable to the Procuring Entity.
	69.2 Within fourteen (14) days from the date of acceptance of the NOA 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 68.1 or 68.2.
70. Validity of Performance Security	70.1 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.
71. Authenticity of	71.1 The Procuring Entity shall verify the authenticity of the

Performance Security		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.
72. Contract Signing	72.1	At the same time as the Procuring Entity issues the NOA, the Procuring Entity will send the draft Contract Agreement and all documents forming the Contract to the successful Tenderer.
	72.2	Within twenty-eight (28) days of the issuance of the NOA, the successful Tenderer and the Procuring Entity shall sign the contract. In the event the successful Tenderer is a JV, all partners of that JV must sign.
	72.3	Failure of the successful Tenderer to submit the Performance Security, as stated under ITT Sub Clause 68.1, or to sign the Contract, as stated under ITT Sub Clause 72.2, 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.
73. Publication of Notification of Award of Contract	73.1	The NOA for Contract shall be notified by the Procuring Entity to the Central Procurement Technical Unit within seven (7) days of its issuance for publication in their website, and that notice shall be kept posted for not less than a month.
74. Debriefing of Tenderers	74.1	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.
	74.2	In the case of debriefing, confidentiality of the evaluation process shall be maintained.
75. Adjudicator	75.1	The Procuring Entity proposes the person named in the TDS to be appointed as Adjudicator under the Contract, at an hourly fee and for those reimbursable expenses as specified in the TDS.
76. Right to Complain	76.1	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 Tender Data Sheet are provided in italics in parenthesis for the relevant ITT clauses

ITT Clause	Amendments of, and Supplements to, Clauses in the Instructions to Tenderers
A. General	
ITT 1.1	The Procuring Entity is Project Director (Dhaka Power System Expansion and Strengthening Project in DESCO Area) Dhaka Electric Supply Company Limited (DESCO). The Name of the Tender: Procurement of works and related services for Installation, Testing & Commissioning of 33kV and 11kV Under Ground Cable Line. Tender No: DPSESP/01/2025 Invitation Reference Number: 27.24.0000.078.014.001.25.590 Date: 05.09.2025 No. of Lots: 03 (Three) Lot-A: South Zone of DESCO Lot-B: North Zone of DESCO Lot-C: Central Zone of DESCO A tenderer is allowed to participate in any or all lots under this tender.
ITT3.1	The source of public funds: Own Fund of DESCO
ITT3.3	The name of the Development Partner: Not Applicable
ITT5.1	Tenderers from the following countries are not eligible: Countries Prohibited by Government of Bangladesh
ITT 5.13	Tenderers shall have the following up to date valid License: a) Valid Electrical ABC Contractor License (for each partner in case of JVCA) b) Valid Trade License
ITT6.1	Materials, Equipment and associated services from the following countries are not eligible: Countries Prohibited by Government of Bangladesh
B. Tender Document	
ITT8.2	The following are authorised agents/offices of the Procuring Entity for the purpose of issuing the Tender Document: Agent's/office Name: Project Director (Dhaka Power System Expansion and Strengthening Project in DESCO Area). Address: House # 4 (2nd floor), Road # 1/A, Nikunja – 2, Khilkhet, Dhaka-1229. Telephone No.: +88-02-8900100 e-mail address: dpsesp@desco.gov.bd.

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Procurement of works and related services for Installation, Testing & Commissioning of 33kV and 11kV Underground Cable Line.

(Handwritten signatures and stamps)

ITT9.1	For Clarification of Tender Document purposes only, the Procuring Entity's address is: Project Director (Dhaka Power System Expansion and Strengthening Project in DESCO Area). Address: House # 4 (2 nd floor), Road # 1/A, Nikunja - 2, Khilkhet, Dhaka-1229. Telephone: +88-02-8900100 e-mail address: dpsesp@desco.gov.bd . and contact the Procuring Entity within 02 (two) weeks after tender invitation
ITT10.1	Any Pre-Tender meeting shall not be held.
C. Qualification Criteria	
ITT 14.1(a)	The minimum number of years of general experience of the Tenderer in the electrical works as Prime Contractor or Subcontractor Shall be 05 (Five) years . <i>[Years counting backward from the date of publication of tender notice in the newspaper]</i>
ITT 14.1(b)	The minimum specific experience as a Prime Contractor or Subcontractor in completion of works of Installation, Testing and Commissioning of Electricity Transmission/Distribution Lines at least 02 (Two) contracts within the last 10 (Ten) years , in which minimum 01 (One) Contract must include Installation, Testing and Commissioning of at least 05 (Five) Circuit Kilometers Underground Power cable lines, but not below 11 kV level. Submission of satisfactory performance certificate of on-going contract of the required works & services (at least 01 (One) year completed) issued by the End-user, under DESCO'S Jurisdiction, will be considered as 01 (One) complete contract. <i>[Years counting backward from the date of publication of tender notice in the newspaper]</i>
ITT 15.1(a)	The tenderer shall have average annual turnover of the best 03 (three) years over the last 10 (Ten) years of value not less than shall be: ▪ For Lot-A: Tk 6,00,00,000.00 (Taka Six Crore) only; ▪ For Lot-B: Tk. 5,50,00,000.00 (Taka Five Crore -Fifty Lac) only; ▪ For Lot-C: Tk. 7,00,00,000.00 (Taka Six Crore) only;
ITT 15.1(b)	For participating in the lot (s) the minimum amount of liquid assets, i. e. working capital or credit line(s) from any schedule Bank or combination of these; net of other contractual commitments, shall be as follows: ▪ For Lot-A & B: Tk 1,50,00,000.00 (Taka One Crore-Fifty Lac) only; ▪ For Lot-C: Tk. 2,00,00,000.00 (Taka Two Crore) only; In support of Credit Facility, the tenderer shall submit Letter of Commitment of Bank's Undertaking for Line of Credit as per PW3A-7
ITT 15.1(d)	The tenderer shall have satisfactory completion of the works and related services as referred specific experience ITT Clause 14.1 (b) of value not less than as follows: ▪ For Lot-A: Tk 6,00,00,000.00 (Taka Six Crore) only; ▪ For Lot-B: Tk. 5,50,00,000.00 (Taka Five Crore -Fifty Lac) only; ▪ For Lot-C: Tk. 7,00,00,000.00 (Taka Six Crore) only; Only in maximum 02 (Two) contracts within last 10 (Ten) years. <i>[Years counting backward from the date of publication of tender notice in the newspaper]</i>

ITT 16.1	A Construction Project Engineer, Site Engineer and Foreman shall have the following qualifications and experience:			
	Nos.	Designation	Qualification	Experience
01	Project Engineer		B.Sc Engineer (Electrical)	Minimum 05 (Five) years of practical experience of Underground electrical line construction works in any electrical distribution system as an Engineer. The candidate shall require adequate knowledge on Auto-CAD Software.
			Or Diploma in Electrical Engineering. Shall possess Electrical Supervisory license of competency class A, B & C issued by the Electricity Licensing Board, GOB	Minimum 08 (Eight) years of practical experience of Underground electrical line construction work in any electrical distribution system as an Engineer. The candidate shall require adequate knowledge on Auto-CAD Software.
01	Site Engineer (01 for each Team)		Diploma in Electrical/Mechanical/Power Engineering	Minimum 03 (Three) years of practical experience of Underground electrical line construction work in any electrical distribution system as an Engineer.
01	Foreman (01 for each Team)		Trade Course Certificate from any Vocational Institute. Shall possess Electrical Work Permit of competency class A, B & C issued by the Electricity Licensing Board, GOB	Minimum 10 (ten) years of experience in any electrical distribution system of which at least 05 years practical experience in works of installation of U/G Cable Line.
01	Cable Joiner (01 for each Team)		Minimum Class VIII pass.	Minimum 08 (eight) years practical experience in works of installation of U/G Cable Line including cable jointing.
01	OPUC Cable Joiner (01 for each Team)		Minimum Class VIII pass. Shall possess OPUC cable Works.	Minimum 05 (Five) years practical experience in works of installation of OPUC Cable Line including OPUC cable jointing.
Experience and qualification of key personnel have been described in Section 8: Particular Specifications.				
ITT 17.1	Tenderers shall own or have proven access to hire or lease of the major construction equipment, in full working order, as follows:			
	Sl. No	Equipment Name and Characteristics		Minimum Number Required
01		Concrete mixture machine		As required
02		Jack rill, Road Cutting Machine		As required
03		Thrust boring machine		As required
04		Vibrator machine, water pump etc.		01 Nos./Team
05		Cable Roller – Straight Standard, Heavy Duty Triple Manhole Cable Roller, Cable Guide for Edges Roller, Corner or Angle Roller		As required

	06	Underground Cable Hipot Machine (above 60kV DC, minimum 20 mA)	As required
	07	Metal Sheath Fault Locating Machine	As required
	08	Earthing Resistance Testing Tools	01 Nos./Team
	09	Insulation Resistance Tester	01 Nos./Team
	10	Cable Pulling Winch Machine	As required
	11	Cable Cutter, Hydraulic compaction machine	01 Nos./Team
	12	Road cutter power saw shovel system	As required
	13	Mobile Pile driving rig	01 Nos./Team
	14	Hydraulic fitter	01 Nos./Team
	15	Tyre roller dump truck	As required
	16	OPUC Cable blowing Machine	As required
	17	Splicer Machine	As required
	18	OTDR Machine	As required
	19	Power Meter	As required
	20	Contractor's staff or work force should be used PPE (safety goggles, dust mask, ear plug, Helmet, Handgloves, Gum-boot, apron, light etc)	As required
	The Employer or its representative(s) will check the availability of tools and equipment at any time during the contract period, as follows: as mentioned in Section 8: Particular Specifications.		
ITT 18.1	The value of the non-judicial stamp for execution of the Joint Venture Agreement shall be Tk. 300 (take three hundred) only.		
ITT 18.2	Maximum number of partners in the JV shall be 03 (three) .		
	The minimum qualification requirements of Leading Partner, other Partner(s) and requirements by summation of a JV shall be as follows:		
	TDS Clauses References	Requirements by summation	Requirements for Leading Partner
	ITT-14.1(a)	Summation not applicable	Same as stated in TDS
	ITT-14.1(b)	100% (summation of different contracts)	At least one Contract
	ITT-15.1(a)	100%	40%
	ITT-15.1(b)	100%	40%
	ITT-15.1(d)	100%	40%
	ITT-16.1(a)	100%	Minimum requirement not applicable
	ITT-17.1	100%	Minimum requirement not applicable
ITT 19.4	The Nominated Subcontractor(s) named shall execute the following specific components of the proposed Works: None.		

D. Tender Preparation

ITT 24.2 (k)	A. The tenderer shall also submit the following additional documents in support of requirements following along with the Technical Proposal. Failure to meet any requirement mentioned below (1-4) shall cause the rejection of tender. 1. Documents in support of the requirements stated in ITT sub-clauses 14.1(a), 14.1(b) and 15.1(b). 2. Satisfactory performance certificates issued by the end users in support of the requirements stated in ITT sub-clause 14.1(b) and 15.1(d), containing name of the employer, date of completion and the value of the contract. The certificates shall be at the official letterhead pad of the end user clearly indicating the name and contact address, phone number, e-mail address and fax number (if any) of the end user. 3. Audited Financial Reports for the best 03 (three) years over the last 10 (ten) years as evidence of Average Annual Turnover as per Clause ITT 15.1 (a). 4. If the tenderer (individually or/and as a partner of JVCA) had completed the contract(s) of similar nature works/Services within last 07 (Seven) years in DESCO, the tenderer shall submit satisfactory performance certificate of ongoing/completed contract(s) issued by the respective division/concerned authority. B. The tenderer shall also be required to submit the following along with the Technical Proposal: i. Copy of Tender Document Purchase receipt ii. Valid Trade License iii. e-TIN Certificate iv. VAT Registration Certificate v. Updated Proof of Submission of return (PSR) vi. Documentary evidence of Key Personnel including educational & experience certificate (as required) and List of Tools & Equipment as per Section 8: Particular Specification vii. Person(s) signing the Tender shall provide a copy of his or her national Identification card.
ITT 24.3(d)	Tenderers shall submit with its Financial Offers the following additional documents: None
ITT 26.1	Alternatives will not be permitted.
ITT 26.2	Alternative technical solutions for any parts of works will not be permitted.
ITT 27.8	The prices quoted by the Tenderers shall be fixed for the duration of the Contract
ITT 31.1	The required Technical Proposal shall include the following additional information: None
ITT 32.1(e)	The required information regarding claims under litigation shall be current or during the last 05 (Five) years.

ITT 32.1 (i)	The required reports on the financial standing, such as profit and loss statements and audited balance sheet shall be for the past 05 (Five) years .
ITT 33.1	The Tender Validity period shall be 120 (one hundred twenty) days .
ITT 35.1	For participating in the lot(s), the amount of the Tender Security shall be: - For Lot-A & B: Tk 25,00,000.00 (Taka Twenty-Five Lac) only; - For Lot-C: Tk. 30,00,000.00 (Taka Thirty Lac) only; The Tender Security shall be in the form of Bank Guarantee/Bank Draft/Pay Order from any scheduled bank in Bangladesh in favour of Dhaka Electric Supply Company Limited (DESCO) .
ITT 40.1	In addition to the original of the tender, 02 (two) copies shall be submitted .
E. Tender Submission	
ITT 41.2(e)	The inner and outer envelopes of the Technical Offer shall bear the following additional identification marks: Not required
ITT 41.4(e)	The inner and outer envelopes of the Financial Offer shall bear the following additional identification marks: Not required
ITT 42.1	For Tender submission purposes only, the Procuring Entity's address: As mentioned in ITT 42.3
ITT 42.3	For Tender submission purposes only, the Procuring Entity's address: Attention: Project Director (Dhaka Power System Expansion and Strengthening Project in DESCO Area) . Address: House # 4 (2 nd floor), Road # 1/A, Nikunja - 2, Khilkhet, Dhaka-1229. Telephone No.: +88-02-8900100 e-mail address: dpsesp@desco.gov.bd. The deadline for submission of Tenders: As per the Tender Notice
ITT 42.4	The deadline for hand-delivering of the Tenders at the PRIMARY PLACE : as mentioned in ITT
F. Tender Opening and Evaluation	
ITT 48.1	The tender opening shall take place at: Office of the Project Director (Dhaka Power System Expansion and Strengthening Project in DESCO Area), DESCO Address: House # 4 (2 nd floor), Road # 1/A, Nikunja - 2, Khilkhet, Dhaka-1229. Time & Date: As per the Tender Notice
G. Contract Award	
ITT 66.1	Contracts shall be awarded in the following manner: - A tenderer (either individually or as a partner of JVCA) will be considered for award of contract for only 01 (one) lot under the tender. - If a tenderer (either individually or as a partner of JVCA) participates in 01 (one) lot under the tender and is evaluated as the lowest responsive tenderer in that lot, the contract shall be awarded to the tenderer at its evaluated tender price.

	(c) If a tenderer (either individually or as a partner of JVCA) is evaluated as lowest responsive in more than 01 (one) lot under the tender, contract shall be awarded to the tenderer for 01 (one) lot at its evaluated tender price that would result in the least total value of the tender and not necessarily the larger lot as the tenderer may wish. (d) A tenderer (either individually or as a partner of JVCA) considered for award of contract in 01 (one) lot under the tender shall be screened out from rest of the lots under the tender. In such situation, the next ranked responsive tenderer shall be considered for award of contract at its evaluated tender price. Same procedure as stated in ITT sub-sub-clause 66.1(c) shall also be followed for the least tender value, where applicable. (e) However, in case of screening out of all the responsive tenderers in a particular lot (say, Lot-X), the lowest responsive tenderer of that lot shall be awarded the contract for Lot-X and shall be screened out from rest of the lot(s) under the tender. After that, same procedure as stated above [ITT sub-sub-clauses 66.1(b) to 66.1(d)] shall be applicable for the remaining lot(s) under the tender. In no cases, a particular tenderer (either individually or as a partner of JVCA) shall be awarded contract for more than 01 (one) lot under the tender.
ITT 68.1	The amount of the Performance Security shall be 5% (five percent) of the Contract Price in favor of 'Dhaka Electric Supply Company Limited (DESCO)' .
ITT 68.4	The Retention Money shall be deducted @ 5% (five percent) from the successful Tenderer's payable invoices during Contract implementation, if awarded the Contract.
ITT 75.1	The Adjudicator proposed by the Procuring Entity: The President of the Institution of Engineers, Bangladesh (IEB) The hourly fees including reimbursable expenses (if any) shall be maximum Tk. 5,000 (taka five thousand) only, but the total shall not exceed 5% (five percent) of the Contract Price.

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 meaning hereby assigned to them. Boldface type is used to identify the defined terms:
- (a) **Act means** The Public Procurement Act, 2006 (Act 24 of 2006).
 - (b) **Adjudicator** is the expert appointed jointly by the Procuring Entity and the Contractor to resolve disputes in the first instance, as provided for in GCC Sub Clause 92.2.
 - (c) **Approving Authority** means the authority which, in accordance with the Delegation of Financial Powers, approves the award of contract.
 - (d) **Bill of Quantities (BOQ)** means the priced and completed Bill of Quantities forming part of the Contract defined in GCC Clause 59.
 - (e) **Compensation Events** are those defined in GCC Clause 67.
 - (f) **Competent Authority** means the authority that gives decision on specific issues as per delegation of administrative and/or financial powers.
 - (g) **Completion Certificate** means the Certificate issued by the Project Manager as evidence that the Contractor has executed the Works and physical services in all respects as per design, drawing, specifications and Conditions of Contract.
 - (h) **Completion Date** is the actual date of completion of the Works and physical services certified by the Project Manager, in accordance with GCC Clause 78.
 - (i) **Contract Agreement** means the Agreement entered into between the Procuring Entity and the Contractor, together with the Contract Documents referred to therein; including all attachments, appendices, and all documents incorporated by reference therein to execute, complete, and maintain the Works.
 - (j) **Contract Documents** means the documents listed in GCC Clause 6, including any amendments thereto.
 - (k) **Contractor** means the Person under contract with the Procuring Entity for the execution of Works under the Rules and the Act as stated in the PCC.
 - (l) **Contract Price** means the price payable to the Contractor as specified in the Contract Agreement, subject to such additions and adjustments thereto or deductions there from, for the execution, completion and maintenance of the Works in accordance with the provisions of the Contract.
 - (m) **Contractor's Tender** is the completed Tender Document including the priced BOQ and the Schedules submitted by the Contractor to the Procuring Entity.



- (n) **Cost** means all expenditures reasonably incurred or to be incurred by the Contractor, whether on or off the Site, including overhead, taxes, duties, fees and such other similar levies including corresponding incidental charges and premiums for banking and insurances, as applicable.
- (o) **Day** means calendar day unless otherwise specified as working days.
- (p) **Dayworks** means work carried out following the instructions of the Procuring Entity or the authorised Project Manager and is paid for on the basis of time spent by the Contractor's workers and equipment at the rates specified in the Schedules, in addition to payments for associated Materials and Plant.
- (q) **Defect** is any part of the Works not completed in accordance with the Contract.
- (r) **Defects Correction Certificate** is the certificate issued by the Project Manager upon correction of defects by the Contractor.
- (s) **Drawings** include calculations and other information provided in Section 9 or as approved by the Project Manager for the execution and completion of the Contract.
- (t) **Equipment** is the Contractor's apparatus, machinery, vehicles and other things required for the execution and completion of the Works and remedying any defects excluding Temporary Works and the Procuring Entity's Equipment (if any), Plant, Materials and any other things to form or forming part of the Permanent Works.
- (u) **Force Majeure** means an event or situation beyond the control of the Contractor that is not foreseeable, is unavoidable, and its origins not due to negligence or lack of care on the part of the Contractor; such events may include, but not be limited to, acts of the Government in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes or more as included in GCC Clause 83;
- (v) **GCC** means the General Conditions of Contract.
- (w) **Government** means the Government of the People's Republic of Bangladesh.
- (x) **Goods** mean the Contractor's Equipment, Materials, Plant and Temporary Works, or any of them as appropriate.
- (y) **"Head of the Procuring Entity"** means the Secretary of a Ministry or a Division, the Head of a Government Department or Directorate; or the Chief Executive, or as applicable, Divisional Commissioner, Deputy Commissioner, Zilla Judge; or by whatever designation called, of a local Government agency, an autonomous or semi-autonomous body or a corporation, or a corporate body established under the Companies Act;
- (z) **Intended Completion Date** is the date calculated from the Commencement Date as specified in the PCC, on which it is intended that the Contractor shall complete the Works and physical services as specified in the Contract and may be revised only by the Project Manager by issuing an extension of time or an acceleration order.

- (aa) **Materials** means things of all kinds other than Plant intended to form or forming part of the Permanent Works, including the supply-only materials, if any, to be supplied by the Contractor under the Contract.
- (bb) **Month** means calendar month.
- (cc) **Original Contract Price** is the Contract Price stated in the Procuring Entity's Notification of Award (Form PW3A-7) and further clearly determined in the PCC.
- (dd) **Permanent works** means the permanent works to be executed by the Contractor under the Contract.
- (ee) **PCC** means the Particular Conditions of Contract.
- (ff) **Plant** means the apparatus, machinery and other equipment intended to form or forming part of the Permanent Works, including vehicles purchased for the Procuring Entity and relating to the construction of the Works and physical services.
- (gg) **Procuring Entity** means a Procuring Entity having administrative and financial powers to undertake procurement of Works and physical services using public funds and is as named in the PCC who employs the Contractor to carry out the Works.
- (hh) **Project Manager** is the person named in the PCC or any other competent person appointed by the Procuring Entity and notified to the Contractor who is responsible for supervising the execution and completion of the Works and physical services and administering the Contract.
- (ii) **Provisional Sums means** amounts of money specified by the Procuring Entity in the BOQ which shall be used, at its discretion for meeting other essential expenditures under the Contract pursuant to GCC Sub Clause 75.
- (jj) **Retention Money** means the accumulated retention moneys which the Procuring Entity retains under GCC Clause 70.
- (kk) **Schedules** means the document(s) entitled schedules, completed by the Contractor and submitted with the Tender Submission Letter, as included in the Contract. Such document may include the data, lists and schedules of rates and/or prices.
- (ll) **Site** means the places where the Permanent Works are to be executed including storage and working areas and to which Plant and Materials are to be delivered, and any other places as may be specified in the PCC as forming part of the Site.
- (mm) **Site Investigation Reports** are those that were included in the Tender Document and are factual and interpretative reports about the surface and subsurface conditions at the Site.
- (nn) **Specification** means the Specification of the Works included in the Contract and any modifications or additions to the specifications made or approved by the Project Manager in accordance with the Contract.
- (oo) **Start Date** is the date defined in the PCC and it is the last date when the Contractor shall commence execution of the Works under the Contract.

- (pp) **Subcontractor** means a person or corporate body, who has a contract with the Contractor to carry out a part of the work in the Contract, which includes work on the Site.
- (qq) **Temporary Works** means all temporary works of every kind other than Contractor's Equipment required on the Site for the execution and completion of the Permanent Works and remedying of any defects.
- (rr) **Variation** means any change to the Works directly procured from the original Contractor to cover increases or decreases in quantities, including the introduction of new work items (non-Tendered items) that are either due to change of plans, design or alignment to suit actual field conditions, within the general scope and physical boundaries of the contract.
- (ss) **Works** means all works associated with the construction, reconstruction, site preparation, demolition, repair, maintenance or renovation of railways, roads, highways, or a building, an infrastructure or structure or an installation or any construction work relating to excavation, installation of equipment and materials, decoration, as well as physical services ancillary to works as detailed in the PCC, if the value of those services does not exceed that of the Works themselves.

Writing means communication written by hand or machine duly signed and includes properly authenticated messages by facsimile or electronic mail.

2. Interpretation

- 2.1 In interpreting the GCC, singular also means plural, male also means female or neuter, and the other way around. Headings in the GCC shall not be deemed part thereof or be taken into consideration in the interpretation or construal of the Contract. Words have their normal meaning under the language of the Contract unless specifically defined.

2.2 Entire Agreement

The Contract constitutes the entire agreement between the Procuring Entity and the Contractor and supersedes all communications, negotiations and agreements (whether written or verbal) of parties with respect thereto made prior to the date of Contract Agreement; except those stated under GCC Sub Clause 6.1(j).

2.3 Non waiver

- (a) Subject to GCC Sub Clause 2.3(b), no relaxation, forbearance, delay, or indulgence by either party in enforcing any of the terms and conditions of the Contract or the granting of time by either party to the other shall prejudice, affect, or restrict the rights of that party under the Contract, neither shall any waiver by either party of any breach of Contract operate as waiver of any subsequent or continuing breach of Contract.
- (b) Any waiver of a party's rights, powers, or remedies under the Contract must be in writing, dated, and signed by an authorized representative of the party granting such waiver, and must specify the right and the extent to which it is being waived.

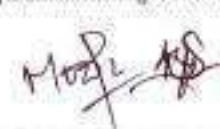
- 2.4 Severability
- If any provision or condition of the Contract is prohibited or rendered invalid or unenforceable, such prohibition, invalidity or unenforceability shall not affect the validity or enforceability of any other provisions and conditions of the Contract.
- 2.5 Sectional completion
- If sectional completion is specified in the PCC, references in the GCC to the Works, the Completion Date, and the Intended Completion Date apply to any section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).
- 3. Communications & Notices**
- 3.1 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 addresses specified in the PCC.
- 3.2 A notice shall be effective when delivered or on the notice's effective date, whichever is later.
- 3.3 A Party may change its address for notice hereunder by giving the other Party notice of such change to the address.
- 4. Governing Law**
- 4.1 The Contract shall be governed by and interpreted in accordance with the laws of the People's Republic of Bangladesh.
- 5. Governing Language**
- 5.1 The Contract shall be written in English. All correspondences and documents relating to the Contract may be written in English or *Bangla*. Supporting documents and printed literature that are part of the Contract may be in another language, provided they are accompanied by an accurate translation of the relevant passages in English, in which case, for purposes of interpretation of the Contract, such translation shall govern.
- 5.2 The Contractor shall bear all costs of translation to the governing language and all risks of the accuracy of such translation.
- 6. Documents Forming the Contract and Priority of Documents**
- 6.1 The following documents forming the Contract shall be interpreted in the following order of priority:
- (a) the signed Contract Agreement (**Form PW3A-9**);
 - (b) the Notification of Award (**PW3A-8**);
 - (c) the completed Tender and the Appendix to the Tender;
 - (d) the Particular Conditions of Contract;
 - (e) the General Conditions of Contract;
 - (f) the Technical Specifications;
 - (g) the General Specifications;
 - (h) the Drawings;
 - (i) the priced BOQ and the Schedules; and
 - (j) any other document listed in the PCC forming part of the Contract.

7. Scope of Works
- 7.1 The Works to be executed, completed and maintained shall be as specified in the BOQ, the General and Particular Specifications and Drawings.
- 7.2 Unless otherwise stipulated in the Contract, the Works shall include all such items not specifically mentioned in the Contract but that can be reasonably inferred from the Contract as being required for completion of the Works as if such items were expressly mentioned in the Contract.
8. Assignment
- 8.1 Neither the Contractor nor the Procuring Entity shall assign, in whole or in part, its obligations under the Contract.
9. Eligibility
- 9.1 The Contractor and its Subcontractor(s) shall have the nationality of a country other than that specified in the PCC.
- 9.2 All materials, equipment, plant, and supplies used by the Contractor in both permanent and temporary works and services supplied under the Contract shall have their origin in the countries except any specified in the PCC.
10. Gratuities / Agency fees
- 10.1 No fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the Tender or in the Contract, have been given or received in connection with the procurement process or in the Contract execution.
11. Confidential Details
- 11.1 The Contractor's and the Procuring Entity's personnel shall disclose all such confidential and other information as may be reasonably required in order to verify the Contractor's compliance with the Contract and allow its proper implementation.
- 11.2 Each of them shall treat the details of the Contract as private and confidential, except to the extent necessary to carry out their respective obligations under the Contract or to comply with applicable Laws. Each of them shall not publish or disclose any particulars of the Works prepared by the other Party without the previous agreement of the other Party. However, the Contractor shall be permitted to disclose any publicly available information, or information otherwise required to establish his qualifications to compete for other projects.
12. Joint Venture (JV)
- 12.1 If the Contractor is a JV,
- (a) each partner of the JV shall be jointly and severally liable for all liabilities and ethical or legal obligations to the Procuring Entity for performance of the Contract;
- (b) the JV partners shall nominate the **Leading Partner as REPRESENTATIVE** being entrusted with the Contract administration and management at Site who shall have the authority to conduct all business including the receipt of payments for and on behalf of all partners of the JV;
- (c) If there is a dispute that results in legal action being taken in court then action will be taken against all partners of the JV, if they are available and, if only one partner is available, then that partner alone shall answer on behalf of all partners and, if the complaint lodged is proven, the penalty shall be applicable on that partner alone as whatever penalty all the partners.

would have received; provided that if the other partners of the JV subsequently become available before the legal action has been completed, the Procuring Entity shall have the right to take action against those other partners of that JV as well.

- (d) the composition or constitution and legal status of the JV shall not be altered without the prior approval of the Procuring Entity;
- (e) alteration of partners, **except the Leading partner**, shall only be allowed if any of them is found to be incompetent or has any serious difficulties which may impact the overall implementation of the Works, whereby the incoming partner shall require to possess qualifications higher than that of the outgoing partner;
- (f) "if any of the partners of JV has been debarred from participating in any procurement activity due to corrupt, fraudulent, collusive or coercive practices and while in case, the Leading partner is found incompetent or has been debarred due to the same reasons stated herein the Contract shall be terminated pursuant to GCC Sub Clause 87.1(h)."

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| 13. Possession of the Site | 13.1 | The Procuring Entity shall give possession of the Site or part(s) of the Site, to the Contractor on the date(s) stated in the PCC. If possession of a part of the Site is not given by the date stated in the PCC, the Procuring Entity will be deemed to have delayed the start of the relevant activities, and this will be a Compensation Event as stated under GCC Sub Clause 67.1(a). |
| 14. Access to the Site | 14.1 | The Contractor shall allow the Project Manager and any person authorised by the Project Manager access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out. |
| 15. Procuring Entity's Responsibilities | 15.1 | The Procuring Entity shall pay the Contractor, in consideration of the satisfactory progress of execution and completion of the Works and physical 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 Agreement. |
| | 15.2 | The Procuring Entity shall make its best effort to guide and assist the Contractor in obtaining, if required, any permit, licence, and approvals from local public authorities for the purpose of execution of the Works and physical services under the Contract. |
| 16. Approval of the Contractor's Temporary Works | 16.1 | The Contractor shall submit Specifications and Drawings showing the proposed Temporary Works to the Project Manager, who is to approve them, if they comply with the Specifications and Drawings. |
| | 16.2 | The Contractor shall be responsible for design of Temporary Works. |
| | 16.3 | The Project Manager's approval shall not alter the Contractor's responsibility for design of the Temporary Works. |
| | 16.4 | The Contractor shall obtain approval of third parties to the design of the Temporary Works, where required. |
| 17. Contractor's | 17.1 | The Contractor shall execute and complete the Works and remedy |

Responsibilities		any defects therein in conformity in all respects with the provisions of the Contract Agreement.
18. Taxes and Duties	18.1	The Contractor shall be entirely responsible for all applicable taxes, custom duties, VAT, and other levies imposed or incurred inside and outside Bangladesh.
19. Contractor's Personnel	19.1	The Contractor shall employ the key personnel named in the Schedule of Key Personnel, as referred to in the PCC, to carry out the functions stated in the Schedule or other personnel approved by the Project Manager.
	19.2	The Project Manager will approve any proposed replacement of key personnel only if their relevant qualifications and abilities are equal to or higher than those of the personnel named in the Schedule.
	19.3	If the Project Manager asks the Contractor to remove a particular person who is a member of the Contractor's staff or work force from the Site, he or she shall state the reasons, and the Contractor shall ensure that the person leaves the Site within three (3) days and has no further connection with the work in the Contract.
20. Subcontracting	20.1	Subcontracting the whole of the Works by the Contractor shall not be permissible. The Contractor shall be responsible for the acts or defaults of any Subcontractor, his or her agents or employees, as if they were the acts or defaults of the Contractor.
	20.2	The prior consent, in writing, of the Project Manager shall however be obtained for other proposed Subcontractor(s).
	20.3	Nominated Subcontractor named in the Contract shall be entitled to execute the specific components of the Works stated in the PCC.
	20.4	Subcontractors shall comply with the provisions of GCC Clause 38.
21. Other Contractors	21.1	The Contractor shall cooperate and share the Site with other Contractors, public authorities, utilities, the Project Manager and the Procuring Entity between the dates given in the Schedule of other Contractors. The Contractor shall also provide facilities and services for them as described in the Schedule. The Procuring Entity may modify the Schedule of other Contractors, and shall notify the Contractor of any such modification.
22. Project Manager's Decisions	22.1	Except where otherwise specifically stated in the PCC, the Project Manager will decide Contractual matters between the Procuring Entity and the Contractor in its role as representative of the Procuring Entity.
23. Delegation	23.1	The Project Manager may delegate any of his duties and responsibilities to his representative except to the Adjudicator, after notifying the Contractor, and may cancel any delegation, without retroactivity, after notifying the Contractor.
	23.2	Any communications to the Contractor in accordance with such delegation shall have the same effect as if it was given by the Project Manager.
24. Instructions	24.1	The Contractor shall carry out all instructions of the Project Manager that comply with the applicable law.

25. Queries About the Contract Conditions	25.1	The Project Manager, on behalf of the Procuring Entity, will clarify queries on the Conditions of Contract.
26. Safety, Security and Protection of the Environment	26.1	The Contractor shall throughout the execution and completion of the Works and the remedying of any defects therein: (a) take all reasonable steps to safeguard the health and safety of all workers working on the Site and other persons entitled to be on it, and to keep the Site in an orderly state; (b) provide and maintain at the Contractor's own cost all lights, guards, fencing, warning signs and watching for the protection of the Works or for the safety on-site; and (c) take all reasonable steps to protect the environment on and off the Site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of the Contractor's methods of operation.
27. Working Hours	27.1	The Contractor shall not perform any work on the Site on the weekly holidays, or during the night or outside the normal working hours, or on any religious or public holiday, without the prior written approval of the Project Manager.
28. Welfare of Labourers	28.1	The Contractor shall comply with all the relevant labour laws applicable to the Contractor's personnel relating to their employment, health, safety, welfare, immigration and shall allow them all their legal rights.
	28.2	The Contractor, in particular, shall provide proper accommodation to his or her labourers and arrange proper water supply, conservancy and sanitation arrangements at the site for all necessary hygienic requirements and for the prevention of epidemics in accordance with relevant regulations, rules and orders of the government.
	28.3	The Contractor, further in particular, shall pay reasonable wages to his or her labourers, and pay them in time. In the event of delay in payment the Procuring Entity may effect payments to the labourers and recover the cost from the Contractor.
29. Child Labour	29.1	The Contractor shall not employ any child to perform any work that is economically exploitative, or is likely to be hazardous to, or to interfere with, the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development in compliance with the applicable labor laws and other relevant treaties ratified by the government.
30. Discoveries	30.1	Anything of historical or other interest or of significant value unexpectedly discovered on the Site shall be the property of the Procuring Entity. The Contractor shall notify the Project Manager of such discoveries and carry out the Project Manager's instructions for dealing with them.
31. Procuring Entity's and Contractor's Risks	31.1	The Procuring Entity carries the risks that the Contract states are Procuring Entity's risks and the Contractor carries the risks that the Contract states are Contractor's risks.

- 32. Procuring Entity's Risks**
- 32.1 From the Start Date until the Defects Correction Certificate has been issued, the following are Procuring Entity's risks:
- (a) the risk of personal injury, death, or loss of or damage to property (excluding the Works, Plant, Materials, and Equipment), which are due to
 - i. use or occupation of the Site by the Works or for the purpose of the Works, which is the unavoidable result of the Works or
 - ii. negligence, breach of statutory duty, or interference with any legal right by the Procuring Entity or by any person employed by or contracted to him except the Contractor.
 - (b) the risk of damage to the Works, Plant, Materials, and Equipment to the extent that it is due to a fault of the Procuring Entity or in the Procuring Entity's design, or due to war or radioactive contamination directly affecting the country where the Works are to be executed.
- 32.2 From the Completion Date until the Defects Correction Certificate has been issued, the risk of loss of or damage to the Works, Plant, and Materials is Procuring Entity's risk, except loss or damage due to:
- (a) a Defect which existed on the Completion Date;
 - (b) an event occurring before the Completion Date, which was not itself Procuring Entity's risk; or
 - (c) the activities of the Contractor on the Site after the Completion Date.
- 33. Contractor's Risks**
- 33.1 From the Start Date until the Defects Correction Certificate has been issued the risks of personal injury, death, and loss of or damage to property including without limitation, the Works, Plant, Materials, and Equipment, which are not Procuring Entity's risks are Contractor's risks.
- 34. Copyright**
- 34.1 The copyright in all drawings, documents, and other materials containing data and information furnished to the Procuring Entity by the Contractor herein shall remain vested in the Contractor, or, if they are furnished to the Procuring Entity directly or through the Contractor by any third party, including Suppliers of materials, the copyright in such materials shall remain vested in such third party.
- 34.2 The Contractor shall not, except for the purposes of performing the obligations under the Contract, without the written permission of the Procuring Entity disclose or make use of any specification, plan, design and drawing, pattern, sample or information furnished by or on behalf of the Procuring Entity.
- 35. Limitation of Liability**
- 35.1 Except in cases of criminal negligence or wilful misconduct:
- (a) the Contractor shall not be liable to the Procuring Entity, whether in Contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of

production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Contractor to pay liquidated damages to the Procuring Entity; and

- (b) the aggregate liability of the Contractor to the Procuring Entity, whether under the Contract, in tort or otherwise, shall not exceed the total Contract Price, provided that this limitation shall not apply to the cost of repairing or replacing defective Works, or to any obligation of the Contractor to indemnify the Procuring Entity with respect to patent infringement.

36. Insurance

36.1 The Contractor shall provide, in the joint names of the Procuring Entity and the Contractor, insurance cover from the Start Date to the end of the Defects Liability Period, in the amounts specified in the PCC for the following events which are due to the Contractor's risks:

- (a) loss of or damage to the Works, Plant, and Materials;
- (b) loss of or damage to Equipment;
- (c) loss of or damage to property (except the Works, Plant, Materials, and Equipment) in connection with the Contract; and
- (d) personal injury or death.

36.2 The Contractor shall deliver policies and certificates of insurance to the Project Manager, for the Project Manager's approval, before the Start Date. All such insurances shall provide for compensation to be payable in the types and proportions required to rectify the loss or damage incurred.

36.3 If the Contractor does not provide any of the policies and certificates required, the Procuring Entity may effect the insurance which the Contractor should have provided and recover the premiums the Procuring Entity has paid from payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due.

36.4 Alterations to the terms of insurance shall not be made without the approval of the Project Manager.

36.5 Both parties shall comply with conditions of the insurance policies.

37. Management and Progress Meetings

37.1 Either the Project Manager or the Contractor may require the other to attend a management and progress meeting. The business of such meeting shall be to review the progress and plans for remaining work and to deal with matters raised in accordance with the early warning procedure.

37.2 The Project Manager shall record the business of the meetings and provide copies of the record to those attending the meeting and to the Procuring Entity. The responsibility of the parties for actions to be taken shall be decided by the Project Manager either at the management and progress meeting or after the meeting.

and stated in writing to all concerned.

38. Corrupt, Fraudulent, Collusive, Coercive (and Obstructive in case of Development Partner) Practices

- 38.1 The Government and the Development Partner requires that the Procuring Entity as well as the Contractor (including sub-contractors, agents, personnel, consultants and service providers), shall observe the highest standard of ethics during the implementation of procurement proceedings and the execution of contracts under public funds.
- 38.2 The Contractor (including sub-contractors, agents, personnel, consultants and service providers) shall permit the Government and/or the Development Partner to inspect the Contractor's accounts and records and other documents relating to the submission of Tender and contract performance, and to have them audited by auditors appointed by the Government and/or the Development Partner, if so required.
- 38.3 For the purposes of GCC Sub Clause 38.4, the terms set forth below as follows:
- (a) "corrupt practice" means offering, giving or promising to give, receiving, or soliciting either directly or indirectly, to any officer or employee of a Procuring Entity or other public or private authority or individual, a gratuity in any form; employment or any other thing or service of value as an inducement with respect to an act or decision or method followed by a Procuring Entity in connection with a Procurement proceeding or Contract execution;
 - (b) "fraudulent practice" means the misrepresentation or omission of facts in order to influence a decision to be taken in a Procurement proceeding or Contract execution;
 - (c) "collusive practice" means a scheme or arrangement between two (2) or more Persons, with or without the knowledge of the Procuring Entity, that is designed to arbitrarily reduce the number of Tenders submitted or fix Tender prices at artificial, non-competitive levels, thereby denying a Procuring Entity the benefits of competitive price arising from genuine and open competition;
 - (d) "coercive practice" means harming or threatening to harm, directly or indirectly, Persons or their property to influence a decision to be taken in the Procurement proceeding or the execution of the Contract, and this will include creating obstructions in the normal submission process used for Tenders; or

- (e) "Obstructive practice" (applicable in case of Development Partner) means deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede an investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and /or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation.

38.4 Should any corrupt, fraudulent, collusive, coercive practice (or obstructive practice in case of Development Partner) of any kind, in competing for or in executing the Contract, is determined by the Procuring Entity, then the Procuring Entity may, upon giving 28 days' notice to the Contractor, terminate the Contractor's employment under the Contract and the provisions of Clause 87 shall apply as if such expulsion had been made under sub-clause 87.1 (Termination for Default).

38.5 If corrupt, fraudulent, collusive or coercive (or obstructive in case of Development Partners) practices of any kind determined by the Procuring Entity or the Development Partner against the Contractor alleged to have carried out such practices, the Procuring Entity and/or the Development Partner shall:

- (a) exclude the Contractor from further participation in the particular Procurement proceeding; or
- (b) declare, at its discretion, the Contractor to be ineligible to participate in further Procurement proceedings, either indefinitely or for a specific period of time; or
- (c) PE can debar the Contractor for a period of 1 (one) to 2 (two) years for the procurement of all procuring entities due to fundamental breach of contract.

38.6 The Contractor shall be aware of the provisions on corruption, fraudulence, collusion and coercion in Section 64 of the Public Procurement Act, 2006 and Rule 127 of the Public Procurement Rules, 2008 and in case of Development Partner financed contract, the Procurement Guidelines of the Development Partner.

B. Time Control

39. Commencement of Works 39.1

Except otherwise specified in the PCC, the Commencement Date shall be the date at which the following precedent conditions have all been fulfilled and the Project Manager's instruction recording the agreement of both Parties on such fulfilment and instructing to commence the Works is received by the Contractor:

- (a) signing of the Contract Agreement by both parties upon approval of the by relevant authorities;
- (b) possession of the Site given to the Contractor as required for the commencement of the Works; and
- (c) receipt by the Contractor of the Advance Payment under GCC Clause 73 provided that the corresponding Bank Guarantee

			has been delivered by the Contractor, if any.
	39.2		The Contractor shall commence the execution of the Works as soon as is reasonably practicable by the Start Date as specified in the GCC Sub Clause 1.1(oo) after the Commencement Date, and shall then proceed with the Works with due expedition and without delay.
40. Completion of Works	40.1		The Contractor shall carry out the Works in accordance with the Programme of Works submitted by the Contractor and as updated with the approval of the Project Manager as stated under GCC Clause 41 to complete them in all respects by the Intended Completion Date, as specified in the PCC .
41. Programme of Works	41.1		Within the time stated in the PCC , the Contractor shall submit to the Project Manager for approval a Programme of Works showing the general methods, arrangements, order, and timing for all the activities in the Works. The programme may be in the form of an Implementation Schedule prepared in any software or other form acceptable to the Project Manager.
	41.2		The Contractor shall submit to the Project Manager for approval of an updated Programme at intervals no longer than the period stated in the PCC . An update of the Programme shall be a Programme showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work, including any changes to the sequence of the activities.
	41.3		If the Contractor does not submit an updated Programme of Works at the intervals as stated under GCC Sub Clause 41.2, the Project Manager may withhold an amount as stated in the PCC from the next payment certificate and continue to withhold this amount until the next due payment after the date on which the overdue Programme of Works has been submitted.
	41.4		The Project Manager's approval of the Programme of Works shall not alter the Contractor's obligations. The Contractor may revise the Programme and submit it to the Project Manager again at any time for approval. A revised Programme shall show the effect of Variations and Compensation Events.
42. Pro Rata Progress	42.1		The Contractor shall maintain Pro Rata progress of the Works. Progress to be achieved shall be pursuant to GCC Clause 41 and shall be determined in terms of the value of the works done.
43. Early Warning	43.1		If at any time during performance of the Contract, the Contractor or its Subcontractors should encounter events, circumstances, conditions that may adversely affect the quality of the work, increase the original Contract Price or delay the execution of the Works, the Contractor shall promptly notify the Project Manager in writing of the delay, its likely duration, and its cause. As soon as practicable after receipt of the Contractor's notice, the Project Manager shall evaluate the situation, and the Contractor shall cooperate with the Project Manager in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced.
	43.2		The Project Manager may require the Contractor to provide an

		estimate of the expected effect of the future event or circumstance on the original Contract Price and Completion Date. The Contractor shall provide the estimate and the Project Manager shall further proceed as soon as reasonably possible.
44. Extension of Intended Completion Date	44.1	The Contractor shall be entitled to an extension of the Intended Completion Date, if and to the extent that completion of the Works or any part thereof is or will be delayed by Compensation Events or a Variation or Extra Work Order.
	44.2	If the Contractor considers itself to be entitled to an extension of the execution period as stated under GCC Sub Clause 44.1, the Contractor shall give notice, not later than twenty-eight (28) days after the Contractor became aware or should have become aware of the event or circumstance, to the Project Manager.
	44.3	The Project Manager shall decide whether and by how much to extend the Intended Completion Date within twenty-one (21) days of the Contractor asking the Project Manager for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the extension of Intended Completion Date.
	44.4	The Project Manager may extend the Intended Completion Date by twenty (20) percent of the original Contract time as stated under GCC Sub Clause 44.1, if a Compensation Event occurs or Variation Order or extra work Order issued, which does not make it possible to complete the execution of works without incurring additional cost.
	44.5	In the case an extension of the Intended Completion Date required under GCC Sub Clause 44.3 is or will be more than twenty (20) percent of the original Contract time, approval of the Head of the Procuring Entity or an officer authorized by him or her for the same shall be required to be obtained.
	44.6	Except in case of Force Majeure, as provided under GCC Clause 83, a delay by the Contractor in the execution Works shall render the Contractor liable to the imposition of Liquidated Damages pursuant to GCC Clause 71, unless an extension of the Intended Completion Date is agreed upon, pursuant to GCC Clause 44.3.
45. Delays Caused by Authorities	45.1	If the following conditions apply, namely: (a) the Contractor has diligently followed the procedures laid down by the relevant legally constituted public authorities, (b) these public authorities delay or disrupt the Contractor's work, and (c) the delay or disruption was unforeseeable; then this delay or disruption will be considered as a cause of delay under GCC Sub Clause 44.1.
	45.2	The Project Manager shall notify the Contractor accordingly keeping the Procuring Entity posted.
46. Acceleration	46.1	When the Procuring Entity wants the Contractor to finish the

		Works before the Intended Completion Date, the Project Manager will obtain priced proposals for achieving the necessary acceleration from the Contractor. If the Procuring Entity accepts these proposals, the Intended Completion Date will be advanced accordingly and confirmed by both the Procuring Entity and the Contractor.
	46.2	If the Procuring Entity accepts the Contractor's priced proposals for acceleration, they will be incorporated in the Contract Price and treated as a Variation under GCC Clause 61.
47. Delays Ordered by the Project Manager	47.1	The Project Manager may instruct the Contractor to delay the start or progress of any activity within the Works.
48. Suspension of Work	48.1	The Project Manager may at any time instruct the Contractor to suspend progress of part or all of the Works. During such suspension, the Contractor shall protect, store and secure such part or the Works against any deterioration, loss or damage.
49. Consequences of Suspension	49.1	If the Contractor suffers delay and/or incurs Cost from complying with the Project Manager's instructions under GCC Clause 48 and/or from resuming the work, the Contractor shall give notice to the Project Manager and shall be entitled subject to GCC Clause 91 to: (a) an extension of time for any such delay, if Completion is or will be delayed and (b) payment of any such cost, which shall be included in the Contract Price.
	49.2	After receiving this notice, the Project Manager shall proceed to agree or determine these matters.
	49.3	The Contractor shall not be entitled to any extension of time for, or to any payment of the cost incurred in, making good the consequences of the Contractor's faulty design, workmanship or materials, or of the Contractor's failure to protect, store or secure in accordance with GCC Clause 48.

C. Quality Control

50. Execution of Works	50.1	The Contractor shall construct, install and carry out the Works and physical services in accordance with the Specifications and Drawings as scheduled in GCC Clause 6.
51. Examination of Works before covering up	51.1	All works under the Contract shall at all times be open to examination, inspection, measurements, testing and supervision of the Project Manager, and the Contractor shall ensure presence of its representatives at such actions provided proper advance notice is given by the Project Manager.
	51.2	No part of the Works shall be covered up or put out of sight without the approval of the Project Manager. The Contractor shall give notice in writing to the Project Manager whenever any such part of the Works is ready for examination and, the Project Manager shall attend to such examination without unreasonable delay.

52. Identifying Defects	52.1	The Project Manager shall check the works executed by the Contractor and notify the Contractor of any Defects found. Such checking shall not relieve the Contractor from his or her obligations. The Project Manager may also instruct the Contractor to search for a Defect and to uncover and test any work that the Project Manager considers may have a Defect.
53. Testing	53.1	If the Project Manager instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no Defect, the test shall be a Compensation Event pursuant to GCC Sub Clause 67.
54. Rejection of Works	54.1	If, as a result of an examination, inspection, measurement or testing, of Works it is found to be defective or otherwise not in accordance with the Contract, the Project Manager may reject the Works by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure that the rejected Works subsequently complies with the Contract.
55. Remedial Work	55.1	Notwithstanding any test or certification, the Project Manager may instruct the Contractor to: (a) remove from the Site and replace any Plant or Materials which is not in accordance with the Contract, (b) remove and re-execute any other work which is not in accordance with the Contract, and (c) execute any work which is urgently required for the safety of the Works, whether because of an accident, unforeseeable event or otherwise.
	55.2	The Contractor shall comply with the instruction issued under GCC Sub Clause 55.1 within a reasonable time, which shall be specified in the instruction, or immediately if urgency is specified under GCC Sub Clause 55.1(c).
	55.3	If the Contractor fails to comply with the instruction issued under GCC Sub Clause 55.2, the Procuring Entity shall be entitled to employ and pay other persons to carry out the work. Except to the extent that the Contractor would have been entitled to payment for the work, the Contractor shall be liable to pay all such costs arising from this failure.
56. Correction of Defects	56.1	The Project Manager shall give notice to the Contractor, with a copy to the Procuring Entity and others concerned, of any Defects before the end of the Defects Liability Period, which begins at Completion Date, and is defined in the PCC. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.
	56.2	Every time notice of a Defect is given, the Contractor shall correct the notified Defect within the length of time specified by the Project Manager's notice.
57. Uncorrected	57.1	If the Contractor has not corrected a Defect within the time

Defects

specified in the Project Manager's notice, the Project Manager shall assess the cost of having the Defect corrected by it, and the Contractor shall remain liable to pay the expenditures incurred on account of correction of such Defect.

D. Cost Control

- 58. Contract Price** 58.1 The Contract Price shall be as specified in the Contract Agreement subject to any additions and adjustments thereto, or deductions there from, as may be made pursuant to Contract.
- 59. Bill of Quantities** 59.1 The Bill of Quantities (BOQ) shall contain priced items for the construction, installation, testing, and commissioning work to be done by the Contractor.
- 59.2 The BOQ is used to calculate the Contract Price. The Contractor is paid for the quantity of the work done at the rate in the BOQ for each item.
- 59.3 Items of works quantified in the BOQ for which no rates have been quoted shall be deemed covered by the amounts at rates of other items in the Contract and, shall under no circumstances be paid for, by the Procuring Entity.
- 60. Changes in the Quantities and Unit Rate** 60.1 If the final quantity of the work done for any particular item in the BOQ increases by more than twenty-five (25) percent and, such increase in quantity of that particular item alone concurrently causes the original Contract Price to exceed by more than one (1) percent, the Project Manager shall adjust the unit rate of the item to allow for the change.
- 60.2 If requested by the Project Manager, the Contractor shall provide the Project Manager with a detailed cost breakdown of any rate in the BOQ.
- 61. Issue Variation or Extra Work Order** 61.1 The Project Manager may issue a **Variation Order** to the Contractor to cover increase or decrease in quantities, including the introduction of new work items (non-Tendered Items) that are either due to change of plans, design or alignment to suit actual field conditions, within the general scope and physical boundaries of the contract.
- 61.2 The Project Manager may issue an **Extra Work Order** to cover the introduction of such new works necessary for the completion, improvement or protection of the original works which were not included in the original contract, on the grounds where there are subsurface or latent physical conditions at the site differing materially from those indicated in the contract, or where there are duly unknown physical conditions at the site of an unusual nature differing materially from those usually encountered and generally recognized as inherent in the work or character provided for in the Contract.
- 61.3 The Project Manager deems it necessary that a Variation or Extra Work Order should be issued, he or she shall prepare the proposed order, the necessary plans, his or her computations as to the quantities of the additional Works involved per item indicating the specific locations where such Works are needed, the date of his or

her inspections and investigations thereon, and the log book thereof, and a detailed estimate of the unit cost of such items of work as stated under GCC Clause 62, together with his or her justifications for the need of such Variation or Extra Work Order, and shall submit the same to the Approving Authority. Any Amend to the contract that happens within the approved BOQ items and doesn't change the contract price shall be approved by the HOPE or delegated officer.

61.4 The Head of the Procuring Entity may, in exceptions to the GCC Sub Clause 61.3 and subject to the availability of funds, in the event of extreme emergency and when time is of the essence, authorize the immediate start of work under any Variation or Extra Work Order; provided that the cumulative increase in the value of Works not yet duly approved exceeded ten (10) percent of the adjusted original Contract Price.

61.5 Increase or decrease in the quantities of any item of work included in the BOQ for the reasons other than those stated under GCC Sub Clause 61.1 and 61.2, in particular for field level actual measurements under this contract (admeasurements), not necessarily however, shall constitute a **Variation**.

61.6 All Variations and Extra work orders under the Contract shall be included in the updated Programme of Works produced by the Contractor.

62. Costing of Variations or Extra Orders

62.1 The Contractor shall provide the Project Manager with a quotation for carrying out the Variation when requested to do so by the Project Manager. The Project Manager shall assess the quotation, which shall be given within seven (7) working days of the request or within any longer period stated by the Project Manager and before the Variation is ordered.

62.2 If the item of work in the Variation corresponds to an item of work in the BOQ and if, in the opinion of the Project Manager, the increased quantity and cost of the works of that particular item does not concurrently cause to exceed the limit stated in GCC Sub Clause 60.1, the same unit rate in the BOQ shall be used to calculate the cost of the Variation. If the item of work in the Variation does not correspond to an item in the BOQ, the unit rates for the new items of works shall be determined based on (i) the direct unit costs used in the original Contract for other items (e.g. unit cost of cement, steel bar, labour rate, equipment rental, etc) as indicated in the Contractor's price breakdown of the cost estimate, if available or (ii) fixed prices acceptable to both, the Procuring Entity and the Contractor, based on market prices. The direct cost of the new work items based on (i) or (ii) stated herein shall then be combined with the mark-up factor (i.e. profit, overhead and VAT) used by the Contractor in its Tender to determine the unit rate of the new items of work.

62.3 If the Contractor's quotation is found to be unreasonable, the Project Manager may order the Variation and make a change to the Contract Price, which shall be based on the Project Manager's own forecast of the effects of the Variation on the Contractor's costs.

		62.4	The Contractor shall not be entitled to additional payment for costs that could have been avoided by giving early warning under GCC Sub Clause 43.1.
		62.5	The time for processing of a Variation and an Extra Work Order from its preparation to approval shall not exceed thirty (30) working days.
63. Cash Flow Forecasts		63.1	When the Programme of Works is updated under GCC Sub Clause 41.2, the Contractor shall provide the Project Manager with an updated cash flow forecast.
64. Payment Certificates		64.1	The basis for payment certificates shall be BOQ used to determine the Contract Price.
		64.2	The Contractor shall submit to the Project Manager monthly statements of the estimated value of the works executed less the cumulative amount certified previously.
		64.3	The Project Manager shall check the Contractor's monthly statement and certify the amount to be paid to the Contractor.
		64.4	The value of work executed shall be determined by the Project Manager.
		64.5	The value of work executed may also include the valuation of Variations or Extra Work Orders, Certified Dayworks and Compensation Events.
		64.6	The Project Manager may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.
65. Payments to the Contractor		65.1	Payments shall be adjusted for deductions for advance payments and retention. The Procuring Entity shall pay the Contractor the amounts certified by the Project Manager within twenty-eight (28) days of the date of each certificate after due adjustments for deductions for advance payments, retention and any other additions or deductions which may have become due under the Contract or otherwise, including those under GCC Clause 91.
		65.2	Payments for Works under Variation Orders or Extra Work Orders satisfactorily accomplished pursuant to GCC Sub Clause 61 may be made only after approval of the same by the Approving Authority or next higher, as appropriate.
		65.3	Payments due to the Contractor in each certificate shall be made into the Bank Account, in any scheduled Bank of Bangladesh, of the legal title of the Contract specified in the PCC, nominated by the Contractor in the currency specified in the Contract.
66. Delayed Payment		66.1	If the Procuring Entity makes a late payment, the Contractor shall be paid interest on the late payment in the next payment at the rate as specified in the PCC. Interest shall be calculated from the date by which the payment should have been made up to the date when the late payment is made.
		66.2	If an amount certified is increased in a subsequent certificate as a result of an award by the Adjudicator or an Arbitrator, the Contractor shall be paid interest upon the delayed payment as set out in this clause. Interest shall be calculated from the date upon

which the increased amount would have been certified in the absence of dispute.

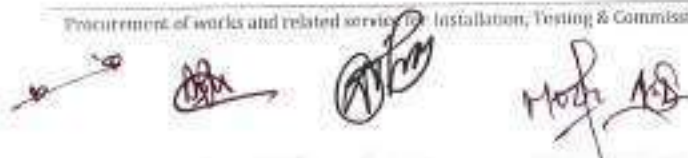
67. Compensation Events

67.1 The following shall be Compensation Events:

- (a) The Procuring Entity does not give access to or possession of the Site or part of the Site by the Site Possession Date stated in the GCC Sub Clause 13.1;
- (b) The Procuring Entity modifies the Schedule of other Contractors in a way that affects the works of the Contractor under the Contract;
- (c) The Project Manager orders a delay or does not issue Drawings, Specifications, or instructions required for execution of the Works on time;
- (d) The Project Manager instructs the Contractor to uncover or to carry out additional tests upon work, which is then found to have no Defects;
- (e) The Project Manager unreasonably does not approve a subcontract to be let, if applicable;
- (f) Ground conditions are substantially more adverse than could reasonably have been assumed before issuance of the Notification of Award from the information issued to Tenderers (including the Site Investigation Reports), from information available publicly and from a visual inspection of the Site; Other Contractors, public authorities, utilities, or the Procuring Entity do not work within the dates and other constraints stated in the Contract, and they cause delay or extra cost to the Contractor;
- (g) The advance payment is delayed;
- (h) The effects on the Contractor of any of the Procuring Entity's Risks;
- (i) The Project Manager unreasonably delays issuing a Completion Certificate;
- (j) A situation of Force Majeure has occurred, as defined in GCC Clause 83; and
- (k) Other Compensation Events described in the Contract or determined by the Project Manager in the PCC shall apply.

67.2 If a Compensation Event would cause additional cost or would prevent the work being completed before the Intended Completion Date, the Contract Price shall be increased and/or the Intended Completion Date shall be extended. The Project Manager shall decide whether and by how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended, only on justifiably acceptable grounds duly recorded.

67.3 As soon as the Contractor has provided information demonstrating the effect of each Compensation Event upon the Contractor's forecast cost, the Project Manager shall assess it, and the Contract Price shall be adjusted accordingly. If the Contractor's forecast is



deemed unreasonable, the Project Manager shall adjust the Contract Price based on the Project Manager's own forecast. The Project Manager will assume that the Contractor will react competently and promptly to the event.

67.4 The Contractor shall not be entitled to compensation to the extent that the Procuring Entity's interests are adversely affected by the Contractor not having given early warning or not having cooperated with the Project Manager.

68. Adjustments for Changes in Legislation

68.1 Unless otherwise specified in the Contract, if between the date twenty-eight (28) days before the submission of Tenders for the Contract and the date of the last Completion Certificate, any law, regulation, ordinance, order or bylaw having the force of law is enacted, promulgated, abrogated, or changed in Bangladesh (which shall be deemed to include any change in interpretation or application by the competent authorities) that subsequently affects the Completion Date and/or the Contract Price, then such Completion Date and/or Contract Price shall be correspondingly increased or decreased, to the extent that the Contractor has thereby been affected in the performance of any of its obligations under the Contract.

68.2 The Project Manager shall adjust the Contract Price on the basis of the change in the amount of taxes, duties, and other levies payable by the Contractor, provided such changes have not already been accounted for in the price adjustment as defined in GCC Clause 69 and/or reflected in the Contract Price.

69. Price Adjustment

69.1 Prices shall be adjusted for fluctuations in the cost of inputs only if provided for in the PCC. If so provided, the amounts as certified in each payment certificate, before deducting for Advance Payment, shall be adjusted by applying the respective price adjustment factor to the payment amount. The formulae indicated below applies:

$$P = A + B (Im/Io)$$

where:

P is the adjustment factor

A and **B** are Coefficients specified in the PCC, representing the nonadjustable and adjustable portions, respectively, of the Contract; and

Im is the Index during the month the work has been executed and

Io is the Index prevailing twenty-eight (28) days prior to the deadline for submission of Tender.

The Indexes to be used is as published by the Bangladesh Bureau of Statistics (BBS) on a monthly basis. In case not available, then other countries or authorities of the sources mentioned in **Appendix to the Tender** may be used.

70. Retention Money

70.1 The Procuring Entity may retain from each progressive payment due to the Contractor at the percentage specified in the PCC until completion of the whole of the Works under the Contract.

		70.2	On completion of the whole of the Works, the first half of the total amount retained under GCC Sub Clause 70.1 shall be returned to the Contractor and the remaining second half after the Defects Liability Period has passed and the Project Manager has certified in the form of Defects Corrections Certificate .
		70.3	On completion of the whole of the Works, the Contractor may substitute an irrevocable unconditional Bank Guarantee from any scheduled Bank of Bangladesh, in the format as specified (Form PW3A-12), without any alteration, acceptable to the Procuring Entity for the second half of the retention money as stated under GCC Sub Clause 70.2.
71.	Liquidated Damages	71.1	Except as provided under GCC Sub Clause 83, if the Contractor fails to complete the Works and physical services within the Intended Completion Date or extended Intended Completion Date, the Procuring Entity shall, as Liquidated Damages, deduct from the Contract Price, a sum at the percent-rate per day of delay as specified in the PCC , of the contract value of the uncompleted works or part thereof completed after the Intended Completion Date or extended Intended Completion Date, as applicable. The total amount of Liquidated Damages or Delay Damages shall not exceed the amount specified in the PCC . The Procuring Entity may deduct Liquidated Damages from payments due to the Contractor. Payment of Liquidated damages shall not affect the Contractor's liabilities.
		71.2	If the Intended Completion Date is extended after Liquidated Damages have been paid, the Project Manager shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate.
72.	Bonus	72.1	The Contractor shall be paid a Bonus calculated at the percent-rate per day if stated in the PCC for each day (less any days for which the Contractor is paid for acceleration) that the Completion of the whole of the Works is earlier than the Intended Completion Date. The Project Manager shall require certifying that the Works are complete, although they may not have fallen due to being complete as per approved updated Programme of Works.
73.	Advance Payment	73.1	The Procuring Entity shall make advance payment, if so specified in the PCC , to the Contractor in the amounts and by the dates specified in the PCC against an irrevocable unconditional Bank Guarantee issued by any scheduled Bank of Bangladesh in the format as specified (Form PW3A-11), without alteration, and acceptable to the Procuring Entity of an amount equal to the advance payment. The Guarantee shall remain effective until the advance payment has been amortized, but the amount of the Guarantee shall be progressively reduced by the amounts amortized by the Contractor. Interest will not be charged on the advance payment.
		73.2	The Contractor shall use the advance payment only to pay for Equipment, Plant, Materials, and mobilization expenses required specifically for execution of the Contract. The Contractor shall demonstrate that advance payment has been used for such specific purposes by supplying copies of invoices or other documents to the

Project Manager.

73.3 The advance payment shall be amortized by deducting at proportionate rate from payments otherwise due to the Contractor, following the schedule of completed percentages of the Works as specified in the PCC. No account shall be taken of the advance payment or its amortization in assessing valuations of work done, Variations, price adjustments, Compensation Events, Bonuses, or Liquidated Damages.

73.4 If the amortization of advance payment has not been completed by twenty-eight (28) days prior to the expiry date of the Guarantee stated under GCC Sub Clause 73.1, the Contractor shall correspondingly extend the validity of the Guarantee for a period so long the advance payment is fully amortized. The Bank Guarantee for advance payment shall be released when the same has been fully amortized.

74. Performance Security

74.1 The Procuring Entity shall notify the Contractor of any claim made against the Bank issuing the Performance Security.

74.2 The Procuring Entity may claim against the security if any of the following events occurs for fourteen (14) days or more.

(a) The Contractor is in breach of the Contract and the Procuring Entity has duly notified him or her; and

(b) The Contractor has not paid an amount due to the Procuring Entity and the Procuring Entity has duly notified him or her.

74.3 In the event as stated under GCC Sub Clause 74.2, the Contractor is liable to pay compensation under the Contract amounting to the full value of the security or more, the Procuring Entity may call the full amount of the security.

74.4 The Performance Security furnished at the time of signing of the Contract Agreement shall be substituted, after the issuance of certificate of Completion of works by the Project Manager, by a new Security covering fifty (50) percent amount of the Performance Security to cover the Defects Liability Period.

74.5 If there is no reason to call the security, the security shall be discharged by the Procuring Entity and returned to the Contractor after the Defects Liability period has passed and the Project Manager has certified in the form of Defects Corrections Certificates and the Procuring Entity shall not make any claim under the security, except for amounts to which the Procuring Entity is entitled under this Contract. In the event this Contract is significantly below the updated official estimated cost or unbalanced as a result of front loading, the Procuring Entity shall call the full amount of the security in the circumstances stated under GCC Sub Clause 74.3.

75. Provisional Sums

75.1 Provisional Sums shall only be used, in whole or in part, in accordance with the Project Manager's instructions.

75.2 Plants, Materials or Services to be purchased by the Contractor under the provisions of GCC Sub Clause 75.1 from Nominated Subcontractor(s) or for meeting the other expenditures under the

Contract, and for which there shall be included in the Contract price, the actual amounts paid or due to be paid by the Contractor, and a sum for profit, overhead and VAT, as applicable, calculated as a percentage of these actual amounts by applying the relevant percentage rate as specified in the PCC.

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| 76. Dayworks | 76.1 | If applicable, the Dayworks rates in the Contractor's Tender shall be used for small additional amounts of work only when the Project Manager has given written instructions in advance for additional work to be paid for in that way. |
| | 76.2 | All works to be paid for as Dayworks shall be recorded by the Contractor on forms approved by the Project Manager. Each completed form shall be certified and signed by the Project Manager within seven (7) days of the works being done. |
| | 76.3 | The Contractor shall be paid for Dayworks subject to obtaining signed Dayworks forms. |
| 77. Cost of Repairs to Loss or Damages | 77.1 | Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Liability Period shall be remedied by the Contractor at the Contractor's own cost, if the loss or damage arises from the Contractor's acts or omissions. |

E. Completion of the Contract

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| 78. Completion | 78.1 | The Contractor shall apply by notice to the Project Manager for issuing a Completion Certificate of the Works, and the Project Manager shall do so upon deciding that the work is completed. |
| 79. Taking Over | 79.1 | The Procuring Entity shall take over the Site and the Works within seven (7) days of the Project Manager's issuing a certificate of Completion. |
| 80. Amendment to Contract | 80.1 | 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 acceptable under the conditions of the Contract. |
| | 80.2 | The Procuring Entity shall amend the Contract, incorporating the changes approved, in accordance with the Delegation of Financial Power or Sub-delegation thereof and, introduced to the original terms and conditions of the Contract |
| 81. Final Account | 81.1 | The Contractor shall submit with a detailed account of the total amount that the Contractor considers payable under the Contract to the Project Manager before the end of the Defects Liability Period . |
| | 81.2 | The Project Manager shall certify the Final Payment within fifty-six (56) days of receiving the Contractor's account if the payable amount claimed by the Contractor is correct and the corresponding works are completed. |
| | 81.3 | If it is not, the Project Manager shall issue within fifty-six (56) days a Defects Liability Schedule that states the scope of the |

			corrections or additions that are necessary.
		81.4	If the Final Account of Works submitted under GCC Sub Clause 81.1 is unsatisfactory even after it has been resubmitted, the Project Manager shall decide on the amount payable to the Contractor and issue a payment certificate.
82. Drawings and Manuals	As-built and	82.1	If "As Built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the PCC.
		82.2	If the Contractor does not supply the Drawings and/or Manuals by the dates specified in GCC Sub Clause 82.1, or they do not receive the Project Manager's approval, the Project Manager shall withhold a nominal amount specified in the PCC from payments due to the Contractor.
83. Force Majeure		83.1	Force Majeure may include, but is not limited to, exceptional events or circumstances of the kind stated below; (a) war, hostilities (whether war be declared or not), invasion, act of foreign enemies; (b) rebellion, terrorism, sabotage by persons other than the Contractor's personnel, revolution, insurrection, military or usurped power, or civil war; (c) riot, commotion, disorder, strike or lockout by persons other than the Contractor's personnel; (d) munitions of war, explosive materials, ionising radiation or contamination by radio-activity, except as may be attributable to the Contractor's use of such munitions, explosives, radiation or radio-activity; and (e) natural catastrophes such as fires, floods, epidemics, quarantine restrictions, freight embargoes, cyclone, hurricane, typhoon, tsunami, storm surge, earthquake, hill slides, landslides, and volcanic activities.
		83.2	The Head of Procuring Entity decides the existence of a Force Majeure that will be the basis of the issuance of order for suspension of Works as stated under GCC Sub Clause 48.1.
84. Notice of Force Majeure		84.1	If a Party is or will be prevented from performing its substantial obligations under the Contract by Force Majeure, then it shall give notice, within fourteen (14) days after the party became aware, to the other Party of the event or circumstances constituting the Force Majeure and shall specify the obligations, the performance of which is or will be prevented.
		84.2	Notwithstanding any other provision of this Clause, Force Majeure shall not apply to obligations of either Party to make payments to the other Party under the Contract.
85. Consequences of Force Majeure		85.1	The Contractor shall not be liable for forfeiture of its security, liquidated damages, or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force

Majeure.

85.2 If the Contractor is prevented from performing its substantial obligations under the Contract by Force Majeure of which notice has been given under GCC Sub Clause 84, and suffers delay and/or incurs cost by reason of such Force Majeure, the Contractor shall be entitled subject to GCC Sub Clause 91 to:

- (a) an extension of time for any such delay, if completion is or will be delayed, under GCC Clause 44, and
- (b) if the event or circumstance is of the kind described subparagraphs (a) to (c) of GCC Sub Clause 83.1 occurs in the country, payment of any such cost, including the costs of rectifying or replacing the Works and physical services damaged or destroyed by Force Majeure, to the extent they are not indemnified through the insurance policy referred to in GCC Clause 36.

85.3 After receiving notice under GCC Sub Clause 84.1, the Project Manager shall proceed to determine these matters under the provisions of the Contract.

86. Release from Performance

86.1 Notwithstanding any other provision of this Clause, if any event or circumstance outside the control of the parties (including, but not limited to, Force Majeure) arises which makes it impossible or unlawful for either or both Parties to fulfil its or their contractual obligations or which, under the law governing the Contract, entitles the Parties to be released from further performance of the Contract, then upon notice by either Party to the other party of such event or circumstance:

- (a) the Parties shall be discharged from further performance, without prejudice to the rights of either Party in respect of any previous breach of the Contract, and
- (b) the sum payable by the Procuring Entity to the Contractor shall be the same as would have been payable under GCC Sub Clause 88.3 if the Contract had been terminated under GCC Sub Clause 87.3.

F. Termination and Settlement of Disputes

87. Termination

87.1 Termination for Default

- (a) The Procuring Entity or the Contractor, without prejudice to any other remedy for breach of Contract, by giving twenty-eight (28) days written notice of default to the other party, may terminate the Contract in whole or in part if the other party causes a fundamental breach of Contract. Fundamental breaches of the Contract shall include, but shall not be limited to, the following:
 - (i) the Contractor stops work for twenty-eight (28) days when no stoppage of work is shown on the current Programme and the stoppage has not been authorized by the Project Manager;
 - (ii) the Project Manager instructs the Contractor to delay



the progress of the Works, and the instruction is not withdrawn within eighty-four (84) days;

- (iii) the Project Manager gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Project Manager;
- (iv) the Contractor does not maintain a Security, which is required;
- (v) the Contractor has delayed the completion of the Works by the number of days for which the maximum amount of Liquidated Damages can be paid, as specified in GCC Sub Clause 71;
- (vi) the Contractor has subcontracted the whole of the Works or has assigned the Contract without the required agreement and without the approval of the Project Manager;
- (vii) the Contractor, in the judgment of the Procuring Entity has engaged in corrupt or fraudulent practices, as defined in GCC Sub Clause 38, in competing for or in executing the Contract.
- (viii) A payment certified by the Project Manager is not paid by the Procuring Entity to the Contractor within eighty-four (84) days of the date of the Project Manager's certificate.

87.2 Termination for Insolvency

The Procuring Entity and the Contractor may at any time terminate the Contract by giving twenty-eight (28) days written notice to the other party if either of the party becomes bankrupt or otherwise insolvent. 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.

87.3 Termination for Convenience

- (a) The Procuring Entity, by giving twenty-eight (28) days written notice sent to the Contractor, may 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 Procuring Entity's convenience, the extent to which performance of the Contractor under the Contract is terminated, and the date upon which such termination becomes effective.
- (b) The Procuring Entity shall not terminate the contract under GCC Sub Clause 87.3 (a) in order to execute the Works itself or to arrange for the Works to be executed by another contractor or to avoid a termination of the Contract by the Contractor as stated under GCC Sub Clause 87.1(a).

- 87.4 In the event the Procuring Entity terminates the Contract in whole or in part, the Procuring Entity shall accept the portion of the Works that are complete and ready for handing over after the Contractor's receipt of notice of termination of the Contract. For the remaining portion of the Works, the Procuring Entity may elect:
- (a) to have any portion completed by the Contractor at the Contract terms and prices; and /or
 - (b) to cancel the remainder and pay to the Contractor an agreed amount for partially completed Works and for materials and parts previously procured by the Contractor, or
 - (c) except in the case of termination for convenience as stated under GCC Sub Clause 87.3, engage another Contractor to complete the Works, and in that case the Contractor shall be liable to the Procuring Entity for any cost that may be incurred in excess of the sum that would have been paid to the Contractor, if the work would have been executed and completed by him or her.
- 87.5 If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as is reasonably possible.
- 87.6 The expiration of the Intended Completion Date under GCC Clause 44 and, the initiation of settlement of disputes like amicable or adjudication and arbitration under GCC Clause 92 shall not be deemed a termination of the Contract under GCC Clause 87.

88. Payment upon Termination

- 88.1 If the Contract is terminated because of a fundamental breach of Contract under GCC Sub Clause 87.1 by the Contractor, the Project Manager shall issue a certificate for the value of the Works done and Plant and Materials ordered less advance payments received up to the date of the issue of the certificate and, further less the amount from percentage to apply to the contract value of the works not completed, as indicated in the PCC. If the total amount due to the Procuring Entity exceeds any payment due to the Contractor, the difference shall be a debt payable to the Procuring Entity.
- 88.2 If the Contract is terminated for the Procuring Entity's convenience or because of a fundamental breach of Contract by the Procuring Entity, the Project Manager shall issue a payment certificate for the value of the work done, Materials ordered, the reasonable cost of removal of Equipment, repatriation of the Contractor's foreign personnel employed solely on the Works and recruited specifically for the Works, and the Contractor's costs of protecting and securing the Works, and less advance payments received up to the date of the certificate.
- 88.3 If the Contract is terminated for reasons of Force Majeure, the Project Manager shall determine the value of the work done and issue a Payment Certificate which shall include:
- (a) the amounts payable for any work carried out for which

		unit rates or prices are stated in the Contract;
		(b) the cost of Plant and Materials ordered for the Works which have been delivered to the Contractor, or of which the Contractor is liable to accept delivery; this Plant and Materials shall become the property of (and be at the risk of) the Procuring Entity when paid for by the Procuring Entity, and the Contractor shall place the same at the Procuring Entity's disposal;
		(c) other costs or liabilities which in the circumstances were reasonably and necessarily incurred by the Contractor in the expectation of completing the Works;
		(d) the cost of removal of Temporary Works and Contractor's Equipment from the Site; and
		(e) the cost of repatriation of the Contractor's staff and labour employed wholly in connection with the Works at the date of termination.
89. Property	89.1	All Materials on the Site, Plant, Equipment, Temporary Works, and Works shall be deemed to be the property of the Procuring Entity if the Contract is terminated because of the Contractor's default stated under GCC Sub Clause 87.1.
90. Frustration	90.1	If the Contract is frustrated by the occurrence of a situation of Force Majeure as defined in GCC Sub Clause 83, the Project Manager shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all works carried out before receiving it and for any work carried out afterwards to which a commitment was made.

G. Claims, Disputes and Arbitration

91. Contractor's Claims	91.1	If the Contractor considers himself to be entitled to any extension of the Completion Time and/or any additional payment, under any Clause of these Conditions or otherwise in connection with the Contract, the Contractor shall give notice to the Procuring Entity, describing the event or circumstance giving rise to the claim. The notice shall be given as soon as practicable, and not later than twenty-eight (28) days after the Contractor became aware, or should have become aware, of the event or circumstance.
	91.2	If the Contractor fails to give notice of a claim within such period of twenty-eight (28) days, the Intended Completion Date shall not be extended, the Contractor shall not be entitled to additional payment, and the Procuring Entity shall be discharged from all liability in connection with the claim.
	91.3	Within forty-two (42) days after the Contractor became aware or should have become aware of the event or circumstance giving rise to the claim, or within such other period as may be proposed by the Contractor and approved by the Project Manager, the

Contractor shall send to the Project Manager a fully detailed claim which includes full supporting particulars of the basis of the claim and of the extension of time and/or additional payment claimed, for settlement.

92. Settlement of Disputes

92.1 Amicable settlement

The procuring Entity and the Contractor shall use their best efforts to settle amicably all possible disputes arising out of or in connection with this Contract or its interpretation.

92.2 Adjudication

- (a) If the Contractor believes that a decision taken by the Project Manager was either outside the authority given to the Project Manager by the Contract or that the decision was wrongly taken, the decision shall be referred to the Adjudicator within fourteen (14) days of notification of the Project Manager's decision in writing.
- (b) The Adjudicator named in the PCC is jointly appointed by the parties. In case of disagreement between the parties, the Appointing Authority designated in the PCC shall appoint the Adjudicator within fourteen (14) days of receipt of a request from either party.
- (c) The Adjudicator shall give its decision in writing to both parties within twenty-eight (28) days of a dispute being referred to it.
- (d) The Contractor shall make all payments (fees and reimbursable expenses) to the Adjudicator, and the Procuring Entity shall reimburse half of these fees through the regular progress payments.
- (e) Should the Adjudicator resign or die, or should the Procuring Entity and the Contractor agree that the Adjudicator is not functioning in accordance with the provisions of the Contract, a new Adjudicator will be jointly appointed by the Procuring Entity and the Contractor. In case of disagreement between the Procuring Entity and the Contractor the Adjudicator shall be designated by the Appointing Authority within fourteen (14) days of receipt of a request from either party as stated under GCC Sub Clause 92.2 (b).

92.3 Arbitration

- (a) If the parties are unable to reach a settlement as per GCC Clauses 92.1 and 92.2 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 in accordance with GCC Sub Clause 94.3(b).
- (b) The arbitration shall be conducted in accordance with the Arbitration Act (**Act No 1 of 2001**) of Bangladesh as at present in force and in the place shown in the PCC.



Section 4. Particular Conditions of Contract

Instructions for completing the Particular Conditions of Contract are provided in italics in parenthesis for the relevant GCC Clauses.

GCC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
GCC 1.1(k)	The Contractor is <i>[Name, address, and name of authorized representative]</i>
GCC 1.1(gg)	The Procuring Entity is Project Director (Dhaka Power System Expansion and Strengthening Project in DESCO Area), Dhaka Electric Supply Company Limited (DESCO)
GCC 1.1(hh)	The Project Manager is Project Director (Dhaka Power System Expansion and Strengthening Project in DESCO Area), Dhaka Electric Supply Company Limited (DESCO)
GCC 1.1(cc)	The original Contract Price is as specified in the contract agreement.
GCC 1.1(z)	The Intended Completion Date for the whole of the works is the end date of Contract Period. Contract period is 24 (Twenty-Four) months from the date of Commencement Date of works.
GCC 1.1(II)	The Site is located at: For Lot-A: South Zone of DESCO For Lot-B: North Zone of DESCO For Lot-C: Central Zone of DESCO Respective Zone or S&D Division of DESCO under each Lot
GCC 1.1(oo)	The Start Date shall be the date as mentioned in GCC sub-clause 39.1.
GCC 1.1(ss)	The works to be executed shall be as per the following of the tender document: 1. Section 6: Bill of Quantities (BOQ); 2. Section 7: General Specifications; 3. Section 8: Particular Specifications; 4. Section 9: Drawings
GCC 2.5	The Sectional Completion Dates are: Not Applicable

GCC 3.1	The Procuring Entity's address for the purpose of communications under this contract is: Contact person: Project Director (Dhaka Power System Expansion and Strengthening Project in DESCO Area) Address: House # 4 (2nd floor), Road # 1/A, Nikunja - 2, Khilkhet, Dhaka-1229. Tel: +8801713443032 Fax: 0088 02 8900100 e-mail address: dpsesp@desco.gov.bd The Contractor's address for the purpose of communications under this contract is: Contact person: Address: Tel: Fax: e-mail address:								
GCC 6.1 (j)	Other documents forming part of the Contract are: None								
GCC 9.1	The Contractor or the Subcontractor that is a national of, or registered in, the following countries are not eligible: Countries Prohibited by the Government of Bangladesh								
GCC 9.2	Materials, equipment, plants and supplies shall not have their origin in the following countries: Countries Prohibited by the Government of Bangladesh								
GCC 13.1	Possession of the Site or part(s) of the Site, to the Contractor shall be given on the following date(s): As per the Decision of Project Director ;								
GCC 19.1	The Contractor shall employ the key personnel stated in ITT sub-clause 16.1.								
GCC 20.3	Nominated Subcontractor(s) named below shall be entitled to execute the following specific components of the Works: Not Applicable								
GCC 22.1	The contractual matters between the Procuring Entity and the Contractor shall be decided by the Project Director .								
GCC 36.1	The insurance cover shall be: <table border="1"> <tr> <td>(a)</td><td>The minimum cover for the Works and of Plant and Materials is Tk. 110% of the value of the Works, Plants and Materials.</td></tr> <tr> <td>(b)</td><td>The maximum deductible of the insurance of the Works and of Plants and Materials is Tk. 10% of the Contract Price.</td></tr> <tr> <td>(c)</td><td>The minimum cover for loss of or damage to Equipment is Tk. 110% of the replacement value of the Equipment.</td></tr> <tr> <td>(d)</td><td>The maximum deductible for insurance of Equipment is Tk. [shall be stated by the Contractor at the time of Contract Signing]</td></tr> </table>	(a)	The minimum cover for the Works and of Plant and Materials is Tk. 110% of the value of the Works, Plants and Materials.	(b)	The maximum deductible of the insurance of the Works and of Plants and Materials is Tk. 10% of the Contract Price.	(c)	The minimum cover for loss of or damage to Equipment is Tk. 110% of the replacement value of the Equipment.	(d)	The maximum deductible for insurance of Equipment is Tk. [shall be stated by the Contractor at the time of Contract Signing]
(a)	The minimum cover for the Works and of Plant and Materials is Tk. 110% of the value of the Works, Plants and Materials.								
(b)	The maximum deductible of the insurance of the Works and of Plants and Materials is Tk. 10% of the Contract Price.								
(c)	The minimum cover for loss of or damage to Equipment is Tk. 110% of the replacement value of the Equipment.								
(d)	The maximum deductible for insurance of Equipment is Tk. [shall be stated by the Contractor at the time of Contract Signing]								

	(e) The minimum cover for other property is Tk. 10% of the Contract Price]
	(f) The maximum deductible for insurance of other property shall be stated by the Contractor at the time of Contract Signing.
	(g) The minimum cover for personal injury or death: (i) For the Contractor's employees approved by the Employer is BDT 3,00,000.00 (Three Lac Taka) only per person. (ii) and for third parties is as per the law and common practice in Bangladesh.
GCC 39.1	The Commencement Date or Contract Effective Date shall mean the latest of following events: a) Signing of the Contract Agreement by both parties upon the approval of the relevant authorities. b) Possession of the Site given to the contractor as required for the commencement of the works. c) Approval of Manpower and necessary Tools and Equipments.
GCC 40.1	The Intended Completion Date of the Works shall be: 02 (Two) years from the date of commencement of works.
GCC 41.1	The Contractor shall submit a Programme for the Works within 15 (Fifteen) days of signing the contract.
GCC 41.2	The period between Programme updates shall be usually quarterly depends on the nature of works. However, as per the requirement of Project Director may claim the updated programme.
GCC 41.3	The amount that may be withheld for late submission of an updated Programme is Tk. 25,000 (taka twenty-five thousand) only.
GCC 56.1	The defects liability period is 12 (twelve) months from the date of successful completion of contract. The Contractor shall repair the defective works within the defect's liability period. In such case, the defects liability period for the part of repair/replacement shall be upto the remaining duration of the defect liability period.
GCC 60.1	The Contract is not subject to unit rate adjustment. The variation order or approval would not be required if the total Contract Price remains unchanged due to increase or decrease in the quantity per item of BOQ.
GCC 61.1, 61.2, 61.5	The variations of the contract value shall be increased up to 15% (fifteen percentage) subject to the approval of the Managing Director, DESCO.




GCC 65.3	The particulars of the Bank Account nominated are as follows: Title of the Account : <i>[insert title to whom the Contract awarded]</i> Name of the Bank : <i>[insert name with code, if any]</i> Name of the Branch : <i>[insert branch name with code, if any]</i> Account Number : <i>[insert number]</i> Address : <i>[insert location with district]</i> Tel : _____ Fax : _____ e-mail address : _____ <i>[information furnished by the Contractor shall be substantiated by the concerned Bank and authenticated by the Procuring Entity]</i> i. All payments shall be made in Bangladeshi Taka. ii. Payments shall be made upon certification by the Project Director on the basis of item rates in the BOQ. Its to be noted that other than item of BOQ is deemed to included. iii. To claim each running bill for respective works/job shall be made after submission of the following documents. a. Joint Inspection report (by nominated representative of Project Director & nominated representative of Contractor). b. As-Built Drawings. c. The close-out report of respective complete works/job and the recovery materials return to store of DESCO. d. The Certified Measurement Sheets (As per SOP of DESCO). e. A statement of all previous bills including amount of bill paid, current amount of bill as claimed for the running bill and remaining amount of contract value. f. A report of work progress status. The progress report is including each item of works upto the current date with physical and financial status. iv. Payments shall be made against partial progress of works as accepted and certified by the Project Director in the form of running bill. Any running bill shall however be not less than 10% (Ten percent) of the total contract value. During each running bill the retention money (Specified in GCC-70.1) shall be deducted. v. The Payment shall be adjusted for retention, if required. vi. The Employer shall pay the amounts certified by the Project Director to the Contractor within twenty-eight (28) days from the date of submission of each bill. However, there not shall be any interest payable for late payment, if any. vii. Payments shall be made through the office of Deputy General Manager (Accounts), DESCO.
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GCC 66.1	The rate of interest for delay payment: Not Applicable.
GCC 67.1(k)	The Compensation Events: None
GCC 69.1	Price adjustment: Not Applicable.
GCC 70.1	Retention Money: The proportion of payments retained against each running bill is 5% (five percent) . On completion of the total scope of the Works, the total amount retained (excluding the adjusted, if any) shall be paid to the Contractor after the Defects Liability Period and upon the certification of project director or designated representative of DESCO.
GCC 71.1	The amount of Liquidated Damages shall be 0.5 % (One half of One percent) of the contract value of the uncompleted works or any part thereof completed after expiry of the Intended Completion Date or extended Intended Completion Date, as applicable, per day of delay. Guide to application of GCC Sub Clause 71.1 above <i>[Liquidated damages is equivalent to an amount to be determined in accordance with the following formulae]</i> $T = V \times P \times n$ Where; T = Total amount of Liquidated Damages V = Contract Value of Uncompleted Works, completed after the expiry of the Intended Completion Date or extended Intended Completion Date, as applicable P = Percent-rate at which the Liquidated Damages shall be imposed per day of delay n = No of days delayed for completion of uncompleted works or part thereof after the expiry of the Intended Completion Date or extended Intended Completion Date, as applicable. The maximum amount of Liquidated Damages for the uncompleted Works or any part thereof is 10% (ten percent) of the final Contract Price of the whole of the Works.
GCC 72.1	Bonus: Not applicable
GCC 73.1	Advance Payment: Not applicable
GCC 73.4	Amortization of Advance Payment: Not Applicable
GCC 75.2	The percentage for adjustment of Provisional Sums: Not Applicable

Procurement of works and related service for Installation, Testing & Commissioning of 33 kV and 11 kV, Under Ground Cable Line.

GCC 78.1	The Completion Certificate shall be issued after 03 (three) months from the date of completion of Contract, subject to submission of close-out document and acceptance of the same by the Employer.
GCC 79.1	The Employer shall take over the Site and the Works within 35 (thirty-five) days from the date of the completion of respective job/works.
GCC 82.1	The As-built drawings shall be supplied by the Contractor to the Project Director within 14 (fourteen) days of the completion of each job. As-built drawing will be made by using modern "GIS Mapping incorporating with existing GIS system of DESCO," and should be duly submitted by the contractor.
GCC 82.2	Withhold Nominal Amount: Not applicable.
GCC 88.1	The percentage to apply to the contract value of the works not completed, representing the Procuring Entity's additional cost for completing the uncompleted Works, is 10% (ten percent).
GCC 92.2 (b)	The Adjudicator jointly appointed by the parties is: Name: Address: Tel No: Fax No: e-mail address:
GCC 92.2(b)	The Adjudicator jointly appointed by the parties is: The President of the Institution of Engineers, Bangladesh (IEB)
GCC 92.3 (b)	The arbitration shall be conducted in Dhaka.


 03.07.24
 Engr. Mohammad Barkat Uddin
 Sub-Divisional Engineer
 Dhaka Power System Expansion and
 Strengthening Project - DESCO Area

Appendix to the Tender

[In Tables below, the Procuring Entity shall indicate the source and base values with dates of Indexes, unless otherwise instructed to be quoted by the Tenderers, for the different Cost Components and mention its Weightings or Coefficients]

Table 1.1: Price Adjustment Data

[ITT Sub Clause 27.8: To be provided by the Procuring Entity]

Index Descriptions	Base Value	Sources of Index

Not Applicable

Note:

1. The sources of Indexes and its values with dates shall be Bangladesh Bureau of Statistics (BBS) unless otherwise mentioned by the Procuring Entity.
2. The Base Value of the Indexes shall be those prevailing twenty-eight (28) days prior to the deadline for submission of the Tenders.

Table 1.2: Price Adjustment Data
[GCC Clause 69: To be provided by the Procuring Entity]

Item Group	Bill No. if applicable	Index Descriptions	Coefficients or Weightings for non-adjustable Cost Component	Coefficients or Weightings for adjustable Cost Components										Total
				a	b	c	d	e	f	g	h	i	j	
														1
														1
														1
														1
														1
														1
														1

Not Applicable

Note:

The Weightings or Coefficients of the Cost Components shall be mentioned by the Procuring Entity based on the proportion of components involved in the work items caused to be impacted by rise and fall in its prices.

Section 5. Tender and Contract Forms

Form	Title
Tender Forms	
PW3A - 1a	Technical offer Submission Letter
PW3A - 1b	Financial offer Submission Letter
PW3A - 2	Tenderer Information
PW3A - 3	JV Partner Information <i>(if applicable)</i>
PW3A - 4	Subcontractor Information <i>(if applicable)</i>
PW3A - 5	Personnel Information
PW3A - 6	Bank Guarantee for Tender Security <i>(when this option is chosen)</i>
PW3A - 7	Bank's Letter of Commitment for Line of Credit <i>(when this option is chosen)</i>
Contract Forms	
PW3A - 8	Notification of Award
PW3A - 9	Contract Agreement
PW3A - 10	Bank Guarantee for Performance Security <i>(when this option is chosen)</i>
PW3A - 11	Bank Guarantee for Advance Payment <i>(if applicable)</i>
PW3A - 12	Bank Guarantee for Retention Money Security <i>(when this option is chosen)</i>

Forms **PW3A-1** to **PW3A -7** comprises part of the Tender Format and should be completed as stated in ITT Clauses 24.

Forms **PW3A-8** to **PW3A -12**comprises part of the Contract as stated in GCC Clause 6.



Technical Offer Submission Letter (Form PW3A-1a)

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

To:

Date:

[Contact Person]

[Name of the Procuring Entity]

*[Address of the Procuring
Entity]*

Invitation for Tender No: **DPSESP/01/2025**

Invitation Reference No: **27.24.0000.078.014.001.25.590** Date: **04.09.2025**

Lot No: *[when applicable]*

We, the undersigned, tender to execute in conformity with the Tender Document, the following Works and physical services, viz:

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 Sub Clause 33.1) 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 *[state Pay Order, Bank Draft, Bank Guarantee]* in the amount stated in the Tender Data Sheet (ITT Sub Clause 36.1) and valid for a period of twenty-eight (28) days beyond the Tender Validity date;
- (c) if our Tender is accepted, we commit to furnishing a Performance Security within the time stated under ITT Sub Clause 69.2 in the amount stated in the Tender Data Sheet (ITT Sub Clauses 68.1) and in the form specified in the Tender Data Sheet (ITT Sub Clause 69.1) valid for a period of twenty-eight (28) days beyond the date of issue of the Completion Certificate of the Works;
- (d) we have examined and have no reservations to the Tender Document, issued by you on *[insert date]*; including Addendum to Tender Document No(s) *[state numbers]*, issued in accordance with the Instructions to Tenderers (ITT Clause 11). *[insert the number and issuing date of each addendum; or delete this sentence if no Addendum has been issued]*;
- (e) we, including as applicable, any JV partner or Subcontractor for any part of the contract resulting from this Tender process, have nationalities from eligible countries, in accordance with ITT Sub Clause 5.1;
- ☒ we are submitting this Tender as a sole Tenderer in accordance with ITT Sub Clause 40.4
- or
- ☐ we are submitting this Tender as the partners of a JV, comprising the following other partners in accordance with ITT Sub Clause 40.4;


Procurement of works and related service for installation, Testing & Commissioning of 33 kV and 11 kV, Underground Cable Line.

	Name of Partner	Location & District of Partner
1		
2		
3		
4		

- (g) *we are not a Government owned entity as defined in ITT Sub Clause 5.3*
or
we are a Government owned entity, and we meet the requirements of ITT Sub Clause 5.10;

- (h) *we, including as applicable any JV partner, 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 5.6;

- (i) *we, including as applicable any JV partner or Subcontractor for any part of the contract resulting from this Tender process, 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;*

- (j) *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;*

- (k) *we intend to subcontract an activity or part of the Works, in accordance with ITT Sub Clause 19.1, to the following Subcontractor(s);*

Activity or part of the Works	Name of Subcontractor with Location and District

- (l) *we, including as applicable any JV partner, 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 as stated in ITT Clause 5.8, and that we do not have, or have had, any litigation against us, other than that stated in the Tenderer Information (Form PW3A-2);*

- (m) *we are not participating as Tenderer in more than one Tender in this Tendering process. We understand that your written Notification of Award shall constitute the acceptance of our Tender and shall become a binding Contract between us, until a formal Contract is prepared and executed;*

- (n) *we, including as applicable any JV partner, 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 been the subject of legal proceedings in accordance with ITT Sub Clause 5.9;*

[Handwritten signatures and marks]

- (o) we, including as applicable any JV partner, 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;
- (p) we understand that you reserve the right to reject all the Tenders or annul the Tender proceedings, without incurring any liability to Tenderer, in accordance with ITT Clause 63.

Signature:	<i>[insert signature of authorised representative of the Tenderer]</i>
Name:	<i>[insert full name of signatory with National ID Number]</i>
In the capacity of:	<i>[insert capacity of signatory]</i>
Duly authorised to sign the Tender for and on behalf of the Tenderer	

[If there is more than one (1) signatory, or in the case of a JV, add other boxes and sign accordingly].

Attachment 1:

[ITT Sub Clause 40.4]

Written confirmation authorising the above signatory(ies) to commit the Tenderer

[and, if applicable]

Attachment 2:

[ITT Sub Clause 29.2(h)]

Copy of the JV Agreement / Letter of Intent to form JV with draft proposed Agreement



Financial Offer Submission Letter (Form PW3A-1b)

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

To:

Date:

[Contact Person]

[Name of the Procuring Entity]

*[Address of the Procuring
Entity]*

Invitation for Tender No: **DPSESP/01/2025**

Invitation Reference No: **27.24.0000.078.014.001.25.590**

Date: 04.09.2025

Lot No: *(when applicable)*

We, the undersigned, tender to execute in conformity with the Tender Document, the following Works and physical services, viz:

In accordance with ITT Clause 27 and 28, the following price applies to our Tender:

The Tender price is: (ITT Sub Clause 27.4 and 28.1)	Tk. _____ <i>[in figures]</i> Taka _____ <i>[in words]</i>
In accordance with ITT Clause 27.6, the following discounts shall apply to our Tender:	
The unconditional discount proposed in this package/Lot is:	In Percentage (%):

The discount shall be equally applicable on all the items of BoQ after arithmetical correction.

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 Sub Clause 33.1) 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 *[state Pay Order, Bank Draft, Bank Guarantee]* in the amount stated in the Tender Data Sheet (ITT Sub Clause 36.1) and valid for a period of twenty-eight (28) days beyond the Tender Validity date;
- (c) if our Tender is accepted, we commit to furnishing a Performance Security within the time stated under ITT Sub Clause 69.2 in the amount stated in the Tender Data Sheet (ITT Sub Clauses 68.1) and in the form specified in the Tender Data Sheet (ITT Sub Clause 66.1) valid for a period of twenty-eight (28) days beyond the date of issue of the Completion Certificate of the Works;

(d) we have examined and have no reservations to the Tender Document, issued by you on *[insert date]*; including Addendum to Tender Document No(s) *[state numbers]*, issued in accordance with the Instructions to Tenderers (ITT Clause 11). *[insert the number and issuing date of each addendum; or delete this sentence if no Addendum has been issued]*;

(e) we, including as applicable, any JV partner or Subcontractor for any part of the contract resulting from this Tender process, have nationalities from eligible countries, in accordance with ITT Sub Clause 5.1;

(f) we are submitting this Tender as a sole Tenderer in accordance with ITT Sub Clause 40.4

or

we are submitting this Tender as the partners of a JV, comprising the following other partners in accordance with ITT Sub Clause 40.4;

	Name of Partner	Location & District of Partner
1		
2		
3		
4		

(g) we are not a Government owned entity as defined in ITT Sub Clause 5.3

or

we are a Government owned entity, and we meet the requirements of ITT Sub Clause 5.10;

(h) we, including as applicable any JV partner, 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 5.6;

(i) we, including as applicable any JV partner or Subcontractor for any part of the contract resulting from this Tender process, 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;

(j) 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;

(k) we intend to subcontract an activity or part of the Works, in accordance with ITT Sub Clause 19.1, to the following Subcontractor(s);

Activity or part of the Works	Name of Subcontractor with Location and District



- (l) we, including as applicable any JV partner, 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 as stated in ITT Clause 5.8, and that we do not have, or have had, any litigation against us, other than that stated in the Tenderer Information (**Form PW3A-2**);
- (m) we are not participating as Tenderer in more than one Tender in this Tendering process. We understand that your written Notification of Award shall constitute the acceptance of our Tender and shall become a binding Contract between us, until a formal Contract is prepared and executed;
- (n) we, including as applicable any JV partner, 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 been the subject of legal proceedings in accordance with ITT Sub Clause 5.9;
- (o) we, including as applicable any JV partner, 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;
- (p) we understand that you reserve the right to reject all the Tenders or annul the Tender proceedings, without incurring any liability to Tenderer, in accordance with ITT Clause 6.3.

Signature:	<i>[insert signature of authorised representative of the Tenderer]</i>
Name:	<i>[insert full name of signatory with National ID Number]</i>
In the capacity of:	<i>[insert capacity of signatory]</i>
Duly authorised to sign the Tender for and on behalf of the Tenderer	

[If there is more than one (1) signatory, or in the case of a JV, add other boxes and sign accordingly].

Attachment 1:

[ITT Sub Clause 40.4]

Written confirmation authorising the above signatory(ies) to commit the Tenderer

[and, if applicable]

Attachment 2:

[ITT Sub Clause 29.2(b)]

Copy of the JV Agreement / Letter of Intent to form JV with draft proposed Agreement

Tenderer Information (Form PW3A-2)

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

Invitation for Tender No: **DPSESP/01/2025**

Invitation Reference No: **27.24.0000.078.014.001.25.590**

Date: **04.09.2025**

Lot No (when applicable)

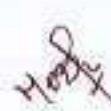
1.	Eligibility Information of the Tenderer [ITT -Clauses 5& 29]		
1.1	Nationality of individual or country of registration		
1.2	Tenderer's legal title		
1.3	Tenderer's registered address		
1.4	Tenderer's legal status <i>[complete the relevant box]</i>		
	Proprietorship		
	Partnership		
	Limited Liability 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		
	Address		
	Telephone / Fax numbers		
	e-mail address		
1.7	Litigation [ITT Cause 13]		
	A. No pending litigation ☐ <i>[if no pending litigation put Tick Mark in Box]</i>		
	B. Pending litigation		
	Year	Matter in dispute	Value of Pending
			Value of Pending Claim

			Claim in Taka	as Percentage of Net Worth
1.8	Tenderer to attach photocopies of the original documents mentioned aside	[All documents required under ITT Clauses 5 and 29]		
The following two information are applicable for National Tenderers				
1.9	Tenderer's Value Added Tax Registration (VAT) Number			
1.10	Tenderer's Tax Identification Number (TIN)			
[The foreign Tenderers, in accordance with ITT Sub Clause 5.1, shall provide evidence by a written declaration to that effect to demonstrate that it meets the criterion]				
2. Qualification Information of the Tenderer [ITT Clause 32]				
2.1	General Experience in Construction Works of Tenderer [State years of experience]			
2.2	Specific Experience in Construction Works of Tenderer Completed Contracts of similar nature, complexity and methods/construction technology			
	Contract No	[insert reference no] of [insert year]		
	Name of Contract	[insert name]		
	Role in Contract <i>[tick relevant box].</i>	Prime Contractor	Subcontractor	Management Contractor
	Award date	[insert date]		
	Completion date	[insert date]		
	Total Contract Value	[insert amount]		
	Procuring Entity's Name Address Tel / Fax e-mail			
	Brief description with justifications of the similarity compared to the Procuring Entity's requirements	[state justification in support of its similarity compared to the proposed works]		
2.3	Average annual construction turnover [ITT Sub Clause 15.1(a)] <i>[total certified payments received for contracts in progress or completed under public sector for a period as stated under ITT Sub Clause 15.1(a), using rate of exchange at the end of the period reported]</i>			
	Year	Currency	Amount Taka or Equivalent Taka	

2.4	Liquid assets available to meet the construction cash flow [ITT Sub Clause 15.1(b)]		
	No	Source of Financing	Amount Available
In order to confirm the above statements, the Tenderer shall submit, as applicable, the documents mentioned in ITT Sub Clause 32.1(d)			
2.5	Contact Details [ITT Sub Clause 32.1 (h)]		
	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 key technical and administrative personnel proposed for Contract administration and management [ITT Sub Clause 32.1(f)]		
	Name	Position	Years of General Experience
[Tenderer to complete details of as many personnel as are applicable. Each personnel listed above should complete the Personnel Information (Form PW3A-5)]			
2.7	Major Construction Equipment proposed to carry out the Contract [ITT Sub Clause 32.1(g)]		
	Item of Equipment	Condition (new, good, average, poor)	Owned, leased or to be purchased (state owner, less or or seller)
[Tenderer to list details of each item of major construction equipment, as applicable]			








JV Partner Information (Form PW3A-3)

[This Form should be completed by each JV partner].

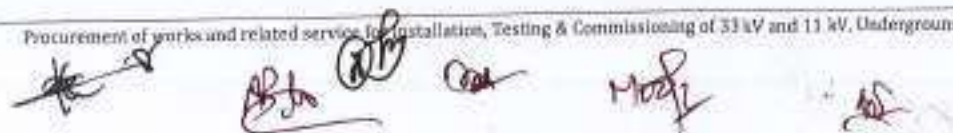
Invitation for Tender No: **DPSESP/01/2025**

Invitation Reference No: **27.24.0000.078.014.001.25.590**

Date: **04.09.2025**

Lot No. (when applicable) Lot No.:

1.	Eligibility Information of the JV Partner [ITT -Clauses 5 & 29]		
1.1	Nationality of individual or country of registration		
1.2	JV Partner's legal title		
1.3	JV Partner's registered address		
1.4	JV Partner's legal status <i>[complete the relevant box]</i>		
	Proprietorship		
	Partnership		
	Limited Liability Concern		
	Government-owned Enterprise		
	Others [please describe, if applicable]		
1.5	JV Partner's year of registration		
1.6	JV Partner's authorised representative details		
	Name		
	National ID number		
	Address		
	Telephone / Fax numbers		
	e-mail address		
1.7	Litigation [ITT Cause 13]		
	A. No pending litigation ☐ if no pending litigation put Tick Mark in Box]		
	B. Pending litigation		
	Year	Matter in dispute	Value of Pending Claim in Taka Value of Pending Claim



				as Percentage of Net Worth
1.8	JV Partner to attach photocopies of the original documents mentioned aside	[All documents required under ITT Clauses 5 and 29]		
The following two information are applicable for national JV Partners only				
1.9	JV Partner's Value Added Tax Registration (VAT) Number			
1.10	JV Partner's Tax Identification Number (TIN)			
[The foreign JV Partners, in accordance with ITT Sub Clause 5.1, shall provide evidence by a written declaration to that effect to demonstrate that it meets the criterion]				
2.	Key Activity(ies) for which it is intended to be joint ventured, if it can be specified [ITT Sub Clause 18.2]			
	Elements of Activity	Brief description of Activity		
3.	Qualification Information of the JV Partners [ITT Clause 32]			
3.1	General Experience in Construction Works of JV Partners [State years of experience]			
3.2	Specific Experience in Construction Works of JV Partners Completed Contracts of similar nature, complexity and methods/construction technology			
	Contract No	[insert reference no] of [insert year]		
	Name of Contract	[insert name]		
	Role in Contract [tick relevant box].	Prime Contractor	Subcontractor	Management Contractor
	Award date	[insert date]		
	Completion date	[insert date]		
	Total Contract Value	[insert amount]		
	Procuring Entity's Name Address Tel / Fax e-mail Brief description with justifications of the similarity compared to the Procuring Entity's requirements	[state justification in support of its similarity compared to the proposed works]		
3.3	Average annual construction turnover [ITT Sub Clause 15.1(a)] [[total certified payments received for contracts in progress or completed under public sector for a period as stated under ITT Sub Clause 15.1(a), using rate of exchange at the end of the period]			

	<i>reported]]</i>		
	Year	Currency	Amount Taka or Equivalent Taka
3.4	Liquid assets available to meet the construction cash flow [ITT Sub Clause 15.1(b)]		
	No	Source of Financing	Amount Available
In order to confirm the above statements, the JV Partners shall submit, as applicable, the documents mentioned in ITT Sub Clause 32.1(d)			
3.5	Contact Details [ITT Sub Clause 32.1 (h)]		
	Name, address, and other contact details of JV Partner's Bankers and other Procuring Entity(s) that may provide references, if contacted by this Procuring Entity		
3.6	Qualifications and experience of key technical and administrative personnel proposed for Contract administration and management [ITT Sub Clause 32.1(f)]		
	Name	Position	Years of General Experience
[JV Partners to complete details of as many personnel as are applicable. Each personnel listed above should complete the Personnel Information (Form PW3A-5)]			
3.7	Major Construction Equipment proposed to carry out the Contract [ITT Sub Clause 32.1(g)]		
	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 construction equipment, as applicable]</i>			

[Handwritten signatures and initials]

Subcontractor Information (Form PW3A-4)

[This Form should be completed by each Subcontractor, preferably on its Letter-Head Pad]

Invitation for Tender No: **DPSESP/01/2025**

Invitation Reference No: **27.24.0000.078.014.001.25.590**

Date: **04.09.2025**

Lot No. (when applicable) Lot No.:

1.	Eligibility Information of the Subcontractor [ITT -Clauses 5& 29]	
1.1	Nationality of Individual or country of Registration	
1.2	Subcontractor's legal title	
1.3	Subcontractor's registered address	
1.4	Subcontractor's legal status <i>[complete the relevant box]</i>	
	Proprietorship	
	Partnership	
	Limited Liability Concern	
	Government-owned Enterprise	
	Other (please describe)	
1.5	Subcontractor's year of registration	
1.6	Subcontractor's authorised representative details	
	Name	
	Address	
	Telephone / Fax numbers	
	e-mail address	
1.7	Subcontractor to attach copies of the following original documents	All documents to the extent relevant to ITT Clause 5 and 29 in support of its qualifications
The following two information are applicable for national Subcontractors		
1.8	Subcontractor's Value Added Tax Registration (VAT) Number	
1.9	Subcontractor's Tax Identification Number (TIN)	
[The foreign Subcontractors, in accordance with ITT sub-Clause 5.1, shall provide evidence by a		

written declaration to that effect to demonstrate that it meets the criterion]		
2. Key Activity(ies) for which it is intended to be Subcontracted [ITT Sub Clause 19.1]		
2.1	Elements of Activity	Brief description of Activity
2.2	List of Similar Contracts in which the proposed Subcontractor had been engaged	
	Name of Contract and Year of Execution	
	Value of Contract	
	Name of Procuring Entity	
	Contact Person and contact details	
	Type of Work performed	

Signature:	<i>[insert signature of authorized representative of the Tenderer]</i>
Name:	<i>[insert full name of signatory with National ID Number]</i>
In the capacity of:	<i>[insert capacity of signatory]</i>
Duly authorized to sign the Tender for and on behalf of the Tenderer	

[Handwritten signatures and initials]

Personnel Information (Form PW3A-5)

[This Form should be completed for each person proposed by the Tenderer in Form PW3A-2 & PW3A-3, where applicable]

Invitation for Tender No: **DPSESP/01/2025**

Tender Package No **WD-4 & WD-5**

Date: **04.09.2025**

Lot No. (when applicable) *[Lot No]*

A. Proposed Position (tick the relevant box)		
☐ Construction Project Manager	☐ Prime Candidate	☐ Alternative Candidate
☐ Key Personnel	☐ Prime Candidate	☐ Alternative Candidate
B. Personal Data		
Name		
Date of Birth		
Years overall experience		
National ID Number		
Years of employment with the Tenderer		
Professional Qualifications:		
1.		
C. Present Employment <i>[to be completed only if not employed by the Tenderer]</i>		
Name of Procuring Entity (working under):		
Address of Procuring Entity (working under):		
Present Job Title:		
Years with present Procuring Entity:		
Tel No:	Fax No:	e-mail address:
Contact <i>[manager/personnel officer]</i> :		
D. Professional Experience		
Summarise professional experience over the past twenty years, in reverse chronological order. Indicate particular technical and managerial experience relevant to the project.		

	From	To	Company / Project / Position / Relevant technical and management experience.
1			
2			

Signature:	<i>[insert signature of authorized representative of the Tenderer]</i>
Name:	<i>[insert full name of signatory with National ID Number]</i>
In the capacity of:	<i>[insert capacity of signatory]</i>
Duly authorized to sign the Tender for and on behalf of the Tenderer	



Bank Guarantee for Tender Security (Form PW3A-6)

[This is the format for the Tender Security to be issued by any scheduled Bank of Bangladesh in accordance with ITT Clause 35 & 36]

Invitation for Tender No: **DPSESP/01/2025**

Date: 05.09.2025

Tender reference No: **27.24.0000.078.014.001.25.590**

Date: 04.09.2025

Lot No (when applicable)
To:

[Name and address of the Procuring Entity]

TENDER GUARANTEE No: [insert number]

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 execution of the Works of *[description of works]* under the above Invitation for Tenders (hereinafter called "the ITT").

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 unconditionally 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 Notification of Award (NOA) within the period as stated under ITT; or
- c. failed to furnish Performance Security within the period stipulated in the NOA; or
- d. refused to sign the Contract Agreement by the time specified in the NOA; or
- e. did not accept the correction of the Tender price following the correction of the arithmetic errors as stated under ITT 58.1.

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.

Signature

Signature



Letter of Commitment for Bank's Undertaking for Line of Credit (Form PW3A-7)

(This is the format for the Credit Line to be issued by any scheduled Bank of Bangladesh in accordance with ITT Clause 32.1(d))

Invitation for Tender No: **DPSESP/01/2025**

Date: 05.09.2025

Tender reference No: **27.24.0000.078.014.001.25.590**

Date: 04.09.2025

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 "Taking-Over Certificate" by the Procuring Entity.

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

Signature

Signature

Notification of Award (Form PW3A-8)

Memo No.:

Date:

To:

[Name of Contractor]

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

You are thus requested to take following actions:

- i. accept in writing the Notification of Award within seven (7) working days of its issuance in accordance with ITT Clause 67
- ii. furnish a Performance Security in the form as specified and in the amount of Tk [state amount in figures and words], within fourteen (14) days of acceptance of this Notification of Award but not later than [specify date], in accordance with ITT Clause 68 & 69,
- iii. sign the Contract within twenty-eight (28) days of issuance of this Notification of Award but not later than [specify date], in accordance with ITT Clause 72.

You may proceed with the execution of the Works only upon completion of the above tasks. You may also please note that this Notification of Award shall constitute the formation of this Contract which shall become binding upon you.

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

Signed

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

Date:



Contract Agreement (Form PW3A-9)

THIS AGREEMENT made the [day] day of [month][year] between [name and address of Procuring Entity] (hereinafter called "the Procuring Entity") of the one part and [name and address of Contractor] (hereinafter called "the Contractor") of the other part:

WHEREAS the Procuring Entity invited Tenders for certain works, viz, [brief description of works] and has accepted a Tender by the Contractor for the execution of those works 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 Notification of Award
 - (c) the completed Tender and the Appendix to the Tender
 - (d) the Particular Conditions of Contract
 - (e) the General Conditions of Contract
 - (f) the Technical Specifications
 - (g) the General Specifications
 - (h) the Drawings
 - (i) the priced BOQ and the Schedules
 - (j) any other document listed in the PCC forming part of the Contract.
3. In consideration of the payments to be made by the Procuring Entity to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Procuring Entity to execute and complete the works and to remedy any defects therein in conformity in all respects with the provisions of the Contract.
4. The Procuring Entity hereby covenants to pay the Contractor in consideration of the execution and completion of the works 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 Procuring Entity For the Contractor

Signature

Name

National ID No.

Title

In the presence of Name

Address

Bank Guarantee for Performance Security (Form PW3A-10)

[This is the format for the Performance Security to be issued by any scheduled Bank of Bangladesh in accordance with ITT Clause 68, 69, 70 & 71]

Contract No: [insert reference number]

Date: [insert date]

To:

[insert Name and address of Procuring Entity]

PERFORMANCE GUARANTEE No: [insert number]

We have been informed that [name of Contractor] (hereinafter called "the Contractor") has undertaken, pursuant to Contract No [insert reference number of Contract] dated [insert date of Contract] (hereinafter called "the Contract"), the execution of works [description of works] 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 Contractor, we [name of Bank] hereby irrevocably unconditionally 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 Contractor 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.

Signature

Signature



Bank Guarantee for Advance Payment (Form PW3A-11)

[Not applicable in this tender]

[This is the format for the Advance Payment Guarantee to be issued by any scheduled Bank of Bangladesh in accordance with GCC Clause 73]

Contract No: [insert reference number]

Date: [insert date]

To:

[insert Name and address of the Procuring Entity]

ADVANCE PAYMENT GUARANTEE No: [insert number]

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

Furthermore, we understand that, according to your Conditions of Contract under GCC Clause 73, the Advance Payment on Contract must be supported by a Bank Guarantee.

At the request of the Contractor, we [insert name of Bank] hereby irrevocably unconditionally 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 Contractor 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 Procuring Entity and the Contractor, 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.

Signature

Signature

Bank Guarantee for Retention Money Security (Form PW3A-12)

[This is the format for the Retention Money Guarantee to be issued by any scheduled Bank of Bangladesh in accordance with GCC Clause 70]

Demand Guarantee

[Bank's Name, and Address of Issuing Branch or Office]

Beneficiary: [insert Name and Address of the Procuring Entity]

Date: [insert date]

RETENTION MONEY GUARANTEE No.: [insert number]

We have been informed that [insert name of Contractor] (hereinafter called "the Contractor") has entered into Contract Number [insert reference number of the Contract] dated [insert date] with you, for the execution of [insert name of Contract and brief description of Works] (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, when the Taking-Over Certificate has been issued for the Works and the first half of the Retention Money has been certified for payment, payment of Tk. [insert the amount of the second half of the Retention Money] which becomes due after the Defects Liability Period has passed and certified in the form of Defects Correction Certificate, is to be made against a Retention Money Guarantee.

At the request of the Contractor, we [insert name of Bank] hereby irrevocably unconditionally undertake to pay you any sum or sums not exceeding in total an amount of Tk. [insert amount in figures] (Taka [insert amount in words]) upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation under the Contract because the Contractor failed to properly correct the defects duly notified in respect of the Works.

It is a condition for any claim and payment under this guarantee to be made that the payment of the second half of the Retention Money referred to above must have been received by the Contractor on its account number [insert A/C no] at [name and address of Bank].

This guarantee is valid until [insert the date of validity of Guarantee that being twenty-eight (28) days beyond the Defects Liability Period]. Consequently, we must receive at the above-mentioned office any demand for payment under this guarantee on or before that date.

Signature

Signature

Section 6. Bill of Quantity (BOQ)

Lot-A: South Zone (S&D Division, Pallabi, Kafrul, Eastern Housing & Joarshahara)

Tender No.: DPSEP/01/2025

Identification Reference No.: 27.24.0000.078.014.001.25.590

Date: 04.09.2025

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
1	PG Clamp	Nos.	126		
	Outdoor Terminating Kits:				
2	Installation of Overhead Cable Line Terminating by heat shrinkable cable termination kits including supply of 1 set single and/or Tri hole rain skirt (as required and applicable) for 3 core Copper/Al Cable which includes Cable kit mounting channel, fixing accessories, cable guard etc. as per approval and instruction given by the engineer in Charge.				
	i) 11 kV 3-Core Copper/Al, Outdoor Termination Kits.	Set	42		
	Indoor Termination Kits:				
3	Installation of Switchgear Terminating by heat/cold shrinkable cable jointing kits as per approval and instruction given by the engineer-in-Charge.				
	i) 11 kV 3-Core Copper/Al, Indoor Termination Kits.	Set	42		
	ii) 33 kV Cable 1-Core Copper/Al Cable (with/without GIS)	Nos.	33		
	Installation of Straight Through Joint:				
4	Preparation of jointing kit the making of straight through joint between two U/G Cable by using cold shrink/heat shrink/hot pouring/cold pouring cable jointing kits, etc. All other materials such as keroshine oil, cotton etc. are to be supplied by the contractor. All works shall be as per direction of Engineer-in-charge.				
	i) 11 kV 3-Core Copper/Aluminum straight through joint	Set	86		
	ii) 33 kV 1-Core Copper/Al Cable straight through joint	Nos.	45		
5	A) Breaking of pucca surface: Includes breaking out of pucca surface of dimension given by the Engineer in charge and as per his instruction. Includes debris cleaning and water spray, temporary repairs to road surface until attended to by the road authority.	Sq. m	21822		

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	B) Excavation and back-filling:				
6	i) Excavation: The excavation of a cable trench of dimensions given by the Engr. By excavation soil, as per requirement of wide and depth, using checkered plates and safety barrier, includes debris cleaning and water spray, temporary repairs to road surface until attended to by the road authority and also bailing/pumping of water as necessary, as per instruction of the Engr./Consultant. Immediately, all rubbish/soil should be removed from the site. All debris shall be cleared from the site to any suitable location.	Cum	21822		
7	Transportation & Laying: Transportation & laying all size of underground cable: i) This item includes for transportation of the UG cable up to site, mounting of cable drum on drum jacks, pulling out of cable on rollers and the installation of the UG cable into the cable trench (through road crossing pipes if necessary); ii) Laying of cable protective slab on top, sand, protective marking tape, etc. iii) installation of routs/ joint/ markers including supply of T block and necessary all items to install it and location of joint bays including laying of cable protective slab on both sides and tops, sand, protective marking tape as per requirement. All in accordance with the specifications and to the direction of the Engineer in charge.				
	I) 11/0.4/0.23 kV U/G cable including consumer service drop (Circuit Basis, All size)	Meter	500		
	II) Laying of 11 kV, 3-Core Copper/Al Cable	Meter	43646		
	III) 33 kV Cable 1-Core Copper/Al Cable	Meter	26550		
8	Supply and laying of sand: This item includes for supply and laying of viti sand (making) at least 200 mm, on sand bed with watering & Properly compacted before laying of cable, over the cable in accordance with the specification & drawing and to the direction of Engr./Conslt. Also includes disposal of surplus soil/debris at contractor's own cost.	Cum	21822		

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
9	a) Supply, laying and carrying of RCC blocks; Reinforce Cement concrete works (1:1.5:3) having with cement (conforming to BDS 232)m best quality quarse sand (50%) quality of local sand (F.M-1.5) and 50% quality of sylhet sand down grade picked jhama chips including breadding chips and screening shuttering, supplying polyethylene sheet for making , mixing the aggregates with mixer machine, casting in forms, compacting by cont. 23 vibrator machine and curing at least 28 days (Excluding the cost of reinforcement and fabrication). The reinforcement bar to be used in the for making such RCC slab is 3/8" placing 150 mm a part and the thickness of the block will be at least 63mm. (PWD rate Schedule)	Cum	1275		
10	Supply, Cutting, Bending and fixing of MS Rod (PWD) Rate Schedule.	Quintal	1378		
11	Supply, Carrying & Laying of GI/RCC/PVC Pipe. Includes Supplying, Carrying and Laying of GI/ RCC/PVC Pipe to Cross the Road or any other Places along the Cable trenches as per direction of the Engineer in Charge.				
	I) Minimum inner dia. 100 mm PVC Pipe.	Meter	2538		
	II) Minimum inner dia. 150mm PVC Pipe.	Meter	4780		
12	HDD for Railway / Road Crossing. The Rate includes delivery and removal from site of hydraulic boring machine which is able to bore holes and bore shaft as per requirements. It also includes back filling as per direction and standard specification, removal from site and disposal of any surplus soil, resettlement of all made up surfaces and installation of carrier pipes as per direction of the Engr/ Consultant. (Pipes and Connectors to be supplied by contractor) the supply and installation of draw wires and to temporary sealing of carrier pipes to the direction of Engr/Consultant Puls all Necessary work to and easy installation of Cable. (HDD=Horizontal Directional Drilling).				
	I) Minimum 76 mm Dia. (OPUC Cable)	Meter	142		
	II) Minimum 160 mm Dia. (Upto-500 mm Cable, 1- Core /3- core)	Meter	3368		

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
13	Supply, Carrying & Laying of Pipe for HDD. Includes Supplying, Carrying and Laying of Pipe with all necessary joints and accessories for HDD to Cross the Road or any other Places along the Cable trenches as per direction of the Engineer in Charge.				
	1) Minimum 160 mm Outside Dia. HDPE Pipe	Meter	3368		
	Installation of RMU (3-Unit/5-Unit/7-Unit RMU)				
	A. Electrical Works (Detail describe below)				
	1. Carrying of RMU from ware house to site, loading, unloading, installation according to design, drawing greezing, fixing alignment, leveling, bolting, grounding, wiring etc. RMU carrying, recovery of existing RMU and return to store and related civil works for RMU pad/base as required. Including Replacement/Reinstallation of CT's as per instruction of Project Director or it's representative.				
	2. Termination of 11 kV cable, cold shrink/heat shrinking, termination kit, carrying of kit to site from ware house and installation of boots for 12 kV SP6 insulated 5(Five)/3(three)/7(seven) function outdoor compatible compact Ring Main Unit (RMU) suitable for 11 kV, 3- core XLPE(Cu/Al), 185sqmm/300sqmm cable.	Job	29		
	3. Grounding of each RMU includes 4 nos. boring, Each 100 ft. boring includes following materials.				
	a. 16 mm diameter, 2 meter length, 4 nos. copper grounding rod will be supplied by contractor.				
	b. There shall be 4 nos. boring. Necessary earth cu wire will be supplied by Desco. Under each 100 ft. boring copper wire must be welded/joint properly to copper grounding rod. Also supply of necessary Nut-bolts and fabricated materials. After completion of grounding:				
	4. 11 kV cable laying in cable trance.				
	5. Testing, Commissioning and Energization of RMU.				

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	B. Civil Works base without room (Detail describe below)				
	1. Mobilization and cleaning site before commencing actual Physical work and during contract period and demobilization after completion of the works under contract to be accepted by the Project Director or it's representative. This work shall also cover cleaning and clearing, cutting or filling, dressing the project area on and in the ground to an extent that all the events of works of the project can be executed smoothly in a working environment with a particular attention on safety and security in all respects, and to stockpile the end outcome to a place for disposal agreed by the Project Director or it's representative, where, payments are to be based on ground area determined by the Project Director or it's representative and be proportionate to the percentage progress of work under contract as a whole in all respects and approved by the Project Director or it's representative. [Quantity: 1 L.S. Job for 1 Set RMU Installation works]				
14	2. Earth work in excavation in all kinds of soil for foundation trenches including layout, providing center lines, local bench mark pillars, levelling, ramming and preparing the base, fixing bamboo spikes and marking layout with chalk powder, providing necessary tools and plants, protecting and maintaining the trench dry etc., stacking, cleaning the excavated earth at a safe distance out of the area enclosed by the layout etc. all complete and accepted by the Project Director or it's representative, subject to submit method statement of carrying out excavation work to the Project Director or it's representative for approval. However, engineer's approval shall not relieve the contractor of his responsibilities and obligations under the contract. 2.1. Earthwork in excavation in foundation trenches up to 1.5 m depth and maximum 10 m lead. [Quantity: 6.38 Cu.M for 1 Set RMU Installation works]	Job	29		

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	3. Sand filling in foundation trenches and plinth with sand having min. F.M. 1.2 in 150 mm in layers including leveling, watering and compaction to achieve minimum dry density of 95% with optimum moisture content (Modified proctor test) by ramming each layer up to finished level as per design supplied by the design office only, all complete and accepted by the Project Director or it's representative. <i>[Quantity: 0.64 Cu. M for 1 Set RMU Installation works]</i>				
	4. One layer brick flat soling in foundation or in floor with first class/picked jhama bricks (BDS 208) including preparation of bed and filling the interstices with local sand, leveling etc. complete and accepted by the Project Director or it's representative. <i>[Quantity: 4.32 Sq. M for 1 Set RMU Installation works]</i>				
	5. Mass concrete (1:2:4) in foundation or in floor with cement, sand (F.M. 1.2) and picked jhama brick chips including breaking of chips, screening, mixing, laying, compacting to required level and curing for at least 7 days including the supply of water, electricity, costs of tools & plants and other charges etc. all complete and accepted by Project Director or it's representative. (Cement: CEM-II/B-M)				
	5.1. Mass concrete in foundation (1:2:4) with brick chips and local sand of F.M. 1.2. <i>[Quantity: 0.31 Cu. M for 1 Set RMU Installation works]</i>				
	6. Supplying and laying of single layer polythene sheet weighing one kilogram per 6.5 square meter in floor or anywhere below cement concrete complete in all respect and accepted by Project Director or it's representative. <i>[Quantity: 4.05 Sq. M for 1 Set RMU Installation works]</i>				

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	7. Brick works with first class bricks with cement sand (F.M. 1:2) mortar (1:6) in foundation and plinth, filling the joints/interstices fully with mortar, racking out the joints, cleaning and soaking the bricks at least for 24 hours before use and curing at least for 7 days etc. all complete including cost of water, electricity and other charges and accepted by the Project Director or it's representative. (Cement: CEM-II/B-M) <i>[Quantity: 3.70 Cu. M for 1 Set RMU Installation works]</i>				
	8. Minimum 12 mm thick cement sand (F.M. 1:2) plaster with neat cement finishing to plinth wall with cement (1:4) up to 150 mm below ground level including washing of sand, finishing the edges and corners and curing at least for 7 days, cost of water, electricity, scaffolding and other charges etc. all complete in all respect as per drawing and accepted by the Project Director or it's representative. (Cement: CEM-II/B-M) ground floor. <i>[Quantity: 25.09 Sq. M for 1 Set RMU Installation works]</i>				
	Installation of RMU and Construction of RMU Room with foundation for 1 No 5 Unit RMU				
	A. Electrical Works (Detail describe below)				
	1. Carrying of RMU from ware house to site, loading, unloading, installation according to design, drawing greezing, fixing alignment, leveling, bolting, grounding, wiring etc. RMU carrying, recovery of existing RMU and return to store and related civil works for RMU pad/base as required. Including Replacement/Reinstallation of CT's as per instruction of Project Director or it's representative.				

Procurement of works and related service for Installation, Testing & Commissioning of 33 kV and 11 kV, Underground Cable-Lines

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	2. Termination of 11KV cable, cold shrink/heat shrinking, termination kit, carrying of kit to site from ware house and installation of boots for 12 kV SP6 insulated 5(Five)/3(three)/7(seven) function outdoor compatible compact Ring Main Unit (RMU) suitable for 11 kV, 3- core XLPE(Cu/Al), 185sqmm / 300sqmm cable.				
	3. Grounding of each RMU includes 4 nos. boring. Each 100 ft. boring includes following materials.				
	a. 16 mm diameter, 2 meter length, 4 nos. copper grounding rod will be supplied by contractor.	Job.	5		
	b. There shall be 4 nos. boring. Necessary earth cu wire will be supplied by Desco. Under each 100 ft. boring copper wire must be welded/joint properly to copper grounding rod. Also supply of necessary Nut-bolts and fabricated materials. After completion of grounding:				
	4. 11KV cable laying in cable trance.				
	5. Testing, Commissioning and Energization of RMU.				
	B. Civil Works for RMU room (Detail describe below)				
	1. Mobilization and clearing site before commencing actual physical work and during contract period and demobilization after completion of the works under contract to be accepted by the Engineer-in-charge. This work shall also cover cleaning and clearing, cutting or filling, dressing the project area on and in the ground to an extent that all the events of works of the project can be executed smoothly in a working environment with a particular attention on safety and security in all respects, and to stockpile the end outcome to a place for disposal agreed by the Engineer-in-charge, where, payments are to be based on ground area determined by the Engineer-in-charge and be proportionate to the percentage progress of work under contract as a whole in all respects and approved by the Engineer-in-charge. [Quantity: 1 L.S. Job for Room of 1 Set RMU Installation works]				

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
15	2. Earth work in excavation in all kinds of soil for foundation trenches including layout, providing center lines, local bench mark pillars, levelling, ramming and preparing the base, fixing bamboo spikes and marking layout with chalk powder, providing necessary tools and plants, protecting and maintaining the trench dry etc., stacking, cleaning the excavated earth at a safe distance out of the area enclosed by the layout etc. all complete and accepted by the Engineer-in-charge, subject to submit method statement of carrying out excavation work to the Engineer-in-charge for approval. However, engineer's approval shall not relieve the contractor of his responsibilities and obligations under the contract.	Job	5		
	2.1 Earthwork in excavation in foundation trenches up to 1.5 m depth and maximum 10 m lead. [Quantity: 10.09 Cu.M for Room of 1 Set RMU Installation works]				
	3. Earth filling in foundation trenches and plinth in 150 mm layer with earth available within 90 m of the building site to achieve minimum dry density of 95% with optimum moisture content (Modified proctor test) including carrying, watering, leveling, dressing and compacting to a specified percentage each layer up to finished level etc. all complete and accepted by Engineer-in-charge. [Quantity: 5.05 Cu. M for 1 Set RMU Installation works]				
	4. Sand filling in foundation trenches and plinth with sand having minimum F.M. 0.5 in 150 mm layers including leveling, watering and compaction to achieve minimum dry density of 95% with optimum moisture content (Modified proctor test) by ramming each layer up to finished level as per design supplied by the design office only, all complete and accepted by the Engineer-in-charge. [Quantity: 10.71 Cu. M for 1 Set RMU Installation works]				

Procurement of works and related service for Installation, Testing & Commissioning of 23 kV and 11 kV, Underground Cable Line.

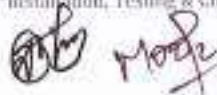
Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4 * 5
	5. One layer brick flat soling in foundation or in floor with first class/picked jhama bricks (BDS 208) including preparation of bed and filling the interstices with local sand, leveling etc. complete and accepted by the Engineer-in-charge. [Quantity: 23.42 Sq. M for Room of 1 Set RMU Installation works] 6. Mass concrete (1:2:4) in foundation or in floor with cement, sand (F.M. 1.2) and picked jhama brick chips including breaking of chips, screening, mixing, laying, compacting to required level and curing for at least 7 days including the supply of water, electricity, costs of tools & plants and other charges etc. all complete and accepted by Engineer-in charge. (Cement: CEM-II / B-M) 6.1 Mass concrete in foundation (1:2:4) with brick chips and local sand of F.M. 1.2. [Quantity: 1.53 Cu. M for Room of 1 Set RMU Installation works] 7. Supplying and laying of single layer polythene sheet weighing one kilogram per 6.5 square meter in floor or anywhere below cement concrete complete in all respect and accepted by Engineer-in-charge. [Quantity: 26.77 Sq. M for Room of 1 Set RMU Installation works] 8. Brick works with first class bricks with cement sand (F.M. 1.2) mortar (1:6) in foundation and plinth, filling the joints/interstices fully with mortar, racking out the joints, cleaning and soaking the bricks at least for 24 hours before use and curing at least for 7 days etc. all complete including cost of water, electricity and other charges and accepted by the Engineer-in-charge. (Cement: CEM-II/B-M) [Quantity: 3.39 Cu. M for Room of 1 Set RMU Installation works]				

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Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	9. 125 mm brick works with first class bricks with cement sand (F.M. 1:2) mortar (1:4) and making bond with connected walls including necessary scaffolding, raking out joints; cleaning and soaking the bricks for at least 24 hours before use and washing of sand, curing at least for 7 days in all floors including cost of water, electricity and other charges etc. all complete and accepted by the Engineer-in-charge. (Cement: CEM-II/B-M) [Quantity: 55.36 Sq. M for Room of 1 Set RMU Installation works] 10. Reinforced cement concrete works with minimum cement content relates to mix ratio 1:1.5:3 having maximum water cement ratio = 0.40 and minimum f_{cr} = 33.5 MPa, satisfying a specified compressive strength f_c = 25 MPa at 28 days on standard cylinders as per standard practice of Code ACI /BNBC, Cement conforming to BDS EN-197-1-CEM-I, 52.5N, best quality Sylhet sand or coarse sand of equivalent F.M. 2.2 and 20 mm down well graded stone chips conforming to ASTM C-33 (Aggregate grading as per table shown in technical specification), conducting necessary tests, making and placing shutter in position and maintaining true to plumb, making shutter water-tight properly, placing reinforcement in position; mixing with standard mixer machine with hopper, fed by standard measuring boxes, casting in forms, compacting by vibrator machine and curing at least for 28 days, removing centering-shuttering after specified time approved; including cost of water, electricity, other charges etc. all complete, approved and accepted by the Engineer-in-charge. (Rate is excluding laboratory test fees, the cost of reinforcement and its fabrication, placing, binding etc. and the cost of shuttering & centering) 10.1 Floor/ roof slab, T-beam, L-beam and rectangular beam, tie beam, lintel, stair case slab and steps etc. up to ground floor. [Quantity: 8.61 Cu. M for Room of 1 Set RMU Installation works]				



Procurement of works and related service for Installation, Testing & Commissioning of 33 kV and 11 kV Underground Cable Line


Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	11. FORMWORK (Wooden) for boundary wall, gate, Tie beam & lintels centry post etc. [Quantity: 63.18 Sq. M for Room of 1 Set RMU Installation works] 12. Grade 400 (B400DWR / B420DWR: complying BDS ISO 6935-2:2016 / ASTM A615) ribbed or deformed bar produced and marked according to Bangladesh standard, with minimum yield strength, f_y (ReH)= 400 MPa but f_y not exceeding 480 MPa and whatever is the actual yield strength within allowable limit as per BNBC/ ACI 318, the ratio of ultimate tensile strength f_u to yield strength f_y, shall be at least 1.25 and minimum elongation after fracture and minimum total elongation at maximum force is 17% and 8% respectively : up to ground floor. [Quantity: 11.68 Quintal for Room of 1 Set RMU Installation works] 13. Supplying, fitting and fixing M.S. door shutters made with 38 mm x 38 mm x 6 mm angle outer frame; inner member 25 mm x 6 mm F.I. bar, cladding with 16 BWG M.S. sheet, 04 nos 75 mm long hinge, 02 nos. locking arrangement with 50 mm x 50 mm x 6 mm M.S. angle chowkat including all charges for welding, riveting etc. including cost of supplying all essential fittings like iron hinges, socket bolts, clamps, for fitting and fixing the frame, making necessary holes in brick walls and R.C.C works and fitting with C.C. (1:2:4) and mending good the damages including all cost of carriage, workshop charges, electricity and labour for fittings, fixing, curing etc. all complete and accepted by the Engineer-in-charge. (Rate is excluding the costs of painting) [Quantity: 5.86 Sq. M for Room of 1 Set RMU Installation works]				

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Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	14. Supplying, fitting and fixing window grills of any design made with 20 mm x 5 mm F.I. bar @ 100 mm c/c as inner and outer section; including fabricating, welding, cost of electricity and tools and plants, finished with anti-corrosive painting (Red-Oxide), carriage, cutting grooves, mending good the damages etc. complete for all floors accepted by the Engineer-in-charge. (Total weight per sqm should be approx. 11 kg. and add or deduct. @ 100.00 for each kg/sqm excess or less respectively) [Quantity: 2.83 Sq. M for Room of 1 Set RMU Installation works] 15. Supplying fitting and fixing of aluminium fixed louver as per the U.S. Architectural Aluminium Manufacturer's Association (AAMA) standard specification and BDS 1879:2014 having minimum 1.2 mm thick wall frame (size 76.20 mm, 38.10 mm, .564 kg/m), 1.5 mm thick louver (size 55.02 mm, 37.39 mm, 0.281 kg/m) and minimum 1.2 mm thick louver outer section (size 39.67 mm, 15.06 mm) and inner inclined aluminium louver section fixed with above mentioned frame and all aluminium members will be anodized to aluminium bronze/silver/ss/black colour with a coat not less than 15 microns in thickness or powder coated to any colour with a coat not less than 25 microns in thickness and density of 4 mg per square cm etc. including all accessories, neoprene, sealant, nuts and bolts etc. complete in all respect as per drawing and accepted by the Engineer-in-charge. [Quantity: 0.74 Sq. M for Room of 1 Set RMU Installation works]				

Procurement of works and related service for Installation, Testing & Commissioning of 33 KV and 11 KV, Underground Cable Line.

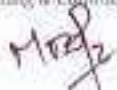
Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	16. Supplying, fitting and fixing of aluminium sliding window as per the U.S. Architectural Aluminium Manufacturer's Association (AAMA) standard specification and BDS 1879:2014 having minimum 1.2 mm thick outer bottom (size 75.50 mm, 32 mm, 0.605 kg/m), minimum 1.2 mm thick outer top (size 75.50 mm, 28.50 mm, 0.705 kg/m), minimum 1.2 mm thick shutter top (size 33 mm, 26.80 mm, 0.42 kg/m), minimum 1.2 mm thick shutter bottom (size 60mm, 24.40 mm, 0.589 kg/m), minimum 1.2 mm thick outer side (size 75.50 mm, 19.90 mm, 0.52 kg/m), minimum 1.2 mm thick shutter lock (size 49.20 mm, 25.80 mm, 0.543 kg/m) and minimum 1.2 mm thick inter lock (size 34.40 mm, 32.13 mm, 0.562 kg/m) sections all aluminium members will be anodized to aluminium bronze/silver/ss/black colour with a coat not less than 15 microns in thickness or powder coated to any colour with a coat not less than 25 microns in thickness and density of 4 mg per square cm etc. including all accessories like sliding door key lock, sliding door wheel, sliding door mohar, sliding door neoprene, bolts and nuts including sealants, keeping provision for fitting 5 mm thick glass including labour charge for fitting of accessories, making grooves and mending good 16.1. size up to: 1500 mm x 1400 mm. [Quantity: 2.09 Sq. M for Room of 1 Set RMU Installation works] 17. Supplying, fitting and fixing in Aluminium door frames, windows, partitions and curtain wall distortion free glass of approved quality and shade including cost of fitting fixing all necessary accessories etc. complete in all respect as per drawing and accepted by the Engineer-in-charge 17.1. 5 mm thick clear glass [Quantity: 2.09 Sq. M for Room of 1 Set RMU Installation works]				

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	18. Minimum 12 mm thick cement sand (F.M. 1:2) plaster (1:4) with fresh cement to both inner and outer surface of wall, finishing the corner and edges including washing of sand, cleaning the surface, curing at least for 7 days, cost of water, electricity, scaffolding and other charges etc. all complete in all respect as per drawing and accepted by the Engineer-in-charge. (Cement: CEM-II/B-M). Ground floor. [Quantity: 158.78 Sq. M for Room of 1 Set RMU Installation works]				
	19. Minimum 12 mm thick cement sand (F.M. 1:2) plaster with neat cement finishing to plinth wall with cement (1:4) up to 150 mm below ground level including washing of sand, finishing the edges and corners and curing at least for 7 days, cost of water, electricity, scaffolding and other charges etc. all complete in all respect as per drawing and accepted by the Engineer-in-charge. (Cement: CEM-II/B-M). Ground floor. [Quantity: 38.30 Sq. M for Room of 1 Set RMU Installation works]				
	20. Providing drip course or nosing at the edge of sunshade or cornice with cement sand (F.M. 1:2) mortar (1:2) with fresh cement, curing at least for 7 days, cost of water, electricity, scaffolding and other charges etc. all complete in all respect as per drawing and accepted by the Engineer-in-charge. [Quantity: 3.51 RM for Room of 1 Set RMU Installation works]				



Procurement of works and related service for Installation, Testing & Commissioning of 33 kV and 11 kV, Underground Cable Lays.






Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	21. Exterior standard acrylic emulsion paint(weather coat) of approved best quality and color having water resisting properties and resistance properties against fungi, fading & flaking delivered from authorized local agent of the manufacturer in a sealed container; applying to exterior surface with surface preparation including cleaning, drying, making free from dirt, grease, wax, removing all chalked and scaled materials, fungus, mending good the surface defects using sand paper and necessary scaffolding; applying necessary exterior sealer of specified brand on prepared surface; then applying necessary exterior putty of specified brand for levelling, spot filling, crack filling and cutting by sand paper/zero water paper; finally applying 2 coats of exterior emulsion paint spreading by brush/roller/spray & necessary scaffolding etc. up to desired finishing, elapsing specified time for drying or recoating; all complete in all floors and accepted by the Engineer-in-charge. [Quantity: 95.95 Sq. M for Room of 1 Set RMU Installation works]				
	22. Standard synthetic enamel paint of approved best quality and colour delivered from authorized local agent of the manufacturer in a sealed container, having high water resistance; high bond ability, flexibility property; using specified brand thinner applying to metallic or wooden surface by brush/roller/spray in 2 coats over single coat anti corrosive coating including cleaning, drying, making free from dirt, grease, wax, removing all chalked and scaled materials, all complete in all floors and accepted by the Engineer-in-charge. [Quantity: 8.69 Sq. M for Room of 1 Set RMU Installation works]				



Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	23. Approved best quality and colour synthetic polyvinyl distemper/plastic paint delivered from authorized local agent of the manufacturer in a sealed container, lying to wall and ceiling with surface preparation including cleaning drying, making free from dirt, grease, wax, removing all chalked and scaled materials, fungus, mending good the surface defects using sand paper and necessary scaffolding; applying 1 coat of interior sealer of specified brand on prepared surface; then applying 1 coat of interior putty of specified brand for levelling, spot filling, crack filling and cutting by sand paper/zero water paper; finally applying 2 coats of synthetic polyvinyl distemper spreading by brush/roller/spray & necessary scaffolding etc. up to desired finishing, elapsing specified time for drying or recoating; all complete in all floors and accepted by the Engineer-in-charge. [Quantity: 68.21 Sq.M for Room of 1 Set RMU Installation works]				
	24. 50 mm dia. uPVC B grade rain water, soil, waste and ventilation pipe. [Quantity: 5.00 RM for Room of 1 Set RMU Installation works]				
	25. Concealed conduit wiring for following point looping at the switch board with earth terminal including circuit wiring with 1C-2x1.5 sq.mm PVC insulated and sheathed standard cable (BYM) & 1.5 sq.mm PVC insulated green/white coloured ECC wire (BYA) through PVC conduit complete with 18 SWG GP sheet, switch board and pull box with 3mm thick ebonite sheet cover, 5 amps piano switch, ceiling rose, fixing materials, etc. as required including mending the damages good (all electrical contacts shall be brass/copper) with cables manufactured by Eastern cable/BRB cable/Paradise cable or equivalent approved by the Engineering-in-Charge: a) Light/Exhaust or wall bracket point b) Fan point c) 2 pin + 3 Pin 5-amps. Socket point with control switch board				



Statement of works and related service for Installation, Testing & Commissioning of 33 kV and 11 kV, Underground Cable Line









Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	26. 4 gang switch fitting and fixing of super star brand all complete and approved by the Engineer. [Quantity: Each for Room of 1 Set RMU Installation works]				
	27. 1C-2x1.5sqmm (BYA) cable with 1.5sqmm (BYA) ECC wire through PVC pipe of minimum inner Dia. 16 mm having wall thickness of 1.5 mm [Quantity: 100.00 RM for Room of 1 Set RMU Installation works]				
	28. Providing & fixing of 1x4' tube light fitting with T5 tube consisting necessary wiring with 2x0.4 sq.mm PVC insulated (stranded) flexible wire, earth terminal etc. complete and approved by the Engineer. [Quantity: Each for Room of 1 Set RMU Installation works]				
	29. 38 mm thick artificial patent stone (1:2:4) flooring with cement, best quality coarse sand (50% quantity of Sylhet sand or coarse sand of equivalent F.M. 2.2 and 50% best local sand of FM 1.2) and 12 mm down well graded brick chips including breaking chips, screening, laying the concrete in alternate panels, compacting and finishing the top with neat cement and curing at least 7 days. [Quantity: 26.48 Sq. M for Room of 1 Set RMU Installation works]				
	30. Including all accessory Materials & Electricity Connection [Quantity: One Job for Room of 1 Set RMU Installation works]				

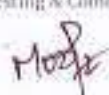
Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6=4*5
	C. Construction of RMU Foundation				
	1. Earth work in excavation in all kinds of soil for foundation trenches including layout, providing center lines, local bench mark pillars, levelling, ramming and preparing the base, fixing bamboo spikes and marking layout with chalk powder, providing necessary tools and plants, protecting and maintaining the trench dry etc., stacking, cleaning the excavated earth at a safe distance out of the area enclosed by the layout etc. all complete and accepted by the Engineer in-charge, subject to submit method statement of carrying out excavation work to the Engineer-in-charge for approval. However, engineer's approval shall not relieve the contractor of his responsibilities and obligations under the contract.				
	1.1. Earthwork in excavation in foundation trenches up to 1.5 m depth and maximum 10 m lead. [Quantity: 6.38 Cu. M for 1 Set RMU Foundation works]				
	2. Earth filling in foundation trenches and plinth in 150 mm layer with earth available within 90 m of the building site to achieve minimum dry density of 95% with optimum moisture content [Modified proctor test] including carrying watering, leveling, dressing and compacting to a specified percentage each layer up to finished level etc. all complete and accepted by Engineer-in-charge. [Quantity: 3.19 Cu. M for 1 Set RMU Foundation works]	Job	5		
	3. Sand filling in foundation trenches and plinth with sand having min. F.M. 1.2 in 150 mm in layers including leveling, watering and compaction to achieve minimum dry density of 95% with optimum moisture content [Modified proctor test] by ramming each layer up to finished level as per design supplied by the design office only, all complete and accepted by the Engineer-in-charge. [Quantity: 0.64 Cu. M for 1 Set RMU Foundation works]				
	4. One layer brick flat soling in foundation or in floor with first class/picked jhama bricks (BDS 208) including preparation of bed and filling the interstices with local sand, leveling etc. complete and accepted by the Engineer-in-charge. [Quantity: 1.25 Sq. M for 1 Set RMU Foundation works]				

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	5. Mass concrete (1:2:4) in foundation or in floor with cement, sand (F.M. 1:2) and picked jhama brick chips including breaking of chips, screening, mixing, laying, compacting to required level and curing for at least 7 days including the supply of water, electricity, costs of tools & plants and other charges etc. all complete and accepted by Engineer-in charge. (Cement: CEM-II / B-M)				
	5.1. Mass concrete in foundation (1:2:4) with brick chips and local sand of F.M. 1:2. [Quantity: 0.21 Cu. M for 1 Set RMU Foundation works]				
	6. Supplying and laying of single layer polythene sheet weighing one kilogram per 6.5 square meter in floor or anywhere below cement concrete complete in all respect and accepted by Engineer-in-charge [Quantity: 13.50 Sq. M for 1 Set RMU Foundation works]				
	7. Brick works with first class bricks with cement sand (F.M. 1:2) mortar (1:6) in foundation and plinth, filling the joints/interstices fully with mortar, racking out the joints, cleaning and soaking the bricks at least for 24 hours before use and curing at least for 7 days etc. all complete including cost of water, electricity and other charges and accepted by the Engineer-in-charge. (Cement: CEM-II/B-M) [Quantity: 3.07 Cu. M. for 1 Set RMU Foundation works]				
	8. Minimum 12 mm thick cement sand (F.M. 1:2) plaster with neat cement finishing to plinth wall with cement (1:4) up to 150 mm below ground level including washing of sand, finishing the edges and corners and curing at least for 7 days, cost of water, electricity, scaffolding and other charges etc. all complete in all respect as per drawing and accepted by the Engineer-in-charge. (Cement: CEM-II/B-M). ground floor [Quantity: 15.06 Sq. M for 1 Set RMU Foundation works]				

Item SL No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	0.415KV Low Tension Distribution Box (LTDB)				
	a. Electrical Works (Detail describe below)				
	1. Supply, carrying of 0.415 kV LTDB to site, fabrication, loading, unloading, installation according to design & drawing, greasing, fixing alignment, leveling, bolting, grounding, wiring etc. including supply of all related accessories as per DESCO's approved design & specification and instruction of Project Director or it's representative.				
	2. General Description: Type tested assembly (TTA) sheet steel clad, dust & vermin proof, tropicalized design outdoor type on a RCC/CC/Brick basement, low tension of free standing, water proof up to IP65 with form of segregation, self-cooling, cubical type switchgear, busbar & other live parts are spaced and insulated according to related IEC standard for 415V 3- p 4- wire 50Hz operation, panel fabrication and environmental management system followed by ISO9001 & ISO14001 respectively.				
	3. Incoming part: 2nos, 3+1 pole 400Amps (Adjustable), breaking capacity 36KA MCCB with electronic trip having adjustable L/S/I (Long, Selective or Instantaneous) protection, European brand, 3-nos phase indicating lamp (R, Y & B) with circuit breaker, 1 set control fuse, 500A TPN+E Cu (99.99%) Busbar with suitable size for multiple incoming cable (not less than 4), both breaker electrically & mechanically interlocked (CO-OC CC-OO), all breaker suitable up to 4C 150sqmm XLPE/PVC Cu cable with proper lugs & other accessories, adequate size to fit in TTA with proper insulation & thermal performance.				



Procurement of works and related service for Installation, Testing & Commissioning of 33 kV and 11 kV, Underground Cable Car

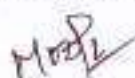

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	4. Outgoing part: 8 nos. 3+1 pole 100Amps MCCB, European brand, 500A TPN+E Cu (99.99%) Busbar with suitable size for multiple outgoing cable (not less than 10), suitable for 7C 10sqmm, 3.5C 35sqmm & 3.5C 50sqmm NYY Cu cable (not greater than 50sqmm) with supply of proper lugs & other accessories; adequate size to fit in TTA with proper insulation & thermal performance. 5. Panel: Materials contain hot-dip galvanized sheet steel, Sheet thickness 2mm (Min), Structure color RAL 7035 Light grey peel finish and plinth color RAL 7012 Basalt grey peel finish. Panel is contained steel M12/M16 bolt to carry with full equipped condition, High quality pad lockable door panel lock, plastic diagram/document case for panel, Ambient temp +3degC to +40degC, uses condition followed by IEC standard, Maximum voltage 1 kV. 6. Documentations: Single line diagram & internal wiring diagram with detailed information, Bill of materials with description/catalogue, Panel design, panel door layout, panel plate layout etc. Each LT Distribution Box shall be provided with a permanent name plate containing Manufacturer's name & Country, Serial Number, Type/Model, Manufacturing date, Contract no, Weight, IP Rating and the name "DESCO". 7. Connection of 0.415 kV & 0.23 kV underground service (10 sq.mm/16 sq.mm/25 sq.mm/35 sq.mm/50 sq.mm or any size up to 50sqmm) cable which will enter and exit from bottom position. 8. Grounding of each LTDB includes 2 nos. boring (100Ft) Each boring includes following materials: a. 16 mm diameter, 2-meter length, 2 nos. copper grounding rod will be supplied by contractor. b. There shall be 2 nos. boring (100Ft). Necessary earth wire will be supplied by DESCO. Under each boring copper wire must be welded/joint properly to copper grounding rod. Also supply of necessary Nut-bolts and fabricated materials.	job	5		

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	9. 0.415 kV & 0.23 kV cable laying in cable trench including supplying of all related Copper materials/accessories for connection (lugs, nuts, bolts, internal cable, etc.)				
	10. Testing, Commissioning and Energization of LTDB.				
	b. Civil Works (Detail describe below)				
	Preparation of LTDB foundation and fencing related works as per drawing & the instruction of Project Director or it's representative of DESCO.				
	1. Mobilization and cleaning site before commencing actual physical work and during contract period and demobilization after completion of the works under contract to be accepted by the Project Director or it's representative. This work shall also cover cleaning and clearing, cutting or filling, dressing the project area on and in the ground to an extent that all the events of works of the project can be executed smoothly in a working environment with a particular attention on safety and security in all respects, and to stockpile the end outcome to a place for disposal agreed by the Project Director or it's representative, where, payments are to be based on ground area determined by the Project Director or it's representative and be proportionate to the percentage progress of work under contract as a whole in all respects and approved by the Project Director or it's representative. [Quantity: 1 LS for 1 Set LTDB Installation works] 2. Earth work in excavation in all kinds of soil for foundation trenches including layout, providing center lines, local bench mark pillars, levelling, ramming and preparing the base, fixing bamboo spikes and marking layout with chalk powder, providing necessary tools and plants, protecting and maintaining the trench dry etc., stacking, cleaning the excavated earth at a safe distance out of the area enclosed by the layout etc. all complete and accepted by the Project Director or it's representative, subject to submit method statement of carrying out excavation work to the Project Director or it's representative for approval. However, engineer's approval shall not relieve the contractor of his responsibilities and obligations under the contract.				



Procurement of works and related services for Installation, Testing & Commissioning of 33 kV and 11 kV, Underground Cable Lines







Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Take	Total Amount in Take
1	2	3	4	5	6 = 4*5
36	2.1. Earthwork in excavation in foundation trenches up to 1.5 m depth and maximum 10 m lead. <i>[Quantity: 3.10 Cu. M for 1 Set LTDB Installation works]</i>	Job	5		
	3. Sand filling in foundation trenches and plinth with sand having min. F.M. 1.2 in 150 mm in layers including leveling, watering and compaction to achieve minimum dry density of 95% with optimum moisture content (Modified proctor test) by ramming each layer up to finished level as per design supplied by the design office only, all complete and accepted by the Project Director or it's representative. <i>[Quantity: 1.0 Cu. M for 1 Set LTDB Installation works]</i>				
	4. One layer brick flat soling in foundation or in floor with first class/picked jhama bricks (BDS 208) including preparation of bed and filling the interstices with local sand, leveling etc. complete and accepted by the Project Director or it's representative. <i>[Quantity: 2.50 Sq. M for 1 Set LTDB Installation works]</i>				
	5. Brick works with first class bricks with cement sand (F.M. 1:2) mortar (1:6) in foundation and plinth, filling the joints/interstices fully with mortar, racking out the joints, cleaning and soaking the bricks at least for 24 hours before use and curing at least for 7 days etc. all complete including cost of water, electricity and other charges and accepted by the Project Director or it's representative. (Cement: CEM-II/B-M) <i>[Quantity: 0.40 Cu. M for 1 Set LTDB Installation works]</i>				
	6. Mass concrete (1:2:4) in foundation or in floor with cement, sand (F.M. 1.2) and picked jhama brick chips including breaking of chips, screening, mixing, laying, compacting to required level and curing for at least 7 days including the supply of water, electricity, costs of tools & plants and other charges etc. all complete and accepted by Project Director or it's representative. (Cement: CEM-II / B-M)				

Item SL No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	6.1. Mass concrete in foundation (1:2:4) with brick chips and local sand of F.M. 1.2. <i>[Quantity: 0.42 Cu. M for 1 Set LTDB Installation works]</i> 7. Supplying and laying of single layer polythene sheet weighing one kilogram per 6.5 square meter in floor or anywhere below cement concrete complete in all respect and accepted by Project Director or it's representative. <i>[Quantity: 3.50 Sq. M for 1 Set LTDB Installation works]</i> 8. Reinforced cement concrete works with minimum cement content relates to mix ratio 1:2:4 having maximum water cement ratio = 0.45 and minimum f_{cr} = 26 MPa, satisfying a specified compressive strength f'_{c} = 19 MPa at 28 days on standard cylinders as per standard practice of Code ACI / BNBC, cement conforming to BIS EN-197-1-CEM-I, 52.5N, best quality sand [50% quantity of best local sand (F.M. 1.2) and 50% quantity of Sylhet sand or coarse sand of equivalent F.M. 2.2] and 20 mm down well graded picked jhama brick chips conforming to ASTM C-33 including conducting necessary tests, breaking chips and screening, making and placing shutter in position maintaining true to plumb, making shutter water-tight properly, placing reinforcement in position; mixing in standard mixer machine with hopper fed by standard measuring boxes, casting in forms, compacting by vibrator machine and curing at least for 28 days, removing centering-shuttering after specified time approved; including cost of water, electricity, other charges etc. all complete, approved and accepted by the Project Director or it's representative. (Rate is excluding laboratory test fees, the cost of reinforcement and its fabrication, placing, binding etc.				

Procurement of works and related service for Installation, Testing & Commissioning of 33 kV and 11 kV, Underground Cable System

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	8.1. Floor / roof slab, T-beam, L-beam and rectangular beam, tie beam, lintel, stair case slab and step etc. up to ground floor. <i>[Quantity: 1.20 Cu. M for 1 Set LTDB Installation works]</i>				
	9. Centering and shuttering, including strutting, propping etc. and removal of form for:				
	9.1. Tie beam & lintels, grade beam, column etc. <i>[Quantity: 14.00 Sq. M for 1 Set LTDB Installation works]</i>				
	10. Grade 400 (B400DWR / B420DWR: complying BDS ISO 6935-2:2016 / ASTM A615) ribbed or deformed bar produced and marked according to Bangladesh standard, with minimum yield strength, f_y (ReH)= 400 MPa but f_y not exceeding 480 MPa and whatever is the actual yield strength within allowable limit as per BNBC/ACI 318, the ratio of ultimate tensile strength f_u to yield strength f_y shall be at least 1.25 and minimum elongation after fracture and minimum total elongation at maximum force is 17% and 8% respectively : up to ground floor. <i>[Quantity: 1.35 Quintal for 1 Set LTDB Installation works]</i>				
	11. Minimum 12 mm thick cement sand (F.M. 1:2) plaster with neat cement finishing to plinth wall with cement (1:4) up to 150 mm below ground level including washing of sand, finishing the edges and corners and curing at least for 7 days, cost of water, electricity, scaffolding and other charges etc. all complete in all respect as per drawing and accepted by the Project Director or it's representative. (Cement: CEM-II/B-M), ground floor. <i>[Quantity: 16.00 Sq. M for 1 Set LTDB Installation works]</i>				

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	12. Supplying, fitting and fixing verandah grill made of 10 mm dia. M.S. rod provided @ 75 mm c/c in any position both ways as per design with outside frame of 25 mm x 25 mm x 6 mm M.S. angle and F.I. bar clamps including fabricating, welding in each point, painting a coat of anti-corrosive painting (Red-Oxide), including cost of electricity, tools and plants, workshop charges, carriage of the same including cutting grooves in the R.C.C. or brick work, mending good the damages with C.C. (1:1.5:3) etc., all complete for all floors accepted by the Project Director or it's representative. (Total weight per sqm should be approx, 21 kg and add or deduct @ 100.00 for each kg/sqm excess or less respectively. <i>[Quantity: 17.50 Sq. M for 1 Set LTDB Installation works]</i>				
	13. Standard synthetic enamel paint of approved best quality and colour delivered from authorized local agent of the manufacturer in a sealed container, having high water resistance, high bond ability, flexibility property; using specified brand thinner applying to metallic or wooden surface by brass/roller/spray in 2 coats over single coat anti corrosive coating including cleaning, drying, making free from dirt, grease, wax, removing all chalked and scaled materials; all complete in all floors and accepted by the Project Director or it's representative. <i>[Quantity: 17.50 Sq. M for 1 Set LTDB Installation works]</i>				
	14. Supply, fabrication and installation of built-up sections i.e. columns, beams, rafters, bracings, struts etc. (up to level-4) from steel plates conforming to ASTM A36, with a minimum yield strength of 250 MPa, including the cost of testing of plates, application of red/grey-oxide primer & 2coat enamel paint etc. all complete as per drawing, specification and direction of Project Director or it's representative. <i>[Quantity: 93.00 KG for 1 Set LTDB Installation works]</i>				

Procurement of works and related service for Installation, Testing & Commissioning of 33 kV and 11 kV, Underground Cable Line

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
17	Fiber Optic Cable				
	Laying of Underground Cables (OPUC) with Transport:				
	Underground Fiber Optic Cable Pulling through HDPE Duct during HDD method and other related works as per direction & instruction of the Engineer in-charge of DESCO.	Meter	142		
	Underground Fiber Optic Cable Pulling through HDPE Duct during Buried method and other related works as per direction & instruction of the Engineer in-charge of DESCO.	Meter	6208		
18	Laying of HDPE Duct (OPUC) with Transport:				
	Carrying & laying of 2" HDPE Duct. Includes carrying & laying HDPE Duct HDD/Buried method to Cross the Road or any other Places along the Cable trenches and other related works as per direction & instruction of the Engineer in-charge.				
	i) Up to 51.5 mm Dia. HDPE Duct (OPUC Cable).	Meter	6350		
19	Joint End closure				
	Overhead/Underground Fiber Optic Cable Termination, Measuring, Testing (dB loss/KM must be within standard limit) and other necessary works including supply of related accessories as per the direction of the Engineer in-charge.	Nos	31		
	Re-installation of Joint Enclosure, Measuring, Testing (dB loss/KM) must be within standard limit) including supply of related accessories and other necessary works as per direction & instruction of the Engineer in-charge.	Nos	3		
	Recovery of Joint Enclosure including all materials and other necessary works as per the direction of Engineer in-charge.	Nos	3		
	Handhole Box				
	Handhole Box installation with steel frame (1200mm x 1075mm x 1100mm). Top of the Handhole cover should be 250mm above the Ground level. Works shall be done as per direction & instruction of the Engineer in-charge of DESCO.				

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	1) Mobilization and cleaning site before commencing actual physical work and during contract period and demobilization after completion of the works under contract to be accepted by the Engineer-in-charge. This work shall also cover cleaning and clearing, cutting or filling, dressing the project area on and in the ground to an extent that all the events of works of the project can be executed smoothly in a working environment with a particular attention on safety and security in all respects, and to stockpile the end outcome to a place for disposal agreed by the Engineer-in-charge, where, payments are to be based on ground area determined by the Engineer-in-charge and be proportionate to the percentage progress of work under contract as a whole in all respects and approved by the Engineer-in-charge. [Quantity: 01 L.S. for 1 Set Handhole Box Construction works] 2) Earth work in excavation in all kinds of soil for foundation trenches including layout, providing center lines, local bench mark pillars, levelling, ramming and preparing the base, fixing bamboo spikes and marking layout with chalk powder, providing necessary tools and plants, protecting and maintaining the trench dry etc., stacking, cleaning the excavated earth at a safe distance out of the area enclosed by the layout etc. all complete and accepted by the Engineer in-charge, subject to submit method statement of carrying out excavation work to the Engineer-in-charge for approval. However, engineer's approval shall not relieve the contractor of his responsibilities and obligations under the contract. 2.1) Earth work in excavation in all kind of soil for foundation trenches. [Quantity: 3.00 Cu. M for 1 Set Handhole Box Construction works] 3) Supplying and laying of single layer polythene sheet weighing one kilogram per 6.5 square meter in floor or anywhere below cement concrete complete in all respect and accepted by Engineer-in-charge. [Quantity: 2.00 Sq. M 1 Set Handhole Box Construction works]				



Measurement of works and related service for Installation, Testing & Commissioning of 33 kV and 11 kV Underground Cable Line







Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4 * 5
20	4) Reinforced cement concrete works using steel shutter with minimum cement content relates to mix ratio 1:1.5:3 having minimum $f_{cr} = 30$ Mpa, and satisfying a specified compressive strength $f'_c = 25$ Mpa at 28 days on standard cylinders as per standard practice of Code ACI/BNBC/ASTM & Cement conforming to BDS EN-197-1-CEM 1 (32.5 to 52.5 N) / ASTM-C 150 Type - I, best quality Sylhet sand or coarse sand of equivalent F.M. 2.2 and 20 mm down well graded stone chips conforming to ASTM C-33, making, placing shutter in position and maintaining true to plumb, making shutter water-tight properly, placing reinforcement in position; mixing with standard mixer machine with hopper, fed by standard measuring boxes, casting in forms, compacting by vibrator machine and curing at least for 28 days, removing, centering-shuttering including cost of water, electricity, testing and other charges etc. all complete approved and accepted by the Engineer. Ent concrete works using wooden shutter, with minimum cement content relates to mix ratio (1:1.5:3), Brick chips having minimum $f_{cr} = 30$ Mpa. <i>[Quantity: 1.25 Quintal for 1 Set Handhole Box Construction works]</i> 4.1. Individual & combined footing, pile cap, raft/mat, floor slab and foundation beam up to plinth level <i>[Quantity: 1.25 Quintal for 1 Set Handhole Box Construction works]</i> 5) Shuttering (wooden) <i>[Quantity: 10.00 Sq. M for 1 Set Handhole Box Construction works]</i>	Job	31		

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	6. Grade 400 (B400DWR / B420DWR: complying BDS ISO 6935-2:2016 / ASTM A615) ribbed or deformed bar produced and marked according to Bangladesh standard, with minimum yield strength, f_y (ReH)= 400 MPa but f_y not exceeding 480 MPa and whatever is the actual yield strength within allowable limit as per BNBC/ ACI 318, the ratio of ultimate tensile strength f_u to yield strength f_y, shall be at least 1.25 and minimum elongation after fracture and minimum total elongation at maximum force is 17% and 8% respectively : up to ground floor [Quantity: 1.15 Quintal for 1 Set Handhole Box Construction works] 7) One layer of brick flat soling in foundation or in floor with first class or picked jhama bricks including preparation of bed and filling the interstices with local sand, leveling etc. complete and accepted by the Engineer. [Quantity: 1.6 Sq.M for 1 Set Handhole Box Construction works] 8) Supplying 50 mm inside dia. best quality uPVC soil, waste and ventilation pipe having specific gravity 1.35 - 1.45, wall thickness 2.5 - 3.0 mm, and other physical, chemical, thermal, fire resistivity properties etc. as per BSTI approved manufacturer standards or ASTM, BS/ISO/IS standards fitted and fixed in position with sockets, bends, of uPVC Pipe with all accessories such as Round grating /domed roof grating bands, sockets etc. approved and accepted by the Engineer (length: 6000 mm each). [Quantity: 0.610 rm for 1 Set Handhole Box Construction works]				

Procurement of works and related service for Installation, Testing & Commissioning of 33 kV and 11 kV Underground Cable Line.

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4 * 5
	9) Supplying different inside dia. best quality uPVC soil, waste and ventilation pipe having specific gravity 1.35 - 1.45, wall thickness 2.5 mm - 3.0 mm; and other physical, chemical, thermal, fire resistivity properties etc. as per BSTI approved manufacturer standards or ASTM, BS/ISO/IS standards fitting and fixing in position with sockets, bends, of uPVC Pipe with all accessories such as round grating/ domed roof grating bands, sockets etc. approved and accepted by the Engineer-in-charge. (100 mm inside dia, wall thickness 3.4- 4.0 mm) 10) Hook for slab with galvanize [Quantity: 4.00 each for 1 Set Handhole Box Construction works] 11) Supply, fabrication and installation of built-up sections i.e. columns, beams, rafters, bracings, struts etc. (up to level-4) from steel plates conforming to ASTM A36, with a minimum yield strength of 250 MPa, including the cost of testing of plates, application of red/grey-oxide primer & 2coat enamel paint etc. all complete as per drawing, specification and direction of Engineer-in-charge; (1.5"x1.5"x5mm Angle) [Quantity: 0.15 Quintal for 1 Set Handhole Box Construction works] 12) Minimum 12 mm thick cement sand (F.M. 1:2) plaster with neat cement finishing to dado with cement (1:4) up to 150 mm including washing of sand, finishing the edges and corners and curing at least for 7 days, cost of water, electricity, scaffolding and other charges etc. all complete in all respect as per drawing and accepted by the Engineer-in-charge. (Cement: CEM- II/B-M). ground floor. [Quantity: 12.00 Sq. M for 1 Set Handhole Box Construction works]				
21	Supply of PIB Tape	Nos	496		
22	Preparation of 33 kV, 11 kV and OPUC Cable laying line route on suitable scale map with all necessary drawing, design etc. as per instruction of Engineer-in-charge. (Route basis)	LS	5		

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
23	Testing & Commissioning of 11 kV/33kV U/G (HV, IR & Sheath) and OPUC Cable Line before final exercitation as per direction & instruction of Engineer-in-charge. (33 kV Ckt. Basis & 11 kV Route basis)	LS	14		
24	05(Five) Sets of "As. Build" Drawing prepared on Geographical Map mentioning the GPS location of the cable jointing point, Handhole Box positions and relevant information to be provided [as per section:3 GCC 82] for upgradation of the GIS map at 1:2000 & 1:200 DCS (Document Cover Sheet) sheet and 02 (two) CDs (compact disc) of AutoCAD Drawing. (33 kV Ckt. Basis & 11 kV Route basis)	LS	5		
25	Clamp for 33kV, 11 kV and OPUC Cable in Substation End.				
	Supply, Carrying & Installation of Clamp. Includes Supply, Cutting, Bending and fixing of MS. Rod (PWD Rate Schedule) For making of Cable Clamp, Angle Frame etc. & installation for Feeder Cable/ckt. and OPUC from trenches to switchgear or any other Places along the Cable trenches as per direction of the Engineer in Charge.				
	i) OPUC cable in Substation	Quintal	0.40		
	ii) 11 kV Feeder cable in Substation	Quintal	2.00		
	iii) 33kV Circuit in Substation	Quintal	1.50		
26	Cable Guard for 11 kV Feeder Cable at O/H Feeder Pole End				
	Supply, Carrying & Installation of Cable Guard. Includes Supplying, Carrying and Installation of cable guard (U shaped) made of Galvanised Iron sheet of 1.5 mm thickness and 10 feet height (Periphery depends on category of Cables & poles) for Feeder Cable/ckt. at O/H Pole or any other Places as per drawing & direction of the Engineer in Charge.				
	i) 11 kV Feeder cable at O/H pole.	Quintal	8.00		
	Recovery of U/G Cable				

Procurement of works and related service for installation, Testing & Commissioning of 33 kV and 11 kV, Underground Cable Line.

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	I] 11/0.4/0.23 kV U/G cable including service drop (Circuit Basis, All size)	Meter	400		
27	II] 33-kV 1-core/3-core XLPE Copper/Al U/G Cable & 11 KV 3- core XLPE Copper/Al U/G Cable recovery, Drumming, Carrying, and Delivery of cable from existing cable trench to DISCO designated store as per instruction of Engineer-in- charge. (All size, 1-core for 33 kV & 3-core for 11 kV)	KM	1.00		
28	Sub Total				
29	Total of Schedule =				
Total Amount (Tk.) in words (Including VAT & TAX):					

Note:

1. It is suggested that the Tenderer uses these sheets of the BOQ in order to avoid any manipulation, distortion and inadvertent mistakes or omission in course of preparing the Tender by the Tenderer.

2. All unit rates and prices quoted by the Tenderers against each basic item or activity shall include the Tenderer's profit, overheads, VAT and all other charges including corresponding incidental service charges and premiums for banking and insurances, as applicable and thus forth the total Tender Price quoted by the Tenderers.

Engt. Mohammad Bakhtiar Uddin
Sub-Divisional Engineer
Disco Power System Expansion and
Strengthening Project in DESCO Area

[Signature]

[Signature]

[Signature]

Section 6. Bill of Quantity (BOQ)
Lot-B: North Zone (S&D Division, Turag & Tongi West)

Tender No.: DPSESP/01/2025

Identification Reference No.: 27.24.0000.078.014.001.25.590

Date: 04.09.2025

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
1	PG Clamp	Nos.	105		
2	Outdoor Terminating Kits:				
	Installation of Overhead Cable Line Terminating by heat/cold shrinkable cable termination kits including supply of 1 set single and/or Tri hole rain skirt (as required and applicable) for 3 core Copper/Al Cable which includes Cable kit mounting channel, fixing accessories, cable guard etc. as per approval and instruction given by the engineer in Charge.				
	i) 11 kV 3-Core Copper, Outdoor Termination Kits.	Set	35		
3	Indoor Termination Kits:				
	Installation of Switchgear Terminating by heat/cold shrinkable cable termination kits as per approval and instruction given by the engineer-in-Charge.				
	i) 11 kV 3-Core Copper/Al, Indoor Termination Kits.	Set	35		
	ii) 33 kV Cable 1-Core Copper/Al Cable (with/without GIS)	Nos.	57		
4	Installation of Straight Through Joint:				
	Preparation of jointing kit the making of straight through joint between two U/G Cable by using cold shrink/heat shrink/hot pouring/cold pouring cable jointing kits, etc. All other materials such as keroshine oil, cotton etc. are to be supplied by the contractor. All works shall be as per direction of Engineer-in-charge.				
	i) 11 kV 3-Core Copper/Al straight through joint	Set	40		
	ii) 33 kV 1-Core Copper/Al Cable straight through joint	Nos.	105		
5	A) Breaking of pucca surface: Includes breaking out of pucca surface of dimension given by the Engineer in charge and as per his instruction. Includes debris cleaning and water spray, temporary repairs to road surface until attended to by the road authority.	Sq. m	17514		


 Procurement of works and related service for Installation, Testing & Commissioning of 33 kV and 11 kV, Underground Cable Line.

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	B) Excavation and back-filling:				
6	i) Excavation: The excavation of a cable trench of dimensions given by the Engr. By excavation soil, as per requirement of wide and depth, using checkered plates and safety barrier, includes debris cleaning and water spray, temporary repairs to road surface until attended to by the road authority and also bailing/pumping of water as necessary, as per instruction of the Engr./Consultant. Immediately, all rubbish/soil should be removed from the site. All debris shall be cleared from the site to any suitable location.	Cum	17514		
7	Transportation & Laying: Transportation & laying all size of underground cable: i) This item includes for transportation of the UG cable up to site, mounting of cable drum on drum jacks, pulling out of cable on rollers and the installation of the UG cable into the cable trench (through road crossing pipes if necessary), ii) Laying of cable protective slab on top, sand, protective marking tape, etc. iii) installation of route/ joint/ markers including supply of T block and necessary all items to install it and location of joint bays including laying of cable protective slab on both sides and tops, sand, protective marking tape as per requirement. All in accordance with the specifications and to the direction of the Engineer in charge.				
	i) 11/0.4/0.23 kV U/G cable including consumer service drop (Circuit Basis, All size)	Meter	500		
	ii) Laying of 11 kV, 3-Core Copper/Al Cable	Meter	24120		
	iii) 33 kV Cable 1-Core Copper/Al Cable	Meter	53760		
8	Supply and laying of sand: This item includes for supply and laying of vitri sand (making) at least 200 mm, on sand bed with watering & Properly compacted before laying of cable, over the cable in accordance with the specification & drawing and to the direction of Engr./Const. Also includes disposal of surplus soil/debris at contractor's own cost.	Cum	17514		

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
9	a) Supply, laying and carrying of RCC blocks: Reinforce Cement concrete works (1:1.5:3) having with cement (conforming to BDS 232)m best quality quarse sand (50%) quality of local sand (F.M-1.5) and 50% quality of sylhet sand down grade picked jhama chips including breadding chips and screening shuttering, supplying polyethylene sheet for making, mixing the aggregates with mixer machine, casting in forms, compacting by cont. 23 vibrator machine and curing at least 28 days (Excluding the cost of reinforcement and fabrication). The reinforcement bar to be used in the for making such RCC slab is 3/8" placing 150 mm a part and the thickness of the block will be at least 63mm. (PWD rate Schedule).	Cum	962		
10	Supply, Cutting, Bending and fixing of MS Rod (PWD) Rate Schedule.	Quintal	1015		
11	Supply, Carrying & Laying of GI/RCC/PVC Pipe. Includes Supplying, Carrying and Laying of GI/ RCC/PVC Pipe to Cross the Road or any other Places along the Cable trenches as per direction of the Engineer in Charge.				
	I) Minimum inner dia. 100 mm PVC Pipe.	Meter	3167		
	II) Minimum inner dia. 150 mm PVC Pipe.	Meter	2132		
12	HDD for Railway / Road Crossing. The Rate includes delivery and removal from site of hydraulic boring machine which is able to bore holes and bore shaft as per requirements. It also includes back filling as per direction and standard specification, removal from site and disposal of any surplus soil, resettlement of all made up surfaces and installation of carrier pipes as per direction of the Engr/ Consultant. (Pipes and Connectors to be supplied by contractor) the supply and installation of draw wires and to temporary sealing of carrier pipes to the direction of Engr./Consultant Puls all Necessary work to and easy installation of Cable. (HDD=Horizontal Directional Drilling).				
	I) Minimum 76 mm Dia. (OPUC Cable)	Meter	650		
	II) Minimum 160 mm Dia. (Upto-500 mm Cable, 1 Core /3-core)	Meter	4556		

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
13	Supply, Carrying & Laying of Pipe for HDD. Includes Supplying, Carrying and Laying of Pipe with all necessary joints and accessories for HDD to Cross the Road or any other Places along the Cable trenches as per direction of the Engineer in Charge.				
	i) Minimum 160 mm Outside Dia. HDPE Pipe	Meter	4784		
	Installation of RMU (3-Unit/5-Unit/7-Unit RMU)				
	A. Electrical Works (Detail describe below)				
	1. Carrying of RMU from ware house to site, loading, unloading, installation according to design, drawing greazing, fixing alignment, leveling, bolting, grounding, wiring etc. RMU carrying, recovery of existing RMU and return to store and related civil works for RMU pad/base as required. Including Replacement/Reinstallation of CT's as per instruction of Project Director or it's representative.				
	2. Termination of 11 kV cable, cold shrink/heat shrinking, termination kit, carrying of kit to site from ware house and installation of boots for 12 kV SP6 insulated 5(Five)/3(three)/7(seven) function outdoor compatible compact Ring Main Unit (RMU) suitable for 11 kV, 3- core XLPE(Cu/Al), 185sqmm/300sqmm cable.				
	3. Grounding of each RMU includes 4 nos. boring. Each 100-ft. boring includes following materials.	Job	28		
	a. 16 mm diameter, 2 meter length, 4 nos. copper grounding rod will be supplied by contractor.				
	b. There shall be 4 nos. boring. Necessary earth cu wire will be supplied by Desco. Under each boring copper wire must be welded/joint properly to copper grounding rod. Also supply of necessary Nut-bolts and fabricated materials. After completion of grounding.				
	4. 11KV cable laying in cable trance.				
	5. Testing, Commissioning and Energization of RMU.				

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	B. Civil Works base without room (Detail describe below)				
14	1. Mobilization and cleaning site before commencing actual Physical work and during contract period and demobilization after completion of the works under contract to be accepted by the Project Director or it's representative. This work shall also cover cleaning and clearing, cutting or filling, dressing the project area on and in the ground to an extent that all the events of works of the project can be executed smoothly in a working environment with a particular attention on safety and security in all respects, and to stockpile the end outcome to a place for disposal agreed by the Project Director or it's representative, where, payments are to be based on ground area determined by the Project Director or it's representative and be proportionate to the percentage progress of work under contract as a whole in all respects and approved by the Project Director or it's representative. <i>[Quantity: 1 L.S. Job for 1 Set RMU Installation works]</i> 2. Earth work in excavation in all kinds of soil for foundation trenches including layout, providing center lines, local bench mark pillars, levelling, ramming and preparing the base, fixing bamboo spikes and marking layout with chalk powder, providing necessary tools and plants, protecting and maintaining the trench dry etc., stacking, cleaning the excavated earth at a safe distance out of the area enclosed by the layout etc. all complete and accepted by the Project Director or it's representative, subject to submit method statement of carrying out excavation work to the Project Director or it's representative for approval. However, engineer's approval shall not relieve the contractor of his responsibilities and obligations under the contract. 2.1. Earthwork in excavation in foundation trenches up to 1.5 m depth and maximum 10 m lead. <i>[Quantity: 6.38 Cu. M for 1 Set RMU Installation works]</i>	Job	28		

Measurement of works and related service for Installation, Testing & Commissioning of 33 kV and 11 kV, Underground Cable Ties

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4 * 5
	3. Sand filling in foundation trenches and plinth with sand having min. F.M. 1.2 in 150 mm in layers including leveling, watering and compaction to achieve minimum dry density of 95% with optimum moisture content (Modified proctor test) by ramming each layer up to finished level as per design supplied by the design office only, all complete and accepted by the Project Director or it's representative. [Quantity: 0.64 Cu. M for 1 Set RMU Installation works]				
	4. One layer brick flat soling in foundation or in floor with first class/picked jhama bricks (BDS 208) including preparation of bed and filling the interstices with local sand, leveling etc. complete and accepted by the Project Director or it's representative. [Quantity: 4.32 Sq. M for 1 Set RMU Installation works]				
	5. Mass concrete (1:2:4) in foundation or in floor with cement, sand (F.M. 1.2) and picked jhama brick chips including breaking of chips, screening, mixing, laying, compacting to required level and curing for at least 7 days including the supply of water, electricity, costs of tools & plants and other charges etc. all complete and accepted by Project Director or it's representative. [Cement: CEM-II / B-M].				
	5.1. Mass concrete in foundation (1:2:4) with brick chips and local sand of F.M. 1.2. [Quantity: 0.31 Cu. M for 1 Set RMU Installation works]				
	6. Supplying and laying of single layer polythene sheet weighing one kilogram per 6.5 square meter in floor or anywhere below cement concrete complete in all respect and accepted by Project Director or it's representative. [Quantity: 4.05 Sq. M for 1 Set RMU Installation works]				

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	7. Brick works with first class bricks with cement sand (F.M. 1:2) mortar (1:6) in foundation and plinth, filling the joints/interstices fully with mortar, racking out the joints, cleaning and soaking the bricks at least for 24 hours before use and curing at least for 7 days etc. all complete including cost of water, electricity and other charges and accepted by the Project Director or it's representative. (Cement: CEM-II/B-M). [Quantity: 3.70 Cu. M for 1 Set RMU Installation works] 8. Minimum 12 mm thick cement sand (F.M. 1:2) plaster with neat cement finishing to plinth wall with cement (1:4) up to 150 mm below ground level including washing of sand, finishing the edges and corners and curing at least for 7 days, cost of water, electricity, scaffolding and other charges etc. all complete in all respect as per drawing and accepted by the Project Director or it's representative. (Cement: CEM-II/B-M). ground floor [Quantity: 25.09 Sq. M for 1 Set RMU Installation works]				
	Installation of RMU and Construction of RMU Room with foundation for 1 No 5-Unit RMU				
	A. Electrical Works (Detail describe below)				
	1. Carrying of RMU from ware house to site, loading, unloading, installation according to design, drawing greezing, fixing alignment, leveling, bolting, grounding, wiring etc. RMU carrying, recovery of existing RMU and return to store and related civil works for RMU pad/base as required. Including Replacement/Reinstallation of CT's as per instruction of Project Director or it's representative. 2. Termination of 11KV cable, heat shrinking, termination kit, carrying of kit to site from ware house and installation of boots for 12 kV SP6 insulated 5(Five)/3(three)/7(seven) function outdoor compatible compact Ring Main Unit (RMU) suitable for 11 kV, 3- core XLPE(Cu/Al), 185sqmm/300sqmm cable.	Job	5		

Procurement of works and related service for Installation, Testing & Commissioning of 33 kV and 11 kV, Underground Cable Line

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Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	3. Grounding of each RMU includes 4 nos. boring. Each 100 ft. boring includes following materials:				
	a. 16 mm diameter, 2 meter length, 4 nos. copper grounding rod will be supplied by contractor.				
	b. There shall be 4 nos. boring. Necessary earth cu wire will be supplied by Desco. Under each 100 ft. boring copper wire must be welded/joint properly to copper grounding rod. Also supply of necessary Nut-bolts and fabricated materials. After completion of grounding;				
	4. 11 kV cable laying in cable trance.				
	5. Testing, Commissioning and Energization of RMU.				
	B. Civil Works for RMU room (Detail describe below)				
	1. Mobilization and cleaning site before commencing actual physical work and during contract period and demobilization after completion of the works under contract to be accepted by the Engineer-in-charge. This work shall also cover cleaning and clearing, cutting or filling, dressing the project area on and in the ground to an extent that all the events of works of the project can be executed smoothly in a working environment with a particular attention on safety and security in all respects, and to stockpile the end outcome to a place for disposal agreed by the Engineer-in-charge, where, payments are to be based on ground area determined by the Engineer-in-charge and be proportionate to the percentage progress of work under contract as a whole in all respects and approved by the Engineer-in-charge. [Quantity: 1 I.S. Job for Room of 1 Set RMU Installation works]				

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
15	2. Earth work in excavation in all kinds of soil for foundation trenches including layout, providing center lines, local bench mark pillars, levelling, ramming and preparing the base, fixing bamboo spikes and marking layout with chalk powder, providing necessary tools and plants, protecting and maintaining the trench dry etc., stacking, cleaning the excavated earth at a safe distance out of the area enclosed by the layout etc. all complete and accepted by the Engineer in-charge, subject to submit method statement of carrying out excavation work to the Engineer-in-charge for approval. However, engineer's approval shall not relieve the contractor of his responsibilities and obligations under the contract. 2.1 Earthwork in excavation in foundation trenches up to 1.5 m depth and maximum 10 m lead. [Quantity: 10.09 Cu. M for Room of 1 Set RMU Installation works] 3. Earth filling in foundation trenches and plinth in 150 mm layer with earth available within 90 m of the building site to achieve minimum dry density of 95% with optimum moisture content (Modified proctor test) including carrying watering, leveling, dressing and compacting to a specified percentage each layer up to finished level etc. all complete and accepted by Engineer-in-charge. [Quantity: 5.05 Cu. M for 1 Set RMU Installation works] 4. Sand filling in foundation trenches and plinth with sand having minimum F.M. 0.5 in 150 mm layers including leveling, watering and compaction to achieve minimum dry density of 95% with optimum moisture content (Modified proctor test) by ramming each layer up to finished level as per design supplied by the design office only, all complete and accepted by the Engineer-in-charge. [Quantity: 10.71 Cu. M for 1 Set RMU Installation works]	Job	5		

Execution of works and related service for Installation, Testing & Commissioning of 33 kV and 11 kV Underground Cable Line

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	5. One layer brick flat soling in foundation or in floor with first class/picked jhama bricks (BDS 208) including preparation of bed and filling the interstices with local sand, leveling etc. complete and accepted by the Engineer-in-charge. [Quantity: 23.42 Sq. M for Room of 1 Set RMU Installation works] 6. Mass concrete (1:2:4) in foundation or in floor with cement, sand (F.M. 1:2) and picked jhama brick chips including breaking of chips, screening, mixing, laying, compacting to required level and curing for at least 7 days including the supply of water, electricity, costs of tools & plants and other charges etc. all complete and accepted by Engineer-in charge. (Cement: CEM-II / B- M). 6.1 Mass concrete in foundation (1:2:4) with brick chips and local sand of F.M. 1:2. [Quantity: 1.53 Cu. M for Room of 1 Set RMU Installation works] 7. Supplying and laying of single layer polythene sheet weighing one kilogram per 6.5 square meter in floor or anywhere below cement concrete complete in all respect and accepted by Engineer-in-charge. [Quantity: 26.77 Sq. M for Room of 1 Set RMU Installation works] 8. Brick works with first class bricks with cement sand (F. M. 1:2) mortar (1:6) in foundation and plinth, filling the joints/interstices fully with mortar, racking out the joints, cleaning and soaking the bricks at least for 24 hours before use and curing at least for 7 days etc. all complete including cost of water, electricity and other charges and accepted by the Engineer-in- charge. (Cement: CEM-II/B-M). [Quantity: 3.39 Cu. M for Room of 1 Set RMU Installation works]				






Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	9. 125 mm brick works with first class bricks with cement sand (F.M. 1:2) mortar (1:4) and making bond with connected walls including necessary scaffolding, raking out joints, cleaning and soaking the bricks for at least 24 hours before use and washing of sand, curing at least for 7 days in all floors including cost of water, electricity and other charges etc. all complete and accepted by the Engineer-in-charge. (Cement: CEM-II/B M). [Quantity: 55.36 Sq. M for Room of 1 Set RMU Installation works] 10. Reinforced cement concrete works with minimum cement content relates to mix ratio 1:1.5:3 having maximum water-cement ratio = 0.40 and minimum f'_{cr} = 33.5 MPa, satisfying a specified compressive strength f'_{c} = 25 MPa at 28 days on standard cylinders as per standard practice of Code ACI /BNBC, Cement conforming to BDS EN-197-1-CEM-I, 52.5N, best quality Sylhet sand or coarse sand of equivalent F.M. 2.2 and 20 mm down well graded stone chips conforming to ASTM C-33 (Aggregate grading as per table shown in technical specification), conducting necessary tests, making and placing shutter in position and maintaining true to plumb, making shutter water-tight properly, placing reinforcement in position; mixing with standard mixer machine with hopper, fed by standard measuring boxes, casting in forms, compacting by vibrator machine and curing at least for 28 days, removing centering-shuttering after specified time approved; including cost of water, electricity, other charges etc. all complete, approved and accepted by the Engineer- in-charge. (Rate is excluding laboratory test fees, the cost of reinforcement and its fabrication, placing, binding etc. and the cost of shuttering & centering) 10.1 Floor/ roof slab, T-beam, L-beam and rectangular beam, tie beam, lintel, stair case slab and steps etc. up to ground floor. [Quantity: 8.61 Cu. M for Room of 1 Set RMU Installation works] 11. FORMWORK (Wooden) for boundary wall, gate, Tie beam & lintels centry post etc. [Quantity: 63.18 Sq. M for Room of 1 Set RMU Installation works]				



Procurement of works and related services for installation, Testing & Commissioning of 33 kV and 11 kV, Underground Cable Line





Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	12. Grade 400 (B400DWR / B420DWR; complying BDS ISO 6935-2:2016 / ASTM A615) ribbed or deformed bar produced and marked according to Bangladesh standard, with minimum yield strength, f_y (ReH) = 400 MPa but f_y not exceeding 480 MPa and whatever is the actual yield strength within allowable limit as per BNBC/ ACI 318, the ratio of ultimate tensile strength f_u to yield strength f_y, shall be at least 1.25 and minimum elongation after fracture and minimum total elongation at maximum force is 17% and 8% respectively : up to ground floor. [Quantity: 11.68 Quintal for Room of 1 Set RMU Installation works]				
	13. Supplying, fitting and fixing M.S. door shutters made with 38 mm x 38 mm x 6 mm angle outer frame, inner member 25 mm x 6 mm F.I. bar, cladding with 16 BWG M.S. sheet, 04 nos 75 mm long hinge, 02 nos. locking arrangement with 50 mm x 50 mm x 6 mm M.S. angle chowkat including all charges for welding, riveting etc. including cost of supplying all essential fittings like iron hinges, socket bolts, clamps, for fitting and fixing the frame, making necessary holes in brick walls and R.C.C works and fitting with C.C. (1:2:4) and mending good the damages including all cost of carriage, workshop charges, electricity and labour for fittings, fixing, curing etc. all complete and accepted by the Engineer-in charge. (Rate is excluding the costs of painting). [Quantity: 5.86 Sq. M for Room of 1 Set RMU Installation works]				
	14. Supplying, fitting and fixing window grills of any design made with 20 mm x 5 mm F.I. bar @ 100 mm c/c as inner and outer section; including fabricating, welding, cost of electricity and tools and plants, finished with anti-corrosive painting (Red-Oxide), carriage, cutting grooves, mending good the damages etc. complete for all floors accepted by the Engineer-in charge. (Total weight per sqm should be approx. 11 kg. and add or deduct. @ 100.00 for each kg/sqm excess or less respectively). [Quantity: 2.83 Sq. M for Room of 1 Set RMU Installation works]				






Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	15. Supplying fitting and fixing of aluminium fixed louver as per the U.S. Architectural Aluminium Manufacturer's Association (AAMA) standard specification and BDS 1879:2014 having minimum 1.2 mm thick wall frame (size 76.20 mm, 38.10 mm, .564 kg/m), 1.5 mm thick louver (size 55.02 mm, 37.39 mm, 0.281 kg/m) and minimum 1.2 mm thick louver outer section (size 39.67 mm, 15.06 mm) and inner inclined aluminium louver section fixed with above mentioned frame and all aluminium members will be anodized to aluminium bronze/silver/ss/black colour with a coat not less than 15 microns in thickness or powder coated to any colour with a coat not less than 25 microns in thickness and density of 4 mg per square cm etc. including all accessories, neoprene, sealant, nuts and bolts etc. complete in all respect as per drawing and accepted by the Engineer-in-charge. [Quantity: 0.74 Sq. M for Room of 1 Set RMU Installation works] 16. Supplying, fitting and fixing of aluminium sliding window as per the U.S. Architectural Aluminium Manufacturer's Association (AAMA) standard specification and BDS 1879:2014 having minimum 1.2 mm thick outer bottom (size 75.50 mm, 32 mm, 0.605 kg/m), minimum 1.2 mm thick outer top (size 75.50 mm, 28.50 mm, 0.705 kg/m), minimum 1.2 mm thick shutter top (size 33 mm, 26.80 mm, 0.42 kg/m), minimum 1.2 mm thick shutter bottom (size 60mm, 24.40 mm, 0.589 kg/m), minimum 1.2 mm thick outer side (size 75.50 mm, 19.90 mm, 0.52 kg/m), minimum 1.2 mm thick shutter lock (size 49.20 mm, 25.80 mm, 0.543 kg/m) and minimum 1.2 mm thick inter lock (size 34.40 mm, 32.13 mm, 0.562 kg/m) sections all aluminium members will be anodized to aluminium bronze/silver/ss/black colour with a coat not less than 15 microns in thickness or powder coated to any colour with a coat not less than 25 microns in thickness and density of 4 mg per square cm etc. including all accessories like sliding door key lock, sliding door wheel, sliding door mohiar, sliding door neoprene, bolts and nuts including sealants, keeping provision for fitting 5 mm thick glass including labour charge for fitting of accessories, making grooves and mending				



Procurement of works and related service for Installation, Testing & Commissioning of 33 kV and 11 kV, Ducted Ground Cable Line





Items SL No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	16.1. size up to: 1500 mm x 1400 mm. [Quantity: 2.09 Sq. M for Room of 1 Set RMU Installation works]				
	17. Supplying, fitting and fixing in Aluminium door frames, windows, partitions and curtain wall distortion free glass of approved quality and shade including cost of fitting, fixing all necessary accessories etc. complete in all respect as per drawing and accepted by the Engineer-in-charge				
	17.1. 5 mm thick clear glass. [Quantity: 2.09 Sq. M for Room of 1 Set RMU Installation works]				
	18. Minimum 12 mm thick cement sand (F.M. 1:2) plaster (1:4) with fresh cement to both inner and outer surface of wall, finishing the corner and edges including washing of sand, cleaning the surface, curing at least for 7 days, cost of water, electricity, scaffolding and other charges etc. all complete in all respect as per drawing and accepted by the Engineer-in charge. (Cement: CEM-II/B-M), ground floor [Quantity: 158.78 Sq. M for Room of 1 Set RMU Installation works]				
	19. Minimum 12 mm thick cement sand (F.M. 1:2) plaster with neat cement finishing to plinth wall with cement (1:4) up to 150 mm below ground level including washing of sand, finishing the edges and corners and curing at least for 7 days, cost of water, electricity, scaffolding and other charges etc. all complete in all respect as per drawing and accepted by the Engineer-in-charge. (Cement: CEM-II/B-M), ground floor [Quantity: 38.30 Sq. M for Room of 1 Set RMU Installation works]				
	20. Providing drip course or nosing at the edge of sunshade or cornice with cement sand (F.M. 1:2) mortar (1:2) with fresh cement, curing at least for 7 days, cost of water, electricity, scaffolding and other charges etc. all complete in all respect as per drawing and accepted by the Engineer-in-charge. [Quantity: 3.51 RM for Room of 1 Set RMU Installation works]				

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	21. Exterior standard acrylic emulsion paint(weather coat) of approved best quality and color having water resisting properties and resistance properties against fungi, fading & flaking delivered from authorized local agent of the manufacturer in a sealed container; applying to exterior surface with surface preparation including cleaning, drying, making free from dirt, grease, wax, removing all chalked and scaled materials, fungus, mending good the surface defects using sand paper and necessary scaffolding; applying necessary exterior sealer of specified brand on prepared surface; then applying necessary exterior putty of specified brand for levelling, spot filling, crack filling and cutting by sand paper/zero water paper; finally applying 2 coats of exterior emulsion paint spreading by brush/roller/spray & necessary scaffolding etc. up to desired finishing, elapsing specified time for drying or recoating; all complete in all floors and accepted by the Engineer-in-charge. [Quantity: 95.95 Sq. M for Room of 1 Set RMU Installation works] 22. Standard synthetic enamel paint of approved best quality and colour delivered from authorized local agent of the manufacturer in a sealed container, having high water resistance, high bond ability, flexibility property; using specified brand thinner applying to metallic or wooden surface by brass/roller/spray in 2 coats over single coat anti corrosive coating including cleaning, drying, making free from dirt, grease, wax, removing all chalked and scaled materials, all complete in all floors and accepted by the Engineer-in-charge. [Quantity: 8.69 Sq. M for Room of 1 Set RMU Installation works]				



Procurement of works and related service for Installation, Testing & Commissioning of 11 kV and 33 kV, Underground Cable Line







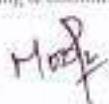
Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	23. Approved best quality and colour synthetic polyvinyl distemper/plastic paint delivered from authorized local agent of the manufacturer in a sealed container, lying to wall and ceiling with surface preparation including cleaning drying, making free from dirt, grease, wax, removing all chalked and scaled materials, fungus, mending good the surface defects using sand paper and necessary scaffolding; applying 1 coat of interior sealer of specified brand on prepared surface; then applying 1 coat of interior putty of specified brand for levelling, spot filling, crack filling and cutting by sand paper/zero water paper; finally applying 2 coats of synthetic polyvinyl distemper spreading by brush/roller/spray & necessary scaffolding etc. up to desired finishing, elapsing specified time for drying or recoating; all complete in all floors and accepted by the Engineer-in-charge. [Quantity: 68.21 Sq. M for Room of 1 Set RMU Installation works]				
	24. 50 mm dia. uPVC B grade rain water, soil, waste and ventilation pipe. [Quantity: 5.00 RM for Room of 1 Set RMU Installation works]				
	25. Concealed conduit wiring for following point looping at the switch board with earth terminal including circuit wiring with 1C-2x1.5 sq.mm PVC insulated and sheathed standard cable (BYM) & 1.5 sq.mm PVC insulated green/white coloured ECC wire (BYA) through PVC conduit complete with 18 SWG GP sheet, switch board and pull box with 3mm thick ebonite sheet cover, 5 amps piano switch, ceiling rose, fixing materials, etc as required including mending the damages good (all electrical contacts shall be brass/copper) with cables manufactured by Eastern cable/BRB cable/Paradise cable or equivalent approved by the Engineering -in-Charge. a) Light/Exhaust or wall bracket point b) Fan point c) 2 pin + 3 Pin 5 amps. Socket point with control switch board				

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	26. 4 gang switch fitting and fixing of super star brand all complete and approved by the Engineer. [Quantity: Each for Room of 1 Set RMU Installation works]				
	27. 1C-2x1.5sqmm (BYA) cable with 1.5sqmm (BYA) ECC wire through PVC pipe of minimum inner Dia. 16 mm having wall thickness of 1.5 mm. [Quantity: 100.00 RM for Room of 1 Set RMU Installation works]				
	28. Providing & fixing of 1x4' tube light fitting with T5 tube consisting necessary wiring with 2x0.4 sq.mm PVC insulated (stranded) flexible wire, earth terminal etc. complete and approved by the Engineer. [Quantity: Each for Room of 1 Set RMU Installation works]				
	29. 38 mm thick artificial patent stone (1:2:4) flooring with cement, best quality coarse sand (50% quantity of Sylhet sand or coarse sand of equivalent F.M. 2.2 and 50% best local sand of FM 1.2) and 12 mm down well graded brick chips including breaking chips, screening, laying the concrete in alternate panels, compacting and finishing the top with neat cement and curing at least 7 days. [Quantity: 26.48 Sq. M for Room of 1 Set RMU Installation works]				
	30. Including all accessory Materials & Electricity Connection. [Quantity: One Job for Room of 1 Set RMU Installation works]				



Measurement of works and related service for installation, Testing & Commissioning of 33 kV and 11 kV Underground Cable line.

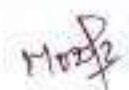






Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	C. Construction of RMU Foundation				
	1. Earth work in excavation in all kinds of soil for foundation trenches including layout, providing center lines, local bench mark pillars, levelling, ramming and preparing the base, fixing bamboo spikes and marking layout with chalk powder, providing necessary tools and plants, protecting and maintaining the trench dry etc., stacking, cleaning the excavated earth at a safe distance out of the area enclosed by the layout etc. all complete and accepted by the Engineer in-charge, subject to submit method statement of carrying out excavation work to the Engineer-in-charge for approval. However, engineer's approval shall not relieve the contractor of his responsibilities and obligations under the contract. 1.1. Earthwork in excavation in foundation trenches up to 1.5 m depth and maximum 10 m lead. [Quantity: 6.38 Cu. M for 1 Set RMU Foundation works] 2. Earth filling in foundation trenches and plinth in 150 mm layer with earth available within 90 m of the building site to achieve minimum dry density of 95% with optimum moisture content (Modified proctor test) including carrying, watering, leveling, dressing and compacting to a specified percentage each layer up to finished level etc. all complete and accepted by Engineer-in-charge. [Quantity: 3.19 Cu. M for 1 Set RMU Foundation works] 3. Sand filling in foundation trenches and plinth with sand having min. F.M. 1.2 in 150 mm in layers including leveling, watering and compaction to achieve minimum dry density of 95% with optimum moisture content (Modified proctor test) by ramming each layer up to finished level as per design supplied by the design office only, all complete and accepted by the Engineer-in-charge. [Quantity: 0.64 Cu. M for 1 Set RMU Foundation works]	Job	5		






Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	4. One layer brick flat soling in foundation or in floor with first class/picked jhama bricks (BDS 208) including preparation of bed and filling the interstices with local sand, leveling etc. complete and accepted by the Engineer-in-charge. [Quantity: 1.25 Sq. M for 1 Set RMU Foundation works] 5. Mass concrete (1:2:4) in foundation or in floor with cement, sand (F.M. 1:2) and picked jhama brick chips including breaking of chips, screening, mixing, laying, compacting to required level and curing for at least 7 days including the supply of water, electricity, costs of tools & plants and other charges etc. all complete and accepted by Engineer-in charge. (Cement: CEM-II / B- M) 5.1. Mass concrete in foundation (1:2:4) with brick chips and local sand of F.M. 1:2. [Quantity: 0.21 Cu. M for 1 Set RMU Foundation works] 6. Supplying and laying of single layer polythene sheet weighing one kilogram per 6.5 square meter in floor or anywhere below cement concrete complete in all respect and accepted by Engineer-in-charge [Quantity: 13.50 Sq. M for 1 Set RMU Foundation works] 7. Brick works with first class bricks with cement sand (F.M. 1:2) mortar (1:6) in foundation and plinth, filling the joints/interstices fully with mortar, racking out the joints, cleaning and soaking the bricks at least for 24 hours before use and curing at least for 7 days etc. all complete including cost of water, electricity and other charges and accepted by the Engineer-in- charge. (Cement: CEM-II/B-M) [Quantity: 3.07 Cu. M for 1 Set RMU Foundation works]				



Procurement of works and related service for Installation, Testing & Commissioning of 23 kV and 11 kV, Underground Cables Lines





Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	8. Minimum 12 mm thick cement sand (F.M. 1:2) plaster with neat cement finishing to plinth wall with cement (1:4) up to 150 mm below ground level including washing of sand, finishing the edges and corners and curing at least for 7 days, cost of water, electricity, scaffolding and other charges etc. all complete in all respect as per drawing and accepted by the Engineer-in-charge. (Cement: CEM-II/B-M). ground floor [Quantity: 15.06 Sq. M for 1 Set RMU Foundation works]				
	0.415KV Low Tension Distribution Box (LTDB)				
	a. Electrical Works (Detail describe below)				
	1. Supply, carrying of 0.415 kV LTDB to site, fabrication, loading, unloading, installation according to design & drawing, greasing, fixing alignment, leveling, bolting, grounding, wiring etc. including supply of all related accessories as per DESCO's approved design & specification and instruction of Project Director or it's representative.				
	2. General Description: Type tested assembly (TTA) sheet steel clad, dust & vermin proof, tropicalized design outdoor type on a RCC/CC/Brick basement, low tension of free standing, water proof up to IP65 with form of segregation, self-cooling, cubical type switchgear, busbar & other live parts are spaced and insulated according to related IEC standard for 415V 3- p 4- wire 50Hz operation, panel fabrication and environmental management system followed by ISO9001 & ISO14001 respectively.	Job	5		
	3. Incoming part: 2nos, 3+1 pole 400Amps (Adjustable), breaking capacity 36KA MCCB with electronic trip having adjustable L/S/I (Long, Selective or Instantaneous) protection, European brand, 3-nos phase indicating lamp (R, Y & B) with circuit breaker, 1 set control fuse, 500A TPN+E Cu (99.99%) Busbar with suitable size for multiple incoming cable (not less than 4), both breaker electrically & mechanically interlocked (CO-OC-CC-OO), all breaker suitable up to 4C 150sqmm XLPE/PVC Cu cable with proper lugs & other accessories, adequate size to fit in TTA with proper insulation & thermal performance.				

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	3. Incoming part: 2nos, 3+1 pole 400Amps (Adjustable), breaking capacity 36KA MCCB with electronic trip having adjustable L/S/I (Long, Selective or Instantaneous) protection, European brand, 3-nos phase indicating lamp (R, Y & B) with circuit breaker, 1 set control fuse, 500A TPN+E Cu (99.99%) Busbar with suitable size for multiple incoming cable (not less than 4), both breaker electrically & mechanically interlocked [CO-OC-CC-OO], all breaker suitable up to 4C 150sqmm XLPE/PVC Cu cable with proper lugs & other accessories, adequate size to fit in TTA with proper insulation & thermal performance. 4. Outgoing part: 8 nos, 3+1 pole 100Amps MCCB, European brand, 500A TPN+E Cu (99.99%) Busbar with suitable size for multiple outgoing cable (not less than 10), suitable for 2C 10sqmm, 3.5C 35sqmm & 3.5C 50sqmm NYY Cu cable (not greater than 50sqmm) with supply of proper lugs & other accessories, adequate size to fit in TTA with proper insulation & thermal performance. 5. Panel: Materials contain hot-dip galvanized sheet steel, Sheet thickness 2mm (Min), Structure color RAL 7035 Light grey peel finish and plinth color RAL 7012 Basalt grey peel finish, Panel is contained steel M12/M16 bolt to carry with full equipped condition, High quality pad lockable door panel lock, plastic diagram/document case for panel, Ambient temp +3degC to +40degC, uses condition followed by IEC standard, Maximum voltage 1 kV. 6. Documentations: Single line diagram & internal wiring diagram with detailed information, Bill of materials with description/catalogue, Panel design, panel door layout, panel plate layout etc. Each LT Distribution Box shall be provided with a permanent name plate containing Manufacturer's name & Country, Serial Number, Type/Model, Manufacturing date, Contract no, Weight, IP Rating and the name "DESCO".				

Document of works and related service for Installation, Testing & Commissioning of 33 kV and 11 kV, Underground Cable Line.

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	7. Connection of 0.415 kV & 0.230 kV underground service (10 sq.mm/16 sq.mm/25 sq.mm/35 sq.mm/50 sq.mm or any size up to 50sqmm) cable which will enter and exit from bottom position.				
	8. Grounding of each LTDB includes 2 nos. boring (100ft) Each boring includes following materials.				
	a. 16-mm diameter, 2-meter length, 2 nos. copper grounding rod will be supplied by contractor.				
	b. There shall be 2 nos. boring (100ft). Necessary earth wire will be supplied by DESCO. Under each boring copper wire must be welded/joint properly to copper grounding rod. Also supply of necessary Nut-bolts and fabricated materials.				
	9. 0.415 kV & 0.230 kV cable laying in cable trench including supplying of all related Copper materials/accessories for connection (lugs, nuts, bolts, internal cable, etc.)				
	10. Testing, Commissioning and Energization of LTDB.				
	b. Civil Works (Detail describe below)				
	Preparation of LTDB foundation and fencing related works as per drawing & the instruction of Project Director or it's representative of DESCO.				
	1. Mobilization and cleaning site before commencing actual physical work and during contract period and demobilization after completion of the works under contract to be accepted by the Project Director or it's representative. This work shall also cover cleaning and clearing, cutting or filling, dressing the project area on and in the ground to an extent that all the events of works of the project can be executed smoothly in a working environment with a particular attention on safety and security in all respects, and to stockpile the end outcome to a place for disposal agreed by the Project Director or it's representative, where, payments are to be based on ground area determined by the Project Director or it's representative and be proportionate to the percentage progress of work under contract as a whole in all respects and approved by the Project Director or it's representative. [Quantity: 1 L.S for 1 Set LTDB Installation works]				

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
16	2. Earth work in excavation in all kinds of soil for foundation trenches including layout, providing center lines, local bench mark pillars, levelling, ramming and preparing the base, fixing bamboo spikes and marking layout with chalk powder, providing necessary tools and plants, protecting and maintaining the trench dry etc., stacking, cleaning the excavated earth at a safe distance out of the area enclosed by the layout etc. all complete and accepted by the Project Director or it's representative, subject to submit method statement of carrying out excavation work to the Project Director or it's representative for approval. However, engineer's approval shall not relieve the contractor of his responsibilities and obligations under the contract. 2.1. Earthwork in excavation in foundation trenches up to 1.5 m depth and maximum 10 m lead. [Quantity: 3.10 Cu. M for 1 Set LTDB Installation works] 3. Sand filling in foundation trenches and plinth with sand having min. F.M. 1.2 in 150 mm in layers including leveling, watering and compaction to achieve minimum dry density of 95% with optimum moisture content (Modified proctor test) by ramming each layer up to finished level as per design supplied by the design office only, all complete and accepted by the Project Director or it's representative. [Quantity: 1.0 Cu. M for 1 Set LTDB Installation works] 4. One layer brick flat soling in foundation or in floor with first class/picked jhama bricks (BDS 208) including preparation of bed and filling the interstices with local sand, leveling etc. complete and accepted by the Project Director or it's representative. [Quantity: 2.50 Sq. M for 1 Set LTDB Installation works]	Job	5		

Measurement of works and related service for installation, Testing & Commissioning of 33 kV and 11 kV Underground Cable Line.

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4 * 5
	5. Brick works with first class bricks with cement sand (F.M. 1:2) mortar (1:6) in foundation and plinth, filling the joints/interstices fully with mortar, racking out the joints, cleaning and soaking the bricks at least for 24 hours before use and curing at least for 7 days etc. all complete including cost of water, electricity and other charges and accepted by the Project Director or it's representative. (Cement: CEM-II/B-M). <i>[Quantity: 0.40 Cu. M for 1 Set LTDB Installation works]</i>				
	6. Mass concrete (1:2:4) in foundation or in floor with cement, sand (F.M. 1:2) and picked jhama brick chips including breaking of chips, screening, mixing, laying, compacting to required level and curing for at least 7 days including the supply of water, electricity, costs of tools & plants and other charges etc. all complete and accepted by Project Director or it's representative. (Cement: CEM-II/B-M)				
	6.1. Mass concrete in foundation (1:2:4) with brick chips and local sand of F.M. 1:2. <i>[Quantity: 0.42 Cu. M for 1 Set LTDB Installation works]</i>				
	7. Supplying and laying of single layer polythene sheet weighing one kilogram per 6.5 square meter in floor or anywhere below cement concrete complete in all respect and accepted by Project Director or it's representative. <i>[Quantity: 3.50 Sq. M for 1 Set LTDB Installation works]</i>				

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	8. Reinforced cement concrete works with minimum cement content relates to mix ratio 1:2:4 having maximum water cement ratio = 0.45 and minimum f_{cr} = 26 MPa, satisfying a specified compressive strength f_{cc} = 19 MPa at 28 days on standard cylinders as per standard practice of Code ACI / BNBC, cement conforming to BDS EN-197-1-CEM-I, 52.5N, best quality sand [50% quantity of best local sand (F.M. 1.2) and 50% quantity of Sylhet sand or coarse sand of equivalent F.M. 2.2] and 20 mm down well graded picked jhama brick chips conforming to ASTM C-33 including conducting necessary tests; breaking chips and screening, making and placing shutter in position maintaining true to plumb, making shutter water-tight properly, placing reinforcement in position; mixing in standard mixer machine with hopper fed by standard measuring boxes, casting in forms, compacting by vibrator machine and curing at least for 28 days, removing centering-shuttering after specified time approved; including cost of water, electricity, other charges etc. all complete, approved and accepted by the Project Director or it's representative. (Rate is excluding laboratory test fees, the cost of reinforcement and its fabrication, placing, binding etc. 8.1. Floor / roof slab, T-beam, L-beam and rectangular beam, tie beam, lintel, stair case slab and step etc. up to ground floor. [Quantity: 1.20 Cu. M for 1 Set LTDB Installation works] 9. Centering and shuttering, including strutting, propping etc. and removal of form for: 9.1. Tie beam & lintels, grade beam, column etc. [Quantity: 14.00 Sq. M for 1 Set LTDB Installation works]				

Procurement of work and related service for Installation, Testing & Commissioning of 33 kV and 11 kV, Underground Cable Line.

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	10. Grade 400 (B400DWR / B420DWR: complying BDS ISO 6935-2:2016 / ASTM A615) ribbed or deformed bar produced and marked according to Bangladesh standard, with minimum yield strength, f_y (ReH) = 400 MPa but f_y not exceeding 480 MPa and whatever is the actual yield strength within allowable limit as per BNBC/ ACI 318; the ratio of ultimate tensile strength f_u to yield strength f_y, shall be at least 1.25 and minimum elongation after fracture and minimum total elongation at maximum force is 17% and 8% respectively: up to ground floor. [Quantity: 1.35 Quintal for 1 Set LTDB Installation works]				
	11. Minimum 12 mm thick cement sand (F.M. 1:2) plaster with neat cement finishing to plinth wall with cement (1:4) up to 150 mm below ground level including washing of sand, finishing the edges and corners and curing at least for 7 days, cost of water, electricity, scaffolding and other charges etc. all complete in all respect as per drawing and accepted by the Project Director or it's representative. (Cement: CEM-II/B-M). ground floor [Quantity: 16.00 Sq. M for 1 Set LTDB Installation works]				
	12. Supplying, fitting and fixing verandah grill made of 10 mm dia. M.S rod provided @ 75 mm c/c in any position both ways as per design with outside frame of 25 mm x 25 mm x 6 mm M.S. angle and F.I. bar clamps including fabricating, welding in each point, painting a coat of anti-corrosive painting (Red-Oxide), including cost of electricity, tools and plants, workshop charges, carriage of the same including cutting groves in the R.C.C. or brick work, mending good the damages with C.C. (1:1.5:3) etc., all complete for all floors accepted by the Project Director or it's representative. (Total weight per sqm should be approx. 21 kg and add or deduct @ 100.00 for each kg/sqm excess or less respectively. [Quantity: 17.50 Sq. M for 1 Set LTDB Installation works]				

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	13. Standard synthetic enamel paint of approved best quality and colour delivered from authorized local agent of the manufacturer in a sealed container, having high water resistance, high bond ability, flexibility property; using specified brand thinner applying to metallic or wooden surface by brass/roller/spray in 2 coats over single coat anti corrosive coating including cleaning, drying, making free from dirt, grease, wax, removing all chalked and scaled materials, all complete in all floors and accepted by the Project Director or it's representative. [Quantity: 17.50 Sq. M for 1 Set LTDB Installation works]				
	14. Supply, fabrication and installation of built-up sections i.e. columns, beams, rafters, bracings, struts etc. (up to level-4) from steel plates conforming to ASTM A36, with a minimum yield strength of 250 MPa, including the cost of testing of plates, application of red/grey-oxide primer & 2coat enamel paint etc. all complete as per drawing, specification and direction of Project Director or it's representative. [Quantity: 93.00 KG for 1 Set LTDB Installation works]				
	Fiber Optic Cable				
	Laying of Underground Cables (OPUC) with Transport:				
17	Underground Fiber Optic Cable Pulling through HDPE Duct during HDD method and other related works as per direction & instruction of the Engineer in-charge of DESCO.	Meter	650		
	Underground Fiber Optic Cable Pulling through HDPE Duct during Buried method and other related works as per direction & instruction of the Engineer in-charge of DESCO.	Meter	8650		
	Laying of HDPE Duct (OPUC) with Transport:				
18	Carrying & laying of 2" HDPE Duct. Includes carrying & laying HDPE Duct HDD/Buried method to Cross the Road or any other Places along the Cable trenches and other related works as per direction & instruction of the Engineer in-charge.				
	1) up to 51.5 mm Dia. HDPE Duct (OPUC Cable).	Meter	9300		

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4 x 5
	Joint End closure				
	Overhead/Underground Fiber Optic Cable Termination, Measuring, Testing (dB loss/KM must be within standard limit) and other necessary works including supply of related accessories as per the direction of the Engineer in-charge.	Nos	38		
	Re-installation of Joint Enclosure, Measuring, Testing (dB loss/KM) must be within standard limit) including supply of related accessories and other necessary works as per direction & instruction of the Engineer in-charge.	Nos	3		
	Recovery of Joint Enclosure including all materials and other necessary works as per the direction of Engineer in-charge.	Nos	3		
	Handhole Box				
	Handhole Box installation with steel frame (1200mm x 1075mm x 1100mm). Top of the Handhole cover should be 250mm above the Ground level. Works shall be done as per direction & instruction of the Engineer in-charge of DESCO.				
	1) Mobilization and cleaning site before commencing actual physical work and during contract period and demobilization after completion of the works under contract to be accepted by the Engineer-in-charge. This work shall also cover cleaning and clearing, cutting or filling, dressing the project area on and in the ground to an extent that all the events of works of the project can be executed smoothly in a working environment with a particular attention on safety and security in all respects, and to stockpile the end outcome to a place for disposal agreed by the Engineer-in-charge, where, payments are to be based on ground area determined by the Engineer-in-charge and be proportionate to the percentage progress of work under contract as a whole in all respects and approved by the Engineer-in-charge. [Quantity: 01 L.S. for 1 Set Handhole Box Construction works]				

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	2) Earth work in excavation in all kinds of soil for foundation trenches including layout, providing center lines, local bench mark pillars, levelling, ramming and preparing the base, fixing bamboo spikes and marking layout with chalk powder, providing necessary tools and plants, protecting and maintaining the trench dry etc., stacking, cleaning the excavated earth at a safe distance out of the area enclosed by the layout etc. all complete and accepted by the Engineer in-charge, subject to submit method statement of carrying out excavation work to the Engineer-in-charge for approval. However, engineer's approval shall not relieve the contractor of his responsibilities and obligations under the contract. 2.1) Earth work in excavation in all kind of soil for foundation trenches, <i>[Quantity: 3.00 Cu. M for 1 Set Handhole Box Construction works]</i> 3) Supplying and laying of single layer polythene sheet weighing one kilogram per 6.5 square meter in floor or anywhere below cement concrete complete in all respect and accepted by Engineer-in-charge. <i>[Quantity: 2.00 Sq. M 1 Set Handhole Box Construction works]</i>				

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
20	4) Reinforced cement concrete works using steel shutter with minimum cement content relates to mix ratio 1:1.5:3 having minimum $f_{cr} = 30$ Mpa, and satisfying a specified compressive strength $f'_c = 25$ Mpa at 28 days on standard cylinders as per standard practice of Code ACI/BNBC/ASTM & Cement conforming to BDS EN-197-1-CEM 1 (32.5 to 52.5 N) / ASTM-C 150 Type-I, best quality Sylhet sand or coarse sand of equivalent F.M. 2.2 and 20 mm down well graded stone chips conforming to ASTM C-33, making, placing shutter in position and maintaining true to plumb, making shutter water-tight properly, placing reinforcement in position, mixing with standard mixer machine with hopper, fed by standard measuring boxes, casting in forms, compacting by vibrator machine and curing at least for 28 days, removing centering-shuttering including cost of water, electricity, testing and other charges etc. all complete approved and accepted by the Engineer. Ent concrete works using wooden shutter, with minimum cement content relates to mix ratio (1:1.5:3), Brick chips having minimum $f_{cr} = 30$ Mpa, [Quantity: 1.25 Quintal for 1 Set Handhole Box Construction works] 4.1. Individual & combined footing, pile cap, raft/mat, floor slab and foundation beam up to plinth level [Quantity: 1.25 Quintal for 1 Set Handhole Box Construction works] 5) Shuttering (wooden) [Quantity: 10.00 Sq. M for 1 Set Handhole Box Construction works] 6. Grade 400 (B400DWR / B420DWR: complying BDS ISO 5935-2:2016 / ASTM A615) ribbed or deformed bar produced and marked according to Bangladesh standard, with minimum yield strength, f_y (ReH)= 400 MPa but f_y not exceeding 480 MPa and whatever is the actual yield strength within allowable limit as per BNBC/ ACI 318, the ratio of ultimate tensile strength f_u to yield strength f_y, shall be at least 1.25 and minimum elongation after fracture and minimum total elongation at maximum force is 17% and 8% respectively: up to ground floor [Quantity: 1.15 Quintal for 1 Set Handhole Box Construction works]	Job	38		

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	7) One layer of brick flat soling in foundation or in floor with first class or picked jhama bricks including preparation of bed and filling the interstices with local sand, leveling etc. complete and accepted by the Engineer. [Quantity: 1.6 Sq. M for 1 Set Handhole Box Construction works] 8) Supplying 50 mm inside dia. best quality uPVC soil, waste and ventilation pipe having specific gravity 1.35 - 1.45, wall thickness 2.5 - 3.0 mm, and other physical, chemical, thermal, fire resistivity properties etc. as per BSI approved manufacturer standards or ASTM, BS/ISO/IS standards fitted and fixed in position with sockets, bends, of uPVC Pipe with all accessories such as Round grating /domed roof grating bands, sockets etc. approved and accepted by the Engineer (length: 6000 mm each). [Quantity: 0.610 m for 1 Set Handhole Box Construction works] 9) Supplying different inside dia. best quality uPVC soil, waste and ventilation pipe having specific gravity 1.35 - 1.45, wall thickness 2.5 mm - 3.0 mm, and other physical, chemical, thermal, fire resistivity properties etc. as per BSI approved manufacturer standards or ASTM, BS/ISO/IS standards fitting and fixing in position with sockets, bends, of uPVC Pipe with all accessories such as Round grating /domed roof grating bands, sockets etc. approved and accepted by the Engineer in-charge. (100 mm inside dia. wall thickness 3.4- 4.0 mm) 10) Hook for slab with galvanize. [Quantity: 4.00 each for 1 Set Handhole Box Construction works] 11) Supply, fabrication and installation of built-up sections i.e. columns, beams, rafters, bracings, struts etc. (up to level-4) from steel plates conforming to ASTM A36, with a minimum yield strength of 250 MPa, including the cost of testing of plates, application of red/grey-oxide primer & 2 coat enamel paint etc. all complete as per drawing, specification and direction of Engineer-in-charge, (1.5"x1.5"x5mm Angle) [Quantity: 0.15 Quintal for 1 Set Handhole Box Construction works]				



Procurement of works and related service for Installation, Testing & Commissioning of 33 kV and 11 kV, Underground Cable Line.




Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	12). Minimum 12 mm thick cement sand (F.M. 1:2) plaster with neat cement finishing to dado with cement (1:4) up to 150 mm including washing of sand; finishing the edges and corners and curing at least for 7 days, cost of water, electricity, scaffolding and other charges etc. all complete in all respect as per drawing and accepted by the Engineer-in-charge. (Cement: CEM II/B-M). ground floor [Quantity: 12.00 Sq. M for 1 Set Handhole Box Construction works]				
21	Supply of PIB Tape	Nos	538		
22	Preparation of 33 kV, 11 kV and OPUC Cable laying line route on suitable scale map with all necessary drawing, design etc. as per instruction of Engineer-in-charge. (Route basis)	LS	11		
23	Testing & Commissioning of 11 kV/33kV U/G (HV, IR & Sheath) and OPUC Cable Line before final excercitation as per direction & instruction of Engineer-in-charge. (33 kV Ckt. Basis & 11 kV Route basis)	LS	15		
24	05(Five) Sets of "As Build" Drawing prepared on Geographical Map mentioning the GPS location of the cable jointing point, Handhole Box positions and relevant information to be provided [as per section:3 GCC 82] for upgradation of the GIS map at 1:2000 & 1:200 DCS (Document Cover Sheet) sheet and 02 (two) CDs (compact disc) of AutoCAD Drawing. (33 kV Ckt. Basis & 11 kV Route basis)	LS	11		
25.	Clamp for 33kV, 11 kV and OPUC Cable in Substation End.				
	Supply, Carrying & Installation of Clamp. Includes Supply, Cutting, Bending and fixing of MS Rod (PWD Rate Schedule) For making of Cable Clamp, Angle Frame etc. & Installation for Feeder Cable/ckt. and OPUC from trenches to switchgear or any other Places along the Cable trenches as per direction of the Engineer in Charge.				
	I) OPUC cable in Substation	Quintal	0.30		
	II) 11 kV Feeder cable in Substation	Quintal	1.00		
	III) 33kV Circuit in Substation	Quintal	2.00		

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
26	Cable Guard for 11 kV Feeder Cable at O/H Feeder Pole End				
	Supply, Carrying & Installation of Cable Guard. Includes Supplying, Carrying and Installation of cable guard (U shaped) made of Galvanised Iron sheet of 1.5 mm thickness and 10 feet height (Periphery depends on category of Cables & poles) for Feeder Cable/ckt. at O/H Pole or any other Places as per drawing & direction of the Engineer in Charge.				
	I) 11 kV Feeder cable at O/H pole.	Quintal	6.00		
27	Recovery of U/G Cable				
	II) 11/0.4/0.23 kV U/G cable including service drop (Circuit Basis, All size)	Meter	300		
	II) 33 kV 1-core/3-core XLPE Copper/Al U/G Cable & 11 kV 3-core XLPE Copper/Al U/G Cable recovery, Drumming, Carrying, and Delivery of cable from existing cable trench to DESCO designated store as per instruction of Engineer-in-charge. (All size, 1-core for 33 kV & 3-core for 11 kV)	KM	1.00		
28	Sub Total				
29	Total of Schedule =				
Total Amount (Tk.) in words (Including VAT & TAX):					

Note:

1. It is suggested that the Tenderer uses these sheets of the BOQ in order to avoid any manipulation, distortion and inadvertent mistakes or omission in course of preparing the Tender by the Tenderer.

2. All unit rates and prices quoted by the Tenderers against each basic item or activity shall include the Tenderer's profit, overheads, VAT and all other charges including corresponding incidental service charges and premiums for banking and insurances, as applicable and thus forth the total Tender Price quoted by the Tenderers.

for
Engr. Mohammad Bakhtul
Sub-Divisional Engineer
Dhaka Power System Expansion
Strengthening Project in DESCO

[Signature]

[Signature]

Section 6. Bill of Quantity (BOQ)

Lot-C: Central Zone (S&D Division, Baridhara, Bashundhara, Khilkhet)

Tender No.: DPSEP/01/2025

Identification Reference No.: 27.24.0000.078.014.001.25.590

Date: 04.09.2025

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
1	PG Clamp	Nos.	123		
2	Outdoor Terminating Kits: Installation of Overhead Cable Line Terminating by heat/cold shrinkable cable termination kits including supply of 1 set single and/or Tri hole rain skirt (as required and applicable) for 3 core Copper/Al Cable which includes Cable kit mounting channel, fixing accessories, cable guard etc. as per approval and instruction given by the engineer in Charge.				
	i) 11 kV 3-Core Copper, Outdoor Termination Kits.	Set	41		
3	Indoor Termination Kits: Installation of Switchgear Terminating by heat/cold shrinkable cable termination kits as per approval and instruction given by the engineer-in-Charge.				
	i) 11 kV 3-Core Copper/Al, Indoor Termination Kits.	Set	41		
	ii) 33 kV Cable 1-Core Copper/Al Cable (with/without GIS)	Nos.	36		
4	Installation of Straight Through Joint: Preparation of jointing kit the making of straight through joint between two U/G Cable by using cold shrink/heat shrink/hot pouring/cold pouring cable jointing kits, etc. All other materials such as keroshine oil, cotton etc. are to be supplied by the contractor. All works shall be as per direction of Engineer-in-charge.				
	i) 11 kV 3-Core Copper/Al straight through joint	Set	58		
	ii) 33 kV 1-Core Copper/Al Cable straight through joint	Nos.	138		
5	A) Breaking of pucca surface: Includes breaking out of pucca surface of dimension given by the Engineer in charge and as per his instruction. Includes debris cleaning and water spray, temporary repairs to road surface until attended to by the road authority.	Sq. m	26510		



Procurement of works and related service for Installation, Testing & Commissioning of 33 kV and 11 kV, Underground Cable Line.

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
6	B) Excavation and back-filling: i) Excavation: The excavation of a cable trench of dimensions given by the Engr. By excavation soil, as per requirement of wide and depth, using checkered plates and safety barrier, includes debris cleaning and water spray, temporary repairs to road surface until attended to by the road authority and also bailing/pumping of water as necessary, as per instruction of the Engr./Consultant. Immediately, all rubbish/soil should be removed from the site. All debris shall be cleared from the site to any suitable location.	Cum	26510		
7	Transportation & Laying: Transportation & laying all size of underground cable: i) This item includes for transportation of the UG cable up to site, mounting of cable drum on drum jacks, pulling out of cable on rollers and the installation of the UG cable into the cable trench (through road crossing pipes if necessary). ii) Laying of cable protective slab on top, sand, protective marking tape, etc. iii) Installation of route/ joint/ markers including supply of T block and necessary all items to install it and location of joint bays including laying of cable protective slab on both sides and tops, sand, protective marking tape as per requirement. All in accordance with the specifications and to the direction of the Engineer in charge.				
	I) 11/0.4/0.23 kV U/G cable including service drop (Circuit Basis, All size)	Meter	500		
	II) Laying of 11 kV, 3-Core Copper/Al Cable	Meter	32234		
	III) 33 kV Cable 1-Core Copper/Al Cable	Meter	69690		
8	Supply and laying of sand: This item includes for supply and laying of viti sand (making) at least 200 mm, on sand bed with watering & Properly compacted before laying of cable, over the cable in accordance with the specification & drawing and to the direction of Engr./Const. Also includes disposal of surplus soil/debris at contractor's own cost.	Cum	26510		

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
9	a) Supply, laying and carrying of RCC blocks: Reinforce Cement concrete works (1:1.5:3) having with cement (conforming to BDS 232)m best quality quarse sand (50%) quality of local sand (F.M-1.5) and 50% quality of sylhet sand down grade picked jhama chips including breadding chips and screening shuttering, supplying polyethylene sheet for making , mixing the aggregates with mixer machine, casting in forms, compacting by cont, 23 vibrator machine and curing at least 28 days (Excluding the cost of reinforcement and fabrication). The reinforcement bar to be used in the for making such RCC slab is 3/8" placing 150 mm a part and the thickness of the block will be at least 63mm. (PWD rate Schedule)	Cum	1326		
10	Supply, Cutting, Bending and fixing of MS Rod (PWD) Rate Schedule.	Quintal	1466		
11	Supply, Carrying & Laying of GI/RCC/PVC Pipe. Includes Supplying, Carrying and Laying of GI/ RCC/PVC Pipe to Cross the Road or any other Places along the Cable trenches as per direction of the Engineer in Charge.				
	I) Minimum inner dia. 100 mm PVC Pipe.	Meter	4505		
	II) Minimum inner dia. 150 mm PVC Pipe.	Meter	3308		
12	HDD for Railway / Road Crossing. The Rate includes delivery and removal from site of hydraulic boring machine which is able to bore holes and bore shaft as per requirements. It also includes back filling as per direction and standard specification, removal from site and disposal of any surplus soil, resettlement of all made up surfaces and installation of carrier pipes as per direction of the Engr/ Consultant. (Pipes and Connectors to be supplied by contractor) the supply and installation of draw wires and to temporary sealing of carrier pipes to the direction of Engr/Consultant Puls all Necessary work to and easy installation of Cable. (HDD=Horizontal Directional Drilling).				
	I) Minimum 76 mm Dia. (OPUC Cable)	Meter	530		
	III) Minimum 160 mm Dia. (Upto-500 mm Cable, 1-Core /3-core)	Meter	4521		

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
13	Supply, Carrying & Laying of Pipe for HDD. Includes Supplying, Carrying and Laying of Pipe with all necessary joints and accessories for HDD to Cross the Road or any other Places along the Cable trenches as per direction of the Engineer in Charge.				
	II) Minimum 160 mm Outside Dia. HDPE Pipe	Meter	4521		
	Installation of RMU (3-Unit/5-Unit/7-Unit RMU)				
	A. Electrical Works (Detail describe below)				
	1. Carrying of RMU from ware house to site, loading, unloading, installation according to design, drawing greazing, fixing alignment, leveling, bolting, grounding, wiring etc. RMU carrying, recovery of existing RMU and return to store and related civil works for RMU pad/base as required, including Replacement/Reinstallation of CT's as per instruction of Project Director or it's representative.				
	2. Termination of 11 kV cable, cold shrink/heat shrinking, termination kit, carrying of kit to site from ware house and installation of boots for 12 kV SP6 insulated 5(Five)/3(three)/7(seven) function outdoor compatible compact Ring Main Unit (RMU) suitable for 11kV, 3- core XLPE (Cu/Al), 185sqmm/300sqmm cable.	Job.	28		
	3. Grounding of each RMU includes 4 nos. boring, Each 100 ft. boring includes following materials.				
	a. 16 mm diameter, 2 meter-length, 4 nos. copper grounding rod will be supplied by contractor.				
	b. There shall be 4 nos. boring. Necessary earth cu wire will be supplied by Desco. Under each boring copper wire must be welded/joint properly to copper grounding rod. Also supply of necessary Nut-bolts and fabricated materials. After completion of grounding:				
	4. 11KV cable laying in cable trance.				
	5. Testing, Commissioning and Energization of RMU.				

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	B. Civil Works base without room (Detail describe below)				
14	1. Mobilization and cleaning site before commencing actual Physical work and during contract period and demobilization after completion of the works under contract to be accepted by the Project Director or it's representative. This work shall also cover cleaning and clearing, cutting or filling, dressing the project area on and in the ground to an extent that all the events of works of the project can be executed smoothly in a working environment with a particular attention on safety and security in all respects, and to stockpile the end outcome to a place for disposal agreed by the Project Director or it's representative, where, payments are to be based on ground area determined by the Project Director or it's representative and be proportionate to the percentage progress of work under contract as a whole in all respects and approved by the Project Director or it's representative. [Quantity: 1 LS; Job for 1 Set RMU Installation works]	Job	28		
	2. Earth work in excavation in all kinds of soil for foundation trenches including layout, providing center lines, local bench mark pillars, levelling, ramming and preparing the base, fixing bamboo spikes and marking layout with chalk powder, providing necessary tools and plants, protecting and maintaining the trench dry etc., stacking, cleaning the excavated earth at a safe distance out of the area enclosed by the layout etc. all complete and accepted by the Project Director or it's representative, subject to submit method statement of carrying out excavation work to the Project Director or it's representative for approval. However, engineer's approval shall not relieve the contractor of his responsibilities and obligations under the contract.				
	2.1. Earthwork in excavation in foundation trenches up to 1.5 m depth and maximum 10 m lead. [Quantity: 6.38 Cu. M for 1 Set RMU Installation works]				

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	3. Sand filling in foundation trenches and plinth with sand having min. F.M. 1.2 in 150 mm in layers including leveling, watering and compaction to achieve minimum dry density of 95% with optimum moisture content (Modified proctor test) by ramming each layer up to finished level as per design supplied by the design office only, all complete and accepted by the Project Director or it's representative. <i>[Quantity: 0.64 Cu. M for 1 Set RMU Installation works]</i>				
	4. One layer brick flat soling in foundation or in floor with first class/picked jhama bricks (BDS 208) including preparation of bed and filling the interstices with local sand, leveling etc. complete and accepted by the Project Director or it's representative. <i>[Quantity: 4.32 Sq. M for 1 Set RMU Installation works]</i>				
	5. Mass concrete (1:2:4) in foundation or in floor with cement, sand (F.M. 1.2) and picked jhama brick chips including breaking of chips, screening, mixing, laying, compacting to required level and curing for at least 7 days including the supply of water, electricity, costs of tools & plants and other charges etc. all complete and accepted by Project Director or it's representative. (Cement: CEM-II / B-M).				
	5.1. Mass concrete in foundation (1:2:4) with brick chips and local sand of F.M. 1.2. <i>[Quantity: 0.31 Cu. M for 1 Set RMU Installation works]</i>				
	6. Supplying and laying of single layer polythene sheet weighing one kilogram per 6.5 square meter in floor or anywhere below cement concrete complete in all respect and accepted by Project Director or it's representative. <i>[Quantity: 4.05 Sq. M for 1 Set RMU Installation works]</i>				

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	7. Brick works with first class bricks with cement sand (F.M. 1:2) mortar (1:6) in foundation and plinth, filling the joints/interstices fully with mortar, racking out the joints, cleaning and soaking the bricks at least for 24 hours before use and curing at least for 7 days etc. all complete including cost of water, electricity and other charges and accepted by the Project Director or it's representative. (Cement: CEM-II/B-M). <i>[Quantity: 3.70 Cu. M for 1 Set RMU Installation works]</i> 8. Minimum 12 mm thick cement sand (F.M. 1:2) plaster with neat cement finishing to plinth wall with cement (1:4) up to 150 mm below ground level including washing of sand, finishing the edges and corners and curing at least for 7 days, cost of water, electricity, scaffolding and other charges etc. all complete in all respect as per drawing and accepted by the Project Director or it's representative. (Cement: CEM-II/B-M), ground floor <i>[Quantity: 25.09 Sq. M for 1 Set RMU Installation works]</i>				
	Installation of RMU and Construction of RMU Room with foundation for 1 No 5-Unit RMU A. Electrical Works (Detail describe below) 1. Carrying of RMU from ware house to site, loading, unloading, installation according to design, drawing greasing, fixing alignment, leveling, bolting, grounding, wiring etc. RMU carrying, recovery of existing RMU and return to store and related civil works for RMU pad/base as required. Including Replacement/Reinstallation of CT's as per instruction of Project Director or it's representative. 2. Termination of 11 kV cable, heat shrinking, termination kit, carrying of kit to site from ware house and installation of boots for 12 kV SP6 insulated 5(Five)/3(three)/7(seven) function outdoor compatible compact Ring Main Unit (RMU) suitable for 11 kV, 3- core XLPE (Cu/Al), 185sqmm/300sqmm cable; 3. Grounding of each RMU includes 4 nos. boring. Each 100 ft. boring includes following materials.	Job	5		

Procurement of works and related service for Installation, Testing & Commissioning of 33 kV and 11 kV, Underground Cable Line.

Item SL No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	a. 16 mm diameter, 2 meter length, 4 nos. copper grounding rod will be supplied by contractor.				
	b. There shall be 4 nos. boring. Necessary earth cu wire will be supplied by Desco. Under each boring copper wire must be welded/joint properly to copper grounding rod. Also supply of necessary Nut-bolts and fabricated materials. After completion of grounding:				
	4. 11KV cable laying in cable trance.				
	5. Testing, Commissioning and Energization of RMU.				
	B. Civil Works for RMU room (Detail describe below)				
	1. Mobilization and cleaning site before commencing actual physical work and during contract period and demobilization after completion of the works under contract to be accepted by the Engineer-in-charge. This work shall also cover cleaning and clearing, cutting or filling, dressing the project area on and in the ground to an extent that all the events of works of the project can be executed smoothly in a working environment with a particular attention on safety and security in all respects, and to stockpile the end outcome to a place for disposal agreed by the Engineer-in-charge, where, payments are to be based on ground area determined by the Engineer-in-charge and be proportionate to the percentage progress of work under contract as a whole in all respects and approved by the Engineer-in-charge. [Quantity: 1 L.S. Job for Room of 1 Set RMU Installation works]				

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
15	2. Earth work in excavation in all kinds of soil for foundation trenches including layout, providing center lines, local bench mark pillars, levelling, ramming and preparing the base, fixing bamboo spikes and marking layout with chalk powder, providing necessary tools and plants, protecting and maintaining the trench dry etc., stacking, cleaning the excavated earth at a safe distance out of the area enclosed by the layout etc. all complete and accepted by the Engineer in-charge, subject to submit method statement of carrying out excavation work to the Engineer-in-charge for approval. However, engineer's approval shall not relieve the contractor of his responsibilities and obligations under the contract. 2.1 Earthwork in excavation in foundation trenches up to 1.5m depth and maximum 10 m lead. [Quantity: 10.09 Cu. M for Room of 1 Set RMU Installation works] 3. Earth filling in foundation trenches and plinth in 150 mm layer with earth available within 90 m of the building site to achieve minimum dry density of 95% with optimum moisture content (Modified proctor test) including carrying watering, leveling, dressing and compacting to a specified percentage each layer up to finished level etc. all complete and accepted by Engineer-in-charge. [Quantity: 5.05 Cu. M for 1 Set RMU Installation works] 4. Sand filling in foundation trenches and plinth with sand having minimum F.M. 0.5 in 150 mm layers including leveling, watering and compaction to achieve minimum dry density of 95% with optimum moisture content (Modified proctor test) by ramming each layer up to finished level as per design supplied by the design office only, all complete and accepted by the Engineer-in-charge. [Quantity: 10.71 Cu. M for 1 Set RMU Installation works]	Job	5		

Procurement of works and related service for Installation, Testing & Commissioning of 33 kV and 11 kV Underground Cable Line

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	5. One layer brick flat soling in foundation or in floor with first class/picked jhama bricks (BDS 208) including preparation of bed and filling the interstices with local sand, leveling etc. complete and accepted by the Engineer-in-charge. [Quantity: 23.42 Sq. M for Room of 1 Set RMU Installation works] 6. Mass concrete (1:2:4) in foundation or in floor with cement, sand (F.M. 1:2) and picked jhama brick chips including breaking of chips, screening, mixing, laying, compacting to required level and curing for at least 7 days including the supply of water, electricity, costs of tools & plants and other charges etc. all complete and accepted by Engineer-in charge. (Cement: CEM-II / B-M) 6.1 Mass concrete in foundation (1:2:4) with brick chips and local sand off F.M. 1:2. [Quantity: 1.53 Cu. M for Room of 1 Set RMU Installation works] 7. Supplying and laying of single layer polythene sheet weighing one kilogram per 6.5 square meter in floor or anywhere below cement concrete complete in all respect and accepted by Engineer-in-charge. [Quantity: 26.77 Sq. M for Room of 1 Set RMU Installation works] 8. Brick works with first class bricks with cement sand (F.M. 1:2) mortar (1:6) in foundation and plinth, filling the joints/interstices fully with mortar, racking out the joints, cleaning and soaking the bricks at least for 24 hours before use and curing at least for 7 days etc. all complete including cost of water, electricity and other charges and accepted by the Engineer-in- charge. (Cement: CEM-II/B-M) [Quantity: 3.39 Cu. M for Room of 1 Set RMU Installation works]				

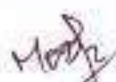
Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
2	2	3	4	5	6 = 4*5
	9. 125 mm brick works with first class bricks with cement sand (F.M. 1:2) mortar (1:4) and making bond with connected walls including necessary scaffolding, raking out joints, cleaning and soaking the bricks for at least 24 hours before use and washing of sand, curing at least for 7 days in all floors including cost of water, electricity and other charges etc. all complete and accepted by the Engineer-in-charge. (Cement: CEM-II/B-M) [Quantity: 55.36 Sq. M for Room of 1 Set RMU Installation works]				
	10. Reinforced cement concrete works with minimum cement content relates to mix ratio 1:1.5:3 having maximum water cement ratio = 0.40 and minimum f_{cr} = 33.5 MPa, satisfying a specified compressive strength f'_c = 25 MPa at 28 days on standard cylinders as per standard practice of Code ACI /BNBC, Cement conforming to BDS EN-197-1-CEM-I, 52.5N, best quality Sylhet sand or coarse sand of equivalent F.M. 2:2 and 20 mm down well graded stone chips conforming to ASTM C-33 (Aggregate grading as per table shown in technical specification), conducting necessary tests, making and placing shutter in position and maintaining true to plumb, making shutter water-tight properly, placing reinforcement in position; mixing with standard mixer machine with hopper, fed by standard measuring boxes, casting in forms, compacting by vibrator machine and curing at least for 28 days, removing centering-shuttering after specified time approved; including cost of water, electricity, other charges etc. all complete, approved and accepted by the Engineer-in-charge. (Rate is excluding laboratory test fees, the cost of reinforcement and its fabrication, placing, binding etc. and the cost of shuttering & centering) 10.1 Floor/ roof slab, T-beam, L-beam and rectangular beam, tie beam, lintel, stair case slab and steps etc. up to ground floor. [Quantity: 8.61 Cu. M for Room of 1 Set RMU Installation works]				
	11. FORMWORK (Wooden) for boundary wall, gate, Tie beam & lintels centry post etc. [Quantity: 63.18 Sq. M for Room of 1 Set RMU Installation works]				

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	12. Grade 400 (B400DWR / B420DWR: complying BDS ISO 6935-2:2016 / ASTM A615) ribbed or deformed bar produced and marked according to Bangladesh standard, with minimum yield strength, f_y (ReH)= 400 MPa but f_y not exceeding 480 MPa and whatever is the actual yield strength within allowable limit as per BNBC/ACI 318, the ratio of ultimate tensile strength f_u to yield strength f_y, shall be at least 1.25 and minimum elongation after fracture and minimum total elongation at maximum force is 17% and 8% respectively; up to ground floor. [Quantity: 11.68 Quintal for Room of 1 Set RMU Installation works] 13. Supplying, fitting and fixing M.S. door shutters made with 38 mm x 38 mm x 6 mm angle outer frame, inner member 25 mm x 6 mm F.I. bar, cladding with 16 BWG M.S. sheet, 04 nos 75 mm long hinge, 02 nos. locking arrangement with 50 mm x 50 mm x 6 mm M.S. angle chowkat including all charges for welding, riveting etc. including cost of supplying all essential fittings like iron hinges, socket bolts, clamps, for fitting and fixing the frame, making necessary holes in brick walls and R.C.C works and fitting with C.C. (1:2:4) and mending good the damages including all cost of carriage, workshop charges, electricity and labour for fittings, fixing, curing etc. all complete and accepted by the Engineer-in charge. (Rate is excluding the costs of painting) [Quantity: 5.86 Sq. M for Room of 1 Set RMU Installation works] 14. Supplying, fitting and fixing window grills of any design made with 20 mm x 5 mm F.I. bar @ 100 mm c/c as inner and outer section; including fabricating, welding, cost of electricity and tools and plants, finished with anti-corrosive painting (Red-Oxide), carriage, cutting grooves, mending good the damages etc. complete for all floors accepted by the Engineer-in charge. (Total weight per sqm should be approx. 11 kg. and add or deduct. @ 100.00 for each kg/sqm excess or less respectively) [Quantity: 2.83 Sq. M for Room of 1 Set RMU Installation works]				

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	15. Supplying fitting and fixing of aluminium fixed louver as per the U.S. Architectural Aluminium Manufacturer's Association (AAMA) standard specification and BDS 1879:2014 having minimum 1.2 mm thick wall frame (size 76.20 mm, 38.10 mm, .564 kg/m), 1.5 mm thick louver (size 55.02 mm, 37.39 mm, 0.281 kg/m) and minimum 1.2 mm thick louver outer section (size 39.67 mm, 15.06 mm) and inner inclined aluminium louver section fixed with above mentioned frame and all aluminium members will be anodized to aluminium bronze/silver/ss/black colour with a coat not less than 15 microns in thickness or powder coated to any colour with a coat not less than 25 microns in thickness and density of 4 mg per square cm etc. including all accessories, neoprene, sealant, nuts and bolts etc. complete in all respect as per drawing and accepted by the Engineer-in-charge. [Quantity: 0.74 Sq. M for Room of 1 Set RMU Installation works] 16. Supplying, fitting and fixing of aluminium sliding window as per the U.S. Architectural Aluminium Manufacturer's Association (AAMA) standard specification and BDS 1879:2014 having minimum 1.2 mm thick outer bottom (size 75.50 mm, 32 mm, 0.605 kg/m), minimum 1.2 mm thick outertop (size 75.50 mm, 28.50 mm, 0.705 kg/m), minimum 1.2 mm thick shutter top (size 33 mm, 26.80 mm, 0.42 kg/m), minimum 1.2 mm thick shutter bottom (size 60mm, 24.40 mm, 0.589 kg/m), minimum 1.2 mm thick outer side (size 75.50 mm, 19.90 mm, 0.52 kg/m), minimum 1.2 mm thick shutter lock (size 49.20 mm, 25.80 mm, 0.543 kg/m) and minimum 1.2 mm thick inter lock (size 34.40 mm, 32.13 mm, 0.562 kg/m) sections all aluminium members will be anodized to aluminium bronze/silver/ss/black colour with a coat not less than 15 microns in thickness or powder coated to any colour with a coat not less than 25 microns in thickness and density of 4 mg per square cm etc. including all accessories like sliding door key lock, sliding door wheel, sliding door mohar, sliding door neoprene, bolts and nuts including sealants, keeping provision for fitting 5 mm thick glass including labour charge for fitting of accessories, making				



Procurement of works and related service for Installation, Testing & Commissioning of 33 kV and 11 kV, Underground Cable Line

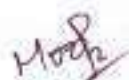



Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1.	2	3	4	5	6 = 4*5
	16.3: size up to: 1500 mm x 1400 mm. [Quantity: 2.09 Sq. M for Room of 1 Set RMU Installation works]				
	17. Supplying, fitting and fixing in Aluminium door frames, windows, partitions and curtain wall distortion free glass of approved quality and shade including cost of fitting fixing all necessary accessories etc. complete in all respect as per drawing and accepted by the Engineer- in-charge.				
	17.1. 5 mm thick clear glass: [Quantity: 2.09 Sq. M for Room of 1 Set RMU Installation works]				
	18. Minimum 12 mm thick cement sand (F.M. 1:2) plaster (1:4) with fresh cement to both inner and outer surface of wall, finishing the corner and edges including washing of sand, cleaning the surface, curing at least for 7 days, cost of water, electricity, scaffolding and other charges etc. all complete in all respect as per drawing and accepted by the Engineer- in- charge. (Cement: CEM-II/B-M), ground floor [Quantity: 158.78 Sq. M for Room of 1 Set RMU Installation works]				
	19. Minimum 12 mm thick cement sand (F.M. 1:2) plaster with neat cement finishing to plinth wall with cement (1:4) up to 150 mm below ground level including washing of sand, finishing the edges and corners and curing at least for 7 days, cost of water, electricity, scaffolding and other charges etc. all complete in all respect as per drawing and accepted by the Engineer-in-charge. (Cement: CEM-II/B-M), ground floor [Quantity: 38.30 Sq. M for Room of 1 Set RMU Installation works]				
	20. Providing drip course or nosing at the edge of sunshade or cornice with cement sand (F.M. 1:2) mortar (1:2) with fresh cement, curing at least for 7 days, cost of water, electricity, scaffolding and other charges etc. all complete in all respect as per drawing and accepted by the Engineer-in-charge. [Quantity: 3.51 RM for Room of 1 Set RMU Installation works]				

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	21. Exterior standard acrylic emulsion paint(weather coat) of approved best quality and color having water resisting properties and resistance properties against fungi, fading, & flaking delivered from authorized local agent of the manufacturer in a sealed container; applying to exterior surface with surface preparation including cleaning, drying, making free from dirt, grease, wax, removing all chalked and scaled materials, fungus, mending good the surface defects using sand paper and necessary scaffolding; applying necessary exterior sealer of specified brand on prepared surface; then applying necessary exterior putty of specified brand for levelling, spot filling, crack filling and cutting by sand paper/zero water paper; finally applying 2 coats of exterior emulsion paint spreading by brush/roller/spray & necessary scaffolding etc. up to desired finishing, elapsing specified time for drying or recoating; all complete in all floors and accepted by the Engineer-in-charge. [Quantity: 95.95 Sq. M for Room of 1 Set RMU Installation works] 22. Standard synthetic enamel paint of approved best quality and colour delivered from authorized local agent of the manufacturer in a sealed container, having high water resistance, high bond ability, flexibility property; using specified brand thinner applying to metallic or wooden surface by brush/roller/spray in 2 coats over single coat anti corrosive coating including cleaning, drying, making free from dirt, grease, wax, removing all chalked and scaled materials, all complete in all floors and accepted by the Engineer-in-charge. [Quantity: 8.69 Sq. M for Room of 1 Set RMU Installation works]				



Procurement of works and related service for installation, Testing & Commissioning of 11 kV and 33 kV (Underground) Cable Line

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	23. Approved best quality and colour synthetic polyvinyl distemper/plastic paint delivered from authorized local agent of the manufacturer in a sealed container, lying to wall and ceiling with surface preparation including cleaning drying, making free from dirt, grease, wax, removing all chalked and scaled materials; fungus, mending good the surface defects using sand paper and necessary scaffolding; applying 1 coat of interior sealer of specified brand on prepared surface; then applying 1 coat of interior putty of specified brand for levelling, spot filling, crack filling and cutting by sand paper/zero water paper; finally applying 2 coats of synthetic polyvinyl distemper spreading by brush/roller/spray & necessary scaffolding etc. up to desired finishing, elapsing specified time for drying or recoating; all complete in all floors and accepted by the Engineer-in-charge. [Quantity: 68.21 Sq. M for Room of 1 Set RMU Installation works]				
	24. 50 mm dia. uPVC B grade rain water, soil, waste and ventilation pipe, [Quantity: 5.00 RM for Room of 1 Set RMU Installation works]				
	25. Concealed conduit wiring for following point looping at the switch board with earth terminal including circuit wiring with 1C-2x1.5 sq.mm PVC insulated and sheathed standard cable (BYM) & 1.5 sq.mm PVC insulated green/white coloured ECC wire (BYA) through PVC conduit complete with 18 SWG GP sheet, switch board and pull box with 3mm-thick ebonite sheet cover, 5 amps piano switch, ceiling rose, fixing materials, etc. as required including mending the damages good (all electrical contacts shall be brass/copper) with cables manufactured by Eastern cable/BRB cable/Paradise cable or equivalent approved by the Engineering -in-Charge.				
	a) Light/Exhaust or wall bracket point				
	b) Fan point				
	c) 2 pin + 3 Pin 5 amps. Socket point with control switch board				

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	26. 4 gang switch fitting and fixing of super star brand all complete and approved by the Engineer. [Quantity: Each for Room of 1 Set RMU Installation works]				
	27. 1C-2x1.5sqmm (BYA) cable with 1.5sqmm (BYA) ECC wire through PVC pipe of minimum inner Dia. 16 mm having wall thickness of 1.5 mm. [Quantity: 100.00 RM for Room of 1 Set RMU Installation works]				
	28. Providing & fixing of 1x4' tube light fitting with T5 tube consisting necessary wiring with 2x0.4 sq.mm PVC insulated (stranded) flexible wire, earth terminal etc. complete and approved by the Engineer. [Quantity: Each for Room of 1 Set RMU Installation works]				
	29. 38 mm thick artificial patent stone (1:2:4) flooring with cement, best quality coarse sand (50% quantity of Sylhet sand or coarse sand of equivalent F.M. 2.2 and 50% best local sand of FM 1.2) and 12 mm down well graded brick chips including breaking chips, screening, laying the concrete in alternate panels, compacting and finishing the top with neat cement and curing at least 7 days [Quantity: 26.48 Sq. M for Room of 1 Set RMU Installation works]				
	30. Including all accessory Materials & Electricity Connection [Quantity: One Job for Room of 1 Set RMU Installation works]				

Procurement of works and related service for Installation, Testing & Commissioning of 33 kV and 11 kV, Bareground Cable Line

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	C. Construction of RMU Foundation				
	1. Earth work in excavation in all kinds of soil for foundation trenches including layout, providing center lines, local bench mark pillars, levelling, ramming and preparing the base, fixing bamboo spikes and marking layout with chalk powder, providing necessary tools and plants, protecting and maintaining the trench dry etc., stacking, cleaning the excavated earth at a safe distance out of the area enclosed by the layout etc. all complete and accepted by the Engineer in-charge, subject to submit method statement of carrying out excavation work to the Engineer-in-charge for approval. However, engineer's approval shall not relieve the contractor of his responsibilities and obligations under the contract. 1.1. Earthwork in excavation in foundation trenches up to 1.5 m depth and maximum 10 m lead. [Quantity: 6.38 Cu. M for 1 Set RMU Foundation works] 2. Earth filling in foundation trenches and plinth in 150 mm layer with earth available within 90 m of the building site to achieve minimum dry density of 95% with optimum moisture content (Modified proctor test) including carrying, watering, leveling, dressing and compacting to a specified percentage each layer up to finished level etc. all complete and accepted by Engineer-in-charge. [Quantity: 3.19 Cu. M for 1 Set RMU Foundation works] 3. Sand filling in foundation trenches and plinth with sand having min. F.M. 1.2 in 150 mm in layers including leveling, watering and compaction to achieve minimum dry density of 95% with optimum moisture content (Modified proctor test) by ramming each layer up to finished level as per design supplied by the design office only, all complete and accepted by the Engineer-in-charge. [Quantity: 0.64 Cu. M for 1 Set RMU Foundation works]	Job	5		

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	4. One layer brick flat soling in foundation or in floor with first class/picked jhama bricks (BDS 208) including preparation of bed and filling the interstices with local sand, leveling etc. complete and accepted by the Engineer-in-charge. [Quantity: 1.25 Sq. M for 1 Set RMU Foundation works]				
	5. Mass concrete (1:2:4) in foundation or in floor with cement, sand (F.M. 1.2) and picked jhama brick chips including breaking of chips, screening, mixing, laying, compacting to required level and curing for at least 7 days including the supply of water, electricity, costs of tools & plants and other charges etc. all complete and accepted by Engineer-in charge. (Cement: CEM-II / B-M)				
	5.1. Mass concrete in foundation (1:2:4) with brick chips and local sand of F.M. 1.2. [Quantity: 0.21 Cu. M for 1 Set RMU Foundation works]				
	6. Supplying and laying of single layer polythene sheet weighing one kilogram per 6.5 square meter in floor or anywhere below cement concrete complete in all respect and accepted by Engineer-in-charge. [Quantity: 13.50 Sq. M for 1 Set RMU Foundation works]				
	7. Brick works with first class bricks with cement sand (F.M. 1.2) mortar (1:6) in foundation and plinth, filling the joints/interstices fully with mortar, racking out the joints, cleaning and soaking the bricks at least for 24 hours before use and curing at least for 7 days etc. all complete including cost of water, electricity and other charges and accepted by the Engineer-in- charge. (Cement: CEM-II/B-M) [Quantity: 3.07 Cu. M for 1 Set RMU Foundation works]				

Procurement of works and related service for Installation, Testing & Commissioning of 33 KV and 11 KV Underground Cable Lines

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1.	2	3	4	5	6 = 4*5
	8. Minimum 12 mm thick cement sand (F.M. 1:2) plaster with neat cement finishing to plinth wall with cement (1:4) up to 150 mm below ground level including washing of sand, finishing the edges and corners and curing at least for 7 days, cost of water, electricity, scaffolding and other charges etc. all complete in all respect as per drawing and accepted by the Engineer-in-charge. (Cement: CEM-II/B-M). ground floor [Quantity: 15.06 Sq. M for 1 Set RMU Foundation works]				
	0.415KV Low Tension Distribution Box (LTDB)				
	a. Electrical Works (Detail describe below)				
	1. Supply, carrying of 0.415 kV LTDB to site, fabrication, loading, unloading, installation according to design & drawing, greasing, fixing alignment, leveling, bolting, grounding, wiring etc. including supply of all related accessories as per DLSCO's approved design & specification and instruction of Project Director or it's representative.				
	2. General Description: Type tested assembly (TTA) sheet steel clad, dust & vermin proof, tropicalized design outdoor type on a RCC/CC/Brick basement, low tension of free standing, water proof up to IP65 with form of segregation, self-cooling, cubical type switchgear, busbar & other live parts are spaced and insulated according to related IEC standard for 415 V 3 p 4-wire 50Hz operation, panel fabrication and environmental management system followed by ISO9001 & ISO14001 respectively.				

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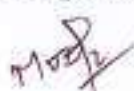
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Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
16	3. Incoming part: 2nos, 3+1 pole 400 Amps (Adjustable), breaking capacity 36 KA MCCB with electronic trip having adjustable L/S/I (Long, Selective or instantaneous) protection, European brand, 3-nos phase indicating lamp (R, Y & B) with circuit breaker, 1 set control fuse, 500A TPN+E Cu (99.99%) Busbar with suitable size for multiple incoming cable (not less than 4), both breaker electrically & mechanically interlocked (CO-OC-CC-OO), all breaker suitable up to 4C 150sqmm XLPE/PVC Cu cable with proper lugs & other accessories, adequate size to fit in TTA with proper insulation & thermal performance. 4. Outgoing part: 8 nos. 3+1 pole 100Amps MCCB, European brand, 500A TPN+E Cu (99.99%) Busbar with suitable size for multiple outgoing cable (not less than 10), suitable for 2C 10sqmm, 3.5C 35sqmm & 3.5C 50sqmm NYY Cu cable (not greater than 50sqmm) with supply of proper lugs & other accessories, adequate size to fit in TTA with proper insulation & thermal performance. 5. Panel: Materials contain hot-dip galvanized sheet steel, Sheet thickness 2mm (Min); Structure color RAL 7035 Light grey peel finish and plinth color RAL 7012 Basalt grey peel finish. Panel is contained steel M12/M16 bolt to carry with fill equipped condition, High quality pad lockable door panel lock, plastic diagram/document case for panel, Ambient temp +3degC to +40degC, uses condition followed by IEC standard, Maximum voltage 1KV. 6. Documentations: Single line diagram & internal wiring diagram with detailed information, Bill of materials with description/catalogue, Panel design, panel door layout, panel plate layout etc. Each LT Distribution Box shall be provided with a permanent name plate containing Manufacturer's name & Country, Serial Number, Type/Model, Manufacturing date, Contract no, Weight, IP Rating and the name "DESCO".	Job	5		



Procurement of works and related service for Installation, Testing & Commissioning of 33 kV and 11 kV, Underground Cable Line

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	7. Connection of 0.415 kV & 0.230 kV underground service (10 sq.mm/16 sq.mm/25 sq.mm/35 sq.mm/ 50 sq.mm or any size up to 50sqmm) cable which will enter and exit from bottom position.				
	8. Grounding of each LTDB includes 2 nos. boring (100Ft) Each boring includes following materials.				
	a. 16 mm diameter, 2-meter length, 2 nos. copper grounding rod will be supplied by contractor.				
	b. There shall be 2 nos. boring (100Ft). Necessary earth wire will be supplied by DESCO. Under each boring copper wire must be welded/joint properly to copper grounding rod. Also supply of necessary Nut- bolts and fabricated materials.				
	9. 0.415 kV & 0.230 kV cable laying in cable trench including supplying of all related Copper materials/accessories for connection (lugs, nuts, bolts, internal cable, etc.)				
	10. Testing, Commissioning and Energization of LTDB.				
	b. Civil Works (Detail describe below)				
	Preparation of LTDB foundation and fencing related works as per drawing & the instruction of Project Director or it's representative of DESCO.				
	1. Mobilization and cleaning site before commencing actual physical work and during contract period and demobilization after completion of the works under contract to be accepted by the Project Director or it's representative. This work shall also cover cleaning and clearing, cutting or filling, dressing the project area on and in the ground to an extent that all the events of works of the project can be executed smoothly in a working environment with a particular attention on safety and security in all respects, and to stockpile the end outcome to a place for disposal agreed by the Project Director or it's representative, where, payments are to be based on ground area determined by the Project Director or it's representative and be proportionate to the percentage progress of work under contract as a whole in all respects and approved by the Project Director or it's representative. [Quantity: 1 LS for 1 Set LTDB Installation works]				

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	2. Earth work in excavation in all kinds of soil for foundation trenches including layout, providing center lines, local bench mark pillars, levelling, ramming and preparing the base, fixing bamboo spikes and marking layout with chalk powder, providing necessary tools and plants, protecting and maintaining the trench dry etc., stacking, cleaning the excavated earth at a safe distance out of the area enclosed by the layout etc. all complete and accepted by the Project Director or it's representative, subject to submit method statement of carrying out excavation work to the Project Director or it's representative for approval. However, engineer's approval shall not relieve the contractor of his responsibilities and obligations under the contract. 2.1. Earthwork in excavation in foundation trenches up to 1.5 m depth and maximum 10 m lead. [Quantity: 3.10 Cu. M for 1 Set LTDB Installation works] 3. Sand filling in foundation trenches and plinth with sand having min. F.M. 1.2 in 150 mm in layers including leveling, watering and compaction to achieve minimum dry density of 95% with optimum moisture content (Modified proctor test) by ramming each layer up to finished level as per design supplied by the design office only, all complete and accepted by the Project Director or it's representative. [Quantity: 1.0 Cu. M for 1 Set LTDB Installation works] 4. One layer brick flat soling in foundation or in floor with first class/picked jharna bricks (BDS 208) including preparation of bed and filling the interstices with local sand, leveling etc. complete and accepted by the Project Director or it's representative. [Quantity: 2.50 Sq. M for 1 Set LTDB Installation works]	Job	5		

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	5. Brick works with first class bricks with cement sand (F.M. 1:2) mortar (1:6) in foundation and plinth, filling the joints/interstices fully with mortar, racking out the joints, cleaning and soaking the bricks at least for 24 hours before use and curing at least for 7 days etc. all complete including cost of water, electricity and other charges and accepted by the Project Director or it's representative. (Cement: CEM-II/B-M) <i>[Quantity: 0.40 Cu. M for 1 Set LTDB Installation works]</i>				
	6. Mass concrete (1:2:4) in foundation or in floor with cement, sand (F.M. 1:2) and picked jhama brick chips including breaking of chips, screening, mixing, laying, compacting to required level and curing for at least 7 days including the supply of water, electricity, costs of tools & plants and other charges etc. all complete and accepted by Project Director or it's representative. (Cement: CEM-II / B-M)				
	6.1. Mass concrete in foundation (1:2:4) with brick chips and local sand of F.M. 1:2. <i>[Quantity: 0.42 Cu. M for 1 Set LTDB Installation works]</i>				
	7. Supplying and laying of single layer polythene sheet weighing one kilogram per 6.5 square meter in floor or anywhere below cement concrete complete in all respect and accepted by Project Director or it's representative. <i>[Quantity: 3.50 Sq. M for 1 Set LTDB Installation works]</i>				

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Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	8. Reinforced cement concrete works with minimum cement content relates to mix ratio 1:2:4 having maximum water cement ratio = 0.45 and minimum $f_{cr} = 26$ MPa, satisfying a specified compressive strength $f_c = 19$ MPa at 28 days on standard cylinders as per standard practice of Code ACI / BNBC, cement conforming to BDS EN-197-1-CEM-I, 52.5N, best quality sand [50% quantity of best local sand (F.M. 1.2) and 50% quantity of Sylhet sand or coarse sand of equivalent F.M. 2.2] and 20 mm down well graded picked jhama brick chips conforming to ASTM C-33 including conducting necessary tests, breaking chips and screening, making and placing shutter in position maintaining true to plumb, making shutter water-tight properly, placing reinforcement in position; mixing in standard mixer machine with hopper fed by standard measuring boxes, casting in forms, compacting by vibrator machine and curing at least for 28 days, removing centering-shuttering after specified time approved; including cost of water, electricity, other charges etc. all complete, approved and accepted by the Project Director or it's representative. (Rate is excluding laboratory test fees, the cost of reinforcement and its fabrication, placing, binding etc. 8.1. Floor / roof slab, T-beam, L-beam and rectangular beam, tie beam, lintel, stair case slab and step etc. up to ground floor. <i>[Quantity: 1.20 Cu. M for 1 Set LTDB Installation works]</i> 9. Centering and shuttering, including strutting, propping etc. and removal of form for: 9.1. Tie beam & lintels, grade beam, column etc. <i>[Quantity: 14.00 Sq. M for 1 Set LTDB Installation works]</i>				

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	10. Grade 400 (B400DWR / B420DWR: complying BDS ISO 6935-2:2016 / ASTM A615) ribbed or deformed bar produced and marked according to Bangladesh standard, with minimum yield strength, f_y (ReH)= 400 MPa but f_y not exceeding 480 MPa and whatever is the actual yield strength within allowable limit as per BNBC/ACI 318, the ratio of ultimate tensile strength f_u to yield strength f_y, shall be at least 1.25 and minimum elongation after fracture and minimum total elongation at maximum force is 17% and 8% respectively: up to ground floor. <i>[Quantity: 1.35 Quintal for 1 Set LTDB Installation works]</i> 11. Minimum 12 mm thick cement sand (F.M. 1:2) plaster with neat cement finishing to plinth wall with cement (1:4) up to 150 mm below ground level including washing of sand, finishing the edges and corners and curing at least for 7 days, cost of water, electricity, scaffolding and other charges etc. all complete in all respect as per drawing and accepted by the Project Director or it's representative. (Cement: CEM-II/B-M). ground floor. <i>[Quantity: 16.00 Sq. M for 1 Set LTDB Installation works]</i> 12. Supplying, fitting and fixing verandah grill made of 10 mm dia. M.S rod provided @ 75 mm c/c in any position both ways as per design with outside frame of 25 mm x 25 mm x 6 mm M.S. angle and F.I. bar clamps including fabricating, welding in each point, painting a coat of anti-corrosive painting (Red-Oxide), including cost of electricity, tools and plants, workshop charges, carriage of the same including cutting groves in the R.C.C. or brick work, mending good the damages with C.C. (1:1.5:3) etc., all complete for all floors accepted by the Project Director or it's representative. (Total weight per sqm should be approx. 21 kg and add or deduct @ 100.00 for each kg/sqm excess or less respectively. <i>[Quantity: 17.50 Sq. M for 1 Set LTDB Installation works]</i>				

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	13. Standard synthetic enamel paint of approved best quality and colour delivered from authorized local agent of the manufacturer in a sealed container, having high water resistance, high bond ability, flexibility property; using specified brand thinner applying to metallic or wooden surface by brass/roller/spray in 2 coats over single coat anti corrosive coating including cleaning, drying, making free from dirt, grease, wax, removing all chalked and scaled materials, all complete in all floors and accepted by the Project Director or it's representative. <i>[Quantity: 17.50 Sq. M for 1 Set LTDB Installation works]</i> 14. Supply, fabrication and installation of built-up sections i.e. columns, beams, rafters, bracings, struts etc. (up to level-4) from steel plates conforming to ASTM A36, with a minimum yield strength of 250 MPa, including the cost of testing of plates, application of red/grey-oxide primer & 2coat enamel paint etc. all complete as per drawing, specification and direction of Project Director or it's representative. <i>[Quantity: 93.00 KG for 1 Set LTDB Installation works]</i>				
17	Fiber Optic Cable				
	Laying of Underground cables (OPUC) with Transport:				
	Underground Fiber Optic Cable Pulling through HDPE Duct during HDD method and other related works as per direction & instruction of the Engineer in-charge of DESCO.	Meter	530		
	Underground Fiber Optic Cable Pulling through HDPE Duct during Buried method and other related works as per direction & instruction of the Engineer in-charge of DESCO.	Meter	11170		
18	Laying of HDPE Duct (OPUC) with Transport:				
	Carrying & laying of 2" HDPE Duct. Includes carrying & laying HDPE Duct HDD/ Buried method to Cross the Road or any other Places along the Cable trenches and other related works as per direction & instruction of the Engineer in-charge.				
	1) Up to 51.5 mm Dia. HDPE Duct (OPUC Cable)	Meter	11700		

Procurement of works and related service for installation, Testing & Commissioning of 33 kV and 11 kV Underground Cable Unit

Item SL No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
19	Joint End closure				
	Overhead/Underground Fiber Optic Cable Termination, Measuring, Testing (dB loss/KM must be within standard limit) and other necessary works including supply of related accessories as per the direction of the Engineer in-charge.	Nos	29		
	Re-installation of Joint Enclosure, Measuring, Testing (dB loss/KM) must be within standard limit) including supply of related accessories and other necessary works as per direction & instruction of the Engineer in-charge.	Nos	3		
	Recovery of Joint Enclosure including all materials and other necessary works as per the direction of Engineer in-charge.	Nos	3		
	Handhole Box				
	Handhole Box installation with steel frame (1200mm x 1075mm x 1100mm). Top of the Handhole cover should be 250mm above the Ground level. Works shall be done as per direction & instruction of the Engineer in-charge of DESCO.				
	1) Mobilization and cleaning site before commencing actual physical work and during contract period and demobilization after completion of the works under contract to be accepted by the Engineer-in-charge. This work shall also cover cleaning and clearing, cutting or filling, dressing the project area on and in the ground to an extent that all the events of works of the project can be executed smoothly in a working environment with a particular attention on safety and security in all respects, and to stockpile the end outcome to a place for disposal agreed by the Engineer-in-charge, where, payments are to be based on ground area determined by the Engineer-in-charge and be proportionate to the percentage progress of work under contract as a whole in all respects and approved by the Engineer-in-charge. [Quantity: 01 L.S. for 1 Set Handhole Box Construction works]				





Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	2) Earth work in excavation in all kinds of soil for foundation trenches including layout, providing center lines, local bench mark pillars, levelling, ramming and preparing the base, fixing bamboo spikes and marking layout with chalk powder, providing necessary tools and plants, protecting and maintaining the trench dry etc., stacking, cleaning the excavated earth at a safe distance out of the area enclosed by the layout etc. all complete and accepted by the Engineer in-charge, subject to submit method statement of carrying out excavation work to the Engineer-in-charge for approval. However, engineer's approval shall not relieve the contractor of his responsibilities and obligations under the contract.				
	2.1) Earth work in excavation in all kind of soil for foundation trenches. <i>[Quantity: 3.00 Cu. M for 1 Set Handhole Box Construction works]</i>				
	3) Supplying and laying of single layer polythene sheet weighing one kilogram per 6.5 square meter in floor or anywhere below cement concrete complete in all respect and accepted by Engineer-in-charge. <i>[Quantity: 2.00 Sq. M 1 Set Handhole Box Construction works]</i>				

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
20	4) Reinforced cement concrete works using steel shutter with minimum cement content relates to mix ratio 1:1.5:3 having minimum $f'_{cr} = 30$ Mpa, and satisfying a specified compressive strength $f'_c = 25$ Mpa at 28 days on standard cylinders as per standard practice of Code ACI/BNBC/ASTM & Cement conforming to BDS EN-197-1-CEM 1 (32.5 to 52.5 N) / ASTM-C 150 Type - I, best quality Sylhet sand or coarse sand of equivalent F.M. 2.2 and 20 mm down well graded stone chips conforming to ASTM C-33, making, placing shutter in position and maintaining true to plumb, making shutter water-tight properly, placing reinforcement in position; mixing with standard mixer machine with hopper, fed by standard measuring boxes, casting in forms, compacting by vibrator machine and curing at least for 28 days, removing centering-shuttering including cost of water, electricity, testing and other charges etc. all complete approved and accepted by the Engineer. Ent concrete works using wooden shutter, with minimum cement content relates to mix ratio (1:1.5:3), Brick chips having minimum $f_{cr} = 30$ Mpa, [Quantity: 1.25 Quintal for 1 Set Handhole Box Construction works] 4.1. Individual & combined footing, pile cap, raft/mat, floor slab and foundation beam up to plinth level [Quantity: 1.25 Quintal for 1 Set Handhole Box Construction works] 5) Shuttering (wooden) [Quantity: 10.00 Sq. M for 1 Set Handhole Box Construction works] 6. Grade 400 (B400DWR / B420DWR: complying BDS ISO 6935-2:2016 / ASTM A615) ribbed or deformed bar produced and marked according to Bangladesh standard, with minimum yield strength, f_y (ReH)= 400 MPa but f_y not exceeding 480 MPa and whatever is the actual yield strength within allowable limit as per BNBC/ ACI 318, the ratio of ultimate tensile strength f_u to yield strength f_y, shall be at least 1.25 and minimum elongation after fracture and minimum total elongation at maximum force is 17% and 8% respectively: up to ground floor [Quantity: 1.15 Quintal for 1 Set Handhole Box Construction works]	Job	29		

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	7) One layer of brick flat soling in foundation or in floor with first class or picked jhama bricks including preparation of bed and filling the interstices with local sand, leveling etc. complete and accepted by the Engineer. <i>[Quantity: 1.6 Sq. M for 1 Set Handhole Box Construction works]</i>				
	8) Supplying 50 mm inside dia. best quality uPVC soil, waste and ventilation pipe having specific gravity 1.35-1.45, wall thickness 2.5 - 3.0 mm, and other physical, chemical, thermal, fire resistivity properties etc. as per BSTI approved manufacturer standards or ASTM, BS/ISO/IS standards fitted and fixed in position with sockets, bends, of uPVC Pipe with all accessories such as Round grating /domed roof grating bands, sockets etc. approved and accepted by the Engineer (length: 6000 mm each). <i>[Quantity: 0.610 m for 1 Set Handhole Box Construction works]</i>				
	9) Supplying different inside dia. best quality uPVC soil, waste and ventilation pipe having specific gravity 1.35-1.45, wall thickness 2.5 mm - 3.0 mm, and other physical, chemical, thermal, fire resistivity properties etc. as per BSTI approved manufacturer standards or ASTM, BS/ISO/IS standards fitting and fixing in position with sockets, bends, of uPVC Pipe with all accessories such as Round grating/ domed roof grating bands, sockets etc. approved and accepted by the Engineer in charge. (100) mm inside dia. wall thickness 3.4- 4.0 mm)				
	10) Hook for slab with galvanize <i>[Quantity: 4.00 each for 1 Set Handhole Box Construction works]</i>				

Measurement of works and related service for installation, Testing & Commissioning of 33 kV and 11 kV, Underground Cable Line.

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
	11) Supply, fabrication and installation of built-up sections i.e. columns, beams, rafters, bracings, struts etc. (up to level 4) from steel plates conforming to ASTM A36, with a minimum yield strength of 250 MPa, including the cost of testing of plates, application of red/grey oxide primer & 2coat enamel paint etc. all complete as per drawing, specification and direction of Engineer-in-charge, (1.5"x1.5"x5mm Angle) <i>[Quantity: 0.15 Quintal for 1 Set Handhole Box Construction works]</i> 12) Minimum 12 mm thick cement sand (F.M. 1:2) plaster with neat cement finishing to dado with cement (1:4) up to 150 mm including washing of sand, finishing the edges and corners and curing at least for 7 days, cost of water, electricity, scaffolding and other charges etc. all complete in all respect as per drawing and accepted by the Engineer-in-charge. (Cement: CEM-II/B-M), ground floor <i>[Quantity: 12.00 Sq. M for 1 Set Handhole Box Construction works]</i>				
21.	Supply of PIB Tape	Nos	628		
22.	Preparation of 33 kV, 11 kV and OPUC Cable laying line route on suitable scale map with all necessary drawing, design etc. as per instruction of Engineer-in-charge. (Route Basis)	LS	10		
23.	Testing & Commissioning of 11 kV/33kV U/G (HV, IR & Sheath) and OPUC Cable Line before final exercitation as per direction & instruction of Engineer-in-charge. (33 kV Ckt. Basis & 11 kV Route basis)	LS	16		
24.	05(Five) Sets of "As Build" Drawing prepared on Geographical Map mentioning the GPS location of the cable jointing point, Handhole Box positions and relevant information to be provided [as per section:3 GCC 82] for upgradation of the GIS map at 1:2000 & 1:200 DCS (Document Cover Sheet) sheet and 02 (two) CDs (compact disc) of AutoCAD Drawing. (33 kV Ckt. Basis & 11 kV Route basis)	LS	10		

Item Sl. No.	Description of Works	Unit	Qty.	Unit Rates in Taka	Total Amount in Taka
1	2	3	4	5	6 = 4*5
25	Clamp for 33 kV, 11 KV and OPUC Cable in Substation End. Supply, Carrying & Installation of Clamp. Includes Supply, Cutting, Bending and fixing of MS Rod (PWD Rate Schedule) For making of Cable Clamp, Angle Frame etc. & Installation for Feeder Cable/ckt. and OPUC from trenches to switchgear or any other Places along the Cable trenches as per direction of the Engineer in Charge.				
	I) OPUC cable in Substation	Quintal	0.30		
	II) 11 kV Feeder cable in Substation	Quintal	1.00		
	III) 33 kV Circuit in Substation	Quintal	1.50		
26	Cable Guard for 11 kV Feeder Cable at O/H Feeder Pole End Supply, Carrying & Installation of Cable Guard. Includes Supplying, Carrying and Installation of cable guard (U shaped) made of Galvanised Iron sheet of 1.5 mm thickness and 10 feet height (Periphery depends on category of Cables & poles) for Feeder Cable/ckt. at O/H Pole or any other Places as per drawing & direction of the Engineer in Charge.				
	I) 11 kV Feeder cable at O/H pole.	Quintal	6.00		
27	Recovery of U/G Cable I) 11/0.4/0.23 kV U/G cable including service drop (Circuit Basis, All size)	Meter	300		
	II) 33 kV 1-core/3-core XLPE Copper/Al U/G Cable & 11 kV 3-core XLPE Copper/Al U/G Cable recovery, Drumming, Carrying, and Delivery of cable from existing cable trench to DESCO designated store as per instruction of Engineer-in-charge. (All size, 1-core for 33 kV & 3-core for 11 kV)	KM	1.00		
28	Sub Total				
29	Total of Schedule =				
Total Amount (Tk.) in words (including VAT & TAX):					

Note:

1. It is suggested that the Tenderer uses these sheets of the BOQ in order to avoid any manipulation, distortion and inadvertent mistakes or omission in course of preparing the Tender by the Tenderer.

2. All unit rates and prices quoted by the Tenderers against each basic item or activity shall include the Tenderer's profit, overheads, VAT and all other charges including corresponding incidental service charges and premiums for banking and insurances, as applicable and thus forth the total Tender Price quoted by the Tenderers.

For use of

 Mohammad Bakhtiar Uddin
 Sub-Divisional Engineer
 Taka Power System Expansion and
 Modernization Project in DESCO Area

for Insulation, Testing & Commissioning of 33 kV and 11 kV, three phase Cable Line.





Section 7. General Specifications

7.1 Scope of Works

The Total Works required under this tender and within the jurisdiction of DESCO are divided into following lots:

Sl. No.	Lot No.	Zone / Area
01	Lot-A	South Zone of DESCO.
02	Lot -B	North Zone of DESCO.
03	Lot -C	Central Zone of DESCO.

The major items in U/G Cable Line Construction work of different classes depending on nature, locations and other circumstances that may give rise to different considerations of costs are stated below. The work shall include mobilization of necessary tools & equipment, materials, storage and other facilities for continuing work in any situation.

- A. Site clearing & mobilization
- B. Breaking of Pucca Surface
- C. Excavation & back filling
- D. RCC slab/brick slab
- E. GI/PVC Pipe
- F. Pipe for HDD (HDPE Pipe)
- G. Thrust boring for Railway/Road crossing
- H. HDD for Railway/Road Crossing
- I. Laying of Cable
- J. Cable jointing and Installation of Termination Kit
- K. Installation of Ring Main Unit (RMU)
- L. Testing & Commission of laying U/G Cable

In case of exigency of works and services, the contractor may be required to carry out the similar works at the contract rate under the jurisdiction of DESCO beyond the specified lots.

The contractor shall take all reasonable steps to protect the environment on and off the site and to avoid damage or nuisance to persons or to property of the public or other resulting from causes arising as a consequence of the contractor's works. During execution of works and services the contractor shall follow the rules and regulations of all other agencies like DMP, DNCC, R&H, WASA, RAJUK, GCC, Utility Organizations, National Housing Authority, DOHS & Cantonment Authority, Others Authority. Detailed scope of works has been described in Section 6: Bill of Quantities (BOQ).

The BOQ is used to calculate the contract price. The contractor shall be paid for the quantity of works done at the rate tendered in the BOQ for each item.

7.2 Variation (Alteration/Addition/Omission) of Works

Quantity of works listed in the BOQ is approximate. If any variation in the form, quality or quantity of the works or any part thereof becomes necessary in the opinion of the employer, then the employer shall have the power to do the following, as required, and the contractor shall comply.

- (i) The variation order or approval would not be required if the total Contract Price remains unchanged due to increase or decrease in the quantity per item of BOQ.
- (ii) Omit any such work including supply items.
- (iii) Change the levels, lines position, dimensions of any part of the work and execute the additional work of any kind necessary for the completion of the work.
- (iv) Change the character or quality or kind of any such work.
- (v) No variation shall in any way vitiate or invalidate the contract but the value (if any) of all such variations shall be taken into account in ascertaining the amount to be paid to the contractor.
- (vi) The contractor shall be paid for the non-scheduled items required for execution of the works. The rate of the non-scheduled items/works shall be determined by the Project Director on present market basis and shall require approval of the Managing Director of DESCO. However, Project Director shall take into consideration the store balance prior to taking any decision regarding the item(s) to be supplied. No non-scheduled item of work shall be taken up without prior approval of the Managing Director of DESCO.
- (vii) Variations with respect to any or all items shall be considered on the basis of total contract price. If net effect in variations is within 10% of contract price, payment will be entertained upon certification of the works by the Engineer and recommendation of the concerned Project Director of DESCO.
- (viii) In case the net effect in variations exceeds 15 (fifteen) percent of the contract price, this shall require recommendation of the concerned Executive Director. In such cases approval of the Managing Director, DESCO shall be required for payment. However, supplied [scheduled/non-scheduled] items will be accepted/received by Central Store or Sub-Store following rules and procedure of DESCO if the item(s) don't have adequate store balance at DESCO's stores.
- (ix) The geographical areas where the contractor is needed to execute the works under the contract shall generally be restricted to the 'Site' specified in the Particular Conditions of Contract (PCC). **However, if situation demands, the contractor shall carry out works under the contract in areas beyond the aforementioned 'Site' at the respective contract rates. The contractor will provide required personnel with necessary logistics, tools and tackles etc. soon after receiving instruction from the Project Director.**



7.3 Contractor's Responsibilities in the Contract

- 7.3.1 The contractor shall abide by the specifications mentioned in Section 7: General Specifications and Section 8: Particular Specifications and shall follow the instructions of the Project Director.
- 7.3.2 The contractor shall employ the personnel stated in Section 8: Particular Specifications or other personnel approved by the Project Director, if required, for execution of the works under the Contract. If the Project Director asks the contractor to remove a particular person who is a member of the contractor's staff or work force from the Site, he or she shall state the reasons, and the contractor shall ensure that the person leaves the Site within 03 (three) days and has no further connection with the works under the Contract.
- 7.3.3 The contractor shall provide/replace personnel, tools/equipment and logistics as reasonably demanded by the employer or its representative. Should the employment of any person of the contractor be deemed by the employer to be either unsuitable for the works and services under the contract or prejudicial to the interests of the employer, or be necessary for any reason of the contractor, the contracting firms shall withdraw and replace the personnel by someone of equivalent or higher competence and experience.
- 7.3.4 The contractor shall render services with due diligence and efficiency and in conformity with sound engineering, administrative and financial practices. The contractor shall act at all times so as to protect the interest of the employer.
- 7.3.5 During execution of the works, the contractor shall comply with all applicable rules and regulations of other agencies like DMP, DNCC, RHD, WASA, TITAS, BRTA, PGCB and other Utility Organizations. Contractor shall be responsible for cut trench as approved dimension with all necessary protection so that no damage of property or slide of soil or any other occurred.
- 7.3.6 Anything of historical or other interest or of significant value unexpectedly discovered on the Site shall be the property of the employer. The contractor shall notify the employer or its representative of such discoveries and carry out the employer's instructions for dealing with them.
- 7.3.7 The Contractor shall comply with all applicable national, and local environmental laws and regulations.
- 7.3.8 The contractor shall be responsible for Traffic Management during the execution of the works.
- 7.3.9 The contractor shall be responsible for meet the compliance of Occupational Health and Safety of the relevant rules & regulations of the country regarding the Occupational Health and Safety.
- 7.3.10 The contractor shall be submitted a summary statement to the Project Director for the materials issued by the Employer at intervals of every 03 (three) months within the contract period.
- 7.3.11 The contractor shall provide all necessary information for geographic information system (GIS) mapping of each completed job to the Project Director. After completion of all the works, the contractor shall be responsible for completing the entire GIS mapping.

7.4 Technical Requirement

7.4.1 Site clearing & mobilization

The Cable Route shall be cleared of all obstructions (structures, trees etc.) throughout the entire cable route. The broken/removed materials due to site clearing works shall be carried away from the site to a safe place as per instruction of the Engineer. Site clearing shall also include disposal of surplus soil brought to site and due to excavation work. All excavated soil shall be removed from site immediately after excavation.

Necessary permission for road cutting/Railway crossing etc. from competent authority to be arranged by the Contractor. However, the payment against compensation claimed by the concerned authority shall be directly made by DESCO.

7.4.2 Excavation & Sand filling

True lines for excavation of cable trench shall be set. The excavations shall be in any kind of soil encountered, as per dimension shown in drawing and IEC 60502-2:2014 standard.

The sides of the excavated trench shall be perpendicular to the base. All necessary protection shall be taken to maintain this. However, depending on site conditions the dimension may vary as per direction of the Engineer-in-charge.

The sand filling shall be made by local sand of FM not less than 0.8 and properly compacted. Compaction shall be by use of manual, mechanical or other approved devices to a density equal to or greater than that required for adjacent area.

Sand filling: 33KV/11kV U/G Cable trench

The sand filling shall be made in three steps as shown below as per IEC 60502-2:2014 standard:

First layer: Sand filling 200mm from bottom of the trench, spread in thin uniform horizontal layer including leveling, watering and compaction, to form the bedding of the Cable line over which the Cable will be laid.

Second layer: Sand filling 350mm from top of first layer. Spread the sand filling in successive thin uniform horizontal layer of 150mm at a time for leveling, watering and compaction. After that the RCC slab will be placed.

Third layer: Sand filling for rest of the trench from top of RCC slab. Spread the sand filling in successive thin uniform horizontal layer of 150mm at a time for leveling, watering and compaction.

The third layer shall be entirely filled by sand (in case of metal road crossing).

7.4.3 Breaking of Pucca Surface

Any pucca surface which falls over the cable route shall be broken prior to commencement of excavation works by means of manual, mechanical or any other mechanical devices as deem suitable. Immediately of excavation, all rubbish/soil should be removed from the site. All debris shall be cleared of the

site to any suitable location. Upon completion of Re-filling of the cable trench the broken and damaged parts of the pucca surface shall be temporarily repaired to bring it to useable condition, which shall subsequently be properly taken care of by concerned authority.

7.4.4 RCC slab

Reinforce cement concrete (1:2:4) having minimum cylinder crushing strength 17 Mpa at 28 days.

7.4.5 Dimension of each RCC slab

For Cable trench of 750mm width

Length: 600mm × width 300mm

Height: Mid section along length 75mm, 63mm at end section along length.

For Cable trench of 1000mm width

Length: 900mm × width 300mm

Height: Mid section along length 75mm, 63mm at end section along length.

For Cable trench of 1250mm width

Length: 1200mm × width 300mm

Height: Mid section along length 75mm, 63mm at end section along length.

7.4.6 Concrete

Construction Requirement

Concrete shall consist of a mixture of Portland cement, fine and coarse aggregate and water.

Cement shall be Portland cement Type-I, ASTM C-150. Only one brand, grade or kind of cement shall be used.

Fine Aggregate shall consist of well-graded clean natural sand (50%) best quality local coarse sand (F.M-1.5) and 50% Sylhet sand (F.M-2.5), free from injurious amount of organic impurities and deleterious substances.

Coarse Aggregate shall consist of well-graded hard angular fragments of 20mm down grade picked chips. The aggregate shall be clean and be generally free from deleterious substances.

Water for use in concrete shall be palatable, clear, free from injurious quantities of oil, alkali, salts and organic substances, any solid particles, etc.

The Contractor in the laboratory in accordance with approved procedure shall prepare trial mixes for concrete with representative material from site. The nominal strength in these tests shall exceed the specified minimum strength by 10%. Strength requirement is the determining factor for accepting a concrete. Cement content may be fixed from the trial mix. If required the cement content has to be increased to attain the desired strength without any additional charge.

Batching

The Contractor shall provide and maintain suitable measuring equipments and devices of good order required to determine and control accurately the relative amount of various materials entering the mix. All measurements shall be by weight and shall be accurate within a tolerance of 1% for each batch. The cement shall be weighted. A bag of cement weighing 50 kg (112 lbs) net will be considered as 0.0339 cum (1.195 cft).

Sufficient acceptable materials shall be available at the batching site to ensure continuous placement. The moisture content of the accepted aggregate shall remain constant to the extent that the resultant successive batches of concrete do not vary in consistency by more than 6mm (1/4 inch) of a slump. If the moisture content in the aggregate varies by more than the above tolerance, corrective measures shall be taken to bring the moisture to a constant and uniform quantity before any more concrete is placed.

Coarse aggregate shall be saturated with water at least 12 hours before use to prevent absorption of the mixing water.

Mixing

Concrete shall be mixed in a batch mixer of an approved type and appropriate capacity. Entire content shall be removed from the drum before the succeeding batch is introduced. Concrete shall be mixed in quantities required for immediate use. Concrete shall not be used which has developed initial set or which is not in place within 30(thirty) minutes after the water has been added. Re-tampering of partially hardened concrete by remixing with or without additional materials or water, or by other means will not be permitted. The inside of the mixing drum shall be kept free from hardened concrete at all times.

Transport and Placing

Concrete shall be so transported from the mixer and placed in the form that contamination, segregation or loss of the constituent materials does not occur.

The concrete shall not be dropped freely from a height exceeding 5 feet nor shall it be deposited in large quantities at any point. Dragging of concrete inside the forms or distribution by vibrators or allowing it to flow by gravity to the ends of the forms will not be permitted.

In slabs concrete should be placed in thickness 12 mm to 25 mm excess of what is required and compacted to the desired thickness with rammers ("Patta"). Concrete shall be deposited and compacted in its final position within 30 minutes of its discharge from the mixer and shall not be subjected to any disturbance or vibration within 72 hours after compaction. When in-situ concrete has been in place for 3 hours no further concrete shall be placed against it for a further 72 hours.

Control Tests for Concrete

- a. **Sampling:** The number, frequency and location of batches to be sampled shall be decided by the Engineer. The testing shall be in accordance with ASTM C-143, current issue.

- b. **Slump:** This determination shall be made at the commencement of concreting, on the occasion of each change in mix proportions, and thereafter as desired by the Engineer. The testing shall be in accordance with ASTM C-143, current issue.
- c. **Compressive Strength:** Test cylinders 150mm (6 inches) in diameter and 300mm (12 inches) high shall be made at the site of the work in sets of minimum six (6) cylinders from each 21m³ (750 cubic feet) of each class of concrete or fraction thereof placed each day. Average test result of three cylinders must be equal to or more than required specified strength but no one cylinder should be below 90% of required strength.

If the Engineer allows cubes to be tested instead of cylinders, the cube strength shall be 17.5 percent higher than the cylinder strength specified.

Formwork

All concrete shall be placed in proper forms. Plywood/wood forms of adequate and uniform thickness may be used alone in lieu of the steel forms.

All formwork shall be constructed water-tight, true to line, of sound materials and of such rigidity to prevent buckling or movement during the placement and curing of the concrete.

Removal of Forms

All formwork shall be removed without damage to the concrete and in accordance with a program agreed upon by the Engineer. Under usual conditions the following minimum periods between concreting and the removal of formwork shall be as observed:

- ✓ Vertical sides 2 days
- ✓ Soffit 14 days

Curing and Protection

Concrete shall be protected against harmful effects of weather for a period of not less than twenty-eight (28) days immediately following the placing.

All exposed surface shall be covered with two layers of wet burlap which have been spot stitched, or wet jute felt soon after placing of concrete as it can be done without manning the surface and kept thoroughly wet by continuous sprinkling of water for a period of not less than twenty-eight (28) days after the concrete has taken its set.

7.4.7 Reinforcing steel in concrete

This shall consist of furnishing and placing in concrete, reinforcing steel of the designated quality, type, size and quantity.

The reinforcing steel will be Grade-40 (maximum variation -8%) deformed bars and shall confirm to relevant ASTM requirements.

The nominal diameter, perimeter and cross-sectional area of deformed bar is equivalent to that of a plain bar having the same standard weight per unit length as given in the table, below.

Bar Nominal Dia (mm)	Nominal Weight (Kg/m)	Cross Sectional area (mm ²)	Circumference (mm)	App Length Per M. Ton (Meter)
10	0.616	78.5	31.4	1,621
12	0.888	113.1	37.7	1,126
16	1.579	201.1	50.3	633
20	2.466	314.2	62.8	405
22	2.985	380.3	69.1	335
25	3.854	490.9	78.5	259

All reinforcing steel when received on the site, prior to its use shall be stacked off the ground and shall be kept free from dirt, oil, grease or avoidable rust. It shall be clean and free from loose rust and loose mill scale at the time of fixing in position and subsequent concreting.

Reinforcement shall be placed, supported and maintained in the position shown in the drawing and shall be checked and approved by the Engineer before placement of concrete begins. All intersecting bars shall be tied together with 24G galvanized iron wire and the ends of wire shall be turned into the main body of the concrete.

Unless otherwise shown on the Plans, the covering of reinforcement for slab shall be 20mm.

The Contractor shall notify the Engineer or his authorized representative when the steel has been placed in position ready for concrete and no concrete shall be placed until the Engineer inspected the steel and given his approval in writing.

7.5 Brick flat soling

Brick shall comply with requirement of first-class bricks. The blinding sand will have a Fineness Modulus of above 1.00 and shall be clean, free from organic matters. Brick soling shall be measured by squire meter (sqm) of placing area.

7.6 GI/PVC Pipe

As per site requirement and direction of the Engineer GI/RCC/PVC Pipe shall be laid along the Cable trench for crossing of Cable under Road/Railway or any other place.

GI Pipe

Galvanized steel pipe Adamjee/Basundhara/National Tube or equivalent or superior brand approved by E.I.C. GI Pipe shall conform to the following specification:

Nominal Pipe dia		Min. wall thickness mm	Min. pressure Kg/Cm ²
Inch	mm		
3	75	3.25	35
4	100	3.65	50
6	150	4.00	50
8	200	8.00	50
10	250	9.2	50
12	300	9.5	50

Galvanized steel welded tubes of screwed and socket type, class-A and shall be equivalent of the specified in BS 1387. All fittings shall be standard CI products and conform to BS 534. Pipes shall be jointed with a suitable compound according to the makers instruction together with a grommet of a few strands of fine jute.

PVC Pipe

PVC Pipe National Polymer/Aziz/Lira water grade or equivalent or superior brand. PVC Pipe shall be un-plasticized polyvinyl chloride pipe type 1420, equivalent to specified in BS 3505. Pipes shall be joint to each other using suitable jointing solvent recommended by the pipe maker.

PVC Pipe shall conform to the following specification

Nominal Pipe dia		Class	Min. wall thickness mm
Inch	mm		
12	300	C	10.31
10	250	C	9.27
8	200	C	8.18
6	150	C	6.6
5	125	C	5.5
4	100	C	4.5
3	75	C	3.5

7.7 Pipe for HDD (HDPE Pipe):

As per site requirement and direction of the Engineer High Density Polyethylene (HDPE) Pipe shall be laid along the Cable trench for crossing of Cable under Road/Railway or any other place.

High Density Polyethylene (HDPE) pipe Navana/RFL or equivalent or superior brand from domestic or abroad approved by E.I.C. These pipes should be manufactured from the base polymer single grade of polyethylene, PE 80 with a derived density greater than 0.93g/cm³ tested at 20° C. All HDPE Pipes must be from Class PE 80 with Nominal Pressure (PN) 12.5 and Standard Dimensions Ratio (SDR) 11 with the minimum strength at 20° C. The standard length of HDPE pipes for nominal diameter 125 mm and above shall be 9m or 12m. HDPE Pipe shall conform to the following specification:

Nominal Pipe dia		Min. wall thickness (mm)
Inch	mm	
3	75	6.8
4	110	10.0
6	160	14.6
8	200	18.2
10	250	22.7
12	315	28.6

HDPE Pipe shall be equivalent of the specified in ASTM D3350. All fittings shall be standard products and conform to ASTM D3350. Pipe joining for pipes buried underground, below pavement or slab or concealed in slab shall use electro-fusion or fully automatic butt fusion jointing unless instructed otherwise by E.I.C.

The pipeline must be designed and installed so that each joint will sustain the longitudinal pullout or thrust forces caused by contraction or expansion of the piping or by anticipated external or internal loading. Each joint must be made in accordance with written procedures that have been proven by test or experience to produce strong, gas-tight joints.

7.8 Thrust Boring for Railway/Road Crossing

Thrust Boring shall be made by hydraulic boring machine which is able to bore holes up to 153mm in dia. This includes making trial holes, trenching for machine setting, trenching for putting into bore shaft 150mm dia carrier pipes. It also includes back filling as per direction and standard specification, removal from site and disposal of any surplus soil, re-statement of all made up surfaces and installation of carrier pipes and temporary supply and installation of draw wires and temporary sealing of carrier pipes as per direction of the Engineer plus all necessary work to ensure correct and easy installation of cables.

7.9 HDD for Railway/Road Crossing:

HDD (Horizontal Draft Drilling) shall be made by hydraulic boring machine which is able to bore holes up to 400 mm in dia. This includes making trial holes, trenching for machine setting, trenching for putting into bore shaft 315mm dia carrier pipes. It also includes back filling as per direction and standard specification, removal from site and disposal of any surplus soil, re-statement of all made up surfaces and installation of carrier pipes and temporary supply and installation of draw wires and temporary sealing of carrier pipes as per direction of the Engineer plus all necessary work to ensure correct and easy installation of cables.

The directional drilling machine shall consist of a hydraulically powered system to rotate, push and pull hollow drill pipe into the ground at a variable angle while delivering a pressurized fluid mixture to a guidable drill(bore) head. The machine shall be anchored to the ground to withstand the pulling, pushing and rotating pressure required to complete the crossing. The hydraulic power system shall be self-contained with sufficient pressure and volume to power drilling operations. The hydraulic system shall be free of leaks. The rig shall have a system to monitor and record maximum pull-back pressure during pull-back operations. The drill head shall be steerable by changing its rotation and shall provide the necessary cutting surfaces and drilling fluid jets.

Pilot hole shall be drilled on bore path with no deviations greater than 5% of depth over the length of 100 feet. Upon successful completion of the pilot hole, the Contractor will ream bore the hole to a minimum of 25% greater than outside diameter of the pipe using the appropriate tools. The Contractor shall not attempt to ream, at one time, more than the drilling equipment and mud system are designed to safely handle. The HDD Contractor shall provide a report and bore log, certified by an authorized company representative, to the Engineer of Record for Construction indicating the horizontal and vertical location every 10 linear feet or less along the pipe. The Guidance system shall use an electronic "walkover" tracking system, a Magnetic Guidance System (MGS), or a proven gyroscopic probe and interface for a continuous and accurate determination of the location of the drill head during the drilling operation. The guidance system must be accurate and calibrated to the manufacturer's specifications of the vertical depth. The system shall be accurate to within 2% vertically and two feet horizontally. When back reaming, the bore hole shall not exceed 1.5 times the outside diameter of the pipe or pipe joint/coupling for pipe up to 12 inches in diameter.

7.10 Junction Box:

Reinforce cement concrete (1:2:4) having minimum cylinder crushing strength 17Mpa at 28 days.

Prefabricated reinforced Cement Concrete box installed in a row for laying 11kV and 33kV cable as per approved drawing. Reinforced Cement concrete works (1:1.5:3) of making a concrete box having tentative dimension 10'x6'x6' with cement (conforming to BDS 232) best quality Sylhet sand 50%, local sand (F.M-1.5) 50% and 20 mm downgraded picked stone chips including bredding chips and screening, shuttering, supplying polyethylene sheet, mixing the aggregates with mixer machine, casting in forms, compacting by vibrator machine and curing at least 28 days (Including the cost of reinforcement and fabrication). The reinforcement bar to be used for making such RCC box is 10mm dia, placing 150 mm apart C/C and the thickness of the junction box wall will be at least 150mm. The cost includes carrying and installation of junction box as per direction of engineer-in-charge.

7.11 Pit:

Reinforce cement concrete (1:2:4) having minimum cylinder crushing strength 17Mpa at 28 days.

Prefabricated reinforced Cement Concrete box installed in a row for laying 11kV and 33kV cable as per approved drawing. Reinforced Cement concrete works (1:1.5:3) of making a concrete box with cement (conforming to BDS 232), best quality Sylhet sand 50%, local sand (F.M-1.5) 50% and 20 mm downgraded picked stone chips including bredding chips and screening, shuttering, supplying polyethylene sheet, mixing the aggregates with mixer machine, casting in forms, compacting by vibrator machine and curing at least 28 days (Including the cost of reinforcement and fabrication). The reinforcement bar to be used for making such RCC box is 10mm dia, placing 150 mm apart C/C and the thickness of the junction box wall will be at least 150mm. The cost includes carrying and installation of junction box as per direction of engineer-in-charge.

Dimension of Pit:

- i) 4 feet x 5 feet x 5 feet
- ii) 4 feet x 4 feet x 4 feet

Dimension of Pit may vary as per approved drawing and instruction of Engineer In-Charge.

7.12 INSTALLTION OF CABLES

7.12.1 General

The successful bidder shall carry out all activities connected with the laying and installation of the XLPE Power cables and completion of the work for which the project is intended and to the full satisfaction of the employer.

7.12.2 Scope

This part covers route survey, proposed method of cable laying-directly buried/cables in ducts/pipes at road crossing of trenches and construction of joint bays as per requirement of the field conditions.

The scope also includes supply of all requisite labour, tools and materials like sand bricks pipes joint marker and mute markers and all other consumables required for the completion of work.

7.12.3 Route Survey

The successful contractor shall make a detailed survey of the cable route after the award of contract to decide the requirements of the following:

Cable delivery length per drum.

Location of joint bay position.

Quantity of joints required.

Design of cable laying-directly buried/cables in ducts/pipes for road, communication circuit, gas line, drainage etc crossing

7.12.4 Location of joint bays

The location of joint bays should be carefully decided to avoid collection of sub soil water and any possibility of flooding due to storm waters. The joint bays located should be easily accessible for inspection and test.

7.12.5 Installation of underground Cables

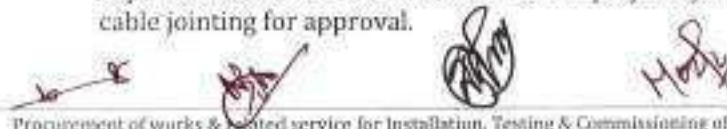
Cable drum shall be unloaded handle and in an approved manner on hard and well drained surface so that they must not sink. In no case shall the drum be stores flat i.e. with flange horizontal rolling of drums shall be avoided as far as possible. For unreeling of cables, the drum shall be mounted on suitable jacks or on wheels. All possible care shall be taken during unreeling and laying to avoid to dust twist, kink or sharp bends.

Bending radii for cables shall be as per manufacture's recommendations. Manufacture's instruction shall be strictly adhered to and necessary conducting medium shall be provided over the cable outer sheath for checking the healthiness of outer sheath applied.

Cable trenches shall be constructed for directly buried cables as per drawings of Drawing Section. Cables shall be installed by direct burial at an average depth of 1.0 meter from finished ground level. Construction of trench for cable shall also include excavation, preparation of sieved sand bedding, riddled soil cover, supply and installation of concrete protective covers back filling and compacting supply and installation of route marker and joint marker. Back filling shall be by the material excavated. However, bigger stones and pieces of rock etc. shall be removed.

Cables shall be laid in trefoil formation. The cables shall be surrounded by well compacted sand of approximately 100 mm thickness in all directions from cable surface for protection against damage. Concrete protective covers (RCC slabs) shall be installed/provided directly over the compacted sand over the cable surface, RCC slabs shall sufficiently cover the width of all the cables.

The cable jointing and termination work shall be carried out by experienced cable jointer who shall have adequate skill and experience in jointing and termination of 11 kV & 33 kV voltage grade XLPE cables. CV of cable jointers mentioning cable jointing experiences shall be submitted to the Employer by the Contractor before execution of cable jointing for approval.



Bidder shall carry out the earthing of cable metallic sheath at both end of termination using insulated sheath bonding (Earthing) cable of required size.

The sheath/screen shall be bonded to the earth through disconnecting type link boxes at both end of cable termination to avoid any induced voltage.

7.12.6 Bonding

The cables shall be installed as an insulated sheath system. Single core cable sheaths may be solidly bonded (bonded at both ends).

Bonding leads shall be of sufficient cross-sectional area to carry the maximum imposed short circuit level. A schematic diagram detailing the proposed bonding system and stating bonding leads cross section shall be submitted with the Bid.

7.12.7 Laying of Cable:

The work includes transportation of cable from store to site, mounting on cable drum with drum jack, pulling out cable on cable roller and laying of cable in the cable trench (Common Utility Trench) as per direction of the Engineer. Adequate protection shall be taken to protect the cable from any damage during transportation, pulling, laying and jointing.

Due account shall be taken of the heating due to other cables or other sources of heat where these can be identified. Depending on the type of cable and number of circuits, the laying position and spacing between circuits shall generally be in the manner shown in the drawings, unless otherwise deem necessary as per local condition.

7.12.8 Cable Jointing and Installation of Termination Kits

Cables shall be joined by straight through joint and include preparation of jointing pit, the making of between two U/G Cable by using heat shrink cable jointing kits. All necessary materials and tools such as keroshine oil, cotton, insulation cutter, semi-conductive layer peeler etc. except jointing compound shall be supplied by the contractor. No of joints shall be kept as low as possible and special care shall be taken that the cable is not damaged during the jointing work.

Installation of Terminal Kits shall include all necessary preparation and cable line termination on type and size of U/G cable required for the particular work by heat shrinkable cable jointing kits, which includes Cable kit mounting Bracket, fixing accessories, cable guard etc. as per approval and instruction given by the Project Director or it's representative. The jointing kits shall be supplied by DESCO.

The particulars of Termination Kits (outdoor & indoor) and Straight-through Joint box that will used for different type and capacity of U/G cable are stated in the tables below:

33KV XLPE, 1Cx500 mm² Copper cable			
	Indoor Termination Kits	Outdoor Termination Kits	Straight Through joint
Installation	For Indoor switchgear terminations	For Outdoor installation on poles/structures	For underground horizontal mounting
System	33KV, effectively earthed system	33KV, effectively earthed system	33KV, effectively earthed system
Cable conductor	500 mm ² Copper Conductors	500 mm ² Copper Conductors	500 mm ² Copper Conductors
Kit content	- Heat shrinkable high voltage insulating and non-tracking tubing - Heat shrinkable stress control tubing - Stress relieving mastic strip - Truck resistant sealant tape - Cable preparation kit - Solderless earth connection kit - Compression lugs for 500 mm² Copper Conductors	- Heat shrinkable high voltage insulating and non-tracking tubing - Heat shrinkable stress control tubing - Stress relieving mastic strip - Truck resistant sealant tape - Heat shrinkable truck resistant rain skirt - Support insulator - Cable preparation kit - Solderless earth connection kit - Compression lugs for 500 mm² Copper Conductors - Support insulators Tee Brackets	The joint shall be proof against ingress of moisture and water
11KV XLPE, 3-Core, 300 mm² Copper cable			
	Indoor Termination Kits	Outdoor Termination Kits	Straight-through joint box for
Installation	For Indoor installation in switchgear terminations	For Outdoor installation on poles/structures	For underground horizontal mounting
System	11KV, effectively earthed system	11KV, effectively earthed system	11KV, effectively earthed system
Cable conductor	300 mm ² Copper Conductors	300 mm ² Copper Conductors	300 mm ² Copper Conductors
Kit content	- Heat shrinkable high voltage insulating and non-tracking tubing - Heat shrinkable stress control tubing - Stress relieving mastic strip - Truck resistant sealant tape - Cable preparation kit	- Heat shrinkable high voltage insulating and non-tracking tubing - Heat shrinkable stress control tubing - Stress relieving mastic strip - Truck resistant sealant tape - Heat shrinkable truck	The joint shall be proof against ingress of moisture and water

	- Solder less earth connection kit - Compression lugs for 300 mm² Copper Conductors	- resistant rain skirt - Support insulator - Cable preparation kit - Solder less earth connection kit - Compression lugs for 300 mm² Copper Conductors - Support insulators Tee Brackets	
11KV XLPE, 3-Core, 185 mm² Copper Cable			
	Indoor Termination Kits	Outdoor Termination Kits	Straight-through joint box
Installation	For Indoor installation in switchgear terminations	For outdoor installation on poles/structures	For underground horizontal mounting
System	11KV, effectively earthed system	11KV, effectively earthed system	11KV, effectively earthed system
Cable conductor	185 mm ² Copper Conductors	185 mm ² Copper Conductor	185 mm ² Copper Conductors
Kit content	- Heat shrinkable high voltage insulating and non-tracking tubing - Heat shrinkable stress control tubing - Stress relieving mastic strip - Truck resistant sealant tape - Cable preparation kit - Solder less earth connection kit - Compression lugs for 185 mm² Copper Conductors	- Heat shrinkable high voltage insulating and non-tracking tubing - Heat shrinkable stress control tubing - Stress relieving mastic strip - Truck resistant sealant tape - Heat shrinkable truck resistant rain skirt - Support insulator - Cable preparation kit - Solder less earth connection kit - Compression lugs for 185 mm² Copper Conductors - Support insulators Tee Brackets	The joint shall be proof against ingress of moisture and water
11KV XLPE, 3-Core, 185 mm² Aluminium Cable			
	Indoor Termination Kits	Outdoor Termination Kits	Straight-through joint box
Installation	For Indoor installation in switchgear terminations	For outdoor installation on poles/structures	For underground horizontal mounting
System	11KV, effectively earthed system	11KV, effectively earthed system	11KV, effectively earthed system
Cable conductor	185 mm ² Aluminium Conductors	185 mm ² Aluminium Conductor	185 mm ² Aluminium Conductors

Kit content	- Heat shrinkable high voltage insulating and non-tracking tubing - Heat shrinkable stress control tubing - Stress relieving mastic strip - Truck resistant sealant tape - Cable preparation kit - Solder less earth connection kit - Compression lugs for 185 mm² Aluminium Conductors	- Heat shrinkable high voltage insulating and non-tracking tubing - Heat shrinkable stress control tubing - Stress relieving mastic strip - Truck resistant sealant tape - Heat shrinkable truck resistant rain skirt - Support insulator - Cable preparation kit - Solder less earth connection kit - Compression lugs for 185 mm² Aluminium Conductors - Support insulators Tee Brackets	The joint shall be proof against ingress of moisture and water
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7.13 Installation of Ring Main Unit (RMU)

This item includes carrying of RMU from ware house to site, loading, unloading, installation according to design, drawing greasing, fixing alignment, leveling, bolting, grounding, wiring etc. Termination of 11KV cable, heat shrinking, jointing kit, carrying of kit to site from ware house and installation of boots for 12KV SP6 insulated 3(three)/5(Five)/7(Seven) function outdoor compatible compact Ring Main Unit (RMU) suitable for 11KV, 3-core XLPE, 300 sq.mm and 185 sq. mm UG cable. 04 nos. boring (100 ft). Earthing rod supply (16mm, 2M, Cu) with nuts-bolts, CT change, testing & commissioning (RMU & cable) all in accordance with the specifications and to the direction of Engr. in charge. Grounding of each RMU includes 4 nos. boring each boring includes 16 mm diameter, 2-meter length, 4 nos. copper grounding rod will be supplied by contractor. There shall be 4 nos boring. Necessary earth wire will be supplied by DESCO. Under each boring copper wire must be welded/joint properly to copper grounding rod. Also supply of necessary Nut-bolts and fabricated materials. After completion of grounding result should be verified in the presence of Project Director or it's representative.

7.14 Supply & Installation of 0.415kv LTDB with Civil Works

Supply, carrying of 0.415KV LTDB to site, fabrication, loading, unloading, installation according to design & drawing, greasing, fixing alignment, leveling, bolting, grounding, wiring etc. including supply of all related accessories as per DESCO's approved design & specification and instruction of Project Director or it's representative.

7.14 Testing & Commissioning of U/G Cable

Testing & Commissioning of laying U/G Cable should include High Voltage withstand Test, Insulation Resistance Test, Sheath Resistance Test. Test should be done as per standards & instructions of Project Director or it's representative with proper standard testing equipments.

Test result should be submitted in written before energisation of cable. Necessary steps should be taken by the Contractor if test results are not accepted as satisfactory by the Project Director or it's representative before energisation of cable.

8.0 Optical fibre underground cable and required accessories

8.1.0 SCOPE

8.1.1 General

This section of the specification covers optical fiber cable suitable for incorporation into the non-metallic underground fiber optic cable.

8.1.2 climatic condition

The offered equipments shall be designed and field proven to operate in the following climatic condition prevailing in this project:

- Climate: Tropical, intense sunshine, heavy rain, humid. Maximum Humidity and Temperature sometimes occur simultaneously.
- Maximum Temperature: 48° C
- Minimum Temperature: 3° C
- Maximum yearly weighted average temperature: 30° C
- Relative Humidity: 50-100%
- Average isokeraunic level: 80 days/ year
- Average annual rain fall: 3454 mm
- Maximum wind velocity: 200 km per hour
- Altitude above the sea level: 1000 meters
- Atmospherical, Mechanical and Chemical impurities: Moderately polluted

The information is given as a guide for tenderers and no responsibility for its accuracy nor will any claim based on the above be entertained.

8.1.3 Quality Standard

The equipment shall be designed and manufactured in accordance with the following quality management systems:

- ISO 9001 or updated version.
- ISO 14001 or updated version.

8.2 Optical Fiber Underground Cable

8.2.1 Mechanical Characteristics

The proposed optical fiber underground cable shall be rodent proof and suitable for direct burial and duct installation. The mechanical characteristics shall apply:

- Outer sheath: UV-resistant HFFR/HDPE/LSZH
- Outer sheath marking: At least meter (1 m interval), cable type, lot number and year of manufacture

- Inner sheath: High-density PE
- Corrugation: Steel tape
- Fire proofness: Fire retardant (IEC 60332-1:2004 or equivalent), low smoke (IEC 61034 or equivalent), halogen free (IEC 60754 or equivalent)
- Crush strength: $\geq 4,500 \text{ N/100mm}$
- Tension (installation): $\geq 3,500 \text{ N}$
- Bending radius: $\leq 20D$
- Tube construction: Jelly filled loose tube
- Central strength member: Glass fibre reinforcement

8.2.2 Optical Characteristics

The following optical requirements shall apply:

- Fibre standard ITU-T G.652.D
- Optical fibre type Single Mode
- Number of optical fibre 24
- Mode field diameter @ 1310 nm $9.0 \pm 0.5 \mu\text{m}$
- Mode field diameter @ 1550 nm $10.1 \pm 0.6 \mu\text{m}$
- Cladding diameter $125 \pm 1 \mu\text{m}$
- Optical attenuation @ 1310 nm $\leq 0.37 \text{ dB/km}$
- Optical attenuation @ 1550 nm $\leq 0.23 \text{ dB/km}$
- Chromatic dispersion @ 1550 nm $\leq 18 \text{ ps/(nm.km)}$
- Cut-off wavelength $\lambda_c \leq 1260 \text{ nm}$
- Polarization Mode Dispersion $\leq 0.2 \text{ ps}/\sqrt{\text{km}}$

8.3 International Standards

The optical cable shall be designed, manufactured and tested in compliance with the following international standards:

- ITU-T G.652 Characteristics of a single-mode optical fibre and cable
- IEC 60304 Standard colours for insulation for low-frequency cables and wires
- IEC 60793-1-1 Optical fibres - Part 1-1: Measurement methods and test procedures - General and guidance
- IEC 60793-1-20 Optical fibres - Part 1-20: Measurement methods and test procedures - Fibre geometry
- IEC 60793-1-21 Optical fibres - Part 1-21: Measurement methods and test procedures - Coating geometry
- IEC 60793-1-22 Optical fibres - Part 1-22: Measurement methods and test procedures - Length measurement
- IEC 60793-1-30 Optical fibres - Part 1-30: Measurement methods and test procedures - Fibre proof test

- IEC 60793-1-31 Optical fibres - Part 1-31: Measurement methods and test procedures - Tensile strength
- IEC 60793-1-32 Optical fibres - Part 1-32: Measurement methods and test procedures - Coating strippability
- IEC 60793-1-33 Optical fibres - Part 1-33: Measurement methods and test procedures - Stress corrosion susceptibility
- IEC 60793-1-34 Optical fibres - Part 1-34: Measurement methods and test procedures - Fibre curl
- IEC 60793-1-40...49 Optical fibres - Part 1-40...49: Measurement methods and test procedures
- IEC 60794-1-1 Optical fibre cables - Part 1-1: Generic Specification - General
- IEC 60794-1-2 Optical fibre cables - Part 1-2: Generic Specification - Basic optical cable test procedures
- IEC 60874-1 - Connectors for optical fibres and cables - Part 1: Generic Specification

8.4 Testing

8.4.1 Type Tests

All relevant mechanical and optical type test certificates for the single fibres and the cable shall be submitted.

8.4.2 Production Tests

The manufacturer shall perform all relevant production tests in accordance with his QA-program.

The Employer shall be allowed to perform a stage inspection at any time before final shipment.

8.4.3 Factory Acceptance Tests

The Factory Acceptance Tests shall at minimum include the following tests and inspections:

- Verification of type test results and certificates (single fibre + cable)
- Inspection of production test result (single fibre + cable)
- Calibration verification on test equipment
- Sample testing of optical characteristics on 10% (or minimum 2 nos.) of the delivery drum amount/shipment selected randomly by the Employer
- Sample testing of mechanical characteristics for cable from minimum 2 drums selected randomly by the Employer
- Cable marking and sealing
- Inventory
- Shipment details

8.5 Optical Distribution Frame

8.5.1 Mechanical Characteristics

The preferred mounting shall be 19" rack mounting inside the cubicles in the scope of supply. However, wall mounting may be considered case by case. Easy access to all connectors and ease of maintenance works shall be ensured.

The optical add-drop multiplexer equipment shall be connected to the ODF by means of patch cords. The patch cords shall have the same optical characteristics with the fibres in the optical cable,

The cable(s) shall be terminated inside the ODF in accordance with the manufacturer's instructions. Special attention shall be given to the following:

- The ODF shall be corrosion protected and painted with powder paint.
- The ODF shall be designed so that accidental damage to the fibres is avoided.
- The ODF shall be properly earthed to the station earth.
- The corrugation (if any) of the cable shall be properly earthed to the ODF.
- The bare fibre lengths from the cable inside the ODF shall be of equal length with the pigtails.
- The fibres shall be spliced to pigtails. The splice shall be protected with heat shrinkable sleeves and stored to a splice tray. The length of the pigtails must not be below 1.5 m.
- The pigtails shall be colour coded and numbered for easy identification.
- The connectors of the pigtails shall be of type SC and terminated to an adapter.
- The adapters shall be of type SC or SCD (duplex).
- All 24 fibres in each cable shall be terminated.
- Each cable shall be terminated in a separate ODF.
- If the proposed ODF has capacity for more than 24 fibres, blind plates shall be used on unused adapters.
- Each ODF shall have clear and visible permanent marking in accordance with the design documentation and route information.

All necessary materials for the termination of the optical cables shall be included in the delivery.

The patch cords between the ODF and the optical terminal shall be protected with tubes or pipes whenever outside the cubicles.

8.5.2 Optical Characteristics

The following optical requirements shall apply to the pigtails and adapters:

- Fibre standard ITU-T G.652D
- Optical fibre type Single Mode
- Number of optical fibres 24
- Mode field diameter @ 1310 nm $9.0 \pm 0.5 \mu\text{m}$
- Optical attenuation @ 1310 nm $\leq 0.37 \text{ dB/km}$
- Optical connector loss $\leq 0.5 \text{ dB}$
- Splice loss $\leq 0.1 \text{ dB}$

8.5.3 Testing

The optical wiring tables shall be submitted as a part of the design documentation. Attenuation and correct splicing order of the fibres shall be verified during SAT. Photographs of each completed splice tray shall be taken before closing the ODF. The photographs shall be available for inspection if the Employer so require.

8.6 Optical Joint Box

8.6.1 Mechanical Characteristics

The joint box shall be supplied with necessary accessories for mounting to the gantry towers, storage reel for spare and work lengths of the optical cables and all material for splicing and finishing.

The joint box shall be suitable for mounting to OHL towers and poles plus for direct burial in the ground. The mounting shall be done in accordance with the manufacturer's specification and without violating the minimum bending radius requirements of the optical cables.

The following mechanical requirements shall apply:

- Housing material: Acid proof steel, ABS or other proven equivalent material
- Colour: Black (aerial/duct installation)
- IP Class (IEC 60529): IP 68
- Number of inlet tubes: ≥ 3
- Fusion splice capacity: ≥ 48
- Single splice loss: ≤ 0.1 dB
- Average splice loss: ≤ 0.05 dB

The splices shall be protected with heat shrinkable protection sleeves. The splices protected with sleeves shall be stored on removable splice trays.

Unused inlet tubes shall be sealed with proper UV-resistant adhesive shrink tube type end sealers.

8.6.2 Accessories

Each joint box shall be delivered with all necessary installation and mounting materials plus two spare sealing gaskets.

8.6.3 Testing

The optical wiring tables shall be submitted as a part of the design documentation. Attenuation and correct splicing order of the fibres shall be verified during SAT. Photographs of each completed splice tray shall be taken before closing the joint box. The photographs shall be available for inspection if the Employer so require.

8.7 HDPE Duct

HDPE ducts shall be used for the "Direct Burial with Duct" type installation of optical fibre underground cable. The HDPE ducts shall be compatible with the latest installation standards and operation and maintenance practices. It shall be highly resistant to all kinds of corrosive liquids, aggressive media and chemicals usually found in the ground. The HDPE ducts shall be Light weight, flexible and shall contain correct type of carbon black protection against Ultra Violet (UV) degradation.

The following mechanical requirements shall apply:

- | | |
|-----------------|---|
| • Certification | ISO 4427 |
| • Diameter | 50.0mm-50.5mm |
| • Thickness | 3.30mm-3.7mm |
| • Appearance | Ribs inside & outside surface free from blist
shrink holes, flakings scratch & roughness |
| • Color | Yellow/Green/Blue |

8.8 Other Accessories

The cable(s) shall be terminated inside an Optical Distribution Frame (ODF) in accordance with the manufacturer's instructions.

Underground vaults known as Handholes that provide access to fiber optic cable for splicing, repairing and other purposes shall be placed in regular interval.

All other necessary accessories for installation and mounting of Optical Fiber Underground Cable shall be supplied with the approval of the manufacturer and the employer.

8.9 Pre-commissioning

The Contractor shall ensure the quality of the material and installations before requesting Commissioning tests to start (pre-commissioning). Proper test and verification records from the pre-commissioning shall be available during commissioning.

8.10 Commissioning

After successful pre-commissioning witnessed commissioning tests shall be performed.

The commissioning tests shall at minimum include:

- Inspection of installation records and "red-pen" documents
- Inspection of pre-commissioning records
- Visual installation inspection including ODF samples
- Calibration verification on test equipment
- OTDR measurements on all fibres
- End-to-end attenuation measurement on all fibres with an optical source-power meter pair.
- Accessories

Section 8. Particular Specifications

8.1 Experience and Qualification of the Key Personnel

The tenderer shall furnish documents in support of the requisite qualification of the proposed key personnel mentioned in the TDS (ITT sub-clause 16.1). The qualification and experience of the key personnel to qualify for the performance of the works under the contract shall be as follows:

Designation	Person	Qualification	Experience
Project Engineer	01	B. Sc Engineer (Electrical)	Minimum 05 (Five) years of practical experience of Underground electrical line construction works in any electrical distribution system as an Engineer. The candidate shall require adequate knowledge on Auto-CAD Software.
		Or Diploma in Electrical Engineering. Shall possess Electrical Supervisory license of competency class A, B & C issued by the Electricity Licensing Board, GOB	Minimum 08 (Eight) years of practical experience of Underground electrical line construction work in any electrical distribution system as an Engineer. The candidate shall require adequate knowledge on Auto-CAD Software.
Site Engineer (01 for each Team)	01	Diploma in Electrical/Mechanical/Power Engineering	Minimum 03 (Three) years of practical experience of Underground electrical line construction work in any electrical distribution system as an Engineer.
Foreman (01 for each Team)	01	Trade Course Certificate from any Vocational Institute. Shall possess Electrical Work Permit of competency class A, B & C issued by the Electricity Licensing Board, GOB	Minimum 10 (ten) years of experience in any electrical distribution system of which at least 05 years practical experience in works of installation of U/G Cable Line.
Cable Joiner (01 for each Team)	01	Minimum Class VIII pass.	Minimum 08 (eight) years practical experience in works of installation of U/G Cable Line including cable jointing.
OPUC Cable Joiner (01 for each Team)	01	Minimum Class VIII pass. Shall possess OPUC cable Works.	Minimum 05 (Five) years practical experience in works of installation of OPUC Cable Line including OPUC cable jointing.

8.2 List of Major Tools and Equipment

The Contractor shall have the requisite major tools and equipment including, but not limited to, the following for the execution of works and services under the contract:

Sl. No	Item Name
01	Concrete mixture machine
02	Jack rill, Road Cutting Machine
03	Thrust boring machine
04	Vibrator machine, water pump etc.
05	Cable Roller – Straight Standard, Heavy Duty Triple Manhole Cable Roller, Cable Guide for Edges Roller, Corner or Angle Roller
06	Underground Cable Hipot Machine (above 60kV DC, minimum 20 mA)
07	Metal Sheath Fault Locating Machine
08	Earthing Resistance Testing Tools
09	Insulation Resistance Tester
10	Cable Pulling Winch Machine
11	Cable Cutter, Hydraulic compaction machine
12	Road cutter power saw shovel system
13	Mobile Pile driving rig
14	Hydraulic fitter
15	Tyre roller dump truck
16	OPUC Cable blowing Machine
17	Fiber Splicing Machine
18	OTDR Machine
19	Power Meter
20	Contractor's staff or work force should be used PPE (safety goggles, dust mask, ear plug, Helmet, Handgloves, Gum-boot, apron, light etc)

The Employer or its representative(s) will check the availability of tools and equipment at any time during the contract period.

8.3 Safety

All safety measures regarding manpower and equipment shall be ensured by the Contractor. For any kind of accident during the work, the Contractor shall be entirely responsible and shall bear all the costs regarding that.

8.4 Employment of Key Personnel

8.4.1 Declaration

Employment of the key personnel for works and services under the contract shall require prior approval of the Employer. The Contractor shall furnish a declaration that the employee(s) proposed for the works and services has/have not been discharged or dismissed from any previous works or services of DESCO under any Contractor. The Contractor shall submit the proposal along with CV, work experience certificate and photograph of the proposed personnel to the office of the Project Director (DPSEP), DESCO within 07 (seven) working days of the date of contract signing.

8.4.2 Interview for Selection of Key Personnel

The key personnel of the Contractor will be interviewed by the Employer or its representative(s) to assess their suitability for the works and services under the contract. A selection committee headed by the Project Director (DPSESP), DESCO will be formed for interview, subject to the approval of Managing Director, DESCO. The unsuitable personnel shall be replaced by suitable personnel. Based on the report of the selection committee, Executive Director (Engineering) of DESCO will approve the manpower of the Contractor and notify accordingly.

8.4.3 Replacement of Key Personnel during Contract Period

In case of replacement of key personnel during contract period CV, NID, work experience certificate and 02 nos. photograph of the proposed personnel (equivalent or higher qualification) shall be submitted to the office of the Project Director (DPSESP), DESCO. A committee headed by the Project Director (DPSESP), DESCO will interview the personnel and will be approved by the Executive Director (Engineering).

8.5 Contractor's Performance Monitoring and Evaluation

The contractor shall have to strictly comply with requirement of ITT Clause 16.1 and scope of works described in Section 6: BOQ, Section 4: Particular Conditions of Contract, Section 7: General Specifications and Section 8: Particular Specifications. On failure to fulfil such requirements penalty and/or negative marking shall be imposed on the Contractor for the reasons and in methods as described below:

- a) Performance evaluation of the Contractor shall consider the factors and corresponding negative marking as mentioned below:

(i)	On account of the contractor's negligence, failure to perform the assigned job in accordance with the Section 6: BOQ, Section 7: General Specifications and Section 8: Particular Specifications; other than any justified reason.	05 negative marks per job/case & Penalty shall be as a percentage of minimum 0.5% to maximum 1.0 % of the said job/case, value depending on the situation.
(ii)	Failure to execute the assigned job under the contract within the period allocated by the Engineer-in-Charge; other than any justified reason.	02 negative marks per job & Penalty of Tk. 5,000/- per job per week or part thereof.
(iii)	Failure to remove excavated soil from the site in accordance with the policy of the approving authority during execution of any job assigned by the Engineer-in-charge, other than any justified reason.	Penalty of Tk. 1000/- per day.
(iv)	Absence of key personnel in the site as per instruction of the Engineer-in-charge while performing the assigned job.	01 negative marks per job/case & Penalty of Tk. 2,000/- for each job/case.
(v)	Absence of required number of safety barriers, safety signs, signboards, checkered plates, etc. on-site in accordance with the policy of the approving authority during execution of any job assigned by Engineer-in-charge, other than any justified reason.	05 negative marks per job & Penalty of Tk. 5,000/- per job per week or part thereof.
(vi)	Failure to submit "Close-Out" documents (e.g. As-built, GIS Data, SGP form(s)) on completed job within the period allocated by the Engineer-in-Charge, other than any justified reason.	01 negative mark per job/case & Penalty of Tk.5,000/- for per job per week or part thereof

(vii)	Non-availability or for defective of tools & equipment as mentioned in Section 8; Particular Specification which cause delay or hamper the execution of assigned job by the Engineer-in-Charge; other than any justified reason.	01 negative mark per event/item & Penalty of Tk. 5,000/- for each case/item.
(vii)	During excavation of cable trench, if any existing cable is injured for the negligence of the Contractor's personnel then penalty shall be imposed for each occurrence.	02 negative marks for each case & The engineer-in-charge will assess the value of loss or damage to works or related materials. The amount of penalty shall be twice of the assessed value.
(ix)	If any cable / RMU / other material has been damaged during installation, transportation, laying, bending or jointing against any assigned job or if any cable / RMU / other material is lost on site (unable to return) due to the Contractor's negligence then penalty shall be imposed for each occurrence.	03 negative marks for each case & the engineer-in-charge will assess the value of loss or damage to works or related materials. The amount of penalty shall be twice of the assessed value.
(x)	If service line of any Consumer / Utility / Organization is injured / damaged due to the Contractor's negligence during execution of any assigned job, penalty shall be imposed depending on the situation for each occurrence.	The Engineer-in-charge will assess and fix the amount for the repair of damage and such penalty shall be imposed on contractor running/final bill if the contractor has not resolved that organization's problems or has not provided appropriate compensation.
(xi)	Failure to cleared from the site / returned to the DESCO's store for cable drums and other related goods / materials within one week after Completion of assigned job; other than any justified reason.	02 negative mark per job/case & Penalty of Tk.10,000/- for per job per week or part thereof
(xii)	Failure to perform the assigned works in accordance with the drawing/design/ instructions (e.g. increase the manpower, logistic support and others) of the Engineer-in-Charge; other than any justified reason.	01 negative marks per event/job & Penalty of Tk. 5,000/- for each job/case.
(xii)	Failure to submit the report as per the prescribed format/as directed or demanded by the Engineer-in-Charge within the stipulated time; other than any justified reason.	Penalty of Tk. 5,000/- for each event.
(xi)	Unauthorized or unapproved line construction / withdrawal / shifting of electric line & equipment in the electric distribution network of DESCO by any employee of the Contractor.	10 negative marks per event & Penalty of Tk. 50,000/- for each event

- b) The penalized amount as mentioned in article 8.5(a), shall be deducted from the final/next certified running bill.
- c) In case of total negative marking as mentioned in article 8.5(a) of this section exceeds 30 marks in within last 06 (six) months, then the penalty @1% of the total contract amount will be imposed upon the Contractor and the same will be realized/adjusted from their final/next certified running bill. If the total negative marks exceed 60 within last 12 (twelve) months, then the Contractor may be considered ineligible for participation in any subsequent tender of DESCO for similar nature of works invited by the employer for the minimum 02 (two) years from date of issuance of notice.

8.6 Completion Certificate

- 8.6.1 The contractor shall apply by notice to the Engineer-in-Charge for issuing a Completion Certificate of the Works, and the Engineer-in-Charge will issue a completion certificate within 03 (three) months of the date of completion of Contract, subject to submission of final close-out document (by confirming return all the recovery/unused materials, submitted As-built of all fully/partially completed job(s) along with the joint inspection/Energization report, submitted of all necessary SOP form(s) and other necessary documents) and acceptance of the same by the employer.
- 8.6.2 The Employer shall take over the Site and the Works within 42 (forty-two) days of the completion of respective job/works by contractor or as per SOP declaration.
- 8.6.3 The Contractor shall supply the Engineer with a detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Engineer shall issue a Defects Correction Certificate and certify any final payment that is due to the Contractor within twenty-eight (28) days of receiving the Contractor's account, if it is correct and complete.
- 8.6.4 The Employer shall effective payment of the final account within twenty-eight (28) days from the date of certification by the Engineer.
- 8.6.5 The contractor shall complete all formalities regarding the close out of all completed works and related services under the contract within 04 (four) weeks after expiration of contract period. The contractor shall complete close-out of partially completed works to claim the progressive payment and it should be done as per the instruction of the Project Director. The contractor shall return all unused recovered materials and all unused issued materials (including cable drum, if any) to the central store or sub-store of DESCO immediately after the completion of each job as decided by the Project Director from time-to-time but finally not later than 02 (two) weeks after the completion of contract period.

Partial Close-out: The Contractor shall also complete the formalities of close out bi-annually for those issued job orders which have been completed within 06 (six) months period. The Project Director will allocate the time-frame for partial close-out.

In case of failure by the contractor to return or loss of any of these materials, the contractor shall compensate at twice the rate of the unreturned/lost materials. **All costs regarding returning materials shall be borne by the contractor.**

- 8.6.6 After confirming the return of security deposit money to DESCO required for road cutting /railway crossing permission from competent authority, final payment will be made. The Contractor will take necessary steps for return of security deposit money to DESCO.

8.7 Facility of Store House

The Contractor shall submit documents, as a proof, of having store house to the office of the Project Director within 15 (fifteen) days of the date of contract signing. The store house will be situated preferably within the jurisdiction of DESCO area. The store house will have adequate facilities to store the materials/equipment, which will be received from DESCO. The Contractor will ensure enough security facility for the store and will maintain a stock register. The Employer or its representative(s) will visit the store house after submission of the said documents to check the space and security facility. They may also visit the store house at any time during the whole contract period. If required by the Employer, the Contractor shall shift the store house at its own responsibility.