

PROCUREMENT DOCUMENT

Request for Bids Framework Agreement Goods (One-Envelope Bidding Process)



August 2026

Procurement Document

Summary of contents

Specific Procurement Notice

Specific Procurement Notice - Request for Bids (RFB) Framework Agreement(s) Goods

The Specific Procurement Notice template, included in this SPD, is the notice to be used for a Request for Bids, one-envelope Procurement process to conclude a Framework Agreement(s).

Request for Bids – Goods (One-Envelope Bidding Process)

PART 1 BIDDING PROCEDURES

Section I Instructions to Bidders (ITB)

This Section provides information to help Bidders prepare their Bids. It is based on a one-envelope Bidding process. It contains details on the submission, opening, and evaluation of Bids received during the Procurement process. It also provides an overview of the Call-off Contract(s)/Work Orders once the Framework Agreement(s) is concluded. This is more fully described in the Framework Agreement. **Section I is to be used without modification.**

Section II Bid Data Sheet (BDS)

This Section includes provisions that are specific to each Procurement process and that supplement Section I, Instructions to Bidders.

Section III Evaluation and Qualification Criteria

This Section specifies the criteria for the evaluation of Bids and the qualification of Bidders, including the methodology, which results in the determination of which Bidders will be invited to conclude a Framework Agreement(s).

Section IV Bidding Forms

This Section includes the forms for Bid submission, Letter of Bid, Price Schedules, and the Manufacturer's Authorization (if applicable only), to be completed and submitted by the Bidder as part of its Bid.

Section V Eligible Countries

This Section contains information regarding eligible countries.

Section VI Fraud and Corruption

This section includes the Fraud and Corruption provisions which apply to this Bidding process.

PART 2 SUPPLY REQUIREMENTS

Section VII Schedule of Requirements

This Section includes the List of Goods and Related Services, an estimate of the volume/quantity, Delivery and Completion Schedules, and the Technical Specifications and Drawings that describe the Goods and Related Services to be procured.

PART 3 PROCURING AGENCY FORMS

Section VIII Procuring Agency Forms

This Section includes the forms for the Notification of Intention to Conclude a Framework Agreement and Notification to Conclude a Framework Agreement.

PART 4 FRAMEWORK AGREEMENT FOR GOODS

This Part sets out the provisions of the Framework Agreement

SCHEDULE 1: Schedule of Requirements

SCHEDULE 2: Price Schedules

Specific Procurement Notice (SPN) Request for Bids Framework Agreement(s) for Goods

(One-Envelope Bidding Process)

Procuring Agency: Federal Board of Revenue (FBR), Government of Pakistan

Country: Pakistan

Name of Project: Pakistan Raises Revenue Program

Framework Agreement Title: Procurement and Installation of External Electrification Systems for Digital Enforcement Stations (DES) at Indus Sites, Phase-I (10 Sites)

RFB Reference No.: 3(7)/2026-Addl-Dir(P&F) / PK-FBR-565389-GO-RFB

Loan No./Credit No./Grant No.: 7867-PK

1. The Procuring Agency, Federal Board of Revenue (FBR) has received financing from the World Bank toward the cost of the Pakistan Raises Revenue Program (PRRP), and intends to apply part of the proceeds toward payments under Call-off Contracts that may be awarded under the Framework Agreement (FA) for the Procurement and Installation of External Electrification Systems for Digital Enforcement Stations (DES) at Indus Sites, Phase-I (10 Sites) concluded through this RFB Procurement process.
2. The Procuring Agency is undertaking Procurement with a view to concluding Framework Agreements. The Procuring Agency now invites sealed Bids from eligible Bidders for Procurement and Installation of External Electrification Systems for Digital Enforcement Stations (DES) at Indus Sites, Phase-I (10 Sites) vide Framework Agreement, at various locations mentioned in the bidding document.
3. This procurement will result in a Framework Agreement for each Lot with a Framework Supplier. Technical specifications, unit rates, contractual terms and conditions shall be finalized during the Procurement process. Call-off Contracts shall be issued as administrative Work Orders for identified sites.
4. The selection of a FA Supplier to be awarded a Call-off Contract will be done through the Procurement process as defined in Framework Agreement. However, the conclusion of a Framework Agreement shall not impose any obligation on the Procuring Agency, to purchase Goods under a Call-off Contract. The conclusion Framework Agreement does not guarantee that a FA Supplier will be awarded a Call-off Contract.
5. Bidding will be conducted through National Competitive Procurement using a Request for Bids (RFB) as specified in the World Bank's "Procurement Regulations for IPF Borrowers", Fifth Edition, September 2023 ("Procurement Regulations") and is open to all eligible Bidders as defined in the Procurement Regulations.
6. Bidders may submit Bids for one or more of the Lots. Each Lot shall be evaluated independently and a separate Framework Agreement shall be concluded with one successful Bidder for each Lot. Bidders shall quote for 100% of the requirements of the respective Lot(s) and sites. Partial bids for incomplete quantities for a lot or sites within a Lot shall not be permitted. The Framework Agreement shall be implemented through site-

specific Call-off Contracts to be issued based on actual site readiness and operational requirements during the Framework Agreement Term.

Sr No	Lot No	Sites Covered Under the Lot
1	1	DI KHAN HAKLA MOTORWAY M-14(CPEC) (BOQ-1)
2		KALA BAGH BRIDGE (BOQ-2)
3		JINNAH BRIDGE (BOQ-03)
4		CHASHMA BARRAGE (BOQ-04)
5	2	GUDDU BARRAGE (BOQ-05)
6		KOTRI BRIDGE (BOQ-06)
7	3	SEHWAN (ARAL BIDGE) (BOQ-07)
8		SEHWAN BHAN SAEED ABAD (BOQ-08)
9		KHUKERA (BOQ-9)
10		HUB (MYGARHI OR CHLEGHEZI CUT) (BOQ-10)

7. Each Bid shall be accompanied by a Bid Securing Declaration as provided in the Bidding Documents.
8. The Framework Agreements shall be concluded for a Term ending on 30th June 2027 from the commencement date stated in the Framework Agreement. The Initial term may be extended for the same period for which the project may be extended.
9. Interested eligible Bidders may obtain further information from Federal Board of Revenue, Procurement Specialist, PRRP having email procsp.prrp@fbr.gov.pk and inspect the Bidding document during office hours 1000 to 1600 hours at the address given below.
10. The Bidding document in English may be downloaded from (<https://fbr.gov.pk/tenders>) without any fee(s)/ charge(s).
11. Bids must be delivered to the address below on or before 8th October 2026 by 1100 hours. Electronic Bidding will not be permitted. Late Bids will be rejected. Bids will be publicly opened in the presence of the Bidders' designated representatives and anyone who chooses to attend, at the address below on 8th October 2026 at 1130 hours.
12. A Pre-Bid Meeting shall be held on 1st September 2026 at 11:30 AM (Pakistan Standard Time) at FBR House, Constitution Avenue, Islamabad. Bidders may also participate virtually through the link provided in the RFB.
13. Attention is drawn to the Procurement Regulations requiring the Borrower to disclose information on the successful bidder's/bidders' beneficial ownership, as part of the publication of the conclusion of framework agreement notice, using the Beneficial Ownership Disclosure Form included in the bidding document.
14. The address(es) referred to above is:

Procurement Specialist, Program Office (PRRP),

Room No. 277-B, Second Floor, Federal Board of Revenue (FBR),
FBR House, G-5, Constitution Avenue, 44000, Islamabad, Pakistan
+92 51 9219641 and +92 51 9215109

Email: procsp.prrp@fbr.gov.pk

Website: <https://www.fbr.gov.pk/tenders>

Request for Bids Framework Agreement(s) Goods

(One-Envelope Bidding Process)

FRAMEWORK AGREEMENT FOR THE PROCUREMENT AND INSTALLATION OF EXTERNAL ELECTRIFICATION SYSTEMS FOR DIGITAL ENFORCEMENT STATIONS (DES) AT INDUS SITES, PHASE-I (10 SITES).

Procuring Agency: Federal Board of Revenue (FBR)

Country: Pakistan

Name of Project: Pakistan Raises Revenue Program (PRRP)

Framework Agreement Title: Procurement and Installation of External Electrification Systems for Digital Enforcement Stations (DES) at Indus Sites, Phase-I (10 Sites).

RFB Reference No.: 3(7)/2026-Addl-Dir(P&F) / PK-FBR-565389-GO-RFB

Loan No./Credit No./Grant No.: 7867-PK

RFB Issued on: 26th August 2026

Request for Bids Framework Agreement(s) Goods

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PART 1 – Bidding Procedures

Section I - Instructions to Bidders (ITB)

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Section I. Instructions to Bidders

A. General

1 Scope of Bid

- 1.1 In connection with the Specific Procurement Notice, Request for Bids (RFB) Framework Agreement(s) Goods, specified **in the Bid Data Sheet (BDS)**, the Procuring Agency, as specified **in the BDS**, issues this Request for Bids (RFB) document as part of the Procurement process for Goods, and may lead to Framework Agreement(s) being concluded with the successful Bidder(s). The name and identification of this RFB are specified **in the BDS**.
- 1.2 Throughout this Bidding document:
- (a) **“in writing”** means communicated in written form (e.g., by mail, e-mail, fax, including if specified **in the BDS**, distributed or received through the electronic-procurement system used by the Procuring Agency) with proof of receipt;
 - (b) if the context so requires, **“singular”** means **“plural”** and vice versa;
 - (c) **“Day”** means calendar day, unless otherwise specified as **“Business Day”**. A Business Day is any day that is an official working day of the Borrower. It excludes the Borrower’s official public holidays;
 - (d) **“Call-off Contract”** means a Work Order issued under the Framework Agreement for execution of identified site-specific works using the agreed Contract Rates, Specifications and Conditions;
 - (e) **“Country”** means the Procuring Agency’s/Purchaser’s country;
 - (f) **“Delivery Period”** is the specified period from the date of formation of a Call-off contract for delivery of the Goods, as per the applicable Incoterms;
 - (g) **“Framework Agreement (FA)”** means the agreement between the Procuring Agency and Supplier (s) (the successful Bidder(s)) to

establish the terms and procedures governing the award of Call-off contracts under the agreement.

- (h) **"FA Supplier"** means the successful Supplier that concludes the Framework Agreement and receives Call-off Contracts issued by the Purchaser during the Framework Agreement period.
- (i) **"Goods"** means all goods, materials or items that the Supplier is required to supply to a Purchaser under a Call-off Contract placed under a Framework Agreement. Details of such Goods are set out in Part 2, Supply Requirements, and the Framework Agreement and particularly described in a Call-off Contract. Where appropriate, for the purpose of interpretation, the definition for Goods includes Related Services;
- (j) **"Procuring Agency"** means the agency that undertakes the Procurement process and concludes the Framework Agreement(s);
- (k) **"Purchaser"**, as **specified in the BDS**, means the agency(ies) that is/are permitted to purchase Goods from a Supplier under a Call-off Contract awarded through a Framework Agreement;
- (l) **"Related Services"** if applicable, means the services incidental to the supply of the Goods, such as insurance, installation, training, initial maintenance and other such obligations of the Supplier, as specified in Framework Agreement Schedule 1: Schedule of Requirements, and specifically described in a Call-off Contract;
- (m) **"Supplier"** means a Bidder that has concluded a Framework Agreement through the the Procurement process and may be considered for the award of a Call-off Contract, to deliver the Goods, and, if applicable, Related Services, as and when required. A Supplier may also be referred to as a "FA Supplier";
- (n) **"Term"** mean the duration of a Framework Agreement starting on the Commencement Date. Where applicable, it includes any extension(s) to the initial Term, if permitted and agreed.

2 Source of Funds

- 2.1 The Borrower or Recipient (hereinafter called “Borrower”) specified **in the BDS** has applied for, or received financing (hereinafter called “funds”) from the International Bank for Reconstruction and Development or the International Development Association (hereinafter called “the Bank”) in an amount specified **in the BDS**, toward the project named **in the BDS**. The Borrower intends to apply a portion of the funds to eligible payments under Call-off Contracts to be awarded under the Framework Agreement(s) for which this Bidding document is issued.
- 2.2 Payment by the Bank will be made only at the request of the Borrower and upon approval by the Bank in accordance with the terms and conditions of the Loan (or other financing) Agreement. The Loan (or other financing) Agreement prohibits a withdrawal from the Loan account for the purpose of any payment to persons or entities, or for any import of Goods, if such payment or import is prohibited by decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations. No party other than the Borrower shall derive any rights from the Loan (or other financing) Agreement or have any claim to the proceeds of the Loan (or other financing).

3 Fraud and Corruption

- 3.1 The Bank requires compliance with the Bank’s Anti-Corruption Guidelines and its prevailing sanctions policies and procedures as set forth in the WBG’s Sanctions Framework, as set forth in Section VI, Fraud and Corruption.
- 3.2 In further pursuance of this policy, Bidders shall permit and shall cause their agents (whether declared or not), subcontractors, subconsultants, service providers, suppliers, and personnel, to permit the Bank to inspect all accounts, records and other documents relating to any, Bid submission, Procurement process, Framework Agreement performance, and/or Call-off Contract performance (in the case of award of a Call-off Contract), and to have them audited by auditors appointed by the Bank.

4 Eligible Bidders

- 4.1 A Bidder may be a firm that is a private entity, a state-owned enterprise or institution subject to ITB 4.6, or any combination of such entities in the form of a joint venture (JV) under an existing agreement or with the

intent to enter into such an agreement supported by a letter of intent. In the case of a joint venture, all members shall be jointly and severally liable for the execution of any Call-off Contract(s) awarded under the Framework Agreement in accordance with the Call-off Contract conditions that apply. The JV shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the members of the JV during the Bidding process and, in the event the JV is awarded a Call-off Contract under the Framework Agreement, during contract execution. Unless specified **in the BDS**, there is no limit on the number of members in a JV.

- 4.2 A Bidder shall not have a conflict of interest. Any Bidder found to have a conflict of interest shall be disqualified. A Bidder may be considered to have a conflict of interest for the purpose of this Bidding process, if the Bidder:
- (a) directly or indirectly controls, is controlled by or is under common control with another Bidder that submits a bid for the same item; or
 - (b) receives or has received any direct or indirect subsidy from another Bidder that submits a bid for the same item; or
 - (c) has the same legal representative as another Bidder that submits a bid for the same item; or
 - (d) has a relationship with another Bidder that submits a bid for the same item, directly or through common third parties, that puts it in a position to influence the Bid of another Bidder, or influence the decisions of the Procuring Agency regarding this Procurement process; or
 - (e) or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the Goods, or Related Services, that are the subject of the Bid; or
 - (f) or any of its affiliates has been hired (or is proposed to be hired) by the Procuring Agency or Purchaser or Borrower in implementing the Framework Agreement or a Call-off Contract; or
 - (g) would be providing Goods, works, or non-consulting services resulting from, or directly

related to consulting services for the preparation or implementation of the project specified in the **BDS ITB 2.1** that it provided or were provided by any affiliate that directly or indirectly controls, is controlled by, or is under common control with that firm; or

- (h) has a close business or family relationship with a professional staff of the Borrower (or of the project implementing agency, or of a recipient of a part of the loan) who:
 - (i) are directly or indirectly involved in the preparation of the Bidding document or specifications of the Framework Agreement or Call-off Contract, and/or the Bid evaluation process of such Framework Agreement or Call-off Contract; or
 - (ii) would be involved in the implementation or supervision of such Framework Agreement or Call-off Contract unless the conflict stemming from such relationship has been resolved in a manner acceptable to the Bank throughout the Bidding process and execution of the Framework Agreement and/or Call-off Contract.
- 4.3 A firm that is a Bidder (either individually or as a JV member) shall not participate in more than one Bid. This includes participation as a subcontractor. Such participation shall result in the disqualification of all Bids in which the firm is involved. A firm that is not a Bidder or a JV member, may participate as a subcontractor in more than one Bid.
- 4.4 A Bidder may have the nationality of any country, subject to the restrictions pursuant to **ITB 4.8**. A Bidder shall be deemed to have the nationality of a country if the Bidder is constituted, incorporated or registered in, and operates in conformity with, the provisions of the laws of that country, as evidenced by its articles of incorporation (or equivalent documents of constitution or association) and its registration documents, as the case may be. This criterion also shall apply to the determination of the nationality of proposed subcontractors or subconsultants for any part of a Call-off Contract including Related Services.

- 4.5 A Bidder that has been sanctioned by the Bank, pursuant to the Bank's Anti-Corruption Guidelines, in accordance with its prevailing sanctions policies and procedures as set forth in the WBG's Sanctions Framework as described in Section VI paragraph 2.2 d., shall be ineligible to be prequalified for, initially selected for, Bid for, propose for, or conclude a Bank-financed Framework Agreement or Call-off Contract or benefit from a Bank-financed Framework Agreement or Call-off Contract, financially or otherwise, during such period of time as the Bank shall have determined. The list of debarred firms and individuals is available at the electronic address specified **in the BDS**.
- 4.6 Bidders that are state-owned enterprises or institutions in the Procuring Agency's Country may be eligible to compete and conclude a Framework Agreement or be awarded a Call-off Contract(s) only if they can establish, in a manner acceptable to the Bank, that they:
- (a) are legally and financially autonomous;
 - (b) operate under commercial law; and
 - (c) are not under supervision of the Procuring Agency, Responsible Agency or a Purchaser.
- 4.7 Eligibility of Bidders suspended, as a result of the execution of a Bid-Securing Declaration or Proposal-Securing Declaration, shall be as follows:
- (a) A Bidder that is under suspension from Bidding, as the result of the operation of a Bid-Securing Declaration or Proposal-Securing Declaration, by the Procuring Agency shall not be eligible to bid to conclude a framework agreement.
 - (b) A Bidder that has concluded a framework agreement is ineligible to quote for or to be awarded a Call-off Contract by a Procuring Agency that has suspended the bidder as the result of the operation of a Bid-Securing Declaration or Proposal-Securing Declaration.
- 4.8 Firms and individuals may be ineligible if so indicated in Section V, Eligible Countries, and:
- (a) as a matter of law or official regulations, the Borrower's country prohibits commercial relations with that country, provided that the

Bank is satisfied that such exclusion does not preclude effective competition for the supply of Goods or the contracting of works or services required; or

- (b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower's country prohibits any import of Goods or contracting of works or services from that country, or any payments to any country, person, or entity in that country.

4.9 A Bidder shall provide such documentary evidence of eligibility satisfactory to the Procuring Agency, as the Procuring Agency shall reasonably request.

4.10 A firm that is under a sanction of debarment by the Borrower from concluding a contract, or a Framework Agreement or being awarded a Call-off Contract is eligible to participate in this procurement, unless the Bank, at the Borrower's request, is satisfied that the debarment;

- (a) relates to fraud or corruption; and
- (b) followed a judicial or administrative proceeding that afforded the firm adequate due process.

5 Eligible Goods and Related Services

5.1 All the Goods and Related Services to be supplied under a Call-off Contract awarded under a Framework Agreement and financed by the Bank, may have their origin in any country in accordance with Section V, Eligible Countries.

5.2 For purposes of this ITB, the term "Goods" includes commodities, raw materials, machinery, equipment, and industrial plants; and "Related Services" includes services such as insurance, installation, training, and initial maintenance.

5.3 The term "origin" means the country where the Goods have been mined, grown, cultivated, produced, manufactured or processed; or, through manufacture, processing, or assembly, another commercially recognized article results that differs substantially in its basic characteristics from its components.

B. Contents of the RFB Document

6 Sections of Bidding Document

- 6.1 The Bidding document consists of Parts 1, 2, 3, and 4, which include all sections, schedules, annexes. and should be read in conjunction with any addenda issued in accordance with **ITB 8**.

PART 1 - Bidding Procedures

Section I - Instructions to Bidders (ITB)

Section II - Bidding Data Sheet (BDS)

Section III - Evaluation and Qualification Criteria

Section IV - Bidding Forms

Section V - Eligible Countries

Section VI - Fraud and Corruption

PART 2 - Supply Requirements

Section VII - Schedule of Requirements

PART 3 - Procuring Agency Forms**PART 4 - Framework Agreement (FA)**

SCHEDULE 1: Schedule of Requirements

SCHEDULE 2: Price Schedules

- 6.2 The Specific Procurement Notice “Request for Bids to conclude a Framework Agreement(s) for Goods”, issued by the Procuring Agency is not part of this Bidding document.
- 6.3 Unless obtained directly from the Procuring Agency, the Procuring Agency is not responsible for the completeness of the document, responses to requests for clarification, the Minutes of the pre-Bid meeting (if any), or addenda to the Bidding document in accordance with ITB 8. In case of any contradiction, documents obtained directly from the Procuring Agency shall prevail.
- 6.4 The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding document and to furnish with its Bid all information or documentation as is required by the Bidding document.

7 Clarification of Bidding Document

- 7.1 A Bidder requiring any clarification of the Bidding document shall contact the Procuring Agency in writing at the Procuring Agency’s address specified **in**

the BDS. The Procuring Agency will respond in writing to any request for clarification, provided that such request is received prior to the deadline for submission of Bids within a period specified **in the BDS.** The Procuring Agency shall forward copies of its response to all Bidders who have acquired the Bidding document in accordance with **ITB 6.3**, including a description of the inquiry but without identifying its source. If so specified **in the BDS**, the Procuring Agency shall also promptly publish its response at the web page identified **in the BDS.** Should the clarification result in changes to the essential elements of the Bidding document, the Procuring Agency shall amend the Bidding document following the procedure under **ITB 8** and **ITB 22.2.**

8 Amendment of Bidding Document

- 8.1 At any time prior to the deadline for submission of Bids, the Procuring Agency may amend the Bidding document by issuing addenda.
- 8.2 Any Addendum issued shall be part of the Bidding document and shall be communicated in writing to all who have obtained the Bidding document from the Procuring Agency in accordance with **ITB 6.3.** The Procuring Agency shall also promptly publish the addendum on the Procuring Agency's web page in accordance with **ITB 7.1.**
- 8.3 To give prospective Bidders reasonable time in which to take an addendum into account in preparing their Bids, the Procuring Agency may, at its discretion, extend the deadline for the submission of Bids, pursuant to **ITB 22.2.**

C. Preparation of Bids

9 Cost of Bidding

- 9.1 The Bidder shall bear all costs associated with the preparation and submission of its Bid, in relation to this Procurement process, and the Procuring Agency shall not be responsible or liable for those costs, regardless of the conduct or outcome of the Bidding process.

10 Language of Bid

- 10.1 The Bid, as well as all correspondence and documents relating to the Bid exchanged by the Bidder and the Procuring Agency, shall be written in the language specified **in the BDS.** Supporting documents and printed literature that are part of the Bid may be in

another language provided they are accompanied by an accurate translation of the relevant passages into the language specified **in the BDS**, in which case, for purposes of interpretation of the Bid, such translation shall govern.

11 Documents Comprising the Bid

11.1 The Bid shall comprise the following:

- (a) Letter of Bid prepared in accordance with **ITB 12**;
- (b) Price Schedules: completed in accordance with **ITB 12** and **ITB 14**;
- (c) Authorization: written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with **ITB 20.3**;
- (d) Qualifications: documentary evidence in accordance with **ITB 17** establishing the Bidder's qualifications to conclude a Framework Agreement and perform any Call-off Contract, if awarded;
- (e) Bidder's Eligibility: documentary evidence in accordance with **ITB 17** establishing the Bidder's eligibility to Bid;
- (f) Eligibility of Goods and Related Services: documentary evidence in accordance with **ITB 16** and **ITB 30**, establishing the eligibility of the Goods and Related Services to be supplied by the Bidder;
- (g) Conformity: documentary evidence in accordance with **ITB 16**, that the Goods and Related Services conform to the Bidding document; and
- (h) any other document required **in the BDS**.

11.2 In addition to the requirements under ITB 11.1, Bids submitted by a JV shall include a copy of the Joint Venture agreement entered into by all members. Alternatively, a letter of intent to execute a Joint Venture Agreement in the event of a successful Bid shall be signed by all members and submitted with the Bid, together with a copy of the proposed agreement.

11.3 The Bidder shall furnish in the Letter of Bid information on commissions and gratuities, if any,

paid or to be paid to agents or any other party relating to this Bid.

12 Letter of Bid and Price Schedules

12.1 The Letter of Bid and Price Schedules shall be prepared using the relevant forms furnished in Section IV, Bidding Forms. The forms must be completed without any alterations to the text, and no substitutes shall be accepted except as provided under **ITB 20.3**. All blank spaces shall be filled in with the information requested.

13 Alternative Bids

13.1 Alternative Bids shall not be permitted in this Procurement process.

14 Bid Prices and Discounts

14.1 The prices and unconditional discounts quoted by the Bidder in the Letter of Bid and in the Price Schedules shall conform to the requirements specified below.

14.2 Bidders shall provide their prices in the Price Schedules, as specified ITB 14.7 below.

14.3 The price to be quoted in the Letter of Bid in accordance with **ITB 12.1** shall be, as specified **in the BDS**.

14.4 The Bidder shall indicate the methodology for the application of any unconditional discounts in the Letter of Bid, in accordance with **ITB 12.1**.

14.5 For the purpose of Call-off/Work Order, the price(s) offered by the Bidder shall be treated as set out in the Framework Agreement Specific Provisions.

14.6 The terms EXW, CIP, and other similar terms shall be governed by the rules prescribed in the current edition of Incoterms, published by the International Chamber of Commerce, as specified **in the BDS**.

14.7 Unit prices in the Price Schedules shall be quoted against estimated quantities over the duration of the Framework Agreement (Term). Prices shall be quoted as specified in each Price Schedule included in Section IV, Bidding Forms. The disaggregation of price components is required solely for the purpose of facilitating the comparison of Bids by the Procuring Agency. This shall not in any way limit the Purchaser's right to award a Call-off Contract on any of the terms offered. In quoting prices, the Bidder shall be free to use transportation through carriers registered in any

eligible country, in accordance with Section V, Eligible Countries. Similarly, the Bidder may obtain insurance services from any eligible country in accordance with Section V, Eligible Countries. Prices shall be entered in the following manner:

- (a) **For Goods to be supplied from within the Procuring Agency's Country:**
 - (i) **If manufactured in the Procuring Agency's Country:** the price of the Goods quoted EXW (ex-works, ex-factory, ex warehouse, ex showroom, or off-the-shelf, as applicable), including all customs duties and sales and other taxes already paid or payable on the components and raw material used in the manufacture or assembly of the Goods, including the price for inland transportation, insurance, and other local services required to convey the Goods to a place of destination as specified in the Bid Data Sheet;
 - (ii) **If manufactured outside the Procuring Agency's Country and already imported at the time of Call-off Contract:** the price of the Goods quoted EXW (ex-works, ex-factory, ex warehouse, ex showroom, or off-the-shelf, as applicable) including the price for inland transportation, insurance, and other local services required to convey the Goods to a place of destination as specified in the Bid Data Sheet but excluding any custom duties and other import taxes on the Goods.
- (b) **For Goods manufactured outside the Procuring Agency's Country, to be imported for supply under a Call-off Contract:**
 - (i) the price of the Goods, quoted CIP named place of destination, in the Procuring Agency's Country, as specified **in the BDS;**
- (c) for Related Services, other than inland transportation and other services required to convey the Goods to their final destination, whenever such Related Services are specified in

the Schedule of Requirements, the price of each item comprising the Related Services (inclusive of any applicable taxes).

15 Currencies of Bid and Payment

- 15.1 The currency(ies) of the Bid and the currency(ies) of payments shall be the same. The Bidder shall quote in the currency of the Procuring Agency's Country the portion of the Bid price that corresponds to expenditures incurred in the currency of the Procuring Agency's Country, unless otherwise specified **in the BDS**.
- 15.2 The Bidder may express the Bid price in any currency. If the Bidder wishes to be paid in a combination of amounts in different currencies, it may quote its price accordingly but shall use no more than three foreign currencies in addition to the currency of the Procuring Agency's Country.

16 Documents Establishing the Eligibility and Conformity of Goods

- 16.1 To establish the eligibility of the Goods and Related Services in accordance with **ITB 5**, Bidders shall complete the country of origin declarations in the Price Schedule Forms, included in Section IV, Bidding Forms.
- 16.2 To establish the conformity of the Goods and Related Services to the Bidding document, the Bidder shall furnish as part of its Bid the documentary evidence that the Goods conform to the technical specifications and standards specified in Section VII, Schedule of Requirements.
- 16.3 The documentary evidence may be in the form of literature, drawings or data, and shall consist of a detailed item by item description of the essential technical and performance characteristics of the Goods and Related Services, demonstrating substantial responsiveness of the Goods and Related Services to the technical specification, and if applicable, a statement of deviations and exceptions to the provisions of the Section VII, Schedule of Requirements.
- 16.4 The Bidder shall also furnish a list giving full particulars, including available sources and current prices of spare parts, special tools, etc., necessary for the proper and continuing functioning of the Goods

during the period specified **in the BDS** following acceptance of the Goods by the Purchaser (if a Call-off Contract is awarded to the Bidder as a FA Supplier).

- 16.5 Standards for workmanship, process, material, and equipment, as well as references to brand names or catalogue numbers specified by the Procuring Agency in the Schedule of Requirements, are intended to be descriptive only and not restrictive. The Bidder may offer other standards of quality, brand names, and/or catalogue numbers, provided that it demonstrates, to the Procuring Agency's satisfaction, that the substitutions ensure substantial equivalence or are superior to those specified in the Section VII, Schedule of Requirements.

17 Documents Establishing the Eligibility and Qualifications of the Bidder

- 17.1 To establish Bidder's eligibility in accordance with **ITB 4**, Bidders shall complete the Letter of Bid, included in Section IV, Bidding Forms.
- 17.2 The documentary evidence of the Bidder's qualifications to conclude a Framework Agreement, and/or to perform any Call-off Contract(s) if awarded, shall establish to the Procuring Agency's satisfaction:
- (a) that, if required **in the BDS**, a Bidder that does not manufacture or produce the Goods it offers to supply shall submit the Manufacturer's Authorization using the form included in Section IV, Bidding Forms to demonstrate that it has been duly authorized by the manufacturer or producer of the Goods to supply these Goods in the Procuring Agency's Country;
 - (b) that, if required **in the BDS**, in case of a Bidder not doing business within the Procuring Agency's Country, the Bidder is, or will be, (if awarded the call off Contract) represented by an Agent in the country, equipped and able to carry out the Supplier's maintenance, repair, and spare parts stocking obligations in respect of the Goods; and
 - (c) that the Bidder meets each of the qualification criterion specified in Section III, Evaluation and Qualification Criteria.

18 Period of Validity of Bids

- 18.1 Bids shall remain valid until the date **specified in the BDS** or any extended date if amended by the Procuring Agency in accordance with ITB 8. A Bid that is not valid until the date **specified in the BDS**, or any extended date if amended by the Procuring Agency in accordance with ITB 8, shall be rejected by the Procuring Agency as nonresponsive.
- 18.2 In exceptional circumstances, prior to the expiry of the Bid validity, the Procuring Agency may request Bidders to extend the period of validity of their Bids. The request and the responses shall be made in writing. A Bidder may refuse the request to extend the validity of their bids. A Bidder granting the request shall not be required or permitted to modify its Bid, except as provided in **ITB 18.3**.
- 18.3 If the conclusion of a Framework Agreement is delayed by a period exceeding fifty-six (56) days beyond the expiry of the initial Bid validity period, the Framework Agreement Base Price shall be determined as follows:
- (a) in the case of a fixed price Framework Agreement, the Base Price shall be the Bid price adjusted by the factor specified **in the BDS**;
 - (b) in the case of an adjustable price Framework Agreement, no adjustment shall be made;
 - (c) in any case, Bid evaluation shall be based on the Bid price without taking into consideration the applicable correction from those indicated above.

19 Bid Security or Bid Securing Declaration

- 19.1 The Bidder shall submit Bid Security or Bid-Securing Declaration for this Procurement process, if required in the in the BDS.
- 19.2 The Bid Security shall remain valid for at least twenty-eight (28) days beyond the original Bid validity period, or beyond any extended Bid validity period, as applicable.
- 19.3 If a Bid Security or a Bid-Securing Declaration is specified pursuant to ITB 19.1, any Bid not accompanied by a substantially responsive Bid Security or Bid-Securing Declaration shall be rejected by the Employer as nonresponsive.

19.4 The Bid Security or the Bid-Securing Declaration of a JV shall be in the name of the JV that submits the Bid. If the JV has not been legally constituted into a legally enforceable JV at the time of bidding, the Bid Security or the Bid Securing Declaration shall be in the names of all future members as named in the letter of intent referred to in ITB 4.1 and ITB 11.2.

20 Format and Signing of Bid

20.1 The Bidder shall prepare one original of the documents comprising the Bid as described in **ITB 11** and clearly mark it “ORIGINAL.” In addition, the Bidder shall submit copies of the Bid, in the number specified **in the BDS** and clearly mark them “COPY.” In the event of any discrepancy between the original and the copies, the original shall prevail.

20.2 Bidders shall mark as “CONFIDENTIAL” information in their Bids which is confidential to their business. This may include proprietary information, trade secrets, or commercial or financially sensitive information.

20.3 The original and all copies of the Bid shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder. This authorization shall consist of a written confirmation as specified **in the BDS** and shall be attached to the Bid. The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the Bid where entries or amendments have been made shall be signed or initialed by the person signing the Bid.

20.4 In case the Bidder is a JV, the Bid shall be signed by an authorized representative of the JV on behalf of the JV, and so as to be legally binding on all the members as evidenced by a power of attorney signed by their legally authorized representative(s).

20.5 Any inter-lineation, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the Bid.

D. Submission and Opening of Bids

21 Sealing and Marking of Bids

21.1 The Bidder shall deliver the Bid in a single, sealed envelope (one-envelope Bidding process). Within the

single envelope, the Bidder shall place the following separate, sealed envelope

- (a) in an envelope marked “ORIGINAL”, all documents comprising the Bid, as described in **ITB 11**; and
- (b) in an envelope marked “COPIES”, all required copies of the Bid; and,

21.2 The inner and outer envelopes, shall:

- (a) bear the name and address of the Bidder;
- (b) be addressed to the Procuring Agency in accordance with **ITB 22.1**;
- (c) bear the specific identification of this Bidding process indicated in **ITB 1.1**; and
- (d) bear a warning not to open before the time and date for Bid opening.

21.3 If all envelopes are not sealed and marked as required, the Procuring Agency will assume no responsibility for the misplacement or premature opening of the Bid.

22 Deadline for Submission of Bids

22.1 Bids must be received by the Procuring Agency at the address and no later than the date and time specified **in the BDS**. When so specified **in the BDS**, Bidders shall have the option of submitting their Bids electronically. Bidders submitting Bids electronically shall follow the electronic Bid submission procedures specified **in the BDS**.

22.2 The Procuring Agency may, at its discretion, extend the deadline for the submission of Bids by amending the Bidding document in accordance with **ITB 8**, in which case all rights and obligations of the Procuring Agency and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.

23 Late Bids

23.1 The Procuring Agency shall not consider any Bid that arrives after the deadline for submission of Bids, in accordance with **ITB 22**. Any Bid received by the Procuring Agency after the deadline for submission of Bids shall be declared late, rejected, and returned unopened to the Bidder.

24 Withdrawal, Substitution, and Modification of Bids

24.1 A Bidder may withdraw, substitute, or modify its Bid after it has been submitted by sending a written notice, duly signed by an authorized representative, and shall include a copy of the authorization (the power of

attorney) in accordance with **ITB 20.3**, (except that withdrawal notices do not require copies). The corresponding substitution or modification of the Bid must accompany the respective written notice. All notices must be:

- (a) prepared and submitted in accordance with **ITB 20** and **ITB 21** (except that withdrawal notices do not require copies), and in addition, the respective envelopes shall be clearly marked “WITHDRAWAL,” “SUBSTITUTION,” or “MODIFICATION;” and
- (b) received by the Procuring Agency prior to the deadline prescribed for submission of Bids, in accordance with **ITB 22**.

24.2 Bids requested to be withdrawn in accordance with **ITB 24.1** shall be returned unopened to the Bidders.

24.3 No Bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of Bids and the expiration of the period of Bid validity specified by the Bidder on the Letter of Bid or any extension thereof.

25 Bid Opening

25.1 Except as in the cases specified in **ITB 23** and **ITB 24.2**, the Procuring Agency shall, at the Bid opening, publicly open and read out all Bids received by the deadline at the date, time and place specified in **the BDS** in the presence of Bidders’ designated representatives and anyone who chooses to attend. Any specific electronic Bid opening procedures required if electronic Bidding is permitted in accordance with **ITB 22.1**, shall be as specified in **the BDS**.

25.2 First, envelopes marked “WITHDRAWAL” shall be opened and read out and the envelope with the corresponding Bid shall not be opened but returned to the Bidder. If the withdrawal envelope does not contain a copy of the “power of attorney” confirming the signature as a person duly authorized to sign on behalf of the Bidder, the corresponding Bid will be opened. No Bid withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at Bid opening.

- 25.3 Next, envelopes marked “SUBSTITUTION” shall be opened and read out and exchanged with the corresponding Bid being substituted, and the substituted Bid shall not be opened, but returned to the Bidder. No Bid substitution shall be permitted unless the corresponding substitution notice contains a valid authorization to request the substitution and is read out at Bid opening.
- 25.4 Next, envelopes marked “MODIFICATION” shall be opened and read out with the corresponding Bid. No Bid modification shall be permitted unless the corresponding modification notice contains a valid authorization to request the modification and is read out at Bid opening.
- 25.5 Next, all remaining envelopes shall be opened one at a time, reading out: the name of the Bidder and whether there is a modification; the Bid Prices, including any unconditional discounts, and any other details as the Procuring Agency may consider appropriate.
- 25.6 Only Bids and unconditional discounts that are opened and read out at Bid opening shall be considered further in the evaluation. The Letter of Bid and the Price Schedules are to be initialed by representatives of the Procuring Agency attending Bid opening in the manner specified **in the BDS**.
- 25.7 At the Bid opening, the Procuring Agency shall neither discuss the merits of any Bid nor reject any Bid (except for late Bids, in accordance with **ITB 23.1**).
- 25.8 The Procuring Agency shall prepare a record of the Bid opening that shall include, as a minimum;
- (a) the name of the Bidder and whether there is a withdrawal, substitution, or modification;
 - (b) the Bid Price, per item including any unconditional discounts;
- 25.9 The Bidders’ representatives who are present shall be requested to sign the record. The omission of a Bidder’s signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders.

E. Evaluation and Comparison of Bids

26 Confidentiality

- 26.1 Information relating to the evaluation of Bids and recommendation to conclude a Framework Agreement(s), shall not be disclosed to Bidders or any other persons not officially concerned with the Bidding process until the Notification of Intention to conclude the Framework Agreement is transmitted to all Bidders in accordance with **ITB 39.1**.
- 26.2 Any effort by a Bidder to influence the Procuring Agency in the evaluation or decision to conclude a Framework Agreement(s) may result in the rejection of its Bid.
- 26.3 Notwithstanding **ITB 26.2**, from the time of Bid opening to the time of the Framework Agreement being concluded, if any Bidder wishes to contact the Procuring Agency on any matter related to the Bidding process, it should do so in writing.

27 Clarification of Bids

- 27.1 To assist in the examination, evaluation, comparison of Bids, and qualification of Bidders, the Procuring Agency may, at its discretion, ask any Bidder for a clarification of its Bid. Any clarification submitted by a Bidder in respect to its Bid and that is not in response to a request by the Procuring Agency shall not be considered. The Procuring Agency's request for clarification and the response shall be in writing. No change, including any voluntary increase or decrease, in the prices or substance of the Bid shall be sought, offered, or permitted.
- 27.2 If a Bidder does not provide clarifications of its Bid by the date and time set in the Procuring Agency's request for clarification, its Bid may be rejected.

28 Deviations, Reservations, and Omissions

- 28.1 During the evaluation of Bids, the following definitions apply:
- (a) "Deviation" is a departure from the requirements specified in the Bidding document;
 - (b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding document; and
 - (c) "Omission" is the failure to submit part or all of the information or documentation required in the Bidding document.

29 Determination of Responsiveness

- 29.1 The Procuring Agency's determination of a Bid's responsiveness is to be based on the contents of the Bid itself, as defined in **ITB 11**.
- 29.2 A substantially responsive Bid is one that meets the requirements of the Bidding document without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that:
- (a) if accepted, would:
 - (i) affect in any substantial way the scope, quality, or performance of the Goods and Related Services specified in the Framework Agreement; or
 - (ii) limit in any substantial way, inconsistent with the Bidding document, the Procuring Agency's rights or the Bidder's obligations under the Framework Agreement; or
 - (b) if rectified, would unfairly affect the competitive position of other Bidders presenting substantially responsive Bids.
- 29.3 The Procuring Agency shall examine the technical aspects of the Bid submitted in accordance with **ITB 16** and **ITB 17**, in particular, to confirm that all requirements of Section VII, Schedule of Requirements have been met without any material deviation or reservation, or omission.
- 29.4 If a Bid is not substantially responsive to the requirements of Bidding document, it shall be rejected by the Procuring Agency and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.

30 Nonconformities, Errors and Omissions

- 30.1 Provided that a Bid is substantially responsive, the Procuring Agency may waive any nonconformities in the Bid.
- 30.2 Provided that a Bid is substantially responsive, the Procuring Agency may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities or omissions in the Bid related to documentation requirements. Such omission shall not be related to any aspect of the price of the Bid. Failure

of the Bidder to comply with the request may result in the rejection of its Bid.

30.3 Provided that a Bid is substantially responsive, the Procuring Agency shall rectify quantifiable nonmaterial nonconformities related to the Bid Price. To this effect, the Bid Price shall be adjusted, for comparison purposes only, to reflect the price of a missing or non-conforming item or component, by adding the average price of the item or component quoted by substantially responsive Bidders. If the price of the item or component cannot be derived from the price of other substantially responsive Bids, the Procuring Agency shall use its best estimate.

31 Correction of Arithmetical Errors

31.1 Provided that the Bid is substantially responsive, the Procuring Agency shall correct arithmetical errors on the following basis:

- (a) if there is a discrepancy between the unit prices in the Price Schedule Summary and the individual Price Schedules, the unit prices in the latter shall prevail; and
- (b) if there is a discrepancy between amounts in words and figures, the amounts in words shall prevail, unless the amount expressed in words is related to an error, in which case the amount in figures shall prevail subject to (a) above.

31.2 Bidders shall be requested to accept correction of arithmetical errors. Failure to accept the correction in accordance with **ITB 31.1**, shall result in the rejection of the Bid.

32 Conversion to Single Currency

32.1 For evaluation and comparison purposes, the currency(ies) of the Bid shall be converted in a single currency as specified **in the BDS**.

33 No Margin of Preference

33.1 No margin of preference shall apply in the Procurement process.

34 Evaluation of Bids

34.1 The Procuring Agency shall use the criteria and methodologies listed in this ITB and Section III, Evaluation and Qualification Criteria in deciding to conclude a Framework Agreement(s). No other evaluation criteria or methodologies shall be permitted.

34.2 To evaluate a Bid, the Procuring Agency shall consider the following:

- (a) evaluation will be done **total price-wise** as quoted in accordance with **ITB 14**;
- (b) price adjustment for correction of arithmetic errors in accordance with **ITB 31.1**;
- (c) price adjustment due to unconditional discounts offered in accordance with **ITB 14.4**;
- (d) converting the amount resulting from applying (a) to (c) above, if relevant, to a single currency in accordance with **ITB 32**;
- (e) price adjustment due to quantifiable nonmaterial nonconformities in accordance with **ITB 30.3**; and;
- (f) the additional evaluation factors are specified in Section III, Evaluation and Qualification Criteria.

34.3 If applicable, the estimated effect of the price adjustment provisions in the Framework Agreement(s) (which determines the Contract Price for a Call-off Contract), applied over the Term of the Framework Agreement, shall not be taken into account in the Procurement Bid evaluation.

34.4 The Procuring Agency's evaluation of a Bid will exclude and not take into account:

- (a) in the case of Goods manufactured in the Procuring Agency's Country, sales and other similar taxes, which will be payable on the Goods if a Call-off Contract is awarded to the Bidder;
- (b) in the case of Goods manufactured outside the Procuring Agency's Country, already imported or to be imported, customs duties and other import taxes levied on the imported Goods sales and other similar taxes, which will be payable on the Goods if the Call-off Contract is awarded to the Bidder;
- (c) if applicable, any allowance for price adjustment during the period of execution of the Call-off

Contract, if provided in Section B: Framework Agreement Specific Provisions.

- 34.5 The Procuring Agency's evaluation of a Bid may require the consideration of other factors, in addition to the Bid Price quoted in accordance with **ITB 14**. These factors may be related to the characteristics, performance, and terms and conditions of purchase of the Goods and Related Services or geographic location. The effect of the factors selected, if any, shall be expressed in monetary terms to facilitate comparison of Bids, unless otherwise specified **in the BDS** from amongst those set out in Section III, Evaluation and Qualification Criteria. The criteria and methodologies to be used shall be as specified in **ITB 34.2(f)**.

35 Comparison of Bids

- 35.1 The Procuring Agency shall compare the evaluated costs of all substantially responsive Bids established in accordance with **ITB 34.2** to determine the ranking of Bids based on the lowest evaluated cost. The comparison shall be on the basis of **unit rates** quoted in accordance with ITB 14, plus any required Related Services, as bid in accordance with ITB 14. The evaluation of prices shall not take into account custom duties and other taxes levied on imported Goods and sales and similar taxes levied in connection with the sale or delivery of Goods.

36 Qualification of the Bidder(s)

- 36.1 Before concluding a Framework Agreement(s), the Procuring Agency shall determine, to its satisfaction, whether the eligible Bidder(s) with substantially responsive Bid(s) that are able to meet the Framework Agreement criteria, meet(s) the qualifying criteria specified in Section III, Evaluation and Qualification Criteria.
- 36.2 The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to **ITB 17**. The determination shall not take into consideration the qualifications of other firms such as the Bidder's subsidiaries, parent entities, affiliates, subcontractors (other than specialized subcontractors if permitted in the Bidding document), or any other firm(s) different from the Bidder.

- 36.3 An affirmative determination shall be a prerequisite for the conclusion of the Framework Agreement (s) to the Bidder. A negative determination shall result in disqualification of the Bid.
- 37 Procuring Agency's Right to Accept Any Bid, and to Reject Any or All Bids**
- 37.1 The Procuring Agency reserves the right to accept or reject any Bid, and to annul the Bidding process and reject all Bids at any time prior to the conclusion of a Framework Agreement(s), without thereby incurring any liability to Bidders. In case of annulment, all Bids submitted shall be promptly returned to the Bidders.
- 38 Standstill Period**
- 38.1 The Framework Agreement(s) shall not be concluded earlier than the expiry of the Standstill Period. The Standstill Period shall be ten (10) Business Days unless extended in accordance with **ITB 44**. The Standstill Period commences the day after the date the Procuring Agency has transmitted to each Bidder the Notification of Intention to Conclude a Framework Agreement. Where only one Bid is submitted, or if this Procurement process is in response to an emergency situation recognized by the Bank, the Standstill Period shall not apply.
- 39 Notification of Intention to Conclude a Framework Agreement**
- 39.1 The Procuring Agency shall send to each Bidder the Notification of Intention to Conclude a Framework Agreement(s) with the successful Bidder(s). The Notification(s) of Intention to Conclude shall contain, at a minimum, the following information:
- (a) the name and address of the Bidder(s) submitting the successful Bid(s);
 - (b) the price(s) of the successful Bid(s), or pricing mechanism(s);
 - (c) the names of all Bidders who submitted Bids, and their Bid prices, or pricing mechanism(s), as readout, and as evaluated;
 - (d) a statement of the reason(s) the Bid (of the unsuccessful Bidder to whom the Notification on Intention to Conclude a Framework Agreement(s) is addressed) was unsuccessful, unless the price, or pricing mechanism(s) information in (c)) above already reveals the reason;
 - (e) the expiry date of the Standstill Period;

- (f) instructions on how to request a debriefing and/or submit a complaint during the standstill period.

F. Conclusion of a Framework Agreement

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| 40 Framework Agreement Criteria | <p>40.1 This is a Closed Framework Agreement.</p> <p>40.2 The Procuring Agency shall specify in the BDS and/or Section III Evaluation and Qualification Criteria, the criteria that will apply in the selection of Bidder(s), with whom a Framework Agreement(s) may be concluded.</p> |
| 41 Notification to Conclude a Framework Agreement | <p>41.1 Prior to the date of expiry of the Bid validity and upon expiry of the Standstill Period, specified in ITB 38.1 or any extension thereof, and upon satisfactorily addressing a complaint that has been submitted within the Standstill Period, the Procuring Agency shall transmit to the successful Bidder a Notification to Conclude a Framework Agreement, attaching the Framework Agreement for signature by the Bidder(s), and a request to submit the completed Beneficial Ownership Disclosure Form within eight (8) Business Days of receiving the request.</p> |
| 42 No Obligation to Purchase | <p>42.1 The conclusion of a Framework Agreement shall not impose any obligation on the Procuring Agency to purchase any Goods under the Framework Agreement.</p> |
| 43 Non-exclusivity | <p>43.1 This Procurement process is non-exclusive, and the Procuring Agency reserves the right to procure the Goods from other suppliers who are not FA Suppliers.</p> |
| 44 Debriefing by the Procuring Agency | <p>44.1 On receipt of the Procuring Agency's Notification of Intention to Conclude a Framework Agreement(s), referred to in ITB 39.1, an unsuccessful Bidder has three (3) Business Days to make a written request to the Procuring Agency for a debriefing. The Procuring Agency shall provide a debriefing to all unsuccessful Bidders whose request is received within this deadline.</p> <p>44.2 Where a request for debriefing is received within the deadline, the Procuring Agency shall provide a debriefing within five (5) Business Days, unless the Procuring Agency decides, for justifiable reasons, to provide the debriefing outside this timeframe. In that</p> |

case, the standstill period shall automatically be extended until five (5) Business Days after such debriefing is provided. If more than one debriefing is so delayed, the standstill period shall not end earlier than five (5) Business Days after the last debriefing takes place. The Procuring Agency shall promptly inform, by the quickest means available, all Bidders of the extended standstill period.

44.3 Where a request for debriefing is received by the Procuring Agency later than the three (3)-Business Day deadline, the Procuring Agency should provide the debriefing as soon as practicable, and normally no later than fifteen (15) Business Days from the date of publication of the Conclusion of Framework Agreement Notice. Requests for debriefing received outside the three (3) day deadline shall not lead to extension of the standstill period.

44.4 Debriefings of unsuccessful Bidders may be done in writing or verbally (over the phone or video conference) or in person. The Bidders shall bear their own costs of attending such a debriefing meeting.

45 Signing the Framework Agreement

45.1 Unless an earlier deadline is stipulated **in the BDS**, the Bidder shall sign, date and return the Framework Agreement within twenty-one (21) days of receipt of the same.

46 Publication of the Conclusion of Framework Agreement Notice

46.1 Within ten (10) Business Days of transmission to the successful Bidder(s) of the Notification(s) to Conclude a Framework Agreement, as per **ITB 41.1**, the Procuring Agency shall publish the Conclusion of Framework Agreement Notice which shall contain, at a minimum, the following information:

- (a) name and address of the Procuring Agency;
- (b) name and reference number of the Framework Agreement being concluded, and the selection method used;
- (c) names of all Bidders that submitted Bids, and their Bid prices, or pricing mechanisms, as read out at Bid opening, and as evaluated;
- (d) names of all Bidders whose Bids were rejected either as nonresponsive or as not meeting

qualification criteria, or were not evaluated, with the reasons therefor; and

(e) the name(s) of the successful Bidder(s), the duration of Framework Agreement(s), and a summary of its scope; and

(f) successful Bidder's (Bidders') Beneficial Ownership Disclosure Form.

46.2 The Conclusion of Framework Agreement Notice shall be published on the Procuring Agency's website with free access if available, or in at least one newspaper of national circulation in the Procuring Agency's Country, or in the official gazette. The Procuring Agency shall also publish the Conclusion of Framework Agreement Notice in the Bank's website.

47 Procurement Related Complaint

47.1 The procedures for making a Procurement-related Complaint are as specified **in the BDS**.

Performance Security

48 Performance Security

48.1 Within twenty-one (21) days of the receipt of Notification to Conclude a Framework Agreement, the successful Bidder, if required, shall furnish the Performance Security in accordance with the FA Conditions, using for that purpose the Performance Security Form acceptable to the Purchaser. The Performance Security shall be issued by a reputable bank selected by the successful Bidder. If the Performance Security is issued by a bank located outside Pakistan, it shall be counter-guaranteed by a correspondent bank located in Pakistan, for being encashable in Pakistan. In case of a Joint Venture, the Performance Security must be in the name of all members of the Joint Venture that signs the Contract.

48.2 Failure of the successful Bidder to submit the above-mentioned Performance Security or sign the FA Agreement shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security. In that event the Purchaser may award the Contract to the Bidder offering the next Most Advantageous Bid (qualified, compliant and lowest).

Section II - Bid Data Sheet (BDS)

The following specific data for the Goods to be procured shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB). Whenever there is a conflict, the provisions **in the BDS** shall prevail over those in ITB.

A. General																												
ITB 1.1	The Procuring Agency is: Federal Board of Revenue (FBR) The Procuring Agency is the agency that will conclude, administer and manage the Framework Agreement, and be the Purchaser under the Framework Agreement/Call of Contracts. The reference number of the Request for Bids (RFB) is: 3(7)/2026-Addl-Dir(P&F) / PK-FBR-565389-GO-RFB The name of the RFB is: Framework Agreement for the Supply and Installation of External Electrification Systems for Digital Enforcement Stations (DES) at Indus Sites, Phase-I (10 Sites) The number and identification of lots (contracts) comprising this RFB is: 3 Lots. Each Lot includes the above-mentioned sites: <table><tr><th>Sr No</th><th>Lot No</th><th>Sites Covered Under the Lot</th></tr><tr><td>1</td><td rowspan="4">1</td><td>DI KHAN HAKLA MOTORWAY M-14(CPEC) (BOQ-1)</td></tr><tr><td>2</td><td>KALA BAGH BRIDGE (BOQ-2)</td></tr><tr><td>3</td><td>JINNAH BRIDGE (BOQ-03)</td></tr><tr><td>4</td><td>CHASHMA BARRAGE (BOQ-04)</td></tr><tr><td>5</td><td rowspan="2">2</td><td>GUDDU BARRAGE (BOQ-05)</td></tr><tr><td>6</td><td>KOTRI BRIDGE (BOQ-06)</td></tr><tr><td>7</td><td rowspan="4">3</td><td>SEHWAN (ARAL BIDGE) (BOQ-07)</td></tr><tr><td>8</td><td>SEHWAN BHAN SAEED ABAD (BOQ-08)</td></tr><tr><td>9</td><td>KHUKERA (BOQ-9)</td></tr><tr><td>10</td><td>HUB (MYGARHI OR CHLEGHEZI CUT) (BOQ-10)</td></tr></table> The locations of the above sites are enclosed at Annex – I. Each Lot shall constitute a separate contract. Bidders may submit Bids for one Lot, any combination of Lots, or all Lots. The Purchaser reserves the right to award one or more Lots to a Bidder, subject to the Bidder meeting the applicable qualification requirements for the respective Lot(s) and based on best economic combination to the Purchaser.		Sr No	Lot No	Sites Covered Under the Lot	1	1	DI KHAN HAKLA MOTORWAY M-14(CPEC) (BOQ-1)	2	KALA BAGH BRIDGE (BOQ-2)	3	JINNAH BRIDGE (BOQ-03)	4	CHASHMA BARRAGE (BOQ-04)	5	2	GUDDU BARRAGE (BOQ-05)	6	KOTRI BRIDGE (BOQ-06)	7	3	SEHWAN (ARAL BIDGE) (BOQ-07)	8	SEHWAN BHAN SAEED ABAD (BOQ-08)	9	KHUKERA (BOQ-9)	10	HUB (MYGARHI OR CHLEGHEZI CUT) (BOQ-10)
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ITB 1.2 (a)	Electronic –Procurement System is Not Applicable.																											

ITB 1.2 (n)	Term of Framework Agreement The Framework Agreement shall be for a Term ending on 30 th June 2027 from the commencement date stated in the Framework Agreement. The Initial term may be extended for the same period for which the project may be extended.				
ITB 2.1	The Borrower is: Islamic Republic of Pakistan Loan or Financing Agreement amount: [470 Million US\$ equivalent] The name of the Project is: Pakistan Raises Revenue Program (PRRP)				
ITB 4.1	The maximum number of members in a Joint Venture (JV) shall be: 3.				
ITB 4.5	A list of debarred firms and individuals is available on the Bank’s external website: http://www.worldbank.org/debarr .				
B. Contents of the RFB Document					
ITB 7.1	For clarification of Bid purposes only, the Procuring Agency’s address is: Attention: Syed Zafar Ali Shah Address: <i>FBR House, Constitution Avenue, Floor/ Room number: 2nd Floor, Room # 277B, City: Islamabad, ZIP Code: 44000, Country: Pakistan</i> Telephone: +92 51 9219641 and +92 51 9215109 Email address: procsp.prrp@fbr.gov.pk , Web page: https://www.fbr.gov.pk/tenders Requests for clarification should be received by the Procuring Agency no later than: 7 days before the deadline for submission of Bids. A Pre-Bid meeting “shall” take place at the following date, time and place which a bidder may attend physically or virtually: <table><tr><td>Date:</td><td>1st September 2026</td><td>Time:</td><td>11:30 hours (PST)</td></tr></table> VENUE ROOM 277B, FBR House, Constitution Avenue, Islamabad, Pakistan Link for Joining the Pre-Bid Meeting Virtually is: https://zoom.us/j/98420357237?pwd=UmKD4bstaIpn3I9MwbYdNeP9zPvQSp.1 Meeting ID: 984 2035 7237 Passcode: 972314	Date:	1 st September 2026	Time:	11:30 hours (PST)
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C. Preparation of Bids																											
ITB 10.1	The language of the Bid is English. All correspondence shall be in English. The language for translation of supporting documents and printed literature is English.																										
ITB 11.1 (h)	The Bidder shall submit the following additional documents in its Bid: ☐ Proposed make, model and country of origin for each major equipment item. ☐ Manufacturer's technical catalogues and data sheets. ☐ Single-line electrical diagrams. ☐ Synchronization philosophy and logic diagrams. ☐ Earthing layout and calculations. ☐ Cable sizing calculations (where applicable). ☐ Preliminary project implementation schedule. ☐ Organization chart and key personnel. ☐ List of proposed testing equipment.																										
ITB 14.3	The price to be quoted in the Letter of Bid in accordance with ITB 12.1 shall be the total bid prices per lot.																										
ITB 14.6	The Incoterms edition that will apply to Framework Agreement Call-off Contracts is: Incoterms DDP 2020.																										
ITB 14.7	The Contract Rates quoted by the Bidder shall constitute the Framework Agreement Rates and shall apply throughout the Framework Agreement Term for issuance of all Call-off under the respective Lot.																										
14.7 a(i), (ii)	Place of destination: FBR Customs Offices / Sites mentioned below: <table border="1" style="margin-left: 40px;"> <thead> <tr> <th>S No</th><th>Lot</th><th>Tentative Name of Stations</th></tr> </thead> <tbody> <tr> <td>1</td><td rowspan="4">01</td><td>DIK-hakla motorway M-14(CPEC)</td></tr> <tr> <td>2</td><td>Kalabagh Bridge</td></tr> <tr> <td>3</td><td>Jinnah Bridge</td></tr> <tr> <td>4</td><td>Chashma Barrage</td></tr> <tr> <td>5</td><td rowspan="2">02</td><td>Guddu Barrage</td></tr> <tr> <td>6</td><td>Kotri bridge</td></tr> <tr> <td>7</td><td rowspan="4">03</td><td>Sehwan (Aral Bridge)</td></tr> <tr> <td>8</td><td>Sehwan Bhan Saeed Abad</td></tr> <tr> <td>9</td><td>Khurkera</td></tr> <tr> <td>10</td><td>HUB(Mygarhi or chleghezi cut)</td></tr> </tbody> </table> The locations of the above sites are enclosed at Annex – I.	S No	Lot	Tentative Name of Stations	1	01	DIK-hakla motorway M-14(CPEC)	2	Kalabagh Bridge	3	Jinnah Bridge	4	Chashma Barrage	5	02	Guddu Barrage	6	Kotri bridge	7	03	Sehwan (Aral Bridge)	8	Sehwan Bhan Saeed Abad	9	Khurkera	10	HUB(Mygarhi or chleghezi cut)
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ITB 14.7 (b)(i)	Named place(s) of destination, as per Incoterms used, is FBR Customs Offices / Sites mentioned below: <table><tr><th>S No</th><th>Lot</th><th>Tentative Name of Stations</th></tr><tr><td>1</td><td rowspan="4">01</td><td>DIK-hakla motorway M-14(CPEC)</td></tr><tr><td>2</td><td>Kalabagh Bridge</td></tr><tr><td>3</td><td>Jinnah Bridge</td></tr><tr><td>4</td><td>Chashma Barrage</td></tr><tr><td>5</td><td rowspan="2">02</td><td>Guddu Barrage</td></tr><tr><td>6</td><td>Kotri bridge</td></tr><tr><td>7</td><td rowspan="4">03</td><td>Sehwan (Aral Bridge)</td></tr><tr><td>8</td><td>Sehwan Bhan Saeed Abad</td></tr><tr><td>9</td><td>Khurkera</td></tr><tr><td>10</td><td>HUB(Mygarhi or chleghezi cut)</td></tr></table> The locations of the above sites are enclosed at Annex – I.	S No	Lot	Tentative Name of Stations	1	01	DIK-hakla motorway M-14(CPEC)	2	Kalabagh Bridge	3	Jinnah Bridge	4	Chashma Barrage	5	02	Guddu Barrage	6	Kotri bridge	7	03	Sehwan (Aral Bridge)	8	Sehwan Bhan Saeed Abad	9	Khurkera	10	HUB(Mygarhi or chleghezi cut)
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ITB 15.1	The Bidders can quote in PKR and/or a combination of a maximum of three freely convertible foreign currencies. However, payment to the supplier will be made fully in PKR equivalent only by converting the foreign currency(ies) with the exchange rate(s) prevailing at the date of each call of order.																										
ITB 16.4	Period of time the Goods are expected to be functioning (for the purpose of spare parts): Five Years following acceptance of the Goods by the Purchaser under a Call-off Contract.																										
ITB 17.2 (a)	Manufacturer’s authorization is NOT required. The bidder shall, however, submit documentary evidence demonstrating that the offered/supplied/installed equipment including, all types of Breakers, Relays, Rotatory(selector switches), Panel, indication and Pole lights, all types of cables, Bus Bars, Connectors, Meters, CTs/PTs, Cable trays, Panels, Transformer and related equipment’s, cable trays are genuine and new supported by valid manufacturer/OEM dealership warranties. Such evidence may include current dealership/distribution ship documentation, OEM warranty confirmation, verifiable supply-chain documentation, published warranty arrangements or equivalent evidence acceptable to purchaser.																										
ITB 17.2 (b)	After sales service is not required.																										
ITB 18.1	The Bid shall be valid until: 8th February 2027.																										
ITB 18.3(a)	Where the Bid validity period is extended, the Bid price shall not be adjusted.																										
ITB 19.1	A Bid Security shall not be required. A Bid-Securing Declaration shall be required.																										

	If the Bidder performs any of the actions prescribed in subparagraphs (a) or (b) below, the Procuring Agency will declare the Bidder ineligible to be awarded contracts by the Procuring Agency for a period of 03(three) years starting from the date the Bidder performs any of the actions. (a) if a Bidder withdraws its Bid during the period of Bid validity specified by the Bidder on the Letter of Bid, or any extended date provided by the Bidder, or (b) if the successful Bidder fails to: sign the Framework Agreement in accordance with ITB 45; or furnish a performance security in accordance with ITB 48; A Bid Securing Declaration shall use the form included in Section IV, Bidding Forms.
ITB 20.1	In addition to the original of the Bid, the number of copies to be delivered to the Procuring Agency is One Soft Copy in USB/ Pen drive which should be sealed in an envelope along with the bid.
ITB 20.3	The written confirmation of authorization to sign on behalf of the Bidder shall consist of an Authorization Letter in the name of signatory to sign the Bid on behalf of the Bidder.
D. Submission and Opening of Bids	
ITB 22.1	For Bid submission purpose only, the Procuring Agency's address is: Room # 277B, 2nd Floor, FBR House, Constitution Avenue G-5, Islamabad, Pakistan. Attention: Syed Zafar Ali Shah (<i>Procurement Specialist</i>) Street Address: <i>Constitution Avenue, G-5</i> Floor/ Room number: 2nd Floor, Room # 277B City: Islamabad ZIP/Postal Code: 44000 Country: Pakistan The deadline for Bid submission is: Date: 8th October 2026 Time: 11:00 a.m. Bidders shall not have the option of submitting their Bids electronically.
ITB 25.1	The Bid opening shall take place at: Street Address: <i>Constitution Avenue, G-5</i> Floor/ Room number: 2nd Floor, Room # 277B

	City: Islamabad Country: Pakistan Date: 8 th October 2026 Time: 11:30 a.m. The electronic Bid opening is not applicable.
ITB 25.6	The Letter of Bid shall be numbered and initialed by Three representatives of the Procuring Agency conducting Bid opening.
E. Evaluation and Comparison of Bids	
ITB 32.1	The currency that shall be used for Bid evaluation and comparison purposes to convert, at the selling exchange rate, all Bid prices expressed in various currencies into a single currency is Pak Rupee (PKR). The source of exchange rate shall not be applicable as the bid is to be quoted in PKR only.
ITB 34.5	The consideration of other factors during the evaluation, in addition to the Bid Price quoted, include the factors set out below as more fully described in Section III, Evaluation and Qualification Criteria; (a) Life cycle costs: the costs during the life of the Goods or equipment are Not applicable . (b) The performance and productivity of the equipment offered is Not applicable .
F. Concluding a Framework Agreement	
ITB 45	Signing the Framework Agreement The Bidder shall sign, date and return the Framework Agreement within 21 (twenty-one) days of receipt of the same.
ITB 47	The procedures for making a Procurement-related Complaint are detailed in Annex III of the Procurement Regulations for IPF Borrowers . If a Bidder wishes to make a Procurement-related Complaint, the Bidder shall submit its complaint in writing (by the quickest means available, that is either by email or fax), to: For the attention: Ardsheer Salim Tariq Title/position: Member Reforms & Modernizations Procuring Agency: Federal Board of Revenue (FBR), Government of Pakistan. Email address: memberr&m@fbr.gov.pk A copy of the complaint can be sent for the Bank's information and monitoring to:

	pprocurementcomplaints@worldbank.org. In summary, a Procurement-related Complaint may challenge any of the following: 1. the Procuring Agency’s Bidding Documents; and 2. the Procuring Agency’s decision to conclude a Framework Agreement(s).
ITB 48	The successful Bidder shall furnish a Performance Security equal to ten percent (10%) of the accepted Framework Agreement price of the respective awarded Lot, excluding fixed Provisional Sums. Where a Bidder is awarded more than one Lot, the Bidder shall provide: 1. a separate Performance Security for each awarded Lot; or 2. one consolidated Performance Security equal to 10% of the aggregate accepted price of all awarded Lots, provided that the consolidated security clearly identifies each Lot and the amount secured for each Lot. The Performance Security shall be submitted within twenty-one (21) days of receipt of Notification to Conclude the Framework Agreement and before signature of the Framework Agreement. Failure to submit the required Performance Security within the prescribed period shall constitute sufficient grounds for annulment of the award and initiation of administrative actions as specified in the bid securing declaration, subject to the provisions of the ITB.

Section III - Evaluation and Qualification Criteria

This Section contains the criteria that the Procuring Agency shall use to conclude a Framework Agreement(s). The criteria and methodology described is to evaluate Bids and qualify Bidders. No other factors, methods or criteria shall be used other than specified in this RFB document for the Procurement process.

Contents

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2.	Post Qualification Criteria (ITB 36.1)	43

Each Lot shall be evaluated independently. A Bidder bidding for a Lot shall quote for the complete scope, all sites, items, quantities and Related Services (where applicable) included in that Lot. Partial Bids within a Lot shall not be accepted.

The Procurement shall establish the specifications, accepted makes and models, unit rates, Related Services rates, contractual conditions, delivery periods, testing requirements and warranty obligations. Site-specific Call-off /Work Orders shall subsequently be issued using these pre-agreed terms and rates.

Evaluation Criteria (ITB 34.2)

The Procuring Agency's evaluation of a Bid will not take into account, in addition to the Bid Price quoted in accordance with **ITB 14.8**, any other factors as specified in **ITB 34.2(f)** and in BDS referring to **ITB 34.5**.

- (a) **Life Cycle Costs:** Not Applicable
- (b) **Performance and productivity of the equipment:** Not Applicable
- (c) **Specific additional criteria:** Not Applicable

1. Criteria to conclude a Framework Agreement (ITB 40)

1.1 Individual Lots

Each Lot shall be evaluated independently. A Bidder bidding for a Lot shall quote for the complete scope, all sites, items, quantities and Related Services included in that Lot. Partial Bids within a Lot shall not be accepted.

The Procuring Agency will conclude the Framework Agreement with the Bidder that meets the qualification criteria and whose Bid has been determined to be:

- (a) substantially responsive to the Bidding document; and
- (b) the lowest evaluated cost

1.2 Multiple Lots

- (a) If bidders submit bids for more multiple lots, the contract will be awarded to the Bidder or Bidders offering a substantially responsive Bid(s) and the lowest evaluated cost (based on best economic combination) to the Purchaser for combined lots, after considering all possible combination of lots, subject to the selected Bidder(s) meeting the required aggregate qualification criteria (Sub-Section 2 of this Section III) for combination of lots.
- (b) In determining Bidder or Bidders that offer the total lowest evaluated cost to the Purchaser for combined lots, the Purchaser shall apply the following steps in sequence:
 - (c) evaluate individual lots to determine the substantially responsive Bids and corresponding evaluated costs;
 - (d) for each lot, rank the substantially responsive Bids starting from the lowest evaluated cost for the lot;
 - (e) apply to the evaluated costs listed in b) above, any applicable discounts/price reductions offered by a Bidder (s) for the award of multiple contracts based on the discounts and the methodology for their application offered by the respective Bidder; and
 - (f) determine contract award on the basis of the combination of lots that offer the total lowest evaluated cost (based on best economic combination) to the Purchaser and meets the aggregate qualification requirements.

2. Post Qualification Criteria (ITB 36.1)

After determining the substantially responsive Bid which offers the lowest-evaluated cost in accordance with **ITB 34**, the Procuring Agency shall carry out the post-qualification of the Bidder in accordance with **ITB 36**, using only the requirements specified. Requirements not included in the text below shall not be used in the evaluation of the Bidder's qualifications.

- (a) **Financial Capability:** The Bidder shall submit audited financial statements or, if not required by the law of the Bidder's country, other financial statements acceptable to the Procuring Agency, for the last **five years** prior to bid submission deadline, demonstrating the current soundness of the Bidder's financial position. These financial statements must include balance sheets, profit and loss accounts, assets and liabilities, investments and availability of financial resources to manage the contract. Lot wise and cumulative Average Annual Turnover of the bidder / JV should minimum match or exceed the following in the last five years. For a joint venture, this requirement may be met by all members combined subject to the condition that each member meets at least 25% criteria and lead member to meet at least 50% of financial capability criteria;

The applicable minimum average annual turnover requirements are:

Lot or Combination of Lots	Minimum Average Annual Turnover in PKR
Lot 1	285,200,000
Lot 2	111,400,000
Lot 3	268,300,000
Lots 1 and 2	396,500,000
Lots 1 and 3	553,400,000
Lots 2 and 3	379,700,000

Lots 1, 2 and 3	664,800,000
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Turnover attributable to an entity. Turnover of a parent company, subsidiary, affiliate or subcontractor, shall not be considered.

- (b) **Specific Experience:** The Bidder shall demonstrate successful completion of at least one (01) contract of a similar nature, scope, and complexity within the last five (05) years prior to the bid submission deadline, where the contract must minimum match or exceed the following Lot wise minimum threshold. For a joint venture, this requirement may be met by all members combined;

Lot or Combination of Lots	Minimum Value of One Similar Contract in PKR
Lot 1	190,100,000
Lot 2	74,300,000
Lot 3	178,900,000
Lots 1 and 2	264,400,000
Lots 1 and 3	369,000,000
Lots 2 and 3	253,200,000
Lots 1, 2 and 3	443,200,000

Bidders shall submit completion/delivery certificates to demonstrate their specific experience.

- (c) **Documentary Evidence:** None

- (d) A bidder who does who does not manufacture an item/s where a manufacturer authorization is not required in accordance with BDS ITB 17.2 (a), the bidder shall submit documentation on, its status as a supplier, to the satisfaction of the Procuring Agency (e.g., authorized dealer/ distributor of the items).

At the time of conclusion of Framework Agreement and subsequently at the time of Call-off Contract, the Bidder (including each subcontractor proposed by the Bidder) shall not be subject to disqualification by the Bank for non-compliance with SEA/ SH obligations.

Section IV - Bid Forms

Table of Forms

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Price Schedule Forms	54
Manufacturer's Authorization.....	186
Beneficial Ownership Disclosure Form.....	188

Instructions for Completing the Bidding Forms

The Bidder shall complete and submit all forms applicable to the Lot or Lots for which it submits a Bid. Each Lot shall be priced and presented separately. A Bidder submitting a Bid for a Lot shall quote the complete scope, all sites, BOQ items, quantities and Related Services (where applicable) included in that Lot.

All prices shall be quoted in Pakistani Rupees on a DDP/site-delivered basis and shall include transportation, loading, unloading, insurance, storage, installation, testing, commissioning, documentation, warranty obligations, labour, tools, equipment, incidental works, overheads, profit and all other costs necessary for complete performance.

Letter of Bid

Framework Agreement Goods

INSTRUCTIONS TO BIDDERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE DOCUMENT

The Bidder must prepare this Letter of Bid on stationery with its letterhead clearly showing the Bidder's complete name and business address.

Note: All italicized text is to help Bidders in preparing this form.

Framework Agreement - Goods

Date of this Bid submission: *[insert date (as day, month and year) of Bid submission]*

Request for Bid No.: *[insert identification]*

Alternative No.: *[insert identification No if this is a Bid for an alternative]*

To: *[insert complete name of Procuring Agency]*

(a) We submit our Bid for the following Lot(s):

☐ Lot 1

☐ Lot 2

☐ Lot 3

We confirm that, for each Lot selected above, our Bid covers the complete scope, all sites, items, quantities and Related Services specified for that Lot.

(b) **No reservations:** We have examined and have no reservations to the RFB document, including addenda issued in accordance with Instructions to Bidders (**ITB 8**);

(c) **Eligibility:** We meet the eligibility requirements and have no conflict of interest in accordance with **ITB 4**;

(d) **Eligible Goods and Related Services:** If we conclude a Framework Agreement, the Goods and Related Services that we may supply under a Call-off Contract awarded under the Framework Agreement, shall be sourced from an eligible country in accordance with **ITB 5** and Section V, Eligible Countries. The Goods and Related Services shall be sourced from *[insert name of the country(ies)]*

Bid/Proposal-Securing Declaration: “We have neither been suspended nor declared ineligible by the Procuring Agency based on execution of a Bid-Securing Declaration or Proposal-Securing Declaration in accordance with **ITB 4.7**” ”;

(e) **Sexual Exploitation and Abuse (SEA) and/or Sexual Harassment (SH):** *[select the appropriate option from (i) to (iii) below and delete the others. In case of JV members*

and/or subcontractors, indicate the status of disqualification by the Bank of each JV member and/or subcontractor].

We, including any of our subcontractors:

- (i) [have not been subject to disqualification by the Bank for non-compliance with SEA/ SH obligations.]
 - (ii) [are subject to disqualification by the Bank for non-compliance with SEA/ SH obligations.]
 - (iii) [had been subject to disqualification by the Bank for non-compliance with SEA/ SH obligations and were removed from the disqualification list. An arbitral award on the disqualification case has been made in our favor.]
- (f) **Conformity:** We offer to supply, in conformity with the RFB document and in accordance with Section VII- Schedule of Requirements, the following Goods: *[insert a brief description of the Goods and Related Services]*;
- (g) **Bid Price:** “The total price/s of our Bid excluding any discounts offered in item (h) below is as provided in the attached Price Schedule Summary;
- (h) We understand and accept that the technical solution, offered makes and models, unit rates, Related Services rates, delivery requirements, testing obligations, warranty provisions and contractual terms established through this Procurement shall govern all Call-off/Work Orders issued under the Framework Agreement.
- (i) We understand that conclusion of the Framework Agreement does not guarantee any minimum quantity, minimum expenditure, minimum number of sites or issuance of any particular Call-off/Work Order.
- (j) We confirm that we possess, or will make available, the aggregate financial resources, personnel, equipment and implementation capacity required to execute the Lot(s) for which our Bid may be accepted.
- (k) **Unconditional Discounts:** The unconditional discounts offered are: *[Specify in detail each unconditional discount offered.]*
- The exact method of calculations to determine the net price after application of unconditional discounts is shown below: *[Specify in detail the method that shall be used to apply the discounts]*;
- (l) **Bid Validity Period:** Our Bid shall be valid until *[insert day, month and year in accordance with ITB 18.1]*, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (m) **Performance Security:** If we receive a Notification to Conclude a Framework Agreement, we commit to obtain performance security within the time required in accordance with the bidding document;
- (n) **One Bid per Bidder:** We are not submitting any other Bid(s) as an individual Bidder, and we are not participating in any other Bid(s) as a Joint Venture member, or as a subcontractor, and meet the requirements of **ITB 4.3**;

- (o) **Suspension and Debarment:** We, along with any of our subcontractors, suppliers, consultants, manufacturers, or service providers for any part of the contract, are not subject to, and not controlled by any entity or individual that is subject to, a temporary suspension or a debarment imposed by the World Bank Group or a debarment imposed by the World Bank Group in accordance with the Agreement for Mutual Enforcement of Debarment Decisions between the World Bank and other development banks. Further, we are not ineligible under the Procuring Agency's Country laws or official regulations or pursuant to a decision of the United Nations Security Council;
- (p) **State-owned enterprise or institution:** *[select the appropriate option and delete the other] [We are not a state-owned enterprise or institution] / [We are a state-owned enterprise or institution but meet the requirements of ITB 4.6];*
- (q) **Commissions, gratuities, fees:** We have paid, or will pay the following commissions, gratuities, or fees with respect to the RFB process or execution of the Contract: *[insert complete name of each Recipient, its full address, the reason for which each commission or gratuity was paid and the amount and currency of each such commission or gratuity]*

Name of Recipient	Address	Reason	Amount

(If none has been paid or is to be paid, indicate "none.")

- (r) **Not Bound to Purchase:** We understand that there is no obligation on the Procuring Agency/Purchaser to purchase any Goods, and/or Related Services from the FA Supplier during the Term of the Framework Agreement.
- (s) **No expectation of Call-off Contract:** We confirm that no undertaking or any form of statement, promise, representation or obligation has been made by the Procuring Agency/Purchaser in respect of the total quantities or value of the Goods that may be ordered by it, or any participating Purchaser(s), in accordance with this Framework Agreement. We acknowledge and agree that we have not submitted this Bid on the basis of any such undertaking, statement, promise or representation. If we conclude a Framework Agreement, we have no legitimate expectation of being awarded a Call-off Contract under the Framework Agreement.
- (t) **Not Bound to Accept:** In relation to this Procurement, we understand that you are not bound to accept any Bid that you may receive.
- (u) **Fraud and Corruption:** We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf engages in any type of Fraud and Corruption.

Name of the Bidder: **[insert complete name of the Bidder]*

Name of the person duly authorized to sign the Bid on behalf of the Bidder: ***[insert complete name of person duly authorized to sign the Bid]*

Title of the person signing the Bid: *[insert complete title of the person signing the Bid]*

Signature of the person named above: *[insert signature of person whose name and capacity are shown above]*

Date signed *[insert date of signing]* **day of** *[insert month]*, *[insert year]*

* In the case of the Bid submitted by a Joint Venture specify the name of the Joint Venture as Bidder.

** Person signing the Bid shall have the power of attorney given by the Bidder. The power of attorney shall be attached with the Bid Schedules.

Bidder Information Form

Framework Agreement Goods

[The Bidder shall fill in this Form in accordance with the instructions indicated below. No alterations to its format shall be permitted and no substitutions shall be accepted.]

Date: *[insert date (as day, month and year) of Bid submission]*

RFB No.: *[insert number of RFB process]*

Page _____ of _____ pages

1. Bidder's Name <i>[insert Bidder's legal name]</i>
2. In case of JV, legal name of each member: <i>[insert legal name of each member in JV]</i>
3. Bidder's actual or intended country of registration: <i>[insert actual or intended country of registration]</i>
4. Bidder's year of registration: <i>[insert Bidder's year of registration]</i>
5. Bidder's Address in country of registration: <i>[insert Bidder's legal address in country of registration]</i>
6. Bidder's Authorized Representative Information Name: <i>[insert Authorized Representative's name]</i> Address: <i>[insert Authorized Representative's Address]</i> Telephone/Fax numbers: <i>[insert Authorized Representative's telephone/fax numbers]</i> Email Address: <i>[insert Authorized Representative's email address]</i>
7. Attached are copies of original documents of <i>[check the box(es) of the attached original documents]</i> ☐ Articles of Incorporation (or equivalent documents of constitution or association), and/or documents of registration of the legal entity named above, in accordance with ITB 4.4 . ☐ In case of JV, letter of intent to form JV or JV agreement, in accordance with ITB 4.1 . ☐ In case of state-owned enterprise or institution, in accordance with ITB 4.6 documents establishing: • Legal and financial autonomy • Operation under commercial law • Establishing that the Bidder is not under the supervision of the Procuring Agency or Purchaser
8. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership. The successful Bidder (s) shall provide additional information on beneficial ownership, using the Beneficial Ownership Disclosure Form.

Bidder's JV Members Information Form

Framework Agreement Goods

[The Bidder shall fill in this Form in accordance with the instructions indicated below. The following table shall be filled in for the Bidder and for each member of a Joint Venture]].

Date: *[insert date (as day, month and year) of Bid submission]*
 RFB No.: *[insert number of RFB process]*
 Page _____ of _____ pages

1. Bidder's Name: <i>[insert Bidder's legal name]</i>
2. Bidder's JV Member's name: <i>[insert JV's Member legal name]</i>
3. Bidder's JV Member's country of registration: <i>[insert JV's Member country of registration]</i>
4. Bidder's JV Member's year of registration: <i>[insert JV's Member year of registration]</i>
5. Bidder's JV Member's legal address in country of registration: <i>[insert JV's Member legal address in country of registration]</i>
6. Bidder's JV Member's authorized representative information Name: <i>[insert name of JV's Member authorized representative]</i> Address: <i>[insert address of JV's Member authorized representative]</i> Telephone/Fax numbers: <i>[insert telephone/fax numbers of JV's Member authorized representative]</i> Email Address: <i>[insert email address of JV's Member authorized representative]</i>
7. Attached are copies of original documents of <i>[check the box(es) of the attached original documents]</i> ☐ Articles of Incorporation (or equivalent documents of constitution or association), and/or registration documents of the legal entity named above, in accordance with ITB 4.4. ☐ In case of a state-owned enterprise or institution, documents establishing legal and financial autonomy, operation in accordance with commercial law, and that they are not under the supervision of the Procuring Agency or Purchaser, in accordance with ITB 4.6.
8. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership. The successful Bidder (s) shall provide additional information on beneficial ownership, using the Beneficial Ownership Disclosure Form.

Sexual Exploitation and Abuse (SEA) and/or Sexual Harassment Performance Declaration

[The following table shall be filled in by the Bidder, each member of a Joint Venture and each subcontractor proposed by the Bidder]

Bidder's Name: *[insert full name]*

Date: *[insert day, month, year]*

Joint Venture Member's or Subcontractor's Name: *[insert full name]*

RFB No. and title: *[insert RFB number and title]*

Page *[insert page number]* of *[insert total number]* pages

SEA and/or SH Declaration in accordance with Section III, Qualification Criteria, and Requirements
We: ☐ (a) have not been subject to disqualification by the Bank for non-compliance with SEA/ SH obligations ☐ (b) are subject to disqualification by the Bank for non-compliance with SEA/ SH obligations ☐ (c) had been subject to disqualification by the Bank for non-compliance with SEA/ SH obligations and were removed from the disqualification list. An arbitral award on the disqualification case has been made in our favor.
<i>[If (c) above is applicable, attach evidence of an arbitral award reversing the findings on the issues underlying the disqualification.]</i>

Form of Bid-Securing Declaration

[The Bidder shall fill in this Form in accordance with the instructions indicated.]

Date: *[date (as day, month and year)]*

RFB No.: *[number of RFB process]*

Alternative No.: *[insert identification No if this is a Bid for an alternative]*

To: *[complete name of Procuring Agency]*

We, the undersigned, declare that:

We understand that, according to your conditions, Bids must be supported by a Bid-Securing Declaration.

We accept that we will automatically be suspended from being eligible for Bidding or submitting proposals in any contract with the Procuring Agency for the period of three years if we are in breach of our obligation(s) under the Bid conditions, because we:

- (a) have withdrawn our Bid prior to the expiry date of the Bid validity specified in the Letter of Bid or any extended date provided by us; or
- (b) having received the Notification to Conclude a Framework Agreement by the Procuring Agency prior to the expiry date of the Bid validity in the Letter of Bid or any extended date provided by us, (i) fail or refuse to sign the Framework Agreement; or (ii) fail or refuse to furnish the Performance Security, as required, in accordance with the ITB.

We understand this Bid Securing Declaration shall expire if we are not the successful Bidder, upon the earlier of (i) our receipt of your notification to us of the name of the successful Bidder; or (ii) twenty-eight days after the expiry date of the Bid validity.

Name of the Bidder* _____

Name of the person duly authorized to sign the Bid on behalf of the Bidder** _____

Title of the person signing the Bid _____

Signature of the person named above _____

Date signed _____ day of _____, _____

*: In the case of the Bid submitted by joint venture specify the name of the Joint Venture as Bidder

**: Person signing the Bid shall have the power of attorney given by the Bidder attached to the Bid

[Note: In case of a Joint Venture, the Bid-Securing Declaration must be in the name of all members to the Joint Venture that submits the Bid.]

Price Schedule Forms

Price Schedules – Lot Wise

Date: _____ RFB No: _____ Page N° _____ of _____				
1	2	3	4	5
<i>Lot No</i>	<i>Sites Included</i>	Indicative <i>Delivery Period as defined by Incoterms</i>	Estimated Quantity over FA period and physical unit	Total DDP Bid Price (includes all kinds of taxes, after sales services, incidental services and costs to deliver, install, commission, inspect, and test goods at the place of destination), in accordance with ITB 14.7 (b) - for the Whole Lot based on itemized cost as per BOQ
Lot 01	Electrification Systems for Digital Enforcement Stations DI KHAN HAKLA MOTORWAY M-14(CPEC), KALA BAGH BRIDGE, JINNAH BRIDGE, ASHMA BARRAGE	<i>180 Days from the date of each call-off</i>	Complete Solution for 4 Sites	
Lot 02	Electrification Systems for Digital Enforcement Stations DDU BARRAGE & KOTRI BRIDGE	<i>180 Days from the date of each call-off</i>	Complete Solution for 2 Sites	
Lot 03	Electrification Systems for Digital Enforcement Stations SEHWAN (ARAL BIDGE), SEHWAN BHAN SAEED ABAD, UKERA, HUB (MYGARHI OR CHLEGHEZI CUT)	<i>180 Days from the date of each call-off</i>	Complete Solution for 4 Sites	
Note: The Total Lot Price shall equal the aggregate of the Total DDP Prices of all Site-wise BOQs comprising that Lot.			Total DDP Price	

Name of Bidder [insert complete name of Bidder] Signature [signature of person authorized to sign the Bid] Date [insert date]
Evaluated Price: For comparison, the Procuring Agency shall use the corrected total price of the relevant Lot, excluding fixed Provisional Sums and applying unconditional discounts and other adjustments permitted under the ITB.
Each Lot shall be evaluated independently.

SITE WISE BOQ PRICE SCHEDULE

Each line item consists of the sub-items listed below for the respective number of sites specified in the BDS. Bidders shall quote prices for each sub-item. The total price quoted for each Lot in the above tables shall be equal to the aggregate price of all sub-items corresponding to the sites included in that Lot.

LOT # 01 - Site 01: DI KHAN HAKLA MOTORWAY M-14(CPEC) (BOQ-01)

Note: Bidders must mention the brand/ model of each sub-item they are offering. The brand must be equivalent to the requirements mentioned in the Technical Specifications.

Item No.	Description	Unit	Indicative Quantity	Unit DDP Price (PKR)	Total DDP Price (PKR)	Offered Make/Model, where applicable
Design, supply, transportation, storage, installation, testing and commissioning of the following items of work, including all material, labor, tools and accessories etc. required for proper completion of each item as per specification, drawings and/or as directed by the Engineer.				(includes all kinds of taxes, after sales services, incidental services and costs to deliver, install, commission, inspect, and test goods at the place of destination)		
1	<u>Poles</u>					
1(a)	12 m high single bent arm conical octagonal galvanized steel pole with extension arm luminaire arrangement, base plate, J-rag bolts, 01 No. 2 Amp 10kA SP MCB, pole numbering and earthing etc. as shown on drawing.	Each	27			
1(b)	12 m high double bent arm conical octagonal galvanized steel pole with extension arm luminaire arrangement, base plate, J-rag bolts, 02 Nos. 2 Amp 10kA SP MCB, pole numbering and earthing etc. as shown on drawing.	Each	4			
1(c)	15 m high conical octagonal (hot dip) galvanized steel pole with circular angular top 4 Nos. luminaire arrangement, base plate, J-rag bolts, 2 Amp 04 Nos. SP MCB, pole numbering and earthing etc. as shown on drawing.	Each	3			

1(d)	Road Lighting Pole Foundation	Each	34			
2	<u>Road Lights & Accessories for Flood Light Installation</u>					
2(a)	Road Lighting LED Luminaries 120W make High-Pressure Sodium (HPS) lamp with PCA arc tube, high energy-efficient LED wattage matching the lumen output, min 24,000 hrs lumens on a 10 hrs start cycle, with built in standard to meet or exceed ANSI and IESNA roadway lighting standards or equivalent suitable for M-2 & M-3 roads of wattage suitable for the project requirements, fully IP 66 with corrosion resistant die cast aluminum housing, silicon gas kit, thermally hardened glass complete with LED drivers, surge protection and all accessories/ components required for the proper operation of the system. The luminaries shall be fully flexible for future upgrades and easy replacements for maintenance purposes. Supplier to submit lighting design calculation as per the offered light fixtures.	No.	35			
2(b)	Surface mounted Batten LED Luminaries 50W or above (dimension 1200 mm and above) High-Pressure Sodium (HPS) lamp with PCA arc tube, high energy-efficient LED wattage matching the lumen output, min 24,000 hrs lumens on a 10 hrs start cycle, with built in standard to meet or exceed ANSI and IESNA roadway lighting standards suitable for Bus stations of wattage suitable for the project requirements, fully IP 65 with polycarbonate housing, UV shielding, stainless steel brackets for mounting, maintenance free long lasting performance complete with LED drivers and all accessories/ components required for the proper operation of the system. The fitting shall be approved by the Engineer.	No.	22			
2(c)	Bollard light Luminaries LED 220 - 240 Volts 9 Watt with IP 65 or above protection complete in all respect or approved equivalent. The fitting shall be approved by the engineer.	No.	20			
2(d)	LED Planter Spike light 7W IP 65, 3000K, with corrosion resistant die cast aluminum housing, tempered glass complete with LED built-in driver and all accessories/components required for the proper operation of the system	No.	80			

2 (e)	Flood Lighting LED Luminaries 120W make High-Pressure Sodium (HPS) lamp with PCA arc tube, high energy-efficient LED wattage matching the lumen output, min 24,000 hrs lumens on a 10 hrs start cycle, with built in standard to meet or exceed ANSI and IESNA roadway lighting or equivalent suitable for M-2 & M-3 roads of wattage suitable for the project requirements, fully IP 65 with corrosion resistant die cast aluminum housing, silicon gas kit, thermally hardened glass complete with LED drivers, surge protection and all accessories/ components required for the proper operation of the system. The luminaries shall be fully flexible for future upgrades and easy replacements for maintenance purposes. Supplier to submit lighting design calculation as per the offered light fixtures.	No.	20			
2(f)	Hot dipped galvanized bracket for mounting of Flood lights along with all accessories.	Each	12			
3	<u>Junction Boxes</u>					
3(a)	Junction box size 12"x08"x06" (for Flood Light connection) with angle iron frame clad 16 SWG, sheet steel enclosure having high quality powder coated paint, color RAL 7032. Suitable for connections with IP 54 protection class, door, locking arrangement etc. and all other accessories as required for quality work.	No.	12			
-	Junction box size 12"x08"x06" (for Flood Light connection)					
-	01 No. 2 Amp. SP MCB, 10 kA					
-	04 No. Terminal block					
-	GI flexible pipe 1" dia					

3(b)	Junction boxes/Pull boxes for canopy lights size 5"x6"x3" with thermoplastic frame enclosure having color RAL 7032, terminal blocks & 25 mm dia GI flexible pipe to light point concealed/surface in walls/slab with clamping arrangements as required complete in all respects suitable for connections and all other accessories as required for quality work (Pull box shall be High-grade, UV-stabilized, halogen-free, and flame-retardant Polycarbonate, Minimum IK08 rating in accordance with IEC 62262, engineered to withstand high roadside vibrations, mechanical stress, and airborne gravel impact. High resistance against industrial atmospheric pollutants, road salt, automotive exhaust gases, and acid rain. - IEC 60695-2-11 and minimum IP67/IP69 submersible standards under IEC 60529 Class II (Total insulation / Double Insulated) with material integrity maintained up to +70°C high-performance outdoor-rated enclosure).	No.	4			
4	<u>Wiring & Accessories</u>					
4 (a)	Wiring of light point or fan point from switch to the point with 3x1.5mm ² PVC insulated single core cables in PVC pipes concealed in walls, columns and slabs including accessories, pvc box, 10 Amp. gang switch 1 or 2 way as required, one for each light or fan installed as in specifications.	Each	4			
4 (b)	Circuit wiring from DB MCBs to gang switches board and from switch board to another switch board with 3x2.5 mm ² (P+N+E) PVC insulated single core stranded cables in 25mm PVC pipe/conduit concealed in walls, columns and slabs as required complete in all respects.	Each	3			
4 (c)	The same as item No. 1.1 but from one light point to another light point.	Each	18			
5	<u>Low Voltage Power Cables</u>					

5(a)	Supply, installation, testing, commissioning and termination of following sizes of PVC insulated 600/1000 Voltage grade unarmored Copper cables laid direct in ground, pulled in PVC pipe already laid, on surface of wall or cable trays etc. including all accessories as required complete in all respects (Imported copper shall be used. Verified documentary evidence for source of copper & PVC shall be furnished prior to manufacturing)					
i	4 Core 50mm ²	Rm	250			
ii	4 Core 35mm ²	Rm	600			
iii	4 Core 25mm ²	Rm	1,100			
iv	4 Core 16mm ²	Rm	2,300			
v	4 Core 10mm ²	Rm	1,000			
vi	4 Core 6mm ²	Rm	1,000			
5(b)	Supply, installation, testing, commissioning and termination of following sizes of PVC insulated single core 450/750 Voltage grade unarmored Copper cables as circuit protective conductor/ earth continuity conductor (CPC/ECC) laid direct in ground, pulled in PVC pipe already laid, on surface of wall or cable trays etc. including all accessories as required complete in all respects (Imported copper shall be used. Verified documentary evidence for source of copper & PVC shall be furnished prior to manufacturing)					
i	1 Core 70mm ²	Rm	500			
ii	1 Core 25mm ²	Rm	350			
iii	1 Core 16mm ²	Rm	2,000			
iv	1 Core 10mm ²	Rm	1,000			
v	1 Core 6mm ²	Rm	1,000			

vi	3 Nos. 1 core 2.5 mm ² Cu. PVC 450/750 Voltage grade cable (stranded conductor) (Imported copper shall be used. Verified documentary evidence for source of copper & PVC shall be furnished prior to manufacturing) from junction box to the fitting through the hollow of pole.					
a)	For 12m Pole	No.	31			
b)	For 15m Pole	No.	9			
c)	For Flood Lights	No.	12			
5	<u>Main Panel Board</u>					
	Main panel board to be installed outside the building designated as MAIN I/C cum O/G Supply with the following specs: 1. 14 SWG MS Sheet ,Pad Mounted , Front access type, Double Powder Coated ,IP class 44/54 & RAL 7032 including foundation/base frame. 2. O/G and I/C cable entries from Bottom. 3. Top Bottom Both removable plates. 4. Front Covering plates for all breakers. 5. Earthing management (Neutral Earth Separate Bus Bar). 6. Door operated one LED tube light 230V,Thermostate temperature operated exhaust Fan in each Cubicle with all installation and operational accessories as per site requirements, with specifications and drawings and as directed by the Engineer.	Job	1			
	<u>Incoming</u>					
	01 No. 800 Amp TP (adj.) MCCB RC= 50 kA					
	01 No. VSS (07 position)					
	01 No. 0-600 Volts AC DIGITAL Voltmeter					
	03 Nos. 800/5 Amps Current Transformers					
	01 No. ASS (R-Y-B-OFF)					
	01 No. 0-800 Amps AC DIGITAL Ammeter					

	06 Nos. RYB, ON,OFF,TRIP LED indication lights					
	<u>Outgoing</u>					
	01 No. 250 Amp MCCB TP (Adj.) RC=36kA					
	01 No. 125 Amp MCCB TP (Adj.) RC=25kA					
	01 No. 100 Amp MCCB TP (Adj.) RC=25kA					
	01 No. 80 Amp MCCB TP (Adj.) RC=25kA					
	03 No. 63 Amp MCCB TP (Adj.) RC=25kA					
	04 No. 25 Amp MCCB TP, (Adj.) RC=25 kA					
	02 No. 80/100 Amp MCCB TP (adj.) RC=25kA (Spare)					
	02 No. 80/100 Amp MCCB TP (adj.) RC=25kA (Space)					
	01 No. Panel light with limit switch					
	Electrolytic copper bus bar 1600 Amp, Bus bar of appropriate size (size/cross-section should be clearly mentioned in quotation based on calculation according to relevant IEC standard),including nuts, bolts and washers, control MCB etc.					
6	<u>Main Panel Board (MPB)</u>					
	Main panel board to be installed outside the building designated as MAIN I/C cum O/G Supply with the following specs: 1. 14 SWG MS Sheet ,Pad Mounted , Front access type, Double Powder Coated ,IP class 44/54 & RAL 7032 including foundation/base frame. 2. O/G and I/C cable entries from Bottom. 3. Top Bottom Both removable plates. 4. Front Covering plates for all breakers. 5. Earthing management (Neutral Earth Separate Bus Bar). 6. Door operated one LED tube light 230V,Thermostate temperature operated exhaust Fan in each Cubicle	Job	1			

	with all installation and operational accessories as per site requirements, with specifications and drawings and as directed by the Engineer.					
	Incoming					
	01 No. 1250 Amp TP (adj.) ACB RC= 66 kA					
	01 No. VSS (07 position)					
	01 No. 0-600 Volts AC DIGITAL Voltmeter					
	03 Nos. 1600/5 Amps Current Transformers					
	01 No. ASS (R-Y-B-OFF)					
	01 No. 0-1600 Amps AC DIGITAL Ammeter					
	06 Nos. RYB, ON,OFF,TRIP LED indication lights					
	<u>Outgoing</u>					
	01 No. 320 Amp MCCB TP (Adj.) RC=36kA					
	01 No. 125 Amp MCCB TP (Adj.) RC=25kA					
	02 No. 100 Amp MCCB TP (Adj.) RC=25kA					
	02 No. 80 Amp MCCB TP (Adj.) RC=25kA					
	07 Nos. 63 Amp MCCB TP (Adj.) RC=25kA					
	01 No. 50 Amp MCCB TP (Adj.) RC=25kA					
	04 No. 25 Amp MCCB TP, (Adj.) RC=25 kA					
	02 No. 80/100 Amp MCCB TP (adj.) RC=25kA (Spare)					
	02 No. 80/100 Amp MCCB TP (adj.) RC=25kA (Space)					
	01 No. Panel light with limit switch					
	Electrolytic copper bus bar 2500 Amp, Bus bar of appropriate size (size/cross-section should be clearly mentioned in quotation based on calculation according to relevant IEC standard),including nuts, bolts and washers, control MCB etc.					

7	<u>Lighting Control Panel</u>					
	Road lighting control panel with angle iron frame clad 14 SWG, sheet steel enclosure having high quality powder coated paint, color RAL 7032. The LCP shall be complete with incoming and outgoing MCCBs, Cu bus bars, magnetic contactors, photo-electric switches, meters, indication lights, construction with IP 54 protection class, door, locking arrangement etc. and all other accessories as required for quality work. MATERIAL 1 No. incoming 63 Amp.(adj.) TP, MCCB, 25 kA 4 No. outgoing 25 Amp. (adj.) TP MCCBs, 25 kA 2 No. outgoing 25 Amp. (adj.) TP MCCBs, 25 kA (Spare) 4 No. 32 Amp. magnetic contactor 2 No. 32 Amp. magnetic contactor (Spare) 3 No. photo-electric switches with timers and relays a) 1 No. ammeters 0-100 Amp, with selector switch (04 position) and CT of 100/5 Amp b) 3 No. indication lights c) 1 No. voltmeter with fuse and 7 position selector switch. d) 3 Ph, N & Earth copper bus bars Internal wiring & line-up terminals etc. Brass cable glands/accessories e) 06 Nos. Auto-Manual-OFF (3 position switches for operation in auto (with photocell) and normal (manual mode-photocell override) f) 06 Nos.ON & 06 Nos. OFF push button switch's with indication lights g) Panel Light with limit Switch	No	2			
8	<u>Power Factor Improvement (PFI) Panel (85 KVAR)</u>					
	14 SWG steel sheet clad IP 44/54 colour RAL 7032 powder coated power factor improvement panel (PFI) including Cu busbar, incoming and outgoing circuit breaker, power capacitors, magnetic contactors, continuous digital p.f controller, on & off push buttons, indication lights, cable glands, top /bottom	Job	1			

	for cable entry of appropriate size etc. complete with all components/ accessories as per specifications and drawings.					
	01 No. Manual/OFF/Auto selector switch 02 Nos. 25 kVAR capacitor 02 Nos. 12.5 kVAR capacitor 01 Nos. 10kVAR capacitor 02 Nos. 65A Magnetic contactor (AC-3) 03 Nos. 32A Magnetic contactor (AC-3) 02 Nos. 50A MCCB, TP (Adj.) RC=25 kA Circuit breaker, Icu=100%Ics" 03 Nos. 32A MCCB, TP (Adj.) RC=25 kA Circuit breaker, Icu=100%Ics" 15 Nos. Indication light (for magnetic contactor and phase)" 12 Nos. Push Buttons (ON/OFF) 12 Nos. Auxiliary contactor (NO/NC) Panel light with limit switch 01 No. Exhaust fan 6" & Louver 8" sweep with thermostat relay and all accessories etc. (For each cabinet) 14 SWG steel sheet Panel RAL 7032, IP= 44/54 and all other accessories, All other accessories required for completion of the quality works including Cable gland and lugs etc., Electrolytic copper bus bar with electrical grade PVC mountings 3 for each, nuts, bolts and washers, control MCB etc. (500 Amps. R+Y+B N, 50 Hz, 415 V, AC) including cable glands at top/bottom entry for cable) FA Supplier shall submit the genuine certificate from the manufacturer/authorized agent clear by indicating the project name make/model/rating of MCCB, MCB, magnetic contactors, terminal blocks and voltmeters/ ammeter along with warranties.					
9	<u>Power Factor Improvement (PFI) Panel (125 KVAR)</u>					

	14 SWG MS sheet clad IP 44/54 colour RAL 7032 double powder coated power factor improvement panel (PFI) including Cu busbar, incoming and outgoing circuit breaker, power capacitors, magnetic contactors, continuous digital p.f controller, on & off push buttons, indication lights, cable glands, top /bottom for cable entry of appropriate size etc. complete with all components/ accessories as per specifications and drawings.					
	6 steps with continuous digital power factor and capacitor controller with all accessories etc. 01 No. Manual/OFF/Auto selector switch 04 Nos. 25 kVAR capacitor 02 Nos. 12.5 kVAR capacitor 04 Nos. 65A Magnetic contactor (AC-3) 02 Nos. 32A Magnetic contactor (AC-3) 04 Nos. 50A MCCB, TP (Adj.) RC=25 kA Circuit breaker, Icu=100%Ics" 02 Nos. 32A MCCB, TP (Adj.) RC=25 kA Circuit breaker, Icu=100%Ics" 15 Nos. Indication light (for magnetic contactor and phase) 12 Nos. Push Buttons (ON/OFF) 12 Nos. Auxiliary contactor (NO/NC) Panel light with limit switch 01 No. Exhaust fan 6" & Louver 8" sweep with thermostat relay and all accessories etc. (For each cabinet) 14 SWG steel sheet Panel RAL 7032, IP= 44/54 and all other accessories, All other accessories required for completion of the quality works including Cable gland and lugs etc Electrolytic copper bus bar with electrical grade PVC mountings 3 for each, nuts, bolts and washers, control MCB etc. (320 Amps. R+Y+B N, 50 Hz, 415 V, AC) including cable glands at top/bottom entry for cable) Suppliers shall submit the genuine certificate from the manufacturer/authorized agent clear by indicating the project name make/model/rating of MCCB, MCB, magnetic contactors, terminal blocks and voltmeters/ ammeter along with warranties.	Job	1			

10	<u>Earthing</u>					
A	Earth point comprising of 10 ft. 5/8" dia. (16 mm dia) copper coated M.S. rods driven in ground near each lighting control panel. The earthing rods shall be completed with fixing clamps etc.	Each	10			
B	Bore type, earthing up to permanent water level/moist soil by arrangement of earth pit/point comprising of concrete/brickwork housing with lifting cover 50mm perforated GI pipe, appropriate bare copper stranded conductor as per details in drawing. The earthing and bonding shall be complete with fixing clamps etc. & all metal works shall be bonded to the proposed earthing network.	Job	10			
C	Drilling of earth bore 3" dia 100 ft. deep or up to permanent water table.					
D	Supply and installation of G.I pipe 2" dia 14 SWG to be installed in pre-made bore including all accessories like tees, bends, sockets etc. Pipe shall be connected to tinned copper spike as per detail shown on drawing, complete in all respects.					
F	Supply and installation of tinned copper spike to be manufactured as per detail shown on drawing. Spike shall be connected/screwed at bottom of G.I pipe including all accessories like nuts and bolts complete in all respect.					
G	Supply and installation of 2 Nos. 70 mm ² bare stranded electrolytic copper conductor lead in pre-load G.I pipe and connected to tinned copper spike as shown on drawing. 02Nos. leads to be installed including all accessories like brass nuts, bolts, washers etc complete in all respect.					
H	Supply and installation of tinned earth test link in earthing pit consisting of copper plate (12"x2"x1/2") with fixing arrangement on the wall of man hole including brass nuts, bolts washers lugs etc. complete in all respect.					
I	Construction of earthing pit (manhole) of internal size 18"x18"x24" deep with 9" thick brick wall with cement mortar, internal plaster 1:4, RCC 4" thick cover with lifting hooks including all accessories complete in all respect.					
J	Testing and commissioning of the earthing system along with all testing accessories complete in all respect.					

11	<u>Transformer (As Per WAPDA Specs)</u>					
	Supply and Installation of Outdoor type pad mounted transformer (HT & LT Compartment) with foundation and all accessories. Oil immersed / dry type transformer manufactured according to BS-171, IEC-60076, specifications and consisting of filling device, drain plug, oil level indicator, lifting hooks,bi-directional roller wheels, H.V. & L.V. porcelain bushings, off load voltage tap changer, 2 earthing terminals, oil conservator and silica gel breather, imported double float buckholz relay, pressure relief vent, dial type thermometer with alarm & trip contacts, rated Voltage 11000 / 415 / 230 Volts, suitable for an ambient temperature of 50°C, winding temperature 55°C and oil temperature 50°C, impedance 6.25% or as specified by IEC, system earth: Delta-Y, neutral solidly earthed (DYN-11) and all necessary accessories / materials, complete in all respects, including trenches etc , submission of technical data sheet. WAPDA (Concerned DISCO) approved. Connection Charges, with energy meter as per WAPDA standards and practice.					
	The Power transformers shall be fully tropicalized, three phase, step down, oil filled, self-cooled, core type, double wound, suitable for parallel operation and for outdoor installation. The Power transformers shall meet the minimum technical specifications but not limited to the following: Type 0.42 Capacity (Rated continuous) As specified Voltage ratio at no-load 11000/415 Volts Frequency 50 Hz Vector group Dy 11 Off load tapping arrangement (on HT side) -7.5%, -5%, -2.5%, 0% +2.5%, +5%, HT connection 11 kV Delta LT connection 400V with grounded star point Temperature rise of oil over ambient temperature 400 C maximum Temperature rise of winding over ambient temperature 500 C maximum Impedance voltage (%) 4 Voltage regulation for normal operating conditions Not to exceed 2.5% of no-load Voltage regulation at 85% pf at full load (%) 3.5 Rated maximum voltage HT/LT 15kV/0.6 kV Basic insulation level 95 kV					

	Power frequency withstand voltage 34 kV Rated short-time current (kA) 25 Switching inrush current (Amps) 6-7 times of HV line current Following information had to be provided: Applicable Standards/Codes Latest editions of the following standards and codes shall be applicable for all materials in scope of this section: BS90 - Power transformers BS14 - Transformer oil BS171 - Specifications for power transformer BS223 - High voltage bushings IEC7 - Power transformers					
I	400 kVA	Job	1			
II	630 kVA	Job	1			
12	<u>MV Cable and Termination Kits</u>					
a)	MV cable 1-core 240mm ² XLPE/PVC/AWA/PVC cable with aluminum conductor voltage grade:8.7/15 kV	Rm	3,000			
b)	Providing and fixing/installation indoor 1-core 240mm ² , 11KV, XLPE, heat shrink termination Kit complete in all respect as required.	Job	6			
c)	Providing and fixing/installation outdoor 1-core 240mm ² , 11KV, XLPE, heat shrink termination Kit complete in all respect as required.	Job	6			
13	<u>Provisional Sum</u>					
	Cost of obtaining 11kV connection from the DISCO/utility. The same shall be paid to the Suppliers per actual demand notice of the relevant DISCO/utility for the respective site.	Job	1			
TOTAL (PKR)						

Mandatory instructions:

1. The Bidder shall quote every item included in the BOQ.
2. Blank unit rates are not permitted.
3. Where an item is included in another rate, the Bidder shall state “Included” and identify the relevant priced item.
4. Unit rates shall include design, manufacture, supply, transportation, insurance, unloading, storage, installation, incidental works, testing, commissioning, labour, tools, equipment, documentation, warranty and all other obligations necessary for complete performance.
5. Quantities are indicative for Framework Agreement purposes. Payment under a Call-off/Work Order shall be based on the quantities ordered and actually executed or accepted, multiplied by the applicable agreed unit rates, subject to the Contract.
6. The unit rates shall remain applicable throughout the Framework Agreement Term.
7. The Bidder shall not add conditions, assumptions or qualifications in the Price Schedule.

LOT # 01 - Site 02: KALA BAGH BRIDGE (BOQ-02)

Note: Bidders must mention the brand/ model of each sub-item they are offering. The brand must be equivalent to the requirements mentioned in the Technical Specifications.

Item No.	Description	Unit	Indicative Quantity	Unit DDP Price (PKR)	Total DDP Price (PKR)	Offered Make/Model, where applicable
Design, supply, transportation, storage, installation, testing and commissioning of the following items of work, including all material, labor, tools and accessories etc. required for proper completion of each item as per specification, drawings and/or as directed by the Engineer.				(includes all kinds of taxes, after sales services, incidental services and costs to deliver, install, commission, inspect, and test goods at the place of destination)		
1	<u>Poles</u>					
1(a)	12 m high single bent arm conical octagonal galvanized steel pole with extension arm luminaire arrangement, base plate, J-rag bolts, 01 No. 2 Amp 10kA SP MCB, pole numbering and earthing etc. as shown on drawing.	Each	42			
1(b)	12 m high double bent arm conical octagonal galvanized steel pole with extension arm luminaire arrangement, base plate, J-rag bolts, 02 Nos. 2 Amp 10kA SP MCB, pole numbering and earthing etc. as shown on drawing.	Each	11			
1(c)	15 m high conical octagonal (hot dip) galvanized steel pole with circular angular top 4 Nos. luminaire arrangement, base plate, J-rag bolts, 2 Amp 04 Nos. SP MCB, pole numbering and earthing etc. as shown on drawing.	Each	5			
1(d)	Road Lighting Pole Foundation	Each	58			
2	<u>Road Lights & Accessories for Flood Light Installation</u>					

2(a)	Road Lighting LED Luminaries 120W make High-Pressure Sodium (HPS) lamp with PCA arc tube, high energy-efficient LED wattage matching the lumen output, min 24,000 hrs lumens on a 10 hrs start cycle, with built in standard to meet or exceed ANSI and IESNA roadway lighting standards or equivalent suitable for M-2 & M-3 roads of wattage suitable for the project requirements, fully IP 66 with corrosion resistant die cast aluminum housing, silicon gas kit, thermally hardened glass complete with LED drivers, surge protection and all accessories/ components required for the proper operation of the system. The luminaries shall be fully flexible for future upgrades and easy replacements for maintenance purposes. Supplier to submit lighting design calculation as per the offered light fixtures.	No.	64			
2(b)	Surface mounted Batten LED Luminaries 50W or above (dimension 1200 mm and above) make High-Pressure Sodium (HPS) lamp with PCA arc tube, high energy-efficient LED wattage matching the lumen output, min 24,000 hrs lumens on a 10 hrs start cycle, with built in standard to meet or exceed ANSI and IESNA roadway lighting standards or equivalent suitable for Bus stations of wattage suitable for the project requirements, fully IP 65 with polycarbonate housing, UV shielding, stainless steel brackets for mounting, maintenance free long lasting performance complete with LED drivers and all accessories/ components required for the proper operation of the system. The fitting shall be approved by the Engineer.	No.	20			
2(c)	Bollard light Luminaries LED 220 - 240 Volts 9 Watt with IP 65 or above protection complete in all respect or approved equivalent. The fitting shall be approved by the engineer.	No.	10			

2(d)	LED Planter Spike light 7W IP 65, 3000K, with corrosion resistant die cast aluminum housing, tempered glass complete with LED built-in driver and all accessories/components required for the proper operation of the system	No.	51			
2 (e)	Flood Lighting LED Luminaries 120W make High-Pressure Sodium (HPS) lamp with PCA arc tube, high energy-efficient LED wattage matching the lumen output, min 24,000 hrs lumens on a 10 hrs start cycle, with built in standard to meet or exceed ANSI and IESNA roadway lighting standards or equivalent suitable for M-2 & M-3 roads of wattage suitable for the project requirements, fully IP 65 with corrosion resistant die cast aluminum housing, silicon gas kit, thermally hardened glass complete with LED drivers, surge protection and all accessories/components required for the proper operation of the system. The luminaries shall be fully flexible for future upgrades and easy replacements for maintenance purposes. Supplier to submit lighting design calculation as per the offered light fixtures.	No.	30			
2(f)	Hot dipped galvanized bracket for mounting of Flood lights along with all accessories.	Each	10			
3	<u>Junction Boxes</u>					
3(a)	Junction box size 12"x08"x06" (for Flood Light connection) with angle iron frame clad 16 SWG, sheet steel enclosure having high quality powder coated paint, color RAL 7032. Suitable for connections with IP 54 protection class, door, locking arrangement etc. and all other accessories as required for quality work.	No.	10			
-	Junction box size 12"x08"x06" (for Flood Light connection)					
-	01 No. 2 Amp. SP MCB, 10 kA					
-	04 No. Terminal block					

-	GI flexible pipe 1" dia					
3(b)	Junction boxes/Pull boxes for canopy lights size 5"x6"x3" with thermoplastic frame enclosure having color RAL 7032, terminal blocks & 25 mm dia GI flexible pipe to light point concealed/surface in walls/slab with clamping arrangements as required complete in all respects suitable for connections and all other accessories as required for quality work (Pull box shall be High-grade, UV-stabilized, halogen-free, and flame-retardant Polycarbonate, Minimum IK08 rating in accordance with IEC 62262, engineered to withstand high roadside vibrations, mechanical stress, and airborne gravel impact. High resistance against industrial atmospheric pollutants, road salt, automotive exhaust gases, and acid rain. - IEC 60695-2-11 and minimum IP67/IP69 submersible standards under IEC 60529 Class II (Total insulation / Double Insulated) with material integrity maintained up to +70°C high-performance outdoor-rated enclosure)).	No.	2			
4	<u>Wiring & Accessories</u>					
4 (a)	Wiring of light point or fan point from switch to the point with 3x1.5mm ² PVC insulated single core cables in PVC pipes concealed in walls, columns and slabs including accessories, pvc box, 10 Amp. gang switch 1 or 2 way as required, one for each light or fan installed as in specifications.	Each	3			
4 (b)	Circuit wiring from DB MCBs to gang switches board and from switch board to another switch board with 3x2.5 mm ² (P+N+E) PVC insulated single core stranded cables in 25mm PVC pipe/conduit concealed in walls, columns and slabs as required complete in all respects.	Each	2			
4 (c)	The same as item No. 1.1 but from one light point to another light point.	Each	15			

5	<u>Low Voltage Power Cables</u>					
5(a)	Supply, installation, testing, commissioning and termination of following sizes of PVC insulated 600/1000 Voltage grade unarmored Copper cables laid direct in ground, pulled in PVC pipe already laid, on surface of wall or cable trays etc. including all accessories as required complete in all respects (Imported copper shall be used. Verified documentary evidence for source of copper & PVC shall be furnished prior to manufacturing)					
i	4 Core 50mm ²	Rm	150			
ii	4 Core 35mm ²	Rm	400			
iii	4 Core 25mm ²	Rm	800			
iv	4 Core 16mm ²	Rm	2,300			
v	4 Core 10mm ²	Rm	500			
vi	4 Core 6mm ²	Rm	500			
5(b)	Supply, installation, testing, commissioning and termination of following sizes of PVC insulated single core 450/750 Voltage grade unarmored Copper cables as circuit protective conductor/ earth continuity conductor (CPC/ECC) laid direct in ground, pulled in PVC pipe already laid, on surface of wall or cable trays etc. including all accessories as required complete in all respects (Imported copper shall be used. Verified documentary evidence for source of copper & PVC shall be furnished prior to manufacturing)					
i	1 Core 70mm ²	Rm	250			
ii	1 Core 25mm ²	Rm	200			
iii	1 Core 16mm ²	Rm	1,750			
iv	1 Core 10mm ²	Rm	500			
v	1 Core 6mm ²	Rm	500			

vi	3 Nos. 1 core 2.5 mm ² Cu. PVC 450/750 Voltage grade cable (stranded conductor) (Imported copper shall be used. Verified documentary evidence for source of copper & PVC shall be furnished prior to manufacturing) from junction box to the fitting through the hollow of pole.					
a)	For 12m Pole	No.	64			
b)	For 15m Pole	No.	20			
c)	For Flood Lights	No.	10			
5	<u>Main Panel Board</u>					
	Main panel board to be installed outside the building designated as MAIN I/C cum O/G Supply with the following specs: 1. 14 SWG MS Sheet ,Pad Mounted , Front access type, Double Powder Coated ,IP class 44/54 & RAL 7032 including foundation/base frame. 2. O/G and I/C cable entries from Bottom. 3. Top Bottom Both removable plates. 4. Front Covering plates for all breakers. 5. Earthing management (Neutral Earth Separate Bus Bar). 6. Door operated one LED tube light 230V,Thermostate temperature operated exhaust Fan in each Cubicle with all installation and operational accessories as per site requirements, with specifications and drawings and as directed by the Engineer.	Job	1			
	<u>Incoming</u>					
	01 No. 800 Amp TP (adj.) MCCB RC= 50 kA					
	01 No. VSS (07 position)					
	01 No. 0-600 Volts AC DIGITAL Voltmeter					
	03 Nos. 800/5 Amps Current Transformers					
	01 No. ASS (R-Y-B-OFF)					

	01 No. 0-800 Amps AC DIGITAL Ammeter					
	06 Nos. RYB, ON,OFF,TRIP LED indication lights					
	<u>Outgoing</u>					
	01 No. 250 Amp MCCB TP (Adj.) RC=36kA					
	01 No. 125 Amp MCCB TP (Adj.) RC=25kA					
	01 No. 100 Amp MCCB TP (Adj.) RC=25kA					
	01 No. 80 Amp MCCB TP (Adj.) RC=25kA					
	03 No. 63 Amp MCCB TP (Adj.) RC=25kA					
	04 No. 25 Amp MCCB TP, (Adj.) RC=25 kA					
	02 No. 80/100 Amp MCCB TP (adj.) RC=25kA (Spare)					
	02 No. 80/100 Amp MCCB TP (adj.) RC=25kA (Space)					
	01 No. Panel light with limit switch					
	Electrolytic copper bus bar 1600 Amp, Bus bar of appropriate size (size/cross-section should be clearly mentioned in quotation based on calculation according to relevant IEC standard),including nuts, bolts and washers, control MCB etc.					
6	<u>Main Panel Board (MPB)</u>					
	Main panel board to be installed outside the building designated as MAIN I/C cum O/G Supply with the folowing specs: 1. 14 SWG MS Sheet ,Pad Mounted , Front access type, Double Powder Coated ,IP class 44/54 & RAL 7032 including foundation/base frame. 2. O/G and I/C cable entries from Bottom. 3. Top Bottom Both removable plates. 4. Front Covering plates for all breakers. 5. Earthing management (Neutral Earth Separate Bus Bar). 6. Door operated one LED tube light 230V,Thermostate temperature operated exhaust Fan in each Cubicle	Job	1			

	with all installation and operational accessories as per site requirements, with specifications and drawings and as directed by the Engineer.					
	Incoming					
	01 No. 1250 Amp TP (adj.) ACB RC= 66 kA					
	01 No. VSS (07 position)					
	01 No. 0-600 Volts AC DIGITAL Voltmeter					
	03 Nos. 1600/5 Amps Current Transformers					
	01 No. ASS (R-Y-B-OFF)					
	01 No. 0-1600 Amps AC DIGITAL Ammeter					
	06 Nos. RYB, ON,OFF,TRIP LED indication lights					
	Outgoing					
	01 No. 320 Amp MCCB TP (Adj.) RC=36kA					
	01 No. 125 Amp MCCB TP (Adj.) RC=25kA					
	02 No. 100 Amp MCCB TP (Adj.) RC=25kA					
	02 No. 80 Amp MCCB TP (Adj.) RC=25kA					
	07 Nos. 63 Amp MCCB TP (Adj.) RC=25kA					
	01 No. 50 Amp MCCB TP (Adj.) RC=25kA					
	04 No. 25 Amp MCCB TP, (Adj.) RC=25 kA					
	02 No. 80/100 Amp MCCB TP (adj.) RC=25kA (Spare)					
	02 No. 80/100 Amp MCCB TP (adj.) RC=25kA (Space)					
	01 No. Panel light with limit switch					
	Electrolytic copper bus bar 2500 Amp, Bus bar of appropriate size (size/cross-section should be clearly mentioned in quotation based on calculation according to relevant IEC standard),including nuts, bolts and washers, control MCB etc.					

7	<u>Lighting Control Panel</u>					
	Road lighting control panel with angle iron frame clad 14 SWG, sheet steel enclosure having high quality powder coated paint, color RAL 7032. The LCP shall be complete with incoming and outgoing MCCBs, Cu bus bars, magnetic contactors, photo-electric switches, meters, indication lights, construction with IP 54 protection class, door, locking arrangement etc. and all other accessories as required for quality work. MATERIAL 1 No. incoming 63 Amp.(adj.) TP, MCCB, 25 kA 4 No. outgoing 25 Amp. (adj.) TP MCCBs, 25 kA 2 No. outgoing 25 Amp. (adj.) TP MCCBs, 25 kA (Spare) 4 No. 32 Amp. magnetic contactor 2 No. 32 Amp. magnetic contactor (Spare) 3 No. photo-electric switches with timers and relays a) 1 No. ammeters 0-100 Amp, with selector switch (04 position) and CT of 100/5 Amp b) 3 No. indication lights c) 1 No. voltmeter with fuse and 7 position selector switch. d) 3 Ph, N & Earth copper bus bars Internal wiring & line-up terminals etc. Brass cable glands/accessories e) 06 Nos. Auto-Manual-OFF (3 position switches for operation in auto (with photocell) and normal (manual mode-photocell override) f) 06 Nos.ON & 06 Nos. OFF push button switch's with indication lights g) Panel Light with limit Switch	No	1			
8	<u>Power Factor Improvement (PFI) Panel (85 KVAR)</u>					
	14 SWG steel sheet clad IP 44/54 colour RAL 7032 powder coated power factor improvement panel (PFI) including Cu busbar, incoming and outgoing circuit breaker, power capacitors, magnetic contactors,	Job	1			

	continuous digital p.f controller, on & off push buttons, indication lights, cable glands, top /bottom for cable entry of appropriate size etc. complete with all components/ accessories as per specifications and drawings.					
	01 No. Manual/OFF/Auto selector switch 02 Nos. 25 kVAR capacitor 02 Nos. 12.5 kVAR capacitor 01 Nos. 10kVAR capacitor 02 Nos. 65A Magnetic contactor (AC-3) 03 Nos. 32A Magnetic contactor (AC-3) 02 Nos. 50A MCCB, TP (Adj.) RC=25 kA Circuit breaker, Icu=100%Ics" 03 Nos. 32A MCCB, TP (Adj.) RC=25 kA Circuit breaker, Icu=100%Ics" 15 Nos. Indication light (for magnetic contactor and phase)" 12 Nos. Push Buttons (ON/OFF) 12 Nos. Auxiliary contactor (NO/NC) Panel light with limit switch 01 No. Exhaust fan 6" & Louver 8" sweep with thermostat relay and all accessories etc. (For each cabinet) 14 SWG steel sheet Panel RAL 7032, IP= 44/54 and all other accessories, All other accessories required for completion of the quality works including Cable gland and lugs etc., Electrolytic copper bus bar with electrical grade PVC mountings 3 for each, nuts, bolts and washers, control MCB etc. (500 Amps. R+Y+B N, 50 Hz, 415 V, AC) including cable glands at top/bottom entry for cable) Suppliers shall submit the genuine certificate from the manufacturer/authorized agent clear by indicating the project name make/model/rating of MCCB, MCB, magnetic contactors, terminal blocks and voltmeters/ ammeter along with warranties.					
9	Power Factor Improvement (PFI) Panel (125 KVAR)					

	14 SWG MS sheet clad IP 44/54 colour RAL 7032 double powder coated power factor improvement panel (PFI) including Cu busbar, incoming and outgoing circuit breaker, power capacitors, magnetic contactors, continuous digital p.f controller, on & off push buttons, indication lights, cable glands, top /bottom for cable entry of appropriate size etc. complete with all components/ accessories as per specifications and drawings.					
	6 steps with continuous digital power factor and capacitor controller with all accessories etc. 01 No. Manual/OFF/Auto selector switch 04 Nos. 25 kVAR capacitor 02 Nos. 12.5 kVAR capacitor 04 Nos. 65A Magnetic contactor (AC-3) 02 Nos. 32A Magnetic contactor (AC-3) 04 Nos. 50A MCCB, TP (Adj.) RC=25 kA Circuit breaker, Icu=100%Ics" 02 Nos. 32A MCCB, TP (Adj.) RC=25 kA Circuit breaker, Icu=100%Ics" 15 Nos. Indication light (for magnetic contactor and phase) 12 Nos. Push Buttons (ON/OFF) 12 Nos. Auxiliary contactor (NO/NC) Panel light with limit switch 01 No. Exhaust fan 6" & Louver 8" sweep with thermostat relay and all accessories etc. (For each cabinet) 14 SWG steel sheet Panel RAL 7032, IP= 44/54 and all other accessories, All other accessories required for completion of the quality works including Cable gland and lugs etc Electrolytic copper bus bar with electrical grade PVC mountings 3 for each, nuts, bolts and washers, control MCB etc. (320 Amps. R+Y+B N, 50 Hz, 415 V, AC) including cable glands at top/bottom entry for cable) Suppliers shall submit the genuine certificate from the manufacturer/authorized agent clear by indicating the project name	Job	1			

	make/model/rating of MCCB, MCB, magnetic contactors, terminal blocks and voltmeters/ ammeter alongwith warranties.					
10	<u>Earthing</u>					
A	Earth point comprising of 10 ft. 5/8" dia. (16 mm dia) copper coated M.S. rods driven in ground near each lighting control panel. The earthing rods shall be completed with fixing clamps etc.	Each	5			
B	Bore type, earthing up to permanent water level/moist soil by arrangement of earth pit/point comprising of concrete/brickwork housing with lifting cover 50mm perforated GI pipe, appropriate bare copper stranded conductor as per details in drawing. The earthing and bonding shall be complete with fixing clamps etc. & all metal works shall be bonded to the proposed earthing network.	Job	5			
C	Drilling of earth bore 3" dia 100 ft. deep or up to permanent water table.					
D	Supply and installation of G.I pipe 2" dia 14 SWG to be installed in pre-made bore including all accessories like tees, bends, sockets etc. Pipe shall be connected to tinned copper spike as per detail shown on drawing, complete in all respects.					
F	Supply and installation of tinned copper spike to be manufactured as per detail shown on drawing. Spike shall be connected/screwed at bottom of G.I pipe including all accessories like nuts and bolts complete in all respect.					
G	Supply and installation of 2 Nos. 70 mm ² bare stranded electrolytic copper conductor lead in preload G.I pipe and connected to tinned copper spike as shown on drawing. 02Nos. leads to be installed including all accessories like brass nuts, bolts, washers etc complete in all respect.					
H	Supply and installation of tinned earth test link in earthing pit consisting of copper plate (12"x2"x1/2") with fixing arrangement on the wall of man hole including brass nuts, bolts washers lugs etc. complete in all respect.					
I	Construction of earthing pit (manhole) of internal size 18"x18"x24" deep with 9" thick brick wall with cement mortar, internal plaster 1:4,					

	RCC 4" thick cover with lifting hooks including all accessories complete in all respect.					
J	Testing and commissioning of the earthing system along with all testing accessories complete in all respect.					
11	<u>Transformer (As Per WAPDA Specs)</u>					
	Supply and Installation of Outdoor type pad mounted transformer (HT & LT Compartment) with foundation and all accessories. Oil immersed / dry type transformer manufactured according to BS-171, IEC-60076, specifications and consisting of filling device, drain plug, oil level indicator, lifting hooks, bi-directional roller wheels, H.V. & L.V. porcelain bushings, off load voltage tap changer, 2 earthing terminals, oil conservator and silica gel breather, imported double float buckholz relay, pressure relief vent, dial type thermometer with alarm & trip contacts, rated Voltage 11000 / 415 / 230 Volts, suitable for an ambient temperature of 50°C, winding temperature 55°C and oil temperature 50°C, impedance 6.25% or as specified by IEC, system earth: Delta-Y, neutral solidly earthed (DYN-11) and all necessary accessories / materials, complete in all respects, including trenches etc , submission of technical data sheet. WAPDA (Concerned DISCO) approved. Connection Charges, with energy meter as per WAPDA standards and practice.					
	The Power transformers shall be fully tropicalized, three phase, step down, oil filled, self-cooled, core type, double wound, suitable for parallel operation and for outdoor installation. The Power transformers shall meet the minimum technical specifications but not limited to the following: Type 0.42 Capacity (Rated continuous) As specified Voltage ratio at no-load 11000/415 Volts Frequency 50 Hz Vector group Dy 11 Off load tapping arrangement (on HT side) -7.5%, -5%, -2.5%, 0% +2.5%, +5%, HT connection 11 kV Delta LT connection 400V with grounded star point					

	Temperature rise of oil over ambient temperature 400 C maximum Temperature rise of winding over ambient temperature 500 C maximum Impedance voltage (%) 4 Voltage regulation for normal operating conditions Not to exceed 2.5% of no-load Voltage regulation at 85% pf at full load (%) 3.5 Rated maximum voltage HT/LT 15kV/0.6 kV Basic insulation level 95 kV Power frequency withstand voltage 34 kV Rated short-time current (kA) 25 Switching inrush current (Amps) 6-7 times of HV line current Following information had to be provided: Applicable Standards/Codes Latest editions of the following standards and codes shall be applicable for all materials in scope of this section: BS90 - Power transformers BS14 - Transformer oil BS171 - Specifications for power transformer BS223 - High voltage bushings IEC7 - Power transformers					
I	630 kVA	Job	1			
12	<u>MV Cable and Termination Kits</u>					
a)	MV cable 1-core 240mm ² XLPE/PVC/AWA/PVC cable with aluminum conductor voltage grade:8.7/15 kV	Rm	1,500			
b)	Providing and fixing/installation indoor 1-core 240mm ² , 11KV, XLPE, heat shrink termination Kit complete in all respect as required.	Job	3			
c)	Providing and fixing/installation outdoor 1-core 240mm ² , 11KV, XLPE, heat shrink termination Kit complete in all respect as required.	Job	3			
13	<u>Provisional Sum</u>					

	Cost of obtaining 11kV connection from the DISCO/utility. The same shall be paid to the Supplier as per actual demand notice of the relevant DISCO/utility for the respective site.	Job	1			

Mandatory instructions:

1. The Bidder shall quote every item included in the BOQ.
2. Blank unit rates are not permitted.
3. Where an item is included in another rate, the Bidder shall state “Included” and identify the relevant priced item.
4. Unit rates shall include design, manufacture, supply, transportation, insurance, unloading, storage, installation, incidental works, testing, commissioning, labour, tools, equipment, documentation, warranty and all other obligations necessary for complete performance.
5. Quantities are indicative for Framework Agreement purposes. Payment under a Call-off/Work Order shall be based on the quantities ordered and actually executed or accepted, multiplied by the applicable agreed unit rates, subject to the Contract.
6. The unit rates shall remain applicable throughout the Framework Agreement Term.
7. The Bidder shall not add conditions, assumptions or qualifications in the Price Schedule.

LOT # 01 - Site 03: JINNAH BRIDGE (BOQ-03)

Note: Bidders must mention the brand/ model of each sub-item they are offering. The brand must be equivalent to the requirements mentioned in the Technical Specifications.

Item No.	Description	Unit	Indicative Quantity	Unit DDP Price (PKR)	Total DDP Price (PKR)	Offered Make/Model, where applicable
Design, supply, transportation, storage, installation, testing and commissioning of the following items of work, including all material, labor, tools and accessories etc. required for proper completion of each item as per specification, drawings and/or as directed by the Engineer.				(includes all kinds of taxes, after sales services, incidental services and costs to deliver, install, commission, inspect, and test goods at the place of destination)		
1	<u>Poles</u>					
1(a)	12 m high single bent arm conical octagonal galvanized steel pole with extension arm luminaire arrangement, base plate, J-rag bolts, 01 No. 2 Amp 10kA SP MCB, pole numbering and earthing etc. as shown on drawing.	Each	60			
1(b)	12 m high double bent arm conical octagonal galvanized steel pole with extension arm luminaire arrangement, base plate, J-rag bolts, 02 Nos. 2 Amp 10kA SP MCB, pole numbering and earthing etc. as shown on drawing.	Each	03			
1(c)	15 m high conical octagonal (hot dip) galvanized steel pole with circular angular top 4 Nos. luminaire arrangement, base plate, J-rag bolts, 2 Amp 04 Nos. SP MCB, pole numbering and earthing etc. as shown on drawing.	Each	04			
1(d)	Road Lighting Pole Foundation	Each	67			
2	<u>Road Lights & Accessories for Flood Light Installation</u>					

2(a)	Road Lighting LED Luminaries 120W make High-Pressure Sodium (HPS) lamp with PCA arc tube, high energy-efficient LED wattage matching the lumen output, min 24,000 hrs lumens on a 10 hrs start cycle, with built in standard to meet or exceed ANSI and IESNA roadway lighting standards or equivalent suitable for M-2 & M-3 roads of wattage suitable for the project requirements, fully IP 66 with corrosion resistant die cast aluminum housing, silicon gas kit, thermally hardened glass complete with LED drivers, surge protection and all accessories/ components required for the proper operation of the system. The luminaries shall be fully flexible for future upgrades and easy replacements for maintenance purposes. Supplier to submit lighting design calculation as per the offered light fixtures.	No.	60			
2(b)	Surface mounted Batten LED Luminaries 50W or above (dimension 1200 mm and above) make High-Pressure Sodium (HPS) lamp with PCA arc tube, high energy-efficient LED wattage matching the lumen output, min 24,000 hrs lumens on a 10 hrs start cycle, with built in standard to meet or exceed ANSI and IESNA roadway lighting standards or equivalent suitable for Bus stations of wattage suitable for the project requirements, fully IP 65 with polycarbonate housing, UV shielding, stainless steel brackets for mounting, maintenance free long lasting performance complete with LED drivers and all accessories/ components required for the proper operation of the system. The fitting shall be approved by the Engineer.	No.	20			
2(c)	Bollard light Luminaries LED 220 - 240 Volts 9 Watt with IP 65 or above protection complete in all respect or approved equivalent. The fitting shall be approved by the engineer.	No.	10			
2(d)	LED Planter Spike light 7W IP 65, 3000K, with corrosion resistant die cast aluminum housing, tempered glass complete with LED built-in driver and all accessories/components required for the proper operation of the system	No.	50			

2 (e)	Flood Lighting LED Luminaries 120W make High-Pressure Sodium (HPS) lamp with PCA arc tube, high energy-efficient LED wattage matching the lumen output, min 24,000 hrs lumens on a 10 hrs start cycle, with built in standard to meet or exceed ANSI and IESNA roadway lighting standards or equivalent suitable for M-2 & M-3 roads of wattage suitable for the project requirements, fully IP 65 with corrosion resistant die cast aluminum housing, silicon gas kit, thermally hardened glass complete with LED drivers, surge protection and all accessories/ components required for the proper operation of the system. The luminaries shall be fully flexible for future upgrades and easy replacements for maintenance purposes. Supplier to submit lighting design calculation as per the offered light fixtures.	No.	26			
2(f)	Hot dipped galvanized bracket for mounting of Flood lights alongwith all accessories.	Each	20			
3	<u>Junction Boxes</u>					
3(a)	Junction box size 12"x08"x06" (for Flood Light connection) with angle iron frame clad 16 SWG, sheet steel enclosure having high quality powder coated paint, color RAL 7032. Suitable for connections with IP 54 protection class, door, locking arrangement etc. and all other accessories as required for quality work.	No.	20			
-	Junction box size 12"x08"x06" (for Flood Light connection)					
-	01 No. 2 Amp. SP MCB, 10 kA					
-	04 No. Terminal block					
-	GI flexible pipe 1" dia					
3(b)	Junction boxes/Pull boxes for canopy lights size 5"x6"x3" with thermoplastic frame enclosure having color RAL 7032, terminal blocks & 25 mm dia GI flexible pipe to light point concealed/surface in walls/slab with clamping arrangements as required complete in all respects suitable for connections and all other accessories as required for quality work (Pull box shall be High-grade, UV-stabilized, halogen-free, and flame-retardant Polycarbonate, Minimum	No.	5			

	IK08 rating in accordance with IEC 62262, engineered to withstand high roadside vibrations, mechanical stress, and airborne gravel impact. High resistance against industrial atmospheric pollutants, road salt, automotive exhaust gases, and acid rain. - IEC 60695-2-11 and minimum IP67/IP69 submersible standards under IEC 60529 Class II (Total insulation / Double Insulated) with material integrity maintained up to +70°C high-performance outdoor-rated enclosure)).					
4	<u>Wiring & Accessories</u>					
4 (a)	Wiring of light point or fan point from switch to the point with 3x1.5mm ² PVC insulated single core cables in PVC pipes concealed in walls, columns and slabs including accessories, pvc box, 10 Amp. gang switch 1 or 2 way as required, one for each light or fan installed as in specifications.	Each	3			
4 (b)	Circuit wiring from DB MCBs to gang switches board and from switch board to another switch board with 3x2.5 mm ² (P+N+E) PVC insulated single core stranded cables in 25mm PVC pipe/conduit concealed in walls, columns and slabs as required complete in all respects.	Each	2			
4 (c)	The same as item No. 1.1 but from one light point to another light point.	Each	15			
5	<u>Low Voltage Power Cables</u>					
5(a)	Supply, installation, testing, commissioning and termination of following sizes of PVC insulated 600/1000 Voltage grade unarmored Copper cables laid direct in ground, pulled in PVC pipe already laid, on surface of wall or cable trays etc. including all accessories as required complete in all respects (Imported copper shall be used. Verified documentary evidence for source of copper & PVC shall be furnished prior to manufacturing)					
i	4 Core 50mm ²	Rm	150			
ii	4 Core 35mm ²	Rm	400			
iii	4 Core 25mm ²	Rm	800			
iv	4 Core 16mm ²	Rm	3,800			

v	4 Core 10mm ²	Rm	500			
vi	4 Core 6mm ²	Rm	500			
5(b)	Supply, installation, testing, commissioning and termination of following sizes of PVC insulated single core 450/750 Voltage grade unarmored Copper cables as circuit protective conductor/ earth continuity conductor (CPC/ECC) laid direct in ground, pulled in PVC pipe already laid, on surface of wall or cable trays etc. including all accessories as required complete in all respects (Imported copper shall be used. Verified documentary evidence for source of copper & PVC shall be furnished prior to manufacturing)					
i	1 Core 70mm ²	Rm	250			
ii	1 Core 25mm ²	Rm	200			
iii	1 Core 16mm ²	Rm	2,100			
iv	1 Core 10mm ²	Rm	500			
v	1 Core 6mm ²	Rm	500			
vi	3 Nos. 1 core 2.5 mm ² Cu. PVC 450/750 Voltage grade cable (stranded conductor) (Imported copper shall be used. Verified documentary evidence for source of copper & PVC shall be furnished prior to manufacturing) from junction box to the fitting through the hollow of pole.					
a)	For 12m Pole	No.	66			
b)	For 15m Pole	No.	16			
c)	For Flood Lights	No.	10			
6	<u>Main Panel Board (MPB)</u>					
	Main panel board to be installed outside the building designated as MAIN I/C cum O/G Supply with the following specs: 1. 14 SWG MS Sheet ,Pad Mounted , Front access type, Double Powder Coated ,IP class 44/54 & RAL 7032 including foundation/base frame. 2. O/G and I/C cable entries from Bottom. 3. Top Bottom Both removable plates.	Job	1			

	4. Front Covering plates for all breakers. 5. Earthing management (Neutral Earth Separate Bus Bar). 6. Door operated one LED tube light 230V, Thermostate temperature operated exhaust Fan in each Cubicle with all installation and operational accessories as per site requirements, with specifications and drawings and as directed by the Engineer.					
	Incoming					
	01 No. 1250 Amp TP (adj.) ACB RC= 66 kA					
	01 No. VSS (07 position)					
	01 No. 0-600 Volts AC DIGITAL Voltmeter					
	03 Nos. 1600/5 Amps Current Transformers					
	01 No. ASS (R-Y-B-OFF)					
	01 No. 0-1600 Amps AC DIGITAL Ammeter					
	06 Nos. RYB, ON, OFF, TRIP LED indication lights					
	Outgoing					
	01 No. 320 Amp MCCB TP (Adj.) RC=36kA					
	01 No. 125 Amp MCCB TP (Adj.) RC=25kA					
	02 No. 100 Amp MCCB TP (Adj.) RC=25kA					
	02 No. 80 Amp MCCB TP (Adj.) RC=25kA					
	07 Nos. 63 Amp MCCB TP (Adj.) RC=25kA					
	01 No. 50 Amp MCCB TP (Adj.) RC=25kA					
	04 No. 25 Amp MCCB TP, (Adj.) RC=25 kA					
	02 No. 80/100 Amp MCCB TP (adj.) RC=25kA (Spare)					
	02 No. 80/100 Amp MCCB TP (adj.) RC=25kA (Space)					
	01 No. Panel light with limit switch					
	Electrolytic copper bus bar 2500 Amp, Bus bar of appropriate size (size/cross-section should be clearly mentioned in quotation based on calculation according to relevant IEC standard), including nuts, bolts and washers, control MCB etc.					
7	Lighting Control Panel					

	Road lighting control panel with angle iron frame clad 14 SWG, sheet steel enclosure having high quality powder coated paint, color RAL 7032. The LCP shall be complete with incoming and outgoing MCCBs, Cu bus bars, magnetic contactors, photo-electric switches, meters, indication lights, construction with IP 54 protection class, door, locking arrangement etc. and all other accessories as required for quality work. MATERIAL 1 No. incoming 63 Amp.(adj.) TP, MCCB, 25 kA 4 No. outgoing 25 Amp. (adj.) TP MCCBs, 25 kA 2 No. outgoing 25 Amp. (adj.) TP MCCBs, 25 kA (Spare) 4 No. 32 Amp. magnetic contactor 2 No. 32 Amp. magnetic contactor (Spare) 3 No. photo-electric switches with timers and relays a) 1 No. ammeters 0-100 Amp, with selector switch (04 position) and CT of 100/5 Amp b) 3 No. indication lights c) 1 No. voltmeter with fuse and 7 position selector switch. d) 3 Ph, N & Earth copper bus bars Internal wiring & line-up terminals etc. Brass cable glands/accessories e) 06 Nos. Auto-Manual-OFF (3 position switches for operation in auto (with photocell) and normal (manual mode-photocell override) f) 06 Nos.ON & 06 Nos. OFF push button switch's with indication lights g) Panel Light with limit Switch	No	1			
8	<u>Power Factor Improvement (PFI) Panel (125 KVAR)</u>					
	14 SWG MS sheet clad IP 44/54 colour RAL 7032 double powder coated power factor improvement panel (PFI) including Cu busbar, incoming and outgoing circuit breaker, power capacitors, magnetic contactors, continuous digital p.f controller, on & off push buttons, indication lights, cable glands, top /bottom for cable entry of					

	appropriate size etc. complete with all components/ accessories as per specifications and drawings.					
	6 steps with continuous digital power factor and capacitor controller with all accessories etc. 01 No. Manual/OFF/Auto selector switch 04 Nos. 25 kVAR capacitor 02 Nos. 12.5 kVAR capacitor 04 Nos. 65A Magnetic contactor (AC-3) 02 Nos. 32A Magnetic contactor (AC-3) 04 Nos. 50A MCCB, TP (Adj.) RC=25 kA Circuit breaker, Icu=100%Ics" 02 Nos. 32A MCCB, TP (Adj.) RC=25 kA Circuit breaker, Icu=100%Ics" 15 Nos. Indication light (for magnetic contactor and phase) 12 Nos. Push Buttons (ON/OFF) 12 Nos. Auxiliary contactor (NO/NC) Panel light with limit switch 01 No. Exhaust fan 6" & Louver 8" sweep with thermostat relay and all accessories etc. (For each cabinet) 14 SWG steel sheet Panel RAL 7032, IP= 44/54 and all other accessories, All other accessories required for completion of the quality works including Cable gland and lugs etc Electrolytic copper bus bar with electrical grade PVC mountings 3 for each, nuts, bolts and washers, control MCB etc. (320 Amps. R+Y+B N, 50 Hz, 415 V, AC) including cable glands at top/bottom entry for cable) Suppliers shall submit the genuine certificate from the manufacturer/authorized agent clear by indicating the project name make/model/rating of MCCB, MCB, magnetic contactors, terminal blocks and voltmeters/ ammeter alongwith warranties.	Job	1			
10	Earthing					

A	Earth point comprising of 10 ft. 5/8" dia. (16 mm dia) copper coated M.S. rods driven in ground near each lighting control panel. The earthing rods shall be completed with fixing clamps etc.	Each	5			
B	Bore type, earthing up to permanent water level/moist soil by arrangement of earth pit/point comprising of concrete/brickwork housing with lifting cover 50mm perforated GI pipe, appropriate bare copper stranded conductor as per details in drawing. The earthing and bonding shall be complete with fixing clamps etc. & all metal works shall be bonded to the proposed earthing network.	Job	5			
C	Drilling of earth bore 3" dia 100 ft. deep or up to permanent water table.					
D	Supply and installation of G.I pipe 2" dia 14 SWG to be installed in pre-made bore including all accessories like tees, bends, sockets etc. Pipe shall be connected to tinned copper spike as per detail shown on drawing, complete in all respects.					
F	Supply and installation of tinned copper spike to be manufactured as per detail shown on drawing. Spike shall be connected/screwed at bottom of G.I pipe including all accessories like nuts and bolts complete in all respect.					
G	Supply and installation of 2 Nos. 70 mm ² bare stranded electrolytic copper conductor lead in preload G.I pipe and connected to tinned copper spike as shown on drawing. 02Nos. leads to be installed including all accessories like brass nuts, bolts, washers etc complete in all respect.					
H	Supply and installation of tinned earth test link in earthing pit consisting of copper plate (12"x2"x1/2") with fixing arrangement on the wall of man hole including brass nuts, bolts washers lugs etc. complete in all respect.					
I	Construction of earthing pit (manhole) of internal size 18"x18"x24" deep with 9" thick brick wall with cement mortar, internal plaster 1:4, RCC 4" thick cover with lifting hooks including all accessories complete in all respect.					

J	Testing and commissioning of the earthing system along with all testing accessories complete in all respect.					
11	<u>Transformer (As Per WAPDA Specs)</u>					
	Supply and Installation of Outdoor type pad mounted transformer (HT & LT Compartment) with foundation and all accessories. Oil immersed / dry type transformer manufactured according to BS-171, IEC-60076, specifications and consisting of filling device, drain plug, oil level indicator, lifting hooks, bi-directional roller wheels, H.V. & L.V. porcelain bushings, off load voltage tap changer, 2 earthing terminals, oil conservator and silica gel breather, imported double float buckholz relay, pressure relief vent, dial type thermometer with alarm & trip contacts, rated Voltage 11000 / 415 / 230 Volts, suitable for an ambient temperature of 50°C, winding temperature 55°C and oil temperature 50°C, impedance 6.25% or as specified by IEC, system earth: Delta-Y, neutral solidly earthed (DYN-11) and all necessary accessories / materials, complete in all respects, including trenches etc , submission of technical data sheet. WAPDA (Concerned DISCO) approved. Connection Charges, with energy meter as per WAPDA standards and practice.					
	The Power transformers shall be fully tropicalized, three phase, step down, oil filled, self-cooled, core type, double wound, suitable for parallel operation and for outdoor installation. The Power transformers shall meet the minimum technical specifications but not limited to the following: Type 0.42 Capacity (Rated continuous) As specified Voltage ratio at no-load 11000/415 Volts Frequency 50 Hz Vector group Dy 11 Off load tapping arrangement (on HT side) -7.5%, -5%, -2.5%, 0% +2.5%, +5%, HT connection 11 kV Delta LT connection 400V with grounded star point Temperature rise of oil over ambient temperature 400 C maximum					

	Temperature rise of winding over ambient temperature 500 C maximum Impedance voltage (%) 4 Voltage regulation for normal operating conditions Not to exceed 2.5% of no-load Voltage regulation at 85% pf at full load (%) 3.5 Rated maximum voltage HT/LT 15kV/0.6 kV Basic insulation level 95 kV Power frequency withstand voltage 34 kV Rated short-time current (kA) 25 Switching inrush current (Amps) 6-7 times of HV line current Following information had to be provided: Applicable Standards/Codes Latest editions of the following standards and codes shall be applicable for all materials in scope of this section: BS90 - Power transformers BS14 - Transformer oil BS171 - Specifications for power transformer BS223 - High voltage bushings IEC7 - Power transformers					
I	630 kVA	Job	1			
12	<u>MV Cable and Termination Kits</u>					
a)	MV cable 1-core 240mm ² XLPE/PVC/AWA/PVC cable with aluminum conductor voltage grade:8.7/15 kV	Rm	1,500			
b)	Providing and fixing/installation indoor 1-core 240mm ² , 11KV, XLPE, heat shrink termination Kit complete in all respect as required.	Job	3			
c)	Providing and fixing/installation outdoor 1-core 240mm ² , 11KV, XLPE, heat shrink termination Kit complete in all respect as required.	Job	3			
13	<u>Provisional Sum</u>					

Cost of obtaining 11kV connection from the DISCO/utility. The same shall be paid to the Supplier as per actual demand notice of the relevant DISCO/utility for the respective site.	Job	1			
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Mandatory instructions:

1. The Bidder shall quote every item included in the BOQ.
2. Blank unit rates are not permitted.
3. Where an item is included in another rate, the Bidder shall state “Included” and identify the relevant priced item.
4. Unit rates shall include design, manufacture, supply, transportation, insurance, unloading, storage, installation, incidental works, testing, commissioning, labour, tools, equipment, documentation, warranty and all other obligations necessary for complete performance.
5. Quantities are indicative for Framework Agreement purposes. Payment under a Call-off/Work Order shall be based on the quantities ordered and actually executed or accepted, multiplied by the applicable agreed unit rates, subject to the Contract.
6. The unit rates shall remain applicable throughout the Framework Agreement Term.

The Bidder shall not add conditions, assumptions or qualifications in the Price Schedule.

LOT # 01 - Site 04: CHASHMA BARRAGE (BOQ-04)

Note: Bidders must mention the brand/ model of each sub-item they are offering. The brand must be equivalent to the requirements mentioned in the Technical Specifications.

Item No.	Description	Unit	Indicative Quantity	Unit DDP Price (PKR)	Total DDP Price (PKR)	Offered Make/Model, where applicable
Design, supply, transportation, storage, installation, testing and commissioning of the following items of work, including all material, labor, tools and accessories etc. required for proper completion of each item as per specification, drawings and/or as directed by the Engineer.				(includes all kinds of taxes, after sales services, incidental services and costs to deliver, install, commission, inspect, and test goods at the place of destination)	(includes all kinds of taxes, after sales services, incidental services and costs to deliver, install, commission, inspect, and test goods at the place of destination)	
1	<u>Poles</u>					
1(a)	12 m high single bent arm conical octagonal galvanized steel pole with extension arm luminaire arrangement, base plate, J-rag bolts, 01 No. 2 Amp 10kA SP MCB, pole numbering and earthing etc. as shown on drawing.	Each	50			
1(b)	12 m high double bent arm conical octagonal galvanized steel pole with extension arm luminaire arrangement, base plate, J-rag bolts, 02 Nos. 2 Amp 10kA SP MCB, pole numbering and earthing etc. as shown on drawing.	Each	05			
1(c)	15 m high conical octagonal (hot dip) galvanized steel pole with circular angular top 4 Nos. luminaire arrangement, base plate, J-	Each	04			

	rag bolts, 2 Amp 04 Nos. SP MCB, pole numbering and earthing etc. as shown on drawing.					
1(d)	Road Lighting Pole Foundation	Each	59			
2	<u>Road Lights & Accessories for Flood Light Installation</u>					
2(a)	Road Lighting LED Luminaries 120W make High-Pressure Sodium (HPS) lamp with PCA arc tube, high energy-efficient LED wattage matching the lumen output, min 24,000 hrs lumens on a 10 hrs start cycle, with built in standard to meet or exceed ANSI and IESNA roadway lighting standards or equivalent suitable for M-2 & M-3 roads of wattage suitable for the project requirements, fully IP 66 with corrosion resistant die cast aluminum housing, silicon gas kit, thermally hardened glass complete with LED drivers, surge protection and all accessories/ components required for the proper operation of the system. The luminaries shall be fully flexible for future upgrades and easy replacements for maintenance purposes. Supplier to submit lighting design calculation as per the offered light fixtures.	No.	60			
2(b)	Surface mounted Batten LED Luminaries 50W or above (dimension 1200 mm and above) make High-Pressure Sodium (HPS) lamp with PCA arc tube, high energy-efficient LED wattage matching the lumen output, min 24,000 hrs lumens on a 10 hrs start cycle, with built in standard to meet or exceed ANSI and IESNA roadway lighting standards or equivalent suitable for Bus stations of wattage suitable for the project requirements, fully IP 65 with polycarbonate housing, UV shielding, stainless steel brackets for mounting, maintenance free long lasting performance complete with LED drivers and all accessories/ components required for the proper operation of the system. The fitting shall be approved by the Engineer.	No.	20			

2(c)	Bollard light Luminaries LED 220 - 240 Volts 9 Watt with IP 65 or above protection complete in all respect or approved equivalent. The fitting shall be approved by the engineer.	No.	10			
2(d)	LED Planter Spike light 7W IP 65, 3000K, with corrosion resistant die cast aluminum housing, tempered glass complete with LED built-in driver and all accessories/components required for the proper operation of the system	No.	40			
2 (e)	Flood Lighting LED Luminaries 120W make High-Pressure Sodium (HPS) lamp with PCA arc tube, high energy-efficient LED wattage matching the lumen output, min 24,000 hrs lumens on a 10 hrs start cycle, with built in standard to meet or exceed ANSI and IESNA roadway lighting standards or equivalent suitable for M-2 & M-3 roads of wattage suitable for the project requirements, fully IP 65 with corrosion resistant die cast aluminum housing, silicon gas kit, thermally hardened glass complete with LED drivers, surge protection and all accessories/ components required for the proper operation of the system. The luminaries shall be fully flexible for future upgrades and easy replacements for maintenance purposes. Supplier to submit lighting design calculation as per the offered light fixtures.	No.	25			
2(f)	Hot dipped galvanized bracket for mounting of Flood lights alongwith all accessories.	Each	10			
3	<u>Junction Boxes</u>					
3(a)	Junction box size 12"x08"x06" (for Flood Light connection) with angle iron frame clad 16 SWG, sheet steel enclosure having high quality powder coated paint, color RAL 7032. Suitable for connections with IP 54 protection class, door, locking arrangement etc. and all other accessories as required for quality work.	No.	2			
-	Junction box size 12"x08"x06" (for Flood Light connection)					
-	01 No. 2 Amp. SP MCB, 10 kA					
-	04 No. Terminal block					
-	GI flexible pipe 1" dia					

3(b)	Junction boxes/Pull boxes for canopy lights size 5"x6"x3" with thermoplastic frame enclosure having color RAL 7032, terminal blocks & 25 mm dia GI flexible pipe to light point concealed/surface in walls/slab with clamping arrangements as required complete in all respects suitable for connections and all other accessories as required for quality work (Pull box shall be High-grade, UV-stabilized, halogen-free, and flame-retardant Polycarbonate, Minimum IK08 rating in accordance with IEC 62262, engineered to withstand high roadside vibrations, mechanical stress, and airborne gravel impact. High resistance against industrial atmospheric pollutants, road salt, automotive exhaust gases, and acid rain. - IEC 60695-2-11 and minimum IP67/IP69 submersible standards under IEC 60529 Class II (Total insulation / Double Insulated) with material integrity maintained up to +70°C high-performance outdoor-rated enclosure)).	No.	5			
4	<u>Wiring & Accessories</u>					
4 (a)	Wiring of light point or fan point from switch to the point with 3x1.5mm ² PVC insulated single core cables in PVC pipes concealed in walls, columns and slabs including accessories, pvc box, 10 Amp. gang switch 1 or 2 way as required, one for each light or fan installed as in specifications.	Each	3			
4 (b)	Circuit wiring from DB MCBs to gang switches board and from switch board to another switch board with 3x2.5 mm ² (P+N+E) PVC insulated single core stranded cables in 25mm PVC pipe/conduit concealed in walls, columns and slabs as required complete in all respects.	Each	2			
4 (c)	The same as item No. 1.1 but from one light point to another light point.	Each	15			
5	<u>Low Voltage Power Cables</u>					
5(a)	Supply, installation, testing, commissioning and termination of following sizes of PVC insulated 600/1000 Voltage grade unarmored Copper cables laid direct in ground, pulled in PVC pipe					

	already laid, on surface of wall or cable trays etc. including all accessories as required complete in all respects (Imported copper shall be used. Verified documentary evidence for source of copper & PVC shall be furnished prior to manufacturing)					
i	4 Core 50mm ²	Rm	150			
ii	4 Core 35mm ²	Rm	400			
iii	4 Core 25mm ²	Rm	800			
iv	4 Core 16mm ²	Rm	2,500			
v	4 Core 10mm ²	Rm	500			
vi	4 Core 6mm ²	Rm	500			
5(b)	Supply, installation, testing, commissioning and termination of following sizes of PVC insulated single core 450/750 Voltage grade unarmored Copper cables as circuit protective conductor/ earth continuity conductor (CPC/ECC) laid direct in ground, pulled in PVC pipe already laid, on surface of wall or cable trays etc. including all accessories as required complete in all respects (Imported copper shall be used. Verified documentary evidence for source of copper & PVC shall be furnished prior to manufacturing)					
i	1 Core 70mm ²	Rm	250			
ii	1 Core 25mm ²	Rm	200			
iii	1 Core 16mm ²	Rm	2,000			
iv	1 Core 10mm ²	Rm	500			
v	1 Core 6mm ²	Rm	500			
vi	3 Nos. 1 core 2.5 mm ² Cu. PVC 450/750 Voltage grade cable (stranded conductor) (Imported copper shall be used. Verified documentary evidence for source of copper & PVC shall be furnished prior to manufacturing) from junction box to the fitting through the hollow of pole.					
a)	For 12m Pole	No.	60			
b)	For 15m Pole	No.	16			
c)	For Flood Lights	No.	10			

6	<u>Main Panel Board (MPB)</u>					
	Main panel board to be installed outside the building designated as MAIN I/C cum O/G Supply with the following specs: 1. 14 SWG MS Sheet ,Pad Mounted , Front access type, Double Powder Coated ,IP class 44/54 & RAL 7032 including foundation/base frame. 2. O/G and I/C cable entries from Bottom. 3. Top Bottom Both removable plates. 4. Front Covering plates for all breakers. 5. Earthing management (Neutral Earth Separate Bus Bar). 6. Door operated one LED tube light 230V,Thermostate temperature operated exhaust Fan in each Cubicle with all installation and operational accessories as per site requirements, with specifications and drawings and as directed by the Engineer.	Job	1			
	<u>Incoming</u>					
	01 No. 1250 Amp TP (adj.) ACB RC= 66 kA					
	01 No. VSS (07 position)					
	01 No. 0-600 Volts AC DIGITAL Voltmeter					
	03 Nos. 1600/5 Amps Current Transformers					
	01 No. ASS (R-Y-B-OFF)					
	01 No. 0-1600 Amps AC DIGITAL Ammeter					
	06 Nos. RYB, ON,OFF,TRIP LED indication lights					
	<u>Outgoing</u>					
	01 No. 320 Amp MCCB TP (Adj.) RC=36kA					
	01 No. 125 Amp MCCB TP (Adj.) RC=25kA					
	02 No. 100 Amp MCCB TP (Adj.) RC=25kA					
	02 No. 80 Amp MCCB TP (Adj.) RC=25kA					
	07 Nos. 63 Amp MCCB TP (Adj.) RC=25kA					
	01 No. 50 Amp MCCB TP (Adj.) RC=25kA					

	04 No. 25 Amp MCCB TP, (Adj.) RC=25 kA					
	02 No. 80/100 Amp MCCB TP (adj.) RC=25kA (Spare)					
	02 No. 80/100 Amp MCCB TP (adj.) RC=25kA (Space)					
	01 No. Panel light with limit switch					
	Electrolytic copper bus bar 2500 Amp, Bus bar of appropriate size (size/cross-section should be clearly mentioned in quotation based on calculation according to relevant IEC standard), including nuts, bolts and washers, control MCB etc.					
7	<u>Lighting Control Panel</u>					
	Road lighting control panel with angle iron frame clad 14 SWG, sheet steel enclosure having high quality powder coated paint, color RAL 7032. The LCP shall be complete with incoming and outgoing MCCBs, Cu bus bars, magnetic contactors, photo-electric switches, meters, indication lights, construction with IP 54 protection class, door, locking arrangement etc. and all other accessories as required for quality work. MATERIAL 1 No. incoming 63 Amp.(adj.) TP, MCCB, 25 kA 4 No. outgoing 25 Amp. (adj.) TP MCCBs, 25 kA 2 No. outgoing 25 Amp. (adj.) TP MCCBs, 25 kA (Spare) 4 No. 32 Amp. magnetic contactor 2 No. 32 Amp. magnetic contactor (Spare) 3 No. photo-electric switches with timers and relays a) 1 No. ammeters 0-100 Amp, with selector switch (04 position) and CT of 100/5 Amp b) 3 No. indication lights c) 1 No. voltmeter with fuse and 7 position selector switch. d) 3 Ph, N & Earth copper bus bars Internal wiring & line-up terminals etc. Brass cable glands/accessories e) 06 Nos. Auto-Manual-OFF (3 position switches for operation in auto (with photocell) and normal (manual mode-photocell override)	No	1			

	f) 06 Nos.ON & 06 Nos. OFF push button switch's with indication lights g) Panel Light with limit Switch					
8	<u>Power Factor Improvement (PFI) Panel (125 KVAR)</u>					
	14 SWG MS sheet clad IP 44/54 colour RAL 7032 double powder coated power factor improvement panel (PFI) including Cu busbar, incoming and outgoing circuit breaker, power capacitors, magnetic contactors, continuous digital p.f controller, on & off push buttons, indication lights, cable glands, top /bottom for cable entry of appropriate size etc. complete with all components/ accessories as per specifications and drawings.					
	6 steps with continuous digital power factor and capacitor controller with all accessories etc. 01 No. Manual/OFF/Auto selector switch 04 Nos. 25 kVAR capacitor 02 Nos. 12.5 kVAR capacitor 04 Nos. 65A Magnetic contactor (AC-3) 02 Nos. 32A Magnetic contactor (AC-3) 04 Nos. 50A MCCB, TP (Adj.) RC=25 kA Circuit breaker, Icu=100%Ics" 02 Nos. 32A MCCB, TP (Adj.) RC=25 kA Circuit breaker, Icu=100%Ics" 15 Nos. Indication light (for magnetic contactor and phase) 12 Nos. Push Buttons (ON/OFF) 12 Nos. Auxiliary contactor (NO/NC) Panel light with limit switch 01 No. Exhaust fan 6" & Louver 8" sweep with thermostat relay and all accessories etc. (For each cabinet) 14 SWG steel sheet Panel RAL 7032, IP= 44/54 and all other accessories, All other accessories required for completion of the quality works including Cable gland and lugs etc	Job	1			

	Electrolytic copper bus bar with electrical grade PVC mountings 3 for each, nuts, bolts and washers, control MCB etc. (320 Amps. R+Y+B N, 50 Hz, 415 V, AC) including cable glands at top/bottom entry for cable) Suppliers shall submit the genuine certificate from the manufacturer/authorized agent clear by indicating the project name make/model/rating of MCCB, MCB, magnetic contactors, terminal blocks and voltmeters/ ammeter alongwith warranties.					
09	<u>Earthing</u>					
A	Earth point comprising of 10 ft. 5/8" dia. (16 mm dia) copper coated M.S. rods driven in ground near each lighting control panel. The earthing rods shall be completed with fixing clamps etc.	Each	5			
B	Bore type, earthing up to permanent water level/moist soil by arrangement of earth pit/point comprising of concrete/brickwork housing with lifting cover 50mm perforated GI pipe, appropriate bare copper stranded conductor as per details in drawing. The earthing and bonding shall be complete with fixing clamps etc. & all metal works shall be bonded to the proposed earthing network.	Job	5			
C	Drilling of earth bore 3" dia 100 ft. deep or up to permanent water table.					
D	Supply and installation of G.I pipe 2" dia 14 SWG to be installed in pre-made bore including all accessories like tees, bends, sockets etc. Pipe shall be connected to tinned copper spike as per detail shown on drawing, complete in all respects.					
F	Supply and installation of tinned copper spike to be manufactured as per detail shown on drawing. Spike shall be connected/screwed at bottom of G.I pipe including all accessories like nuts and bolts complete in all respect.					
G	Supply and installation of 2 Nos. 70 mm ² bare stranded electrolytic copper conductor lead in preload G.I pipe and connected to tinned copper spike as shown on drawing. 02Nos.leads to be installed					

	including all accessories like brass nuts, bolts, washers etc complete in all respect.					
H	Supply and installation of tinned earth test link in earthing pit consisting of copper plate (12"x2"x1/2") with fixing arrangement on the wall of man hole including brass nuts, bolts washers lugs etc. complete in all respect.					
I	Construction of earthing pit (manhole) of internal size 18"x18"x24" deep with 9" thick brick wall with cement mortar, internal plaster 1:4, RCC 4" thick cover with lifting hooks including all accessories complete in all respect.					
J	Testing and commissioning of the earthing system along with all testing accessories complete in all respect.					
10	<u>Transformer (As Per WAPDA Specs)</u>					
	Supply and Installation of Outdoor type pad mounted transformer (HT & LT Compartment) with foundation and all accessories. Oil immersed / dry type transformer manufactured according to BS-171, IEC-60076, specifications and consisting of filling device, drain plug, oil level indicator, lifting hooks, bi-directional roller wheels, H.V. & L.V. porcelain bushings, off load voltage tap changer, 2 earthing terminals, oil conservator and silica gel breather, imported double float buckholz relay, pressure relief vent, dial type thermometer with alarm & trip contacts, rated Voltage 11000 / 415 / 230 Volts, suitable for an ambient temperature of 50°C, winding temperature 55°C and oil temperature 50°C, impedance 6.25% or as specified by IEC, system earth: Delta-Y, neutral solidly earthed (DYN-11) and all necessary accessories / materials, complete in all respects, including trenches etc , submission of technical data sheet. WAPDA (Concerned DISCO) approved. Connection Charges, with energy meter as per WAPDA standards and practice.					

The Power transformers shall be fully tropicalized, three phase, step down, oil filled, self-cooled, core type, double wound, suitable for parallel operation and for outdoor installation. The Power transformers shall meet the minimum technical specifications but not limited to the following: Type 0.42 Capacity (Rated continuous) As specified Voltage ratio at no-load 11000/415 Volts Frequency 50 Hz Vector group Dy 11 Off load tapping arrangement (on HT side) -7.5%, -5%, -2.5%, 0% +2.5%, +5%, HT connection 11 kV Delta LT connection 400V with grounded star point Temperature rise of oil over ambient temperature 400 C maximum Temperature rise of winding over ambient temperature 500 C maximum Impedance voltage (%) 4 Voltage regulation for normal operating conditions Not to exceed 2.5% of no-load Voltage regulation at 85% pf at full load (%) 3.5 Rated maximum voltage HT/LT 15kV/0.6 kV Basic insulation level 95 kV Power frequency withstand voltage 34 kV Rated short-time current (kA) 25 Switching inrush current (Amps) 6-7 times of HV line current Following information had to be provided: Applicable Standards/Codes Latest editions of the following standards and codes shall be applicable for all materials in scope of this section: BS90 - Power transformers BS14 - Transformer oil BS171 - Specifications for power transformer BS223 - High voltage bushings IEC7 - Power transformers					
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I	630 kVA	Job	1			
11	<u>MV Cable and Termination Kits</u>					
a)	MV cable 1-core 240mm ² XLPE/PVC/AWA/PVC cable with aluminum conductor voltage grade:8.7/15 kV	Rm	1,500			
b)	Providing and fixing/installation indoor 1-core 240mm ² , 11KV, XLPE, heat shrink termination Kit complete in all respect as required.	Job	3			
c)	Providing and fixing/installation outdoor 1-core 240mm ² , 11KV, XLPE, heat shrink termination Kit complete in all respect as required.	Job	3			
12	<u>Provisional Sum</u>					
	Cost of obtaining 11kV connection from the DISCO/utility. The same shall be paid to the Supplier as per actual demand notice of the relevant DISCO/utility for the respective site.	Job	1			

LOT # 02 (GUDDU BARRAGE & KOTRI BRIDGE):

LOT # 02 - Site 01: GUDDU BARRAGE (BOQ-05)

Note: Bidders must mention the brand/ model of each sub-item they are offering. The brand must be equivalent to the requirements mentioned in the Technical Specifications.

Item No.	Description	Unit	Indicative Quantity	Unit DDP Price (PKR)	Total DDP Price (PKR)	Offered Make/Model, where applicable
Design, supply, transportation, storage, installation, testing and commissioning of the following items of work, including all material, labor, tools and accessories etc. required for proper completion of each item as per specification, drawings and/or as directed by the Engineer.				(includes all kinds of taxes, after sales services, incidental services and costs to deliver, install, commission, inspect, and test goods at the place of destination)	(includes all kinds of taxes, after sales services, incidental services and costs to deliver, install, commission, inspect, and test goods at the place of destination)	
1	<u>Poles</u>					
1(a)	12 m high single bent arm conical octagonal galvanized steel pole with extension arm luminaire arrangement, base plate, J-rag bolts, 01 No. 2 Amp 10kA SP MCB, pole numbering and earthing etc. as shown on drawing.	Each	46			
1(b)	12 m high double bent arm conical octagonal galvanized steel pole with extension arm luminaire arrangement, base plate, J-rag bolts, 02	Each	02			

	Nos. 2 Amp 10kA SP MCB, pole numbering and earthing etc. as shown on drawing.					
1(c)	15 m high conical octagonal (hot dip) galvanized steel pole with circular angular top 4 Nos. luminaire arrangement, base plate, J-rag bolts, 2 Amp 04 Nos. SP MCB, pole numbering and earthing etc. as shown on drawing.	Each	02			
1(d)	Road Lighting Pole Foundation	Each	50			
2	<u>Road Lights & Accessories for Flood Light Installation</u>					
2(a)	Road Lighting LED Luminaries 120W make High-Pressure Sodium (HPS) lamp with PCA arc tube, high energy-efficient LED wattage matching the lumen output, min 24,000 hrs lumens on a 10 hrs start cycle, with built in standard to meet or exceed ANSI and IESNA roadway lighting standards or equivalent suitable for M-2 & M-3 roads of wattage suitable for the project requirements, fully IP 66 with corrosion resistant die cast aluminum housing, silicon gas kit, thermally hardened glass complete with LED drivers, surge protection and all accessories/ components required for the proper operation of the system. The luminaries shall be fully flexible for future upgrades and easy replacements for maintenance purposes. Supplier to submit lighting design calculation as per the offered light fixtures.	No.	50			
2(b)	Surface mounted Batten LED Luminaries 50W or above (dimension 1200 mm and above) make High-Pressure Sodium (HPS) lamp with PCA arc tube, high energy-efficient LED wattage matching the lumen output, min 24,000 hrs lumens on a 10 hrs start cycle, with built in standard to meet or exceed ANSI and IESNA roadway lighting standards or equivalent suitable for Bus stations of wattage suitable for the project requirements, fully IP 65 with polycarbonate housing, UV shielding, stainless steel brackets for mounting, maintenance free long lasting performance complete with LED drivers and all accessories/ components required	No.	20			

	for the proper operation of the system. The fitting shall be approved by the Engineer.					
2(c)	Bollard light Luminaries LED 220 - 240 Volts 9 Watt with IP 65 or above protection complete in all respect or approved equivalent. The fitting shall be approved by the engineer.	No.	10			
2(d)	LED Planter Spike light 7W IP 65, 3000K, with corrosion resistant die cast aluminum housing, tempered glass complete with LED built-in driver and all accessories/components required for the proper operation of the system	No.	46			
2 (e)	Flood Lighting LED Luminaries 120W make High-Pressure Sodium (HPS) lamp with PCA arc tube, high energy-efficient LED wattage matching the lumen output, min 24,000 hrs lumens on a 10 hrs start cycle, with built in standard to meet or exceed ANSI and IESNA roadway lighting standards or equivalent suitable for M-2 & M-3 roads of wattage suitable for the project requirements, fully IP 65 with corrosion resistant die cast aluminum housing, silicon gas kit, thermally hardened glass complete with LED drivers, surge protection and all accessories/ components required for the proper operation of the system. The luminaries shall be fully flexible for future upgrades and easy replacements for maintenance purposes. Supplier to submit lighting design calculation as per the offered light fixtures.	No.	18			
2(f)	Hot dipped galvanized bracket for mounting of Flood lights alongwith all accessories.	Each	10			
3	<u>Junction Boxes</u>					
3(a)	Junction box size 12"x08"x06" (for Flood Light connection) with angle iron frame clad 16 SWG, sheet steel enclosure having high quality powder coated paint, color RAL 7032. Suitable for connections with IP 54 protection class, door, locking arrangement etc. and all other accessories as required for quality work.	No.	10			
-	Junction box size 12"x08"x06" (for Flood Light connection)					
-	01 No. 2 Amp. SP MCB, 10 kA					
-	04 No. Terminal block					

-	GI flexible pipe 1" dia					
3(b)	Junction boxes/Pull boxes for canopy lights size 5"x6"x3" with thermoplastic frame enclosure having color RAL 7032, terminal blocks & 25 mm dia GI flexible pipe to light point concealed/surface in walls/slab with clamping arrangements as required complete in all respects suitable for connections and all other accessories as required for quality work (Pull box shall be High-grade, UV-stabilized, halogen-free, and flame-retardant Polycarbonate, Minimum IK08 rating in accordance with IEC 62262, engineered to withstand high roadside vibrations, mechanical stress, and airborne gravel impact. High resistance against industrial atmospheric pollutants, road salt, automotive exhaust gases, and acid rain. - IEC 60695-2-11 and minimum IP67/IP69 submersible standards under IEC 60529 Class II (Total insulation / Double Insulated) with material integrity maintained up to +70°C high-performance outdoor-rated enclosure)).	No.	2			
4	Wiring & Accessories					
4 (a)	Wiring of light point or fan point from switch to the point with 3x1.5mm ² PVC insulated single core cables in PVC pipes concealed in walls, columns and slabs including accessories, pvc box, 10 Amp. gang switch 1 or 2 way as required, one for each light or fan installed as in specifications.	Each	3			
4 (b)	Circuit wiring from DB MCBs to gang switches board and from switch board to another switch board with 3x2.5 mm ² (P+N+E) PVC insulated single core stranded cables in 25mm PVC pipe/conduit concealed in walls, columns and slabs as required complete in all respects.	Each	2			
4 (c)	The same as item No. 1.1 but from one light point to another light point.	Each	15			
5	Low Voltage Power Cables					
5(a)	Supply, installation, testing, commissioning and termination of following sizes of PVC insulated 600/1000 Voltage grade unarmored Copper cables laid direct in ground, pulled in PVC pipe already laid,					

	on surface of wall or cable trays etc. including all accessories as required complete in all respects (Imported copper shall be used. Verified documentary evidence for source of copper & PVC shall be furnished prior to manufacturing)					
i	4 Core 50mm ²	Rm	150			
ii	4 Core 35mm ²	Rm	400			
iii	4 Core 25mm ²	Rm	800			
iv	4 Core 16mm ²	Rm	2,000			
v	4 Core 10mm ²	Rm	500			
vi	4 Core 6mm ²	Rm	500			
5(b)	Supply, installation, testing, commissioning and termination of following sizes of PVC insulated single core 450/750 Voltage grade unarmored Copper cables as circuit protective conductor/ earth continuity conductor (CPC/ECC) laid direct in ground, pulled in PVC pipe already laid, on surface of wall or cable trays etc. including all accessories as required complete in all respects (Imported copper shall be used. Verified documentary evidence for source of copper & PVC shall be furnished prior to manufacturing)					
i	1 Core 70mm ²	Rm	250			
ii	1 Core 25mm ²	Rm	200			
iii	1 Core 16mm ²	Rm	1,600			
iv	1 Core 10mm ²	Rm	500			
v	1 Core 6mm ²	Rm	500			
vi	3 Nos. 1 core 2.5 mm ² Cu. PVC 450/750 Voltage grade cable (stranded conductor) (Imported copper shall be used. Verified documentary evidence for source of copper & PVC shall be furnished prior to manufacturing) from junction box to the fitting through the hollow of pole.					
a)	For 12m Pole	No.	50			
b)	For 15m Pole	No.	08			
c)	For Flood Lights	No.	10			

6	<u>Main Panel Board (MPB)</u>					
	Main panel board to be installed outside the building designated as MAIN I/C cum O/G Supply with the following specs: 1. 14 SWG MS Sheet ,Pad Mounted , Front access type, Double Powder Coated ,IP class 44/54 & RAL 7032 including foundation/base frame. 2. O/G and I/C cable entries from Bottom.					
	3. Top Bottom Both removable plates.					
	4. Front Covering plates for all breakers. 5. Earthing management (Neutral Earth Separate Bus Bar). 6. Door operated one LED tube light 230V, Thermostate temperature operated exhaust Fan in each Cubicle with all installation and operational accessories as per site requirements, with specifications and drawings and as directed by the Engineer.	Job	1			
	<u>Incoming</u>					
	01 No. 1250 Amp TP (adj.) ACB RC= 66 kA					
	01 No. VSS (07 position)					
	01 No. 0-600 Volts AC DIGITAL Voltmeter					
	03 Nos. 1600/5 Amps Current Transformers					
	01 No. ASS (R-Y-B-OFF)					
	01 No. 0-1600 Amps AC DIGITAL Ammeter					
	06 Nos. RYB, ON, OFF, TRIP LED indication lights					
	<u>Outgoing</u>					
	01 No. 320 Amp MCCB TP (Adj.) RC=36kA					
	01 No. 125 Amp MCCB TP (Adj.) RC=25kA					
	02 No. 100 Amp MCCB TP (Adj.) RC=25kA					
	02 No. 80 Amp MCCB TP (Adj.) RC=25kA					
	07 Nos. 63 Amp MCCB TP (Adj.) RC=25kA					
	01 No. 50 Amp MCCB TP (Adj.) RC=25kA					

	04 No. 25 Amp MCCB TP, (Adj.) RC=25 kA					
	02 No. 80/100 Amp MCCB TP (adj.) RC=25kA (Spare)					
	02 No. 80/100 Amp MCCB TP (adj.) RC=25kA (Space)					
	01 No. Panel light with limit switch					
	Electrolytic copper bus bar 2500 Amp, Bus bar of appropriate size (size/cross-section should be clearly mentioned in quotation based on calculation according to relevant IEC standard),including nuts, bolts and washers, control MCB etc.					
7	Lighting Control Panel					
	Road lighting control panel with angle iron frame clad 14 SWG, sheet steel enclosure having high quality powder coated paint, color RAL 7032. The LCP shall be complete with incoming and outgoing MCCBs, Cu bus bars, magnetic contactors, photo-electric switches, meters, indication lights, construction with IP 54 protection class, door, locking arrangement etc. and all other accessories as required for quality work. MATERIAL 1 No. incoming 63 Amp.(adj.) TP, MCCB, 25 kA 4 No. outgoing 25 Amp. (adj.) TP MCCBs, 25 kA 2 No. outgoing 25 Amp. (adj.) TP MCCBs, 25 kA (Spare) 4 No. 32 Amp. magnetic contactor 2 No. 32 Amp. magnetic contactor (Spare) 3 No. photo-electric switches with timers and relays	No	1			
	a) 1 No. ammeters 0-100 Amp, with selector switch (04 position) and CT of 100/5 Amp					
	b) 3 No. indication lights c) 1 No. voltmeter with fuse and 7 position selector switch. d) 3 Ph, N & Earth copper bus bars Internal wiring & line-up terminals etc. Brass cable glands/accessories e) 06 Nos. Auto-Manual-OFF (3 position switches for operation in auto (with photocell) and normal (manual mode-photocell override)					

	f) 06 Nos.ON & 06 Nos. OFF push button switch's with indication lights g) Panel Light with limit Switch					
8	<u>Power Factor Improvement (PFI) Panel (125 KVAR)</u>					
	14 SWG MS sheet clad IP 44/54 colour RAL 7032 double powder coated power factor improvement panel (PFI) including Cu busbar, incoming and outgoing circuit breaker, power capacitors, magnetic contactors, continuous digital p.f controller, on & off push buttons, indication lights, cable glands, top /bottom for cable entry of appropriate size etc. complete with all components/ accessories as per specifications and drawings.					
	6 steps with continuous digital power factor and capacitor controller with all accessories etc. 01 No. Manual/OFF/Auto selector switch 04 Nos. 25 kVAR capacitor 02 Nos. 12.5 kVAR capacitor 04 Nos. 65A Magnetic contactor (AC-3) 02 Nos. 32A Magnetic contactor (AC-3) 04 Nos. 50A MCCB, TP (Adj.) RC=25 kA Circuit breaker, Icu=100%Ics" 02 Nos. 32A MCCB, TP (Adj.) RC=25 kA Circuit breaker, Icu=100%Ics" 15 Nos. Indication light (for magnetic contactor and phase) 12 Nos. Push Buttons (ON/OFF) 12 Nos. Auxiliary contactor (NO/NC) Panel light with limit switch 01 No. Exhaust fan 6" & Louver 8" sweep with thermostat relay and all accessories etc. (For each cabinet) 14 SWG steel sheet Panel RAL 7032, IP= 44/54 and all other accessories,	Job	1			

	All other accessories required for completion of the quality works including Cable gland and lugs etc Electrolytic copper bus bar with electrical grade PVC mountings 3 for each, nuts, bolts and washers, control MCB etc. (320 Amps. R+Y+B N, 50 Hz, 415 V, AC) including cable glands at top/bottom entry for cable)					
	Supplier shall submit the genuine certificate from the manufacturer/authorized agent clear by indicating the project name make/model/rating of MCCB, MCB, magnetic contactors, terminal blocks and voltmeters/ ammeter alongwith warranties.					
09	<u>Earthing</u>					
A	Earth point comprising of 10 ft. 5/8" dia. (16 mm dia) copper coated M.S. rods driven in ground near each lighting control panel. The earthing rods shall be completed with fixing clamps etc.	Each	5			
B	Bore type, earthing up to permanent water level/moist soil by arrangement of earth pit/point comprising of concrete/brickwork housing with lifting cover 50mm perforated GI pipe, appropriate bare copper stranded conductor as per details in drawing. The earthing and bonding shall be complete with fixing clamps etc. & all metal works shall be bonded to the proposed earthing network.	Job	5			
C	Drilling of earth bore 3" dia 100 ft. deep or up to permanent water table.					
D	Supply and installation of G.I pipe 2" dia 14 SWG to be installed in pre-made bore including all accessories like tees, bends, sockets etc. Pipe shall be connected to tinned copper spike as per detail shown on drawing, complete in all respects.					
F	Supply and installation of tinned copper spike to be manufactured as per detail shown on drawing. Spike shall be connected/screwed at bottom of G.I pipe including all accessories like nuts and bolts complete in all respect.					

G	Supply and installation of 2 Nos. 70 mm ² bare stranded electrolytic copper conductor lead in preload G.I pipe and connected to tinned copper spike as shown on drawing. 02Nos.leads to be installed including all accessories like brass nuts, bolts, washers etc complete in all respect.					
H	Supply and installation of tinned earth test link in earthing pit consisting of copper plate (12"x2"x1/2") with fixing arrangement on the wall of man hole including brass nuts, bolts washers lugs etc. complete in all respect.					
I	Construction of earthing pit (manhole) of internal size 18"x18"x24" deep with 9" thick brick wall with cement mortar, internal plaster 1:4, RCC 4" thick cover with lifting hooks including all accessories complete in all respect.					
J	Testing and commissioning of the earthing system along with all testing accessories complete in all respect.					
10	<u>Transformer (As Per WAPDA Specs)</u>					
	Supply and Installation of Outdoor type pad mounted transformer (HT & LT Compartment) with foundation and all accessories. Oil immersed / dry type transformer manufactured according to BS-171, IEC-60076, specifications and consisting of filling device, drain plug, oil level indicator, lifting hooks,bi-directional roller wheels, H.V. & L.V. porcelain bushings, off load voltage tap changer, 2 earthing terminals, oil conservator and silica gel breather, imported double float buckholz relay, pressure relief vent, dial type thermometer with alarm & trip contacts, rated Voltage 11000 / 415 / 230 Volts, suitable for an ambient temperature of 50°C, winding temperature 55°C and oil temperature 50°C, impedance 6.25% or as specified by IEC, system earth: Delta-Y, neutral solidly earthed (DYN-11) and all necessary accessories / materials, complete in all respects, including trenches etc , submission of technical data sheet. WAPDA (Concerned DISCO)					

approved. Connection Charges, with energy meter as per WAPDA standards and practice.					
The Power transformers shall be fully tropicalized, three phase, step down, oil filled, self-cooled, core type, double wound, suitable for parallel operation and for outdoor installation. The Power transformers shall meet the minimum technical specifications but not limited to the following: Type 0.42 Capacity (Rated continuous) As specified Voltage ratio at no-load 11000/415 Volts Frequency 50 Hz Vector group Dy 11 Off load tapping arrangement (on HT side) -7.5%, -5%, -2.5%, 0% +2.5%, +5%, HT connection 11 kV Delta LT connection 400V with grounded star point Temperature rise of oil over ambient temperature 400 C maximum Temperature rise of winding over ambient temperature 500 C maximum Impedance voltage (%) 4 Voltage regulation for normal operating conditions Not to exceed 2.5% of no-load Voltage regulation at 85% pf at full load (%) 3.5 Rated maximum voltage HT/LT 15kV/0.6 kV Basic insulation level 95 kV Power frequency withstand voltage 34 kV Rated short-time current (kA) 25 Switching inrush current (Amps) 6-7 times of HV line current Following information had to be provided: Applicable Standards/Codes Latest editions of the following standards and codes shall be applicable for all materials in scope of this section: BS90 - Power transformers BS14 - Transformer oil BS171 - Specifications for power transformer					

	BS223 - High voltage bushings IEC7 - Power transformers					
I	630 kVA	Job	1			
11	<u>MV Cable and Termination Kits</u>					
a)	MV cable 1-core 240mm ² XLPE/PVC/AWA/PVC cable with aluminum conductor voltage grade:8.7/15 kV	Rm	1,500			
b)	Providing and fixing/installation indoor 1-core 240mm ² , 11KV, XLPE, heat shrink termination Kit complete in all respect as required.	Job	3			
c)	Providing and fixing/installation outdoor 1-core 240mm ² , 11KV, XLPE, heat shrink termination Kit complete in all respect as required.	Job	3			
12	<u>Provisional Sum</u>					
	Cost of obtaining 11kV connection from the DISCO/utility. The same shall be paid to the Supplier as per actual demand notice of the relevant DISCO/utility for the respective site.	Job	1			

Mandatory instructions:

1. The Bidder shall quote every item included in the BOQ.
2. Blank unit rates are not permitted.
3. Where an item is included in another rate, the Bidder shall state “Included” and identify the relevant priced item.
4. Unit rates shall include design, manufacture, supply, transportation, insurance, unloading, storage, installation, incidental works, testing, commissioning, labour, tools, equipment, documentation, warranty and all other obligations necessary for complete performance.
5. Quantities are indicative for Framework Agreement purposes. Payment under a Call-off/Work Order shall be based on the quantities ordered and actually executed or accepted, multiplied by the applicable agreed unit rates, subject to the Contract.
6. The unit rates shall remain applicable throughout the Framework Agreement Term.
7. The Bidder shall not add conditions, assumptions or qualifications in the Price Schedule.

LOT # 02 - Site 02: KOTRI BRIDGE (BOQ-06)

Note: Bidders must mention the brand/ model of each sub-item they are offering. The brand must be equivalent to the requirements mentioned in the Technical Specifications.

Item No.	Description	Unit	Indicative Quantity	Unit DDP Price (PKR)	Total DDP Price (PKR)	Offered Make/Model, where applicable
Design, supply, transportation, storage, installation, testing and commissioning of the following items of work, including all material, labor, tools and accessories etc. required for proper completion of each item as per specification, drawings and/or as directed by the Engineer.				(includes all kinds of taxes, after sales services, incidental services and costs to deliver, install, commission, inspect, and test goods at the place of destination)		
1	<u>Poles</u>					
1(a)	12 m high single bent arm conical octagonal galvanized steel pole with extension arm luminaire arrangement, base plate, J-rag bolts, 01 No. 2 Amp 10kA SP MCB, pole numbering and earthing etc. as shown on drawing.	Each	32			
1(b)	12 m high double bent arm conical octagonal galvanized steel pole with extension arm luminaire arrangement, base plate, J-rag bolts, 02 Nos. 2 Amp 10kA SP MCB, pole numbering and earthing etc. as shown on drawing.	Each	05			
1(c)	15 m high conical octagonal (hot dip) galvanized steel pole with circular angular top 4 Nos. luminaire arrangement, base plate, J-rag bolts, 2 Amp 04 Nos. SP MCB, pole numbering and earthing etc. as shown on drawing.	Each	02			
1(d)	Road Lighting Pole Foundation	Each	39			
2	<u>Road Lights & Accessories for Flood Light Installation</u>					

2(a)	Road Lighting LED Luminaries 120W make High-Pressure Sodium (HPS) lamp with PCA arc tube, high energy-efficient LED wattage matching the lumen output, min 24,000 hrs lumens on a 10 hrs start cycle, with built in standard to meet or exceed ANSI and IESNA roadway lighting standards or equivalent suitable for M-2 & M-3 roads of wattage suitable for the project requirements, fully IP 66 with corrosion resistant die cast aluminum housing, silicon gas kit, thermally hardened glass complete with LED drivers, surge protection and all accessories/ components required for the proper operation of the system. The luminaries shall be fully flexible for future upgrades and easy replacements for maintenance purposes. Supplier to submit lighting design calculation as per the offered light fixtures.	No.	42			
2(b)	Surface mounted Batten LED Luminaries 50W or above (dimension 1200 mm and above) make High-Pressure Sodium (HPS) lamp with PCA arc tube, high energy-efficient LED wattage matching the lumen output, min 24,000 hrs lumens on a 10 hrs start cycle, with built in standard to meet or exceed ANSI and IESNA roadway lighting standards or equivalent suitable for Bus stations of wattage suitable for the project requirements, fully IP 65 with polycarbonate housing, UV shielding, stainless steel brackets for mounting, maintenance free long lasting performance complete with LED drivers and all accessories/ components required for the proper operation of the system. The fitting shall be approved by the Engineer.	No.	20			
2(c)	Bollard light Luminaries LED 220 - 240 Volts 9 Watt with IP 65 or above protection complete in all respect or approved equivalent. The fitting shall be approved by the engineer.	No.	10			
2(d)	LED Planter Spike light 7W IP 65, 3000K, with corrosion resistant die cast aluminum housing, tempered glass complete with LED built-in driver and all accessories/components required for the proper operation of the system	No.	64			
2 (e)	Flood Lighting LED Luminaries 120W make High-Pressure Sodium (HPS) lamp with PCA arc tube, high energy-efficient LED wattage	No.	18			

	matching the lumen output, min 24,000 hrs lumens on a 10 hrs start cycle, with built in standard to meet or exceed ANSI and IESNA roadway lighting standards or equivalent suitable for M-2 & M-3 roads of wattage suitable for the project requirements, fully IP 65 with corrosion resistant die cast aluminum housing, silicon gas kit, thermally hardened glass complete with LED drivers, surge protection and all accessories/ components required for the proper operation of the system. The luminaries shall be fully flexible for future upgrades and easy replacements for maintenance purposes. Supplier to submit lighting design calculation as per the offered light fixtures.					
2(f)	Hot dipped galvanized bracket for mounting of Flood lights along with all accessories.	Each	10			
3	<u>Junction Boxes</u>					
3(a)	Junction box size 12"x08"x06" (for Flood Light connection) with angle iron frame clad 16 SWG, sheet steel enclosure having high quality powder coated paint, color RAL 7032. Suitable for connections with IP 54 protection class, door, locking arrangement etc. and all other accessories as required for quality work.	No.	10			
-	Junction box size 12"x08"x06" (for Flood Light connection)					
-	01 No. 2 Amp. SP MCB, 10 kA					
-	04 No. Terminal block					
-	GI flexible pipe 1" dia					
3(b)	Junction boxes/Pull boxes for canopy lights size 5"x6"x3" with thermoplastic frame enclosure having color RAL 7032, terminal blocks & 25 mm dia GI flexible pipe to light point concealed/surface in walls/slab with clamping arrangements as required complete in all respects suitable for connections and all other accessories as required for quality work (Pull box shall be High-grade, UV-stabilized, halogen-free, and flame-retardant Polycarbonate, Minimum IK08 rating in accordance with IEC 62262, engineered to withstand high roadside vibrations, mechanical stress, and airborne gravel impact. High resistance against industrial atmospheric pollutants, road salt, automotive exhaust	No.	05			

	gases, and acid rain. - IEC 60695-2-11 and minimum IP67/IP69 submersible standards under IEC 60529 Class II (Total insulation / Double Insulated) with material integrity maintained up to +70°C high-performance outdoor-rated enclosure)).					
4	<u>Wiring & Accessories</u>					
4 (a)	Wiring of light point or fan point from switch to the point with 3x1.5mm ² PVC insulated single core cables in PVC pipes concealed in walls, columns and slabs including accessories, pvc box, 10 Amp. gang switch 1 or 2 way as required, one for each light or fan installed as in specifications.	Each	3			
4 (b)	Circuit wiring from DB MCBs to gang switches board and from switch board to another switch board with 3x2.5 mm ² (P+N+E) PVC insulated single core stranded cables in 25mm PVC pipe/conduit concealed in walls, columns and slabs as required complete in all respects.	Each	2			
4 (c)	The same as item No. 1.1 but from one light point to another light point.	Each	15			
5	<u>Low Voltage Power Cables</u>					
5(a)	Supply, installation, testing, commissioning and termination of following sizes of PVC insulated 600/1000 Voltage grade unarmored Copper cables laid direct in ground, pulled in PVC pipe already laid, on surface of wall or cable trays etc. including all accessories as required complete in all respects (Imported copper shall be used. Verified documentary evidence for source of copper & PVC shall be furnished prior to manufacturing)					
i	4 Core 50mm ²	Rm	150			
ii	4 Core 35mm ²	Rm	400			
iii	4 Core 25mm ²	Rm	800			
iv	4 Core 16mm ²	Rm	1,500			
v	4 Core 10mm ²	Rm	500			
vi	4 Core 6mm ²	Rm	500			

5(b)	Supply, installation, testing, commissioning and termination of following sizes of PVC insulated single core 450/750 Voltage grade unarmored Copper cables as circuit protective conductor/ earth continuity conductor (CPC/ECC) laid direct in ground, pulled in PVC pipe already laid, on surface of wall or cable trays etc. including all accessories as required complete in all respects (Imported copper shall be used. Verified documentary evidence for source of copper & PVC shall be furnished prior to manufacturing)					
i	1 Core 70mm ²	Rm	250			
ii	1 Core 25mm ²	Rm	200			
iii	1 Core 16mm ²	Rm	1,350			
iv	1 Core 10mm ²	Rm	500			
v	1 Core 6mm ²	Rm	500			
vi	3 Nos. 1 core 2.5 mm ² Cu. PVC 450/750 Voltage grade cable (stranded conductor) (Imported copper shall be used. Verified documentary evidence for source of copper & PVC shall be furnished prior to manufacturing) from junction box to the fitting through the hollow of pole.					
a)	For 12m Pole	No.	37			
b)	For 15m Pole	No.	02			
c)	For Flood Lights	No.	10			
6	<u>Main Panel Board (MPB)</u>					
	Main panel board to be installed outside the building designated as MAIN I/C cum O/G Supply with the following specs: 1. 14 SWG MS Sheet ,Pad Mounted , Front access type, Double Powder Coated ,IP class 44/54 & RAL 7032 including foundation/base frame. 2. O/G and I/C cable entries from Bottom. 3. Top Bottom Both removable plates. 4. Front Covering plates for all breakers. 5. Earthing management (Neutral Earth Separate Bus Bar).	Job	1			

	6. Door operated one LED tube light 230V, Thermostate temperature operated exhaust Fan in each Cubicle with all installation and operational accessories as per site requirements, with specifications and drawings and as directed by the Engineer.					
	Incoming					
	01 No. 1250 Amp TP (adj.) ACB RC= 66 kA					
	01 No. VSS (07 position)					
	01 No. 0-600 Volts AC DIGITAL Voltmeter					
	03 Nos. 1600/5 Amps Current Transformers					
	01 No. ASS (R-Y-B-OFF)					
	01 No. 0-1600 Amps AC DIGITAL Ammeter					
	06 Nos. RYB, ON, OFF, TRIP LED indication lights					
	Outgoing					
	01 No. 320 Amp MCCB TP (Adj.) RC=36kA					
	01 No. 125 Amp MCCB TP (Adj.) RC=25kA					
	02 No. 100 Amp MCCB TP (Adj.) RC=25kA					
	02 No. 80 Amp MCCB TP (Adj.) RC=25kA					
	07 Nos. 63 Amp MCCB TP (Adj.) RC=25kA					
	01 No. 50 Amp MCCB TP (Adj.) RC=25kA					
	04 No. 25 Amp MCCB TP, (Adj.) RC=25 kA					
	02 No. 80/100 Amp MCCB TP (adj.) RC=25kA (Spare)					
	02 No. 80/100 Amp MCCB TP (adj.) RC=25kA (Space)					
	01 No. Panel light with limit switch					
	Electrolytic copper bus bar 2500 Amp, Bus bar of appropriate size (size/cross-section should be clearly mentioned in quotation based on calculation according to relevant IEC standard), including nuts, bolts and washers, control MCB etc.					
7	Lighting Control Panel					
	Road lighting control panel with angle iron frame clad 14 SWG, sheet steel enclosure having high quality powder coated paint, color	No	1			

	RAL 7032. The LCP shall be complete with incoming and outgoing MCCBs, Cu bus bars, magnetic contactors, photo-electric switches, meters, indication lights, construction with IP 54 protection class, door, locking arrangement etc. and all other accessories as required for quality work. MATERIAL 1 No. incoming 63 Amp.(adj.) TP, MCCB, 25 kA 4 No. outgoing 25 Amp. (adj.) TP MCCBs, 25 kA 2 No. outgoing 25 Amp. (adj.) TP MCCBs, 25 kA (Spare) 4 No. 32 Amp. magnetic contactor 2 No. 32 Amp. magnetic contactor (Spare) 3 No. photo-electric switches with timers and relays a) 1 No. ammeters 0-100 Amp, with selector switch (04 position) and CT of 100/5 Amp b) 3 No. indication lights c) 1 No. voltmeter with fuse and 7 position selector switch. d) 3 Ph, N & Earth copper bus bars Internal wiring & line-up terminals etc. Brass cable glands/accessories e) 06 Nos. Auto-Manual-OFF (3 position switches for operation in auto (with photocell) and normal (manual mode-photocell override) f) 06 Nos.ON & 06 Nos. OFF push button switch's with indication lights g) Panel Light with limit Switch					
8	<u>Power Factor Improvement (PFI) Panel (125 KVAR)</u>					
	14 SWG MS sheet clad IP 44/54 color RAL 7032 double powder coated power factor improvement panel (PFI) including Cu busbar, incoming and outgoing circuit breaker, power capacitors, magnetic contactors, continuous digital p.f controller, on & off push buttons, indication lights, cable glands, top /bottom for cable entry of					

	appropriate size etc. complete with all components/ accessories as per specifications and drawings.					
	6 steps with continuous digital power factor and capacitor controller with all accessories etc. 01 No. Manual/OFF/Auto selector switch 04 Nos. 25 kVAR capacitor 02 Nos. 12.5 kVAR capacitor 04 Nos. 65A Magnetic contactor (AC-3) 02 Nos. 32A Magnetic contactor (AC-3) 04 Nos. 50A MCCB, TP (Adj.) RC=25 kA Circuit breaker, Icu=100%Ics" 02 Nos. 32A MCCB, TP (Adj.) RC=25 kA Circuit breaker, Icu=100%Ics" 15 Nos. Indication light (for magnetic contactor and phase) 12 Nos. Push Buttons (ON/OFF) 12 Nos. Auxiliary contactor (NO/NC) Panel light with limit switch 01 No. Exhaust fan 6" & Louver 8" sweep with thermostat relay and all accessories etc. (For each cabinet) 14 SWG steel sheet Panel RAL 7032, IP= 44/54 and all other accessories, All other accessories required for completion of the quality works including Cable gland and lugs etc Electrolytic copper bus bar with electrical grade PVC mountings 3 for each, nuts, bolts and washers, control MCB etc. (320 Amps. R+Y+B N, 50 Hz, 415 V, AC) including cable glands at top/bottom entry for cable) Suppliers shall submit the genuine certificate from the manufacturer/authorized agent clear by indicating the project name make/model/rating of MCCB, MCB, magnetic contactors, terminal blocks and voltmeters/ ammeter alongwith warranties.	Job	1			
09	Earthing					

A	Earth point comprising of 10 ft. 5/8" dia. (16 mm dia) copper coated M.S. rods driven in ground near each lighting control panel. The earthing rods shall be completed with fixing clamps etc.	Each	5			
B	Bore type, earthing up to permanent water level/moist soil by arrangement of earth pit/point comprising of concrete/brickwork housing with lifting cover 50mm perforated GI pipe, appropriate bare copper stranded conductor as per details in drawing. The earthing and bonding shall be complete with fixing clamps etc. & all metal works shall be bonded to the proposed earthing network.	Job	5			
C	Drilling of earth bore 3" dia 100 ft. deep or up to permanent water table.					
D	Supply and installation of G.I pipe 2" dia 14 SWG to be installed in pre-made bore including all accessories like tees, bends, sockets etc. Pipe shall be connected to tinned copper spike as per detail shown on drawing, complete in all respects.					
F	Supply and installation of tinned copper spike to be manufactured as per detail shown on drawing. Spike shall be connected/screwed at bottom of G.I pipe including all accessories like nuts and bolts complete in all respect.					
G	Supply and installation of 2 Nos. 70 mm ² bare stranded electrolytic copper conductor lead in preload G.I pipe and connected to tinned copper spike as shown on drawing. 02Nos. leads to be installed including all accessories like brass nuts, bolts, washers etc complete in all respect.					
H	Supply and installation of tinned earth test link in earthing pit consisting of copper plate (12"x2"x1/2") with fixing arrangement on the wall of man hole including brass nuts, bolts washers lugs etc. complete in all respect.					
I	Construction of earthing pit (manhole) of internal size 18"x18"x24" deep with 9" thick brick wall with cement mortar, internal plaster					

	1:4, RCC 4" thick cover with lifting hooks including all accessories complete in all respect.					
J	Testing and commissioning of the earthing system along with all testing accessories complete in all respect.					
10	<u>Transformer (As Per WAPDA Specs)</u>					
	Supply and Installation of Outdoor type pad mounted transformer (HT & LT Compartment) with foundation and all accessories. Oil immersed / dry type transformer manufactured according to BS-171, IEC-60076, specifications and consisting of filling device, drain plug, oil level indicator, lifting hooks, bi-directional roller wheels, H.V. & L.V. porcelain bushings, off load voltage tap changer, 2 earthing terminals, oil conservator and silica gel breather, imported double float buckholz relay, pressure relief vent, dial type thermometer with alarm & trip contacts, rated Voltage 11000 / 415 / 230 Volts, suitable for an ambient temperature of 50°C, winding temperature 55°C and oil temperature 50°C, impedance 6.25% or as specified by IEC, system earth: Delta-Y, neutral solidly earthed (DYN-11) and all necessary accessories / materials, complete in all respects, including trenches etc , submission of technical data sheet. WAPDA (Concerned DISCO) approved. Connection Charges, with energy meter as per WAPDA standards and practice.					
	The Power transformers shall be fully tropicalized, three phase, step down, oil filled, self-cooled, core type, double wound, suitable for parallel operation and for outdoor installation. The Power transformers shall meet the minimum technical specifications but not limited to the following: Type 0.42 Capacity (Rated continuous) As specified Voltage ratio at no-load 11000/415 Volts Frequency 50 Hz Vector group Dy 11 Off load tapping arrangement (on HT side) -7.5%, -5%, -2.5%, 0% +2.5%, +5%,					

	HT connection 11 kV Delta LT connection 400V with grounded star point Temperature rise of oil over ambient temperature 400 C maximum Temperature rise of winding over ambient temperature 500 C maximum Impedance voltage (%) 4 Voltage regulation for normal operating conditions Not to exceed 2.5% of no-load Voltage regulation at 85% pf at full load (%) 3.5 Rated maximum voltage HT/LT 15kV/0.6 kV Basic insulation level 95 kV Power frequency withstand voltage 34 kV Rated short-time current (kA) 25 Switching inrush current (Amps) 6-7 times of HV line current Following information had to be provided: Applicable Standards/Codes Latest editions of the following standards and codes shall be applicable for all materials in scope of this section: BS90 - Power transformers BS14 - Transformer oil BS171 - Specifications for power transformer BS223 - High voltage bushings IEC7 - Power transformers					
I	630 kVA	Job	1			
11	<u>MV Cable and Termination Kits</u>					
a)	MV cable 1-core 240mm ² XLPE/PVC/AWA/PVC cable with aluminum conductor voltage grade:8.7/15 kV	Rm	1,500			
b)	Providing and fixing/installation indoor 1-core 240mm ² , 11KV, XLPE, heat shrink termination Kit complete in all respect as required.	Job	3			

c)	Providing and fixing/installation outdoor 1-core 240mm ² ,11KV, XLPE, heat shrink termination Kit complete in all respect as required.	Job	3			
12	<u>Provisional Sum</u>					
	Cost of obtaining 11kV connection from the DISCO/utility. The same shall be paid to the Supplier as per actual demand notice of the relevant DISCO/utility for the respective site.	Job	1			

LOT # 03 (SEHWAN (ARAL BIDGE), SEHWAN BHAN SAEED ABAD, KHUKERA & HUB MYGARHI OR CHLEGHEZI CUT):

LOT # 03 - Site 01: SEHWAN (ARAL BIDGE) (BOQ-07)

Note: Bidders must mention the brand/ model of each sub-item they are offering. The brand must be equivalent to the requirements mentioned in the Technical Specifications.

Item No.	Description	Unit	Quantity	Unit DDP Price (PKR)	Total DDP Price (PKR)	
	Design, supply, transportation, storage, installation, testing and commissioning of the following items of work, including all material, labor, tools and accessories etc. required for proper completion of each item as per specification, drawings and/or as directed by the Engineer.			(includes all kinds of taxes, after sales services, incidental services and costs to deliver, install, commission, inspect, and test goods at the place of destination)	(includes all kinds of taxes, after sales services, incidental services and costs to deliver, install, commission, inspect, and test goods at the place of destination)	Offered Make/Model, where applicable
1	<u>Poles</u>					
1(a)	12 m high single bent arm conical octagonal galvanized steel pole with extension arm luminaire arrangement, base plate, J-rag bolts, 01 No. 2 Amp 10kA SP MCB, pole numbering and earthing etc. as shown on drawing.	Each	40			
1(b)	12 m high double bent arm conical octagonal galvanized steel pole with extension arm luminaire arrangement, base plate, J-rag bolts, 02 Nos. 2 Amp 10kA SP MCB, pole numbering and earthing etc. as shown on drawing.	Each	10			
1(c)	15 m high conical octagonal (hot dip) galvanized steel pole with circular angular top 4 Nos. luminaire arrangement, base	Each	05			

	plate, J-rag bolts, 2 Amp 04 Nos. SP MCB, pole numbering and earthing etc. as shown on drawing.					
1(d)	Road Lighting Pole Foundation	Each	55			
2	<u>Road Lights & Accessories for Flood Light Installation</u>					
2(a)	Road Lighting LED Luminaries 120W make High-Pressure Sodium (HPS) lamp with PCA arc tube, high energy-efficient LED wattage matching the lumen output, min 24,000 hrs lumens on a 10 hrs start cycle, with built in standard to meet or exceed ANSI and IESNA roadway lighting standards or equivalent suitable for M-2 & M-3 roads of wattage suitable for the project requirements, fully IP 66 with corrosion resistant die cast aluminum housing, silicon gas kit, thermally hardened glass complete with LED drivers, surge protection and all accessories/ components required for the proper operation of the system. The luminaries shall be fully flexible for future upgrades and easy replacements for maintenance purposes. Supplier to submit lighting design calculation as per the offered light fixtures.	No.	60			
2(b)	Surface mounted Batten LED Luminaries 50W or above (dimension 1200 mm and above) make High-Pressure Sodium (HPS) lamp with PCA arc tube, high energy-efficient LED wattage matching the lumen output, min 24,000 hrs lumens on a 10 hrs start cycle, with built in standard to meet or exceed ANSI and IESNA roadway lighting standards or equivalent suitable for Bus stations of wattage suitable for the project requirements, fully IP 65 with polycarbonate housing, UV shielding, stainless steel brackets for mounting, maintenance free long lasting performance complete with LED drivers and all accessories/ components required for the proper operation of the system. The fitting shall be approved by the Engineer.	No.	20			

2(c)	Bollard light Luminaries LED 220 - 240 Volts 9 Watt with IP 65 or above protection complete in all respect or approved equivalent. The fitting shall be approved by the engineer.	No.	20			
2(d)	LED Planter Spike light 7W IP 65, 3000K, with corrosion resistant die cast aluminum housing, tempered glass complete with LED built-in driver and all accessories/components required for the proper operation of the system	No.	85			
2 (e)	Flood Lighting LED Luminaries 120W make High-Pressure Sodium (HPS) lamp with PCA arc tube, high energy-efficient LED wattage matching the lumen output, min 24,000 hrs lumens on a 10 hrs start cycle, with built in standard to meet or exceed ANSI and IESNA roadway lighting standards or equivalent suitable for M-2 & M-3 roads of wattage suitable for the project requirements, fully IP 65 with corrosion resistant die cast aluminum housing, silicon gas kit, thermally hardened glass complete with LED drivers, surge protection and all accessories/ components required for the proper operation of the system. The luminaries shall be fully flexible for future upgrades and easy replacements for maintenance purposes. Supplier to submit lighting design calculation as per the offered light fixtures.	No.	30			
2(f)	Hot dipped galvanized bracket for mounting of Flood lights alongwith all accessories.	Each	10			
3	Junction Boxes					
3(a)	Junction box size 12"x08"x06" (for Flood Light connection) with angle iron frame clad 16 SWG, sheet steel enclosure having high quality powder coated paint, color RAL 7032. Suitable for connections with IP 54 protection class, door, locking arrangement etc. and all other accessories as required for quality work.	No.	10			
-	Junction box size 12"x08"x06" (for Flood Light connection)					

-	01 No. 2 Amp. SP MCB, 10 kA					
-	04 No. Terminal block					
-	GI flexible pipe 1" dia					
3(b)	Junction boxes/Pull boxes for canopy lights size 5"x6"x3" with thermoplastic frame enclosure having color RAL 7032, terminal blocks & 25 mm dia GI flexible pipe to light point concealed/surface in walls/slab with clamping arrangements as required complete in all respects suitable for connections and all other accessories as required for quality work (Pull box shall be High-grade, UV-stabilized, halogen-free, and flame-retardant Polycarbonate, Minimum IK08 rating in accordance with IEC 62262, engineered to withstand high roadside vibrations, mechanical stress, and airborne gravel impact. High resistance against industrial atmospheric pollutants, road salt, automotive exhaust gases, and acid rain. - IEC 60695-2-11 and minimum IP67/IP69 submersible standards under IEC 60529 Class II (Total insulation / Double Insulated) with material integrity maintained up to +70°C high-performance outdoor-rated enclosure)).	No.	10			
4	<u>Wiring & Accessories</u>					
4 (a)	Wiring of light point or fan point from switch to the point with 3x1.5mm ² PVC insulated single core cables in PVC pipes concealed in walls, columns and slabs including accessories, pvc box, 10 Amp. gang switch 1 or 2 way as required, one for each light or fan installed as in specifications.	Each	3			
4 (b)	Circuit wiring from DB MCBs to gang switches board and from switch board to another switch board with 3x2.5 mm ² (P+N+E) PVC insulated single core stranded cables in 25mm PVC pipe/conduit concealed in walls, columns and slabs as required complete in all respects.	Each	2			
4 (c)	The same as item No. 1.1 but from one light point to another light point.	Each	15			

5	<u>Low Voltage Power Cables</u>					
5(a)	Supply, installation, testing, commissioning and termination of following sizes of PVC insulated 600/1000 Voltage grade unarmored Copper cables laid direct in ground, pulled in PVC pipe already laid, on surface of wall or cable trays etc. including all accessories as required complete in all respects (Imported copper shall be used. Verified documentary evidence for source of copper & PVC shall be furnished prior to manufacturing)					
i	4 Core 50mm ²	Rm	150			
ii	4 Core 35mm ²	Rm	400			
iii	4 Core 25mm ²	Rm	800			
iv	4 Core 16mm ²	Rm	2,100			
v	4 Core 10mm ²	Rm	500			
vi	4 Core 6mm ²	Rm	500			
5(b)	Supply, installation, testing, commissioning and termination of following sizes of PVC insulated single core 450/750 Voltage grade unarmored Copper cables as circuit protective conductor/ earth continuity conductor (CPC/ECC) laid direct in ground, pulled in PVC pipe already laid, on surface of wall or cable trays etc. including all accessories as required complete in all respects (Imported copper shall be used. Verified documentary evidence for source of copper & PVC shall be furnished prior to manufacturing)					
i	1 Core 70mm ²	Rm	250			
ii	1 Core 25mm ²	Rm	200			
iii	1 Core 16mm ²	Rm	1,650			
iv	1 Core 10mm ²	Rm	500			
v	1 Core 6mm ²	Rm	500			
vi	3 Nos. 1 core 2.5 mm ² Cu. PVC 450/750 Voltage grade cable (stranded conductor) (Imported copper shall be used. Verified documentary evidence for source of copper & PVC					

	shall be furnished prior to manufacturing) from junction box to the fitting through the hollow of pole.					
a)	For 12m Pole	No.	60			
b)	For 15m Pole	No.	05			
c)	For Flood Lights	No.	10			
6	<u>Main Panel Board (MPB)</u>					
	Main panel board to be installed outside the building designated as MAIN I/C cum O/G Supply with the following specs: 1. 14 SWG MS Sheet ,Pad Mounted , Front access type, Double Powder Coated ,IP class 44/54 & RAL 7032 including foundation/base frame. 2. O/G and I/C cable entries from Bottom. 3. Top Bottom Both removable plates.					
	4. Front Covering plates for all breakers. 5. Earthing management (Neutral Earth Separate Bus Bar). 6. Door operated one LED tube light 230V,Thermostate temperature operated exhaust Fan in each Cubicle with all installation and operational accessories as per site requirements, with specifications and drawings and as directed by the Engineer.	Job	1			
	<u>Incoming</u>					
	01 No. 1250 Amp TP (adj.) ACB RC= 66 kA					
	01 No. VSS (07 position)					
	01 No. 0-600 Volts AC DIGITAL Voltmeter					
	03 Nos. 1600/5 Amps Current Transformers					
	01 No. ASS (R-Y-B-OFF)					
	01 No. 0-1600 Amps AC DIGITAL Ammeter					
	06 Nos. RYB, ON,OFF,TRIP LED indication lights					
	<u>Outgoing</u>					

	01 No. 320 Amp MCCB TP (Adj.) RC=36kA					
	01 No. 125 Amp MCCB TP (Adj.) RC=25kA					
	02 No. 100 Amp MCCB TP (Adj.) RC=25kA					
	02 No. 80 Amp MCCB TP (Adj.) RC=25kA					
	07 Nos. 63 Amp MCCB TP (Adj.) RC=25kA					
	01 No. 50 Amp MCCB TP (Adj.) RC=25kA					
	04 No. 25 Amp MCCB TP, (Adj.) RC=25 kA					
	02 No. 80/100 Amp MCCB TP (adj.) RC=25kA (Spare)					
	02 No. 80/100 Amp MCCB TP (adj.) RC=25kA (Space)					
	01 No. Panel light with limit switch					
	Electrolytic copper bus bar 2500 Amp, Bus bar of appropriate size (size/cross-section should be clearly mentioned in quotation based on calculation according to relevant IEC standard),including nuts, bolts and washers, control MCB etc.					
7	<u>Lighting Control Panel</u>					
	Road lighting control panel with angle iron frame clad 14 SWG, sheet steel enclosure having high quality powder coated paint, color RAL 7032. The LCP shall be complete with incoming and outgoing MCCBs, Cu bus bars, magnetic contactors, photo-electric switches, meters, indication lights, construction with IP 54 protection class, door, locking arrangement etc. and all other accessories as required for quality work. MATERIAL 1 No. incoming 63 Amp.(adj.) TP, MCCB, 25 kA 4 No. outgoing 25 Amp. (adj.) TP MCCBs, 25 kA 2 No. outgoing 25 Amp. (adj.) TP MCCBs, 25 kA (Spare) 4 No. 32 Amp. magnetic contactor 2 No. 32 Amp. magnetic contactor (Spare) 3 No. photo-electric switches with timers and relays	No	1			

	a) 1 No. ammeters 0-100 Amp, with selector switch (04 position) and CT of 100/5 Amp b) 3 No. indication lights c) 1 No. voltmeter with fuse and 7 position selector switch. d) 3 Ph, N & Earth copper bus bars Internal wiring & line-up terminals etc. Brass cable glands/accessories e) 06 Nos. Auto-Manual-OFF (3 position switches for operation in auto (with photocell) and normal (manual mode-photocell override) f) 06 Nos.ON & 06 Nos. OFF push button switch's with indication lights g) Panel Light with limit Switch					
8	<u>Power Factor Improvement (PFI) Panel (125 KVAR)</u>					
	14 SWG MS sheet clad IP 44/54 colour RAL 7032 double powder coated power factor improvement panel (PFI) including Cu busbar, incoming and outgoing circuit breaker, power capacitors, magnetic contactors, continuous digital p.f controller, on & off push buttons, indication lights, cable glands, top /bottom for cable entry of appropriate size etc. complete with all components/ accessories as per specifications and drawings.					
	6 steps with continuous digital power factor and capacitor controller with all accessories etc. 01 No. Manual/OFF/Auto selector switch 04 Nos. 25 kVAR capacitor 02 Nos. 12.5 kVAR capacitor 04 Nos. 65A Magnetic contactor (AC-3) 02 Nos. 32A Magnetic contactor (AC-3) 04 Nos. 50A MCCB, TP (Adj.) RC=25 kA Circuit breaker, Icu=100%Ics"	Job	1			

	02 Nos. 32A MCCB, TP (Adj.) RC=25 kA Circuit breaker, Icu=100%Ics" 15 Nos. Indication light (for magnetic contactor and phase) 12 Nos. Push Buttons (ON/OFF) 12 Nos. Auxiliary contactor (NO/NC) Panel light with limit switch 01 No. Exhaust fan 6" & Louver 8" sweep with thermostat relay and all accessories etc. (For each cabinet) 14 SWG steel sheet Panel RAL 7032, IP= 44/54 and all other accessories, All other accessories required for completion of the quality works including Cable gland and lugs etc Electrolytic copper bus bar with electrical grade PVC mountings 3 for each, nuts, bolts and washers, control MCB etc. (320 Amps. R+Y+B N, 50 Hz, 415 V, AC) including cable glands at top/bottom entry for cable) Suppliers shall submit the genuine certificate from the manufacturer/authorized agent clear by indicating the project name make/model/rating of MCCB, MCB, magnetic contactors, terminal blocks and voltmeters/ ammeter along with warranties.					
09	<u>Earthing</u>					
A	Earth point comprising of 10 ft. 5/8" dia. (16 mm dia) copper coated M.S. rods driven in ground near each lighting control panel. The earthing rods shall be completed with fixing clamps etc.	Each	5			
B	Bore type, earthing up to permanent water level/moist soil by arrangement of earth pit/point comprising of concrete/brickwork housing with lifting cover 50mm perforated GI pipe, appropriate bare copper stranded conductor as per details in drawing. The earthing and	Job	5			

	bonding shall be complete with fixing clamps etc. & all metal works shall be bonded to the proposed earthing network.					
C	Drilling of earth bore 3" dia 100 ft. deep or up to permanent water table.					
D	Supply and installation of G.I pipe 2" dia 14 SWG to be installed in pre-made bore including all accessories like tees, bends, sockets etc. Pipe shall be connected to tinned copper spike as per detail shown on drawing, complete in all respects.					
F	Supply and installation of tinned copper spike to be manufactured as per detail shown on drawing. Spike shall be connected/screwed at bottom of G.I pipe including all accessories like nuts and bolts complete in all respect.					
G	Supply and installation of 2 Nos. 70 mm ² bare stranded electrolytic copper conductor lead in pre-load G.I pipe and connected to tinned copper spike as shown on drawing. 02Nos. leads to be installed including all accessories like brass nuts, bolts, washers etc complete in all respect.					
H	Supply and installation of tinned earth test link in earthing pit consisting of copper plate (12"x2"x1/2") with fixing arrangement on the wall of man hole including brass nuts, bolts washers lugs etc. complete in all respect.					
I	Construction of earthing pit (manhole) of internal size 18"x18"x24" deep with 9" thick brick wall with cement mortar, internal plaster 1:4, RCC 4" thick cover with lifting hooks including all accessories complete in all respect.					
J	Testing and commissioning of the earthing system along with all testing accessories complete in all respect.					
10	<u>Transformer (As Per WAPDA Specs)</u>					
	Supply and Installation of Outdoor type pad mounted transformer (HT & LT Compartment) with foundation and all accessories. Oil immersed / dry type transformer					

manufactured according to BS-171, IEC-60076, specifications and consisting of filling device, drain plug, oil level indicator, lifting hooks, bi-directional roller wheels, H.V. & L.V. porcelain bushings, off load voltage tap changer, 2 earthing terminals, oil conservator and silica gel breather, imported double float buckholz relay, pressure relief vent, dial type thermometer with alarm & trip contacts, rated Voltage 11000 / 415 / 230 Volts, suitable for an ambient temperature of 50°C, winding temperature 55°C and oil temperature 50°C, impedance 6.25% or as specified by IEC, system earth: Delta-Y, neutral solidly earthed (DYN-11) and all necessary accessories / materials, complete in all respects, including trenches etc , submission of technical data sheet. WAPDA (Concerned DISCO) approved. Connection Charges, with energy meter as per WAPDA standards and practice.					
The Power transformers shall be fully tropicalized, three phase, step down, oil filled, self-cooled, core type, double wound, suitable for parallel operation and for outdoor installation. The Power transformers shall meet the minimum technical specifications but not limited to the following: Type 0.42 Capacity (Rated continuous) As specified Voltage ratio at no-load 11000/415 Volts Frequency 50 Hz Vector group Dy 11 Off load tapping arrangement (on HT side) -7.5%, -5%, -2.5%, 0% +2.5%, +5%, HT connection 11 kV Delta LT connection 400V with grounded star point Temperature rise of oil over ambient temperature 400 C maximum Temperature rise of winding over ambient temperature 500 C maximum					

	Impedance voltage (%) 4 Voltage regulation for normal operating conditions Not to exceed 2.5% of no-load Voltage regulation at 85% pf at full load (%) 3.5 Rated maximum voltage HT/LT 15kV/0.6 kV Basic insulation level 95 kV Power frequency withstand voltage 34 kV Rated short-time current (kA) 25 Switching inrush current (Amps) 6-7 times of HV line current Following information had to be provided: Applicable Standards/Codes Latest editions of the following standards and codes shall be applicable for all materials in scope of this section: BS90 - Power transformers BS14 - Transformer oil BS171 - Specifications for power transformer BS223 - High voltage bushings IEC7 - Power transformers					
I	630 kVA	Job	1			
11	<u>MV Cable and Termination Kits</u>					
a)	MV cable 1-core 240mm ² XLPE/PVC/AWA/PVC cable with aluminum conductor voltage grade:8.7/15 kV	Rm	1,500			
b)	Providing and fixing/installation indoor 1-core 240mm ² , 11KV, XLPE, heat shrink termination Kit complete in all respect as required.	Job	3			
c)	Providing and fixing/installation outdoor 1-core 240mm ² , 11KV, XLPE, heat shrink termination Kit complete in all respect as required.	Job	3			
12	<u>Provisional Sum</u>					

Cost of obtaining 11kV connection from the DISCO/utility. The same shall be paid to the Supplier per actual demand notice of the relevant DISCO/utility for the respective site.	Job	1			
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Mandatory instructions:

1. The Bidder shall quote every item included in the BOQ.
2. Blank unit rates are not permitted.
3. Where an item is included in another rate, the Bidder shall state “Included” and identify the relevant priced item.
4. Unit rates shall include design, manufacture, supply, transportation, insurance, unloading, storage, installation, incidental works, testing, commissioning, labour, tools, equipment, documentation, warranty and all other obligations necessary for complete performance.
5. Quantities are indicative for Framework Agreement purposes. Payment under a Call-off/Work Order shall be based on the quantities ordered and actually executed or accepted, multiplied by the applicable agreed unit rates, subject to the Contract.
6. The unit rates shall remain applicable throughout the Framework Agreement Term.
7. The Bidder shall not add conditions, assumptions or qualifications in the Price Schedule.

LOT # 03 - Site 02: SEHWAN BHAN SAEED ABAD (BOQ-08)

Note: Bidders must mention the brand/ model of each sub-item they are offering. The brand must be equivalent to the requirements mentioned in the Technical Specifications.

Item No.	Description	Unit	Indicative Quantity	Unit DDP Price (PKR)	Total DDP Price (PKR)	Offered Make/Model, where applicable
Design, supply, transportation, storage, installation, testing and commissioning of the following items of work, including all material, labor, tools and accessories etc. required for proper completion of each item as per specification, drawings and/or as directed by the Engineer.				(includes all kinds of taxes, after sales services, incidental services and costs to deliver, install, commission, inspect, and test goods at the place of destination)		
1	Poles					
1(a)	12 m high single bent arm conical octagonal galvanized steel pole with extension arm luminaire arrangement, base plate, J-rag bolts, 01 No. 2 Amp 10kA SP MCB, pole numbering and earthing etc. as shown on drawing.	Each	50			
1(b)	12 m high double bent arm conical octagonal galvanized steel pole with extension arm luminaire arrangement, base plate, J-rag bolts, 02 Nos. 2 Amp 10kA SP MCB, pole numbering and earthing etc. as shown on drawing.	Each	05			
1(c)	15 m high conical octagonal (hot dip) galvanized steel pole with circular angular top 4 Nos. luminaire arrangement, base plate, J-rag bolts, 2 Amp 04 Nos.	Each	05			

	SP MCB, pole numbering and earthing etc. as shown on drawing.					
1(d)	Road Lighting Pole Foundation	Each	60			
2	<u>Road Lights & Accessories for Flood Light Installation</u>					
2(a)	Road Lighting LED Luminaries 120W make High-Pressure Sodium (HPS) lamp with PCA arc tube, high energy-efficient LED wattage matching the lumen output, min 24,000 hrs lumens on a 10 hrs start cycle, with built in standard to meet or exceed ANSI and IESNA roadway lighting standards or equivalent suitable for M-2 & M-3 roads of wattage suitable for the project requirements, fully IP 66 with corrosion resistant die cast aluminum housing, silicon gas kit, thermally hardened glass complete with LED drivers, surge protection and all accessories/ components required for the proper operation of the system. The luminaries shall be fully flexible for future upgrades and easy replacements for maintenance purposes. Supplier to submit lighting design calculation as per the offered light fixtures.	No.	60			
2(b)	Surface mounted Batten LED Luminaries 50W or above (dimension 1200 mm and above) make High-Pressure Sodium (HPS) lamp with PCA arc tube, high energy-efficient LED wattage matching the lumen output, min 24,000 hrs lumens on a 10 hrs start cycle, with built in standard to meet or exceed ANSI and IESNA roadway lighting standards or equivalent suitable for Bus stations of wattage suitable for the project requirements, fully IP 65 with polycarbonate housing, UV shielding, stainless steel brackets for	No.	20			

	mounting, maintenance free long lasting performance complete with LED drivers and all accessories/ components required for the proper operation of the system. The fitting shall be approved by the Engineer.					
2(c)	Bollard light Luminaries LED 220 - 240 Volts 9 Watt with IP 65 or above protection complete in all respect or approved equivalent. The fitting shall be approved by the engineer.	No.	10			
2(d)	LED Planter Spike light 7W IP 65, 3000K, with corrosion resistant die cast aluminum housing, tempered glass complete with LED built-in driver and all accessories/components required for the proper operation of the system	No.	50			
2 (e)	Flood Lighting LED Luminaries 120W make High-Pressure Sodium (HPS) lamp with PCA arc tube, high energy-efficient LED wattage matching the lumen output, min 24,000 hrs lumens on a 10 hrs start cycle, with built in standard to meet or exceed ANSI and IESNA roadway lighting standards or equivalent suitable for M-2 & M-3 roads of wattage suitable for the project requirements, fully IP 65 with corrosion resistant die cast aluminum housing, silicon gas kit, thermally hardened glass complete with LED drivers, surge protection and all accessories/ components required for the proper operation of the system. The luminaries shall be fully flexible for future upgrades and easy replacements for maintenance purposes. Supplier to submit lighting design calculation as per the offered light fixtures.	No.	30			
2(f)	Hot dipped galvanized bracket for mounting of Flood lights along with all accessories.	Each	10			
3	<u>Junction Boxes</u>					

3(a)	Junction box size 12"x08"x06" (for Flood Light connection) with angle iron frame claded 16 SWG, sheet steel enclosure having high quality powder coated paint, color RAL 7032. Suitable for connections with IP 54 protection class, door, locking arrangement etc. and all other accessories as required for quality work.	No.	10			
-	Junction box size 12"x08"x06" (for Flood Light connection)					
-	01 No. 2 Amp. SP MCB, 10 kA					
-	04 No. Terminal block					
-	GI flexible pipe 1" dia					
3(b)	Junction boxes/Pull boxes for canopy lights size 5"x6"x3" with thermoplastic frame enclosure having color RAL 7032, terminal blocks & 25 mm dia GI flexible pipe to light point concealed/surface in walls/slab with clamping arrangements as required complete in all respects suitable for connections and all other accessories as required for quality work (Pull box shall be High-grade, UV-stabilized, halogen-free, and flame-retardant Polycarbonate, Minimum IK08 rating in accordance with IEC 62262, engineered to withstand high roadside vibrations, mechanical stress, and airborne gravel impact. High resistance against industrial atmospheric pollutants, road salt, automotive exhaust gases, and acid rain. - IEC 60695-2-11 and minimum IP67/IP69 submersible standards under IEC 60529 Class II (Total insulation / Double Insulated) with material integrity maintained up to +70°C high-performance outdoor-rated enclosure)	No.	05			
4	<u>Wiring & Accessories</u>					

4 (a)	Wiring of light point or fan point from switch to the point with 3x1.5mm ² PVC insulated single core cables in PVC pipes concealed in walls, columns and slabs including accessories, pvc box, 10 Amp. gang switch 1 or 2 way as required, one for each light or fan installed as in specifications.	Each	3			
4 (b)	Circuit wiring from DB MCBs to gang switches board and from switch board to another switch board with 3x2.5 mm ² (P+N+E) PVC insulated single core stranded cables in 25mm PVC pipe/conduit concealed in walls, columns and slabs as required complete in all respects.	Each	2			
4 (c)	The same as item No. 1.1 but from one light point to another light point.	Each	15			
5	<u>Low Voltage Power Cables</u>					
5(a)	Supply, installation, testing, commissioning and termination of following sizes of PVC insulated 600/1000 Voltage grade unarmored Copper cables laid direct in ground, pulled in PVC pipe already laid, on surface of wall or cable trays etc. including all accessories as required complete in all respects (Imported copper shall be used. Verified documentary evidence for source of copper & PVC shall be furnished prior to manufacturing)					
i	4 Core 50mm ²	Rm	150			
ii	4 Core 35mm ²	Rm	400			
iii	4 Core 25mm ²	Rm	800			
iv	4 Core 16mm ²	Rm	2,300			
v	4 Core 10mm ²	Rm	500			
vi	4 Core 6mm ²	Rm	500			
5(b)	Supply, installation, testing, commissioning and termination of following sizes of PVC insulated					

	single core 450/750 Voltage grade unarmored Copper cables as circuit protective conductor/ earth continuity conductor (CPC/ECC) laid direct in ground, pulled in PVC pipe already laid, on surface of wall or cable trays etc. including all accessories as required complete in all respects (Imported copper shall be used. Verified documentary evidence for source of copper & PVC shall be furnished prior to manufacturing)					
i	1 Core 70mm ²	Rm	250			
ii	1 Core 25mm ²	Rm	200			
iii	1 Core 16mm ²	Rm	1,750			
iv	1 Core 10mm ²	Rm	500			
v	1 Core 6mm ²	Rm	500			
vi	3 Nos. 1 core 2.5 mm ² Cu. PVC 450/750 Voltage grade cable (stranded conductor) (Imported copper shall be used. Verified documentary evidence for source of copper & PVC shall be furnished prior to manufacturing) from junction box to the fitting through the hollow of pole.					
a)	For 12m Pole	No.	60			
b)	For 15m Pole	No.	20			
c)	For Flood Lights	No.	10			
6	<u>Main Panel Board (MPB)</u>					
	Main panel board to be installed outside the building designated as MAIN I/C cum O/G Supply with the following specs: 1. 14 SWG MS Sheet ,Pad Mounted , Front access type, Double Powder Coated ,IP class 44/54 & RAL 7032 including foundation/base frame. 2. O/G and I/C cable entries from Bottom.	Job	1			

	3. Top Bottom Both removable plates. 4. Front Covering plates for all breakers. 5. Earthing management (Neutral Earth Separate Bus Bar). 6. Door operated one LED tube light 230V, Thermostate temperature operated exhaust Fan in each Cubicle with all installation and operational accessories as per site requirements, with specifications and drawings and as directed by the Engineer.					
	Incoming					
	01 No. 1250 Amp TP (adj.) ACB RC= 66 kA					
	01 No. VSS (07 position)					
	01 No. 0-600 Volts AC DIGITAL Voltmeter					
	03 Nos. 1600/5 Amps Current Transformers					
	01 No. ASS (R-Y-B-OFF)					
	01 No. 0-1600 Amps AC DIGITAL Ammeter					
	06 Nos. RYB, ON, OFF, TRIP LED indication lights					
	Outgoing					
	01 No. 320 Amp MCCB TP (Adj.) RC=36kA					
	01 No. 125 Amp MCCB TP (Adj.) RC=25kA					
	02 No. 100 Amp MCCB TP (Adj.) RC=25kA					
	02 No. 80 Amp MCCB TP (Adj.) RC=25kA					
	07 Nos. 63 Amp MCCB TP (Adj.) RC=25kA					
	01 No. 50 Amp MCCB TP (Adj.) RC=25kA					
	04 No. 25 Amp MCCB TP, (Adj.) RC=25 kA					
	02 No. 80/100 Amp MCCB TP (adj.) RC=25kA (Spare)					
	02 No. 80/100 Amp MCCB TP (adj.) RC=25kA (Space)					

	01 No. Panel light with limit switch					
	Electrolytic copper bus bar 2500 Amp, Bus bar of appropriate size (size/cross-section should be clearly mentioned in quotation based on calculation according to relevant IEC standard), including nuts, bolts and washers, control MCB etc.					
7	<u>Lighting Control Panel</u>					
	Road lighting control panel with angle iron frame clad 14 SWG, sheet steel enclosure having high quality powder coated paint, color RAL 7032. The LCP shall be complete with incoming and outgoing MCCBs, Cu bus bars, magnetic contactors, photo-electric switches, meters, indication lights, construction with IP 54 protection class, door, locking arrangement etc. and all other accessories as required for quality work. MATERIAL 1 No. incoming 63 Amp.(adj.) TP, MCCB, 25 kA 4 No. outgoing 25 Amp. (adj.) TP MCCBs, 25 kA 2 No. outgoing 25 Amp. (adj.) TP MCCBs, 25 kA (Spare) 4 No. 32 Amp. magnetic contactor 2 No. 32 Amp. magnetic contactor (Spare) 3 No. photo-electric switches with timers and relays a) 1 No. ammeters 0-100 Amp, with selector switch (04 position) and CT of 100/5 Amp b) 3 No. indication lights c) 1 No. voltmeter with fuse and 7 position selector switch. d) 3 Ph, N & Earth copper bus bars Internal wiring & line-up terminals etc. Brass cable glands/accessories	No	1			

	e) 06 Nos. Auto-Manual-OFF (3 position switches for operation in auto (with photocell) and normal (manual mode-photocell override) f) 06 Nos.ON & 06 Nos. OFF push button switch's with indication lights g) Panel Light with limit Switch					
8	<u>Power Factor Improvement (PFI) Panel (125 KVAR)</u>					
	14 SWG MS sheet clad IP 44/54 colour RAL 7032 double powder coated power factor improvement panel (PFI) including Cu busbar, incoming and outgoing circuit breaker, power capacitors, magnetic contactors, continuous digital p.f controller, on & off push buttons, indication lights, cable glands, top /bottom for cable entry of appropriate size etc. complete with all components/ accessories as per specifications and drawings.					
	6 steps with continuous digital power factor and capacitor controller with all accessories etc. 01 No. Manual/OFF/Auto selector switch 04 Nos. 25 kVAR capacitor 02 Nos. 12.5 kVAR capacitor 04 Nos. 65A Magnetic contactor (AC-3) 02 Nos. 32A Magnetic contactor (AC-3) 04 Nos. 50A MCCB, TP (Adj.) RC=25 kA Circuit breaker, Icu=100%Ics" 02 Nos. 32A MCCB, TP (Adj.) RC=25 kA Circuit breaker, Icu=100%Ics" 15 Nos. Indication light (for magnetic contactor and phase) 12 Nos. Push Buttons (ON/OFF)	Job	1			

	12 Nos. Auxiliary contactor (NO/NC) Panel light with limit switch 01 No. Exhaust fan 6" & Louver 8" sweep with thermostat relay and all accessories etc. (For each cabinet) 14 SWG steel sheet Panel RAL 7032, IP= 44/54 and all other accessories, All other accessories required for completion of the quality works including Cable gland and lugs etc Electrolytic copper bus bar with electrical grade PVC mountings 3 for each, nuts, bolts and washers, control MCB etc. (320 Amps. R+Y+B N, 50 Hz, 415 V, AC) including cable glands at top/bottom entry for cable) Suppliers shall submit the genuine certificate from the manufacturer/authorized agent clear by indicating the project name make/model/rating of MCCB, MCB, magnetic contactors, terminal blocks and voltmeters/ammeter alongwith warranties.					
09	<u>Earthing</u>					
A	Earth point comprising of 10 ft. 5/8" dia. (16 mm dia) copper coated M.S. rods driven in ground near each lighting control panel. The earthing rods shall be completed with fixing clamps etc.	Each	5			
B	Bore type, earthing up to permanent water level/moist soil by arrangement of earth pit/point comprising of concrete/brickwork housing with lifting cover 50mm perforated GI pipe, appropriate bare copper stranded conductor as per details in drawing. The earthing and bonding shall be complete with fixing clamps etc. & all metal works shall be bonded to the proposed earthing network.	Job	5			

C	Drilling of earth bore 3" dia 100 ft. deep or up to permanent water table.					
D	Supply and installation of G.I pipe 2" dia 14 SWG to be installed in pre-made bore including all accessories like tees, bends, sockets etc. Pipe shall be connected to tinned copper spike as per detail shown on drawing, complete in all respects.					
F	Supply and installation of tinned copper spike to be manufactured as per detail shown on drawing. Spike shall be connected/screwed at bottom of G.I pipe including all accessories like nuts and bolts complete in all respect.					
G	Supply and installation of 2 Nos. 70 mm ² bare stranded electrolytic copper conductor lead in preload G.I pipe and connected to tinned copper spike as shown on drawing. 02Nos.leads to be installed including all accessories like brass nuts, bolts, washers etc complete in all respect.					
H	Supply and installation of tinned earth test link in earthing pit consisting of copper plate (12"x2"x1/2") with fixing arrangement on the wall of man hole including brass nuts, bolts washers lugs etc. complete in all respect.					
I	Construction of earthing pit (manhole) of internal size 18"x18"x24" deep with 9" thick brick wall with cement mortar, internal plaster 1:4, RCC 4" thick cover with lifting hooks including all accessories complete in all respect.					
J	Testing and commissioning of the earthing system along with all testing accessories complete in all respect.					
10						

<u>Transformer (As Per WAPDA Specs)</u>						
	Supply and Installation of Outdoor type pad mounted transformer (HT & LT Compartment) with foundation and all accessories. Oil immersed / dry type transformer manufactured according to BS-171, IEC-60076, specifications and consisting of filling device, drain plug, oil level indicator, lifting hooks, bi-directional roller wheels, H.V. & L.V. porcelain bushings, off load voltage tap changer, 2 earthing terminals, oil conservator and silica gel breather, imported double float buckholz relay, pressure relief vent, dial type thermometer with alarm & trip contacts, rated Voltage 11000 / 415 / 230 Volts, suitable for an ambient temperature of 50°C, winding temperature 55°C and oil temperature 50°C, impedance 6.25% or as specified by IEC, system earth: Delta-Y, neutral solidly earthed (DYN-11) and all necessary accessories / materials, complete in all respects, including trenches etc , submission of technical data sheet. WAPDA (Concerned DISCO) approved. Connection Charges, with energy meter as per WAPDA standards and practice.					
	The Power transformers shall be fully tropicalized, three phase, step down, oil filled, self-cooled, core type, double wound, suitable for parallel operation and for outdoor installation. The Power transformers shall meet the minimum technical specifications but not limited to the following: Type 0.42 Capacity (Rated continuous) As specified Voltage ratio at no-load 11000/415 Volts Frequency 50 Hz Vector group Dy 11					

	Off load tapping arrangement (on HT side) -7.5%, -5%, -2.5%, 0% +2.5%, +5%, HT connection 11 kV Delta LT connection 400V with grounded star point Temperature rise of oil over ambient temperature 400 C maximum Temperature rise of winding over ambient temperature 500 C maximum Impedance voltage (%) 4 Voltage regulation for normal operating conditions Not to exceed 2.5% of no-load Voltage regulation at 85% pf at full load (%) 3.5 Rated maximum voltage HT/LT 15kV/0.6 kV Basic insulation level 95 kV Power frequency withstand voltage 34 kV Rated short-time current (kA) 25 Switching inrush current (Amps) 6-7 times of HV line current Following information had to be provided: Applicable Standards/Codes Latest editions of the following standards and codes shall be applicable for all materials in scope of this section: BS90 - Power transformers BS14 - Transformer oil BS171 - Specifications for power transformer BS223 - High voltage bushings IEC7 - Power transformers					
I	630 kVA	Job	1			
11	<u>MV Cable and Termination Kits</u>					

a)	MV cable 1-core 240mm ² XLPE/PVC/AWA/PVC cable with aluminum conductor voltage grade:8.7/15 kV	Rm	1,500			
b)	Providing and fixing/installation indoor 1-core 240mm ² , 11KV, XLPE, heat shrink termination Kit complete in all respect as required.	Job	3			
c)	Providing and fixing/installation outdoor 1-core 240mm ² , 11KV, XLPE, heat shrink termination Kit complete in all respect as required.	Job	3			
12	<u>Provisional Sum</u>					
	Cost of obtaining 11kV connection from the DISCO/utility. The same shall be paid to the Supplier as per actual demand notice of the relevant DISCO/utility for the respective site.	Job	1			

Mandatory instructions:

1. The Bidder shall quote every item included in the BOQ.
2. Blank unit rates are not permitted.
3. Where an item is included in another rate, the Bidder shall state “Included” and identify the relevant priced item.
4. Unit rates shall include design, manufacture, supply, transportation, insurance, unloading, storage, installation, incidental works, testing, commissioning, labour, tools, equipment, documentation, warranty and all other obligations necessary for complete performance.
5. Quantities are indicative for Framework Agreement purposes. Payment under a Call-off/Work Order shall be based on the quantities ordered and actually executed or accepted, multiplied by the applicable agreed unit rates, subject to the Contract.
6. The unit rates shall remain applicable throughout the Framework Agreement Term.
7. The Bidder shall not add conditions, assumptions or qualifications in the Price Schedule.

LOT # 03 - Site 03: KHUKERA (BOQ-9)

Note: Bidders must mention the brand/ model of each sub-item they are offering. The brand must be equivalent to the requirements mentioned in the Technical Specifications.

Item No.	Description	Unit	Indicative Quantity	Unit DDP Price (PKR)	Total DDP Price (PKR)	Offered Make/Model, where applicable
Design, supply, transportation, storage, installation, testing and commissioning of the following items of work, including all material, labor, tools and accessories etc. required for proper completion of each item as per specification, drawings and/or as directed by the Engineer.				(includes all kinds of taxes, after sales services, incidental services and costs to deliver, install, commission, inspect, and test goods at the place of destination)		
1	<u>Poles</u>					
1(a)	12 m high single bent arm conical octagonal galvanized steel pole with extension arm luminaire arrangement, base plate, J-rag bolts, 01 No. 2 Amp 10kA SP MCB, pole numbering and earthing etc. as shown on drawing.	Each	23			
1(b)	12 m high double bent arm conical octagonal galvanized steel pole with extension arm luminaire arrangement, base plate, J-rag bolts, 02 Nos. 2 Amp 10kA SP MCB, pole numbering and earthing etc. as shown on drawing.	Each	06			
1(c)	15 m high conical octagonal (hot dip) galvanized steel pole with circular angular top 4 Nos. luminaire arrangement, base plate, J-rag bolts, 2 Amp 04 Nos. SP MCB, pole numbering and earthing etc. as shown on drawing.	Each	02			
1(d)	Road Lighting Pole Foundation	Each	31			

2	<u>Road Lights & Accessories for Flood Light Installation</u>						
2(a)	Road Lighting LED Luminaries 120W make High-Pressure Sodium (HPS) lamp with PCA arc tube, high energy-efficient LED wattage matching the lumen output, min 24,000 hrs lumens on a 10 hrs start cycle, with built in standard to meet or exceed ANSI and IESNA roadway lighting standards or equivalent suitable for M-2 & M-3 roads of wattage suitable for the project requirements, fully IP 66 with corrosion resistant die cast aluminum housing, silicon gas kit, thermally hardened glass complete with LED drivers, surge protection and all accessories/ components required for the proper operation of the system. The luminaries shall be fully flexible for future upgrades and easy replacements for maintenance purposes. Supplier to submit lighting design calculation as per the offered light fixtures.	No.	35				
2(b)	Surface mounted Batten LED Luminaries 50W or above (dimension 1200 mm and above) make High-Pressure Sodium (HPS) lamp with PCA arc tube, high energy-efficient LED wattage matching the lumen output, min 24,000 hrs lumens on a 10 hrs start cycle, with built in standard to meet or exceed ANSI and IESNA roadway lighting standards or equivalent suitable for Bus stations of wattage suitable for the project requirements, fully IP 65 with polycarbonate housing, UV shielding, stainless steel brackets for mounting, maintenance free long lasting performance complete with LED drivers and all accessories/ components required for the proper operation of the system. The fitting shall be approved by the Engineer.	No.	20				
2(c)	Bollard light Luminaries LED 220 - 240 Volts 9 Watt with IP 65 or above protection complete in all respect or approved equivalent. The fitting shall be approved by the engineer.	No.	10				
2(d)	LED Planter Spike light 7W IP 65, 3000K, with corrosion resistant die cast aluminum housing, tempered glass complete with LED built-in driver and all accessories/components required for the proper operation of the system	No.	41				

2 (e)	Flood Lighting LED Luminaries 120W make High-Pressure Sodium (HPS) lamp with PCA arc tube, high energy-efficient LED wattage matching the lumen output, min 24,000 hrs lumens on a 10 hrs start cycle, with built in standard to meet or exceed ANSI and IESNA roadway lighting standards or equivalent suitable for M-2 & M-3 roads of wattage suitable for the project requirements, fully IP 65 with corrosion resistant die cast aluminum housing, silicon gas kit, thermally hardened glass complete with LED drivers, surge protection and all accessories/ components required for the proper operation of the system. The luminaries shall be fully flexible for future upgrades and easy replacements for maintenance purposes. Supplier to submit lighting design calculation as per the offered light fixtures.	No.	18			
2(f)	Hot dipped galvanized bracket for mounting of Flood lights along with all accessories.	Each	10			
3	<u>Junction Boxes</u>					
3(a)	Junction box size 12"x08"x06" (for Flood Light connection) with angle iron frame clad 16 SWG, sheet steel enclosure having high quality powder coated paint, color RAL 7032. Suitable for connections with IP 54 protection class, door, locking arrangement etc. and all other accessories as required for quality work.	No.	10			
-	Junction box size 12"x08"x06" (for Flood Light connection)					
-	01 No. 2 Amp. SP MCB, 10 kA					
-	04 No. Terminal block					
-	GI flexible pipe 1" dia					
3(b)	Junction boxes/Pull boxes for canopy lights size 5"x6"x3" with thermoplastic frame enclosure having color RAL 7032, terminal blocks & 25 mm dia GI flexible pipe to light point concealed/surface in walls/slab with clamping arrangements as required complete in all respects suitable for connections and all other accessories as required for quality work (Pull box shall be High-grade, UV-stabilized, halogen-free, and flame-retardant Polycarbonate, Minimum IK08 rating in accordance with IEC 62262, engineered to withstand high roadside	No.	05			

	vibrations, mechanical stress, and airborne gravel impact. High resistance against industrial atmospheric pollutants, road salt, automotive exhaust gases, and acid rain. - IEC 60695-2-11 and minimum IP67/IP69 submersible standards under IEC 60529 Class II (Total insulation / Double Insulated) with material integrity maintained up to +70°C high-performance outdoor-rated enclosure)).					
4	<u>Wiring & Accessories</u>					
4 (a)	Wiring of light point or fan point from switch to the point with 3x1.5mm ² PVC insulated single core cables in PVC pipes concealed in walls, columns and slabs including accessories, pvc box, 10 Amp. gang switch 1 or 2 way as required, one for each light or fan installed as in specifications.	Each	3			
4 (b)	Circuit wiring from DB MCBs to gang switches board and from switch board to another switch board with 3x2.5 mm ² (P+N+E) PVC insulated single core stranded cables in 25mm PVC pipe/conduit concealed in walls, columns and slabs as required complete in all respects.	Each	2			
4 (c)	The same as item No. 1.1 but from one light point to another light point.	Each	15			
5	<u>Low Voltage Power Cables</u>					
5(a)	Supply, installation, testing, commissioning and termination of following sizes of PVC insulated 600/1000 Voltage grade unarmored Copper cables laid direct in ground, pulled in PVC pipe already laid, on surface of wall or cable trays etc. including all accessories as required complete in all respects (Imported copper shall be used. Verified documentary evidence for source of copper & PVC shall be furnished prior to manufacturing)					
i	4 Core 50mm ²	Rm	150			
ii	4 Core 35mm ²	Rm	400			
iii	4 Core 25mm ²	Rm	800			
iv	4 Core 16mm ²	Rm	1,200			
v	4 Core 10mm ²	Rm	500			

vi	4 Core 6mm2	Rm	500			
5(b)	Supply, installation, testing, commissioning and termination of following sizes of PVC insulated single core 450/750 Voltage grade unarmored Copper cables as circuit protective conductor/ earth continuity conductor (CPC/ECC) laid direct in ground, pulled in PVC pipe already laid, on surface of wall or cable trays etc. including all accessories as required complete in all respects (Imported copper shall be used. Verified documentary evidence for source of copper & PVC shall be furnished prior to manufacturing)					
i	1 Core 70mm2	Rm	250			
ii	1 Core 25mm2	Rm	200			
iii	1 Core 16mm2	Rm	1,200			
iv	1 Core 10mm2	Rm	500			
v	1 Core 6mm2	Rm	500			
vi	3 Nos. 1 core 2.5 mm ² Cu. PVC 450/750 Voltage grade cable (stranded conductor) (Imported copper shall be used. Verified documentary evidence for source of copper & PVC shall be furnished prior to manufacturing) from junction box to the fitting through the hollow of pole.					
a)	For 12m Pole	No.	30			
b)	For 15m Pole	No.	02			
c)	For Flood Lights	No.	10			

6	<u>Main Panel Board (MPB)</u> Main panel board to be installed outside the building designated as MAIN I/C cum O/G Supply with the following specs:	Job	1			
	1. 14 SWG MS Sheet ,Pad Mounted , Front access type, Double Powder Coated ,IP class 44/54 & RAL 7032 including foundation/base frame.					
	2. O/G and I/C cable entries from Bottom.					
	3. Top Bottom Both removable plates.					
	4. Front Covering plates for all breakers.					
	5. Earthing management (Neutral Earth Separate Bus Bar).					
	6. Door operated one LED tube light 230V, Thermostate temperature operated exhaust Fan in each Cubicle with all installation and operational accessories as per site requirements, with specifications and drawings and as directed by the Engineer.					
	<u>Incoming</u>					
	01 No. 1250 Amp TP (adj.) ACB RC= 66 kA					
	01 No. VSS (07 position)					
	01 No. 0-600 Volts AC DIGITAL Voltmeter					
	03 Nos. 1600/5 Amps Current Transformers					
	01 No. ASS (R-Y-B-OFF)					
	01 No. 0-1600 Amps AC DIGITAL Ammeter					
	06 Nos. RYB, ON,OFF,TRIP LED indication lights					
	<u>Outgoing</u>					
	01 No. 320 Amp MCCB TP (Adj.) RC=36kA					
	01 No. 125 Amp MCCB TP (Adj.) RC=25kA					
	02 No. 100 Amp MCCB TP (Adj.) RC=25kA					
	02 No. 80 Amp MCCB TP (Adj.) RC=25kA					
	07 Nos. 63 Amp MCCB TP (Adj.) RC=25kA					
	01 No. 50 Amp MCCB TP (Adj.) RC=25kA					

	04 No. 25 Amp MCCB TP, (Adj.) RC=25 kA					
	02 No. 80/100 Amp MCCB TP (adj.) RC=25kA (Spare)					
	02 No. 80/100 Amp MCCB TP (adj.) RC=25kA (Space)					
	01 No. Panel light with limit switch					
	Electrolytic copper bus bar 2500 Amp, Bus bar of appropriate size (size/cross-section should be clearly mentioned in quotation based on calculation according to relevant IEC standard), including nuts, bolts and washers, control MCB etc.					
7	<u>Lighting Control Panel</u>					
	Road lighting control panel with angle iron frame clad 14 SWG, sheet steel enclosure having high quality powder coated paint, color RAL 7032. The LCP shall be complete with incoming and outgoing MCCBs, Cu bus bars, magnetic contactors, photo-electric switches, meters, indication lights, construction with IP 54 protection class, door, locking arrangement etc. and all other accessories as required for quality work.					
	MATERIAL 1 No. incoming 63 Amp.(adj.) TP, MCCB, 25 kA 4 No. outgoing 25 Amp. (adj.) TP MCCBs, 25 kA 2 No. outgoing 25 Amp. (adj.) TP MCCBs, 25 kA (Spare) 4 No. 32 Amp. magnetic contactor 2 No. 32 Amp. magnetic contactor (Spare) 3 No. photo-electric switches with timers and relays a) 1 No. ammeters 0-100 Amp, with selector switch (04 position) and CT of 100/5 Amp b) 3 No. indication lights c) 1 No. voltmeter with fuse and 7 position selector switch. d) 3 Ph, N & Earth copper bus bars Internal wiring & line-up terminals etc. Brass cable glands/accessories e) 06 Nos. Auto-Manual-OFF (3 position switches for operation in auto (with photocell) and normal (manual mode-photocell override)	No	1			

	f) 06 Nos.ON & 06 Nos. OFF push button switch's with indication lights g) Panel Light with limit Switch					
8	<u>Power Factor Improvement (PFI) Panel (125 KVAR)</u>					
	14 SWG MS sheet clad IP 44/54 colour RAL 7032 double powder coated power factor improvement panel (PFI) including Cu busbar, incoming and outgoing circuit breaker, power capacitors, magnetic contactors, continuous digital p.f controller, on & off push buttons, indication lights, cable glands, top /bottom for cable entry of appropriate size etc. complete with all components/ accessories as per specifications and drawings.					
	6 steps with continuous digital power factor and capacitor controller with all accessories etc. 01 No. Manual/OFF/Auto selector switch 04 Nos. 25 kVAR capacitor 02 Nos. 12.5 kVAR capacitor 04 Nos. 65A Magnetic contactor (AC-3) 02 Nos. 32A Magnetic contactor (AC-3) 04 Nos. 50A MCCB, TP (Adj.) RC=25 kA Circuit breaker, Icu=100%Ics" 02 Nos. 32A MCCB, TP (Adj.) RC=25 kA Circuit breaker, Icu=100%Ics" 15 Nos. Indication light (for magnetic contactor and phase) 12 Nos. Push Buttons (ON/OFF) 12 Nos. Auxiliary contactor (NO/NC) Panel light with limit switch 01 No. Exhaust fan 6" & Louver 8" sweep with thermostat relay and all accessories etc. (For each cabinet) 14 SWG steel sheet Panel RAL 7032, IP= 44/54 and all other accessories,	Job	1			

	All other accessories required for completion of the quality works including Cable gland and lugs etc Electrolytic copper bus bar with electrical grade PVC mountings 3 for each, nuts, bolts and washers, control MCB etc. (320 Amps. R+Y+B N, 50 Hz, 415 V, AC) including cable glands at top/bottom entry for cable) Suppliers shall submit the genuine certificate from the manufacturer/authorized agent clear by indicating the project name make/model/rating of MCCB, MCB, magnetic contactors, terminal blocks and voltmeters/ ammeter along with warranties.					
09	Earthing					
A	Earth point comprising of 10 ft. 5/8" dia. (16 mm dia) copper coated M.S. rods driven in ground near each lighting control panel. The earthing rods shall be completed with fixing clamps etc.	Each	5			
B	Bore type, earthing up to permanent water level/moist soil by arrangement of earth pit/point comprising of concrete/brickwork housing with lifting cover 50mm perforated GI pipe, appropriate bare copper stranded conductor as per details in drawing. The earthing and bonding shall be complete with fixing clamps etc. & all metal works shall be bonded to the proposed earthing network.	Job	5			
C	Drilling of earth bore 3" dia 100 ft. deep or up to permanent water table.					
D	Supply and installation of G.I pipe 2" dia 14 SWG to be installed in pre-made bore including all accessories like tees, bends, sockets etc. Pipe shall be connected to tinned copper spike as per detail shown on drawing, complete in all respects.					
F	Supply and installation of tinned copper spike to be manufactured as per detail shown on drawing. Spike shall be connected/screwed at bottom of G.I pipe including all accessories like nuts and bolts complete in all respect.					
G	Supply and installation of 2 Nos. 70 mm ² bare stranded electrolytic copper conductor lead in preload G.I pipe and connected to tinned					

	copper spike as shown on drawing. 02Nos. leads to be installed including all accessories like brass nuts, bolts, washers etc complete in all respect.					
H	Supply and installation of tinned earth test link in earthing pit consisting of copper plate (12"x2"x1/2") with fixing arrangement on the wall of man hole including brass nuts, bolts washers lugs etc. complete in all respect.					
I	Construction of earthing pit (manhole) of internal size 18"x18"x24" deep with 9" thick brick wall with cement mortar, internal plaster 1:4, RCC 4" thick cover with lifting hooks including all accessories complete in all respect.					
J	Testing and commissioning of the earthing system along with all testing accessories complete in all respect.					
10	<u>Transformer (As Per WAPDA Specs)</u>					
	Supply and Installation of Outdoor type pad mounted transformer (HT & LT Compartment) with foundation and all accessories. Oil immersed / dry type transformer manufactured according to BS-171, IEC-60076, specifications and consisting of filling device, drain plug, oil level indicator, lifting hooks, bi-directional roller wheels, H.V. & L.V. porcelain bushings, off load voltage tap changer, 2 earthing terminals, oil conservator and silica gel breather, imported double float buckholz relay, pressure relief vent, dial type thermometer with alarm & trip contacts, rated Voltage 11000 / 415 / 230 Volts, suitable for an ambient temperature of 50°C, winding temperature 55°C and oil temperature 50°C, impedance 6.25% or as specified by IEC, system earth: Delta-Y, neutral solidly earthed (DYN-11) and all necessary accessories / materials, complete in all respects, including trenches etc, submission of technical data sheet. WAPDA (Concerned DISCO) approved. Connection Charges, with energy meter as per WAPDA standards and practice.					
	The Power transformers shall be fully tropicalized, three phase, step down, oil filled, self-cooled, core type, double wound, suitable for					

	parallel operation and for outdoor installation. The Power transformers shall meet the minimum technical specifications but not limited to the following: Type 0.42 Capacity (Rated continuous) As specified Voltage ratio at no-load 11000/415 Volts Frequency 50 Hz Vector group Dy 11 Off load tapping arrangement (on HT side) -7.5%, -5%, -2.5%, 0% +2.5%, +5%, HT connection 11 kV Delta LT connection 400V with grounded star point Temperature rise of oil over ambient temperature 400 C maximum Temperature rise of winding over ambient temperature 500 C maximum Impedance voltage (%) 4 Voltage regulation for normal operating conditions Not to exceed 2.5% of no-load Voltage regulation at 85% pf at full load (%) 3.5 Rated maximum voltage HT/LT 15kV/0.6 kV Basic insulation level 95 kV Power frequency withstand voltage 34 kV Rated short-time current (kA) 25 Switching inrush current (Amps) 6-7 times of HV line current Following information had to be provided: Applicable Standards/Codes Latest editions of the following standards and codes shall be applicable for all materials in scope of this section:							
	BS90 - Power transformers BS14 - Transformer oil BS171 - Specifications for power transformer BS223 - High voltage bushings IEC7 - Power transformers							

I	630 kVA	Job	1			
11	<u>MV Cable and Termination Kits</u>					
a)	MV cable 1-core 240mm ² XLPE/PVC/AWA/PVC cable with aluminum conductor voltage grade:8.7/15 kV	Rm	1,500			
b)	Providing and fixing/installation indoor 1-core 240mm ² , 11KV, XLPE, heat shrink termination Kit complete in all respect as required.	Job	3			
c)	Providing and fixing/installation outdoor 1-core 240mm ² , 11KV, XLPE, heat shrink termination Kit complete in all respect as required.	Job	3			
12	<u>Provisional Sum</u>					
	Cost of obtaining 11kV connection from the DISCO/utility. The same shall be paid to the Supplier as per actual demand notice of the relevant DISCO/utility for the respective site.	Job	1			

Mandatory instructions:

1. The Bidder shall quote every item included in the BOQ.
2. Blank unit rates are not permitted.
3. Where an item is included in another rate, the Bidder shall state “Included” and identify the relevant priced item.
4. Unit rates shall include design, manufacture, supply, transportation, insurance, unloading, storage, installation, incidental works, testing, commissioning, labour, tools, equipment, documentation, warranty and all other obligations necessary for complete performance.
5. Quantities are indicative for Framework Agreement purposes. Payment under a Call-off/Work Order shall be based on the quantities ordered and actually executed or accepted, multiplied by the applicable agreed unit rates, subject to the Contract.
6. The unit rates shall remain applicable throughout the Framework Agreement Term.
7. The Bidder shall not add conditions, assumptions or qualifications in the Price Schedule.

LOT # 03 - Site 04: HUB (MYGARHI OR CHLEGHEZI CUT) (BOQ-10)

Note: Bidders must mention the brand/ model of each sub-item they are offering. The brand must be equivalent to the requirements mentioned in the Technical Specifications.

Item No.	Description	Unit	Indicative Quantity	Unit DDP Price (PKR)	Total DDP Price (PKR)	Offered Make/Model, where applicable
Design, supply, transportation, storage, installation, testing and commissioning of the following items of work, including all material, labor, tools and accessories etc. required for proper completion of each item as per specification, drawings and/or as directed by the Engineer.				(includes all kinds of taxes, after sales services, incidental services and costs to deliver, install, commission, inspect, and test goods at the place of destination)		
1	<u>Poles</u>					
1(a)	12 m high single bent arm conical octagonal galvanized steel pole with extension arm luminaire arrangement, base plate, J-rag bolts, 01 No. 2 Amp 10kA SP MCB, pole numbering and earthing etc. as shown on drawing.	Each	25			
1(b)	Road Lighting Pole Foundation	Each	25			
2	<u>Road Lights & Accessories for Flood Light Installation</u>					
2(a)	Road Lighting LED Luminaries 120W make High-Pressure Sodium (HPS) lamp with PCA arc tube, high energy-efficient LED wattage matching the lumen output, min 24,000 hrs lumens on a 10 hrs start cycle, with built in standard to meet or exceed ANSI and IESNA roadway lighting standards or equivalent suitable for M-2 & M-3 roads of wattage suitable for the project requirements, fully IP 66 with corrosion resistant die cast aluminum housing, silicon gas kit, thermally hardened glass complete with	No.	30			

	LED drivers, surge protection and all accessories/ components required for the proper operation of the system. The luminaries shall be fully flexible for future upgrades and easy replacements for maintenance purposes. Supplier to submit lighting design calculation as per the offered light fixtures.					
2(b)	Surface mounted Batten LED Luminaries 50W or above (dimension 1200 mm and above) make High-Pressure Sodium (HPS) lamp with PCA arc tube, high energy-efficient LED wattage matching the lumen output, min 24,000 hrs lumens on a 10 hrs start cycle, with built in standard to meet or exceed ANSI and IESNA roadway lighting standards or equivalent suitable for Bus stations of wattage suitable for the project requirements, fully IP 65 with polycarbonate housing, UV shielding, stainless steel brackets for mounting, maintenance free long lasting performance complete with LED drivers and all accessories/ components required for the proper operation of the system. The fitting shall be approved by the Engineer.	No.	20			
2(c)	Bollard light Luminaries LED 220 - 240 Volts 9 Watt with IP 65 or above protection complete in all respect or approved equivalent. The fitting shall be approved by the engineer.	No.	45			
2(d)	LED Planter Spike light 7W IP 65, 3000K, with corrosion resistant die cast aluminum housing, tempered glass complete with LED built-in driver and all accessories/components required for the proper operation of the system	No.	65			
2 (e)	Flood Lighting LED Luminaries 120W make High-Pressure Sodium (HPS) lamp with PCA arc tube, high energy-efficient LED wattage matching the lumen output, min 24,000 hrs lumens on a 10 hrs start cycle, with built in	No.	10			

	standard to meet or exceed ANSI and IESNA roadway lighting standards or equivalent suitable for M-2 & M-3 roads of wattage suitable for the project requirements, fully IP 65 with corrosion resistant die cast aluminum housing, silicon gas kit, thermally hardened glass complete with LED drivers, surge protection and all accessories/ components required for the proper operation of the system. The luminaires shall be fully flexible for future upgrades and easy replacements for maintenance purposes. Supplier to submit lighting design calculation as per the offered light fixtures.					
2(f)	Hot dipped galvanized bracket for mounting of Flood lights along with all accessories.	Each	10			
3	<u>Junction Boxes</u>					
3(a)	Junction box size 12"x08"x06" (for Flood Light connection) with angle iron frame clad 16 SWG, sheet steel enclosure having high quality powder coated paint, color RAL 7032. Suitable for connections with IP 54 protection class, door, locking arrangement etc. and all other accessories as required for quality work.	No.	15			
-	Junction box size 12"x08"x06" (for Flood Light connection)					
-	01 No. 2 Amp. SP MCB, 10 kA					
-	04 No. Terminal block					
-	GI flexible pipe 1" dia					
3(b)	Junction boxes/Pull boxes for canopy lights size 5"x6"x3" with thermoplastic frame enclosure having color RAL 7032, terminal blocks & 25 mm dia GI flexible pipe to light point concealed/surface in walls/slab with clamping arrangements as required complete in all respects suitable for connections and all other accessories as required for quality work (Pull box shall be High-grade, UV-stabilized, halogen-free, and flame-retardant Polycarbonate, Minimum IK08 rating in	No.	10			

	accordance with IEC 62262, engineered to withstand high roadside vibrations, mechanical stress, and airborne gravel impact. High resistance against industrial atmospheric pollutants, road salt, automotive exhaust gases, and acid rain. - IEC 60695-2-11 and minimum IP67/IP69 submersible standards under IEC 60529 Class II (Total insulation / Double Insulated) with material integrity maintained up to +70°C high-performance outdoor-rated enclosure)).					
4	<u>Wiring & Accessories</u>					
4 (a)	Wiring of light point or fan point from switch to the point with 3x1.5mm ² PVC insulated single core cables in PVC pipes concealed in walls, columns and slabs including accessories, pvc box, 10 Amp. gang switch 1 or 2 way as required, one for each light or fan installed as in specifications.	Each	05			
4 (b)	Circuit wiring from DB MCBs to gang switches board and from switch board to another switch board with 3x2.5 mm ² (P+N+E) PVC insulated single core stranded cables in 25mm PVC pipe/conduit concealed in walls, columns and slabs as required complete in all respects.	Each	04			
4 (c)	The same as item No. 1.1 but from one light point to another light point.	Each	20			
5	<u>Low Voltage Power Cables</u>					
5(a)	Supply, installation, testing, commissioning and termination of following sizes of PVC insulated 600/1000 Voltage grade unarmored Copper cables laid direct in ground, pulled in PVC pipe already laid, on surface of wall or cable trays etc. including all accessories as required complete in all respects (Imported copper shall be used. Verified documentary evidence for source of copper & PVC shall be furnished prior to manufacturing)					
i	4 Core 50mm ²	Rm	150			

ii	4 Core 35mm ²	Rm	400			
iii	4 Core 25mm ²	Rm	800			
iv	4 Core 16mm ²	Rm	1,200			
v	4 Core 10mm ²	Rm	500			
vi	4 Core 6mm ²	Rm	500			
5(b)	Supply, installation, testing, commissioning and termination of following sizes of PVC insulated single core 450/750 Voltage grade unarmored Copper cables as circuit protective conductor/ earth continuity conductor (CPC/ECC) laid direct in ground, pulled in PVC pipe already laid, on surface of wall or cable trays etc. including all accessories as required complete in all respects (Imported copper shall be used. Verified documentary evidence for source of copper & PVC shall be furnished prior to manufacturing)					
i	1 Core 70mm ²	Rm	250			
ii	1 Core 25mm ²	Rm	200			
iii	1 Core 16mm ²	Rm	1,200			
iv	1 Core 10mm ²	Rm	500			
v	1 Core 6mm ²	Rm	500			
vi	3 Nos. 1 core 2.5 mm ² Cu. PVC 450/750 Voltage grade cable (stranded conductor) (Imported copper shall be used. Verified documentary evidence for source of copper & PVC shall be furnished prior to manufacturing) from junction box to the fitting through the hollow of pole.					
a)	For 12m Pole	No.	30			
b)	For 15m Pole	No.	02			
c)	For Flood Lights	No.	10			
6	<u>Main Panel Board (MPB)</u>					

	Main panel board to be installed outside the building designated as MAIN I/C cum O/G Supply with the folowing specs: 1. 14 SWG MS Sheet ,Pad Mounted , Front access type, Double Powder Coated ,IP class 44/54 & RAL 7032 including foundation/base frame. 2. O/G and I/C cable entries from Bottom. 3. Top Bottom Both removable plates. 4. Front Covering plates for all breakers. 5. Earthing management (Neutral Earth Separate Bus Bar). 6. Door operated one LED tube light 230V,Thermostate temperature operated exhaust Fan in each Cubicle with all installation and operational accessories as per site requirements, with specifications and drawings and as directed by the Engineer.	Job	1			
	Incoming					
	01 No. 1250 Amp TP (adj.) ACB RC= 66 kA					
	01 No. VSS (07 position)					
	01 No. 0-600 Volts AC DIGITAL Voltmeter					
	03 Nos. 1600/5 Amps Current Transformers					
	01 No. ASS (R-Y-B-OFF)					
	01 No. 0-1600 Amps AC DIGITAL Ammeter					
	06 Nos. RYB, ON,OFF,TRIP LED indication lights					
	Outgoing					
	01 No. 320 Amp MCCB TP (Adj.) RC=36kA					
	01 No. 125 Amp MCCB TP (Adj.) RC=25kA					
	02 No. 100 Amp MCCB TP (Adj.) RC=25kA					
	02 No. 80 Amp MCCB TP (Adj.) RC=25kA					
	07 Nos. 63 Amp MCCB TP (Adj.) RC=25kA					
	01 No. 50 Amp MCCB TP (Adj.) RC=25kA					
	04 No. 25 Amp MCCB TP, (Adj.) RC=25 kA					

	02 No. 80/100 Amp MCCB TP (adj.) RC=25kA (Spare)					
	02 No. 80/100 Amp MCCB TP (adj.) RC=25kA (Space)					
	01 No. Panel light with limit switch					
	Electrolytic copper bus bar 2500 Amp, Bus bar of appropriate size (size/cross-section should be clearly mentioned in quotation based on calculation according to relevant IEC standard), including nuts, bolts and washers, control MCB etc.					
7	<u>Lighting Control Panel</u>					
	Road lighting control panel with angle iron frame clad 14 SWG, sheet steel enclosure having high quality powder coated paint, color RAL 7032. The LCP shall be complete with incoming and outgoing MCCBs, Cu bus bars, magnetic contactors, photo-electric switches, meters, indication lights, construction with IP 54 protection class, door, locking arrangement etc. and all other accessories as required for quality work. MATERIAL 1 No. incoming 63 Amp.(adj.) TP, MCCB, 25 kA 4 No. outgoing 25 Amp. (adj.) TP MCCBs, 25 kA 2 No. outgoing 25 Amp. (adj.) TP MCCBs, 25 kA (Spare) 4 No. 32 Amp. magnetic contactor 2 No. 32 Amp. magnetic contactor (Spare) 3 No. photo-electric switches with timers and relays a) 1 No. ammeters 0-100 Amp, with selector switch (04 position) and CT of 100/5 Amp b) 3 No. indication lights c) 1 No. voltmeter with fuse and 7 position selector switch. d) 3 Ph, N & Earth copper bus bars Internal wiring & line-up terminals etc. Brass cable glands/accessories	No	1			

	e) 06 Nos. Auto-Manual-OFF (3 position switches for operation in auto (with photocell) and normal (manual mode-photocell override) f) 06 Nos.ON & 06 Nos. OFF push button switch's with indication lights g) Panel Light with limit Switch					
8	<u>Power Factor Improvement (PFI) Panel (125 KVAR)</u>					
	14 SWG MS sheet clad IP 44/54 colour RAL 7032 double powder coated power factor improvement panel (PFI) including Cu busbar, incoming and outgoing circuit breaker, power capacitors, magnetic contactors, continuous digital p.f controller, on & off push buttons, indication lights, cable glands, top /bottom for cable entry of appropriate size etc. complete with all components/ accessories as per specifications and drawings.					
	6 steps with continuous digital power factor and capacitor controller with all accessories etc. 01 No. Manual/OFF/Auto selector switch 04 Nos. 25 kVAR capacitor 02 Nos. 12.5 kVAR capacitor 04 Nos. 65A Magnetic contactor (AC-3) 02 Nos. 32A Magnetic contactor (AC-3) 04 Nos. 50A MCCB, TP (Adj.) RC=25 kA Circuit breaker, Icu=100%Ics" 02 Nos. 32A MCCB, TP (Adj.) RC=25 kA Circuit breaker, Icu=100%Ics" 15 Nos. Indication light (for magnetic contactor and phase) 12 Nos. Push Buttons (ON/OFF) 12 Nos. Auxiliary contactor (NO/NC) Panel light with limit switch	Job	1			

	01 No. Exhaust fan 6" & Louver 8" sweep with thermostat relay and all accessories etc. (For each cabinet) 14 SWG steel sheet Panel RAL 7032, IP= 44/54 and all other accessories, All other accessories required for completion of the quality works including Cable gland and lugs etc Electrolytic copper bus bar with electrical grade PVC mountings 3 for each, nuts, bolts and washers, control MCB etc. (320 Amps. R+Y+B N, 50 Hz, 415 V, AC) including cable glands at top/bottom entry for cable) shall submit the genuine certificate from the manufacturer/authorized agent clear by indicating the project name make/model/rating of MCCB, MCB, magnetic contactors, terminal blocks and voltmeters/ ammeter alongwith warranties.					
09	<u>Earthing</u>					
A	Earth point comprising of 10 ft. 5/8" dia. (16 mm dia) copper coated M.S. rods driven in ground near each lighting control panel. The earthing rods shall be completed with fixing clamps etc.	Each	5			
B	Bore type, earthing up to permanent water level/moist soil by arrangement of earth pit/point comprising of concrete/brickwork housing with lifting cover 50mm perforated GI pipe, appropriate bare copper stranded conductor as per details in drawing. The earthing and bonding shall be complete with fixing clamps etc. & all metal works shall be bonded to the proposed earthing network.	Job	5			
C	Drilling of earth bore 3" dia 100 ft. deep or up to permanent water table.					

D	Supply and installation of G.I pipe 2" dia 14 SWG to be installed in pre-made bore including all accessories like tees, bends, sockets etc. Pipe shall be connected to tinned copper spike as per detail shown on drawing, complete in all respects.					
F	Supply and installation of tinned copper spike to be manufactured as per detail shown on drawing. Spike shall be connected/screwed at bottom of G.I pipe including all accessories like nuts and bolts complete in all respect.					
G	Supply and installation of 2 Nos. 70 mm ² bare stranded electrolytic copper conductor lead in preload G.I pipe and connected to tinned copper spike as shown on drawing. 02Nos. leads to be installed including all accessories like brass nuts, bolts, washers etc complete in all respect.					
H	Supply and installation of tinned earth test link in earthing pit consisting of copper plate (12"x2"x1/2") with fixing arrangement on the wall of man hole including brass nuts, bolts washers lugs etc. complete in all respect.					
I	Construction of earthing pit (manhole) of internal size 18"x18"x24" deep with 9" thick brick wall with cement mortar, internal plaster 1:4, RCC 4" thick cover with lifting hooks including all accessories complete in all respect.					
J	Testing and commissioning of the earthing system along with all testing accessories complete in all respect.					
10	<u>Transformer (As Per WAPDA Specs)</u>					
	Supply and Installation of Outdoor type pad mounted transformer (HT & LT Compartment) with foundation and all accessories. Oil immersed / dry type transformer manufactured according to BS-171, IEC-60076, specifications and consisting of filling device, drain plug, oil level indicator, lifting hooks, bi-directional roller wheels, H.V. & L.V. porcelain bushings, off load voltage tap					

changer, 2 earthing terminals, oil conservator and silica gel breather, imported double float buckholz relay, pressure relief vent, dial type thermometer with alarm & trip contacts, rated Voltage 11000 / 415 / 230 Volts, suitable for an ambient temperature of 50°C, winding temperature 55°C and oil temperature 50°C, impedance 6.25% or as specified by IEC, system earth: Delta-Y, neutral solidly earthed (DYN-11) and all necessary accessories / materials, complete in all respects, including trenches etc , submission of technical data sheet. WAPDA (Concerned DISCO) approved. Connection Charges, with energy meter as per WAPDA standards and practice.					
The Power transformers shall be fully tropicalized, three phase, step down, oil filled, self-cooled, core type, double wound, suitable for parallel operation and for outdoor installation. The Power transformers shall meet the minimum technical specifications but not limited to the following: Type 0.42 Capacity (Rated continuous) As specified Voltage ratio at no-load 11000/415 Volts Frequency 50 Hz Vector group Dy 11 Off load tapping arrangement (on HT side) -7.5%, -5%, -2.5%, 0% +2.5%, +5%, HT connection 11 kV Delta LT connection 400V with grounded star point Temperature rise of oil over ambient temperature 400 C maximum Temperature rise of winding over ambient temperature 500 C maximum Impedance voltage (%) 4 Voltage regulation for normal operating conditions Not to exceed 2.5% of no-load					

	Voltage regulation at 85% pf at full load (%) 3.5 Rated maximum voltage HT/LT 15kV/0.6 kV Basic insulation level 95 kV Power frequency withstand voltage 34 kV Rated short-time current (kA) 25 Switching inrush current (Amps) 6-7 times of HV line current Following information had to be provided: Applicable Standards/Codes Latest editions of the following standards and codes shall be applicable for all materials in scope of this section: BS90 - Power transformers BS14 - Transformer oil BS171 - Specifications for power transformer BS223 - High voltage bushings IEC7 - Power transformers					
I	630 Kva	Job	1			
11	<u>MV Cable and Termination Kits</u>					
a)	MV cable 1-core 240mm ² XLPE/PVC/AWA/PVC cable with aluminum conductor voltage grade:8.7/15 kV	Rm	3,000			
b)	Providing and fixing/installation indoor 1-core 240mm ² , 11KV, XLPE, heat shrink termination Kit complete in all respect as required.	Job	6			
c)	Providing and fixing/installation outdoor 1-core 240mm ² , 11KV, XLPE, heat shrink termination Kit complete in all respect as required.	Job	6			
12	<u>Provisional Sum</u>					
	Cost of obtaining 11kV connection from the DISCO/utility. The same shall be paid to the Supplier as per actual demand notice of the relevant DISCO/utility for the respective site.	Job	1			

Mandatory instructions:

1. The Bidder shall quote every item included in the BOQ.
2. Blank unit rates are not permitted.
3. Where an item is included in another rate, the Bidder shall state “Included” and identify the relevant priced item.
4. Unit rates shall include design, manufacture, supply, transportation, insurance, unloading, storage, installation, incidental works, testing, commissioning, labour, tools, equipment, documentation, warranty and all other obligations necessary for complete performance.
5. Quantities are indicative for Framework Agreement purposes. Payment under a Call-off/Work Order shall be based on the quantities ordered and actually executed or accepted, multiplied by the applicable agreed unit rates, subject to the Contract.
6. The unit rates shall remain applicable throughout the Framework Agreement Term.
7. The Bidder shall not add conditions, assumptions or qualifications in the Price Schedule.

Manufacturer's Authorization (Not Applicable)

*[The Bidder shall require the Manufacturer to fill in this Form in accordance with the instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer and should be signed by a person with the proper authority to sign documents that are binding on the Manufacturer. The Bidder shall include it in its Bid, if so indicated in the **BDS**.]*

Date: *[insert date (as day, month and year) of Bid submission]*

RFB No.: *[insert number of RFB process]*

To: *[insert complete name of Procuring Agency]*

WHEREAS

We *[insert complete name of Manufacturer]*, who are official manufacturers of *[insert type of Goods manufactured]*, having factories at *[insert full address of Manufacturer's factories]*, do hereby authorize *[insert complete name of Bidder]* to submit a Bid the purpose of which is to provide the following Goods, manufactured by us *[insert name and or brief description of the Goods]*, and to subsequently sign a Framework Agreement permitting them to enter into Call-off Contracts for the supply of the Goods.

We hereby extend our full guarantee and warranty in accordance with FAP 11 of the Framework Agreement, with respect to the Goods offered by the above firm.

We confirm that we do not engage or employ forced labor or persons subject to trafficking or child labor, in accordance with FAP 4 of the Framework Agreement.

Signed: *[insert signature(s) of authorized representative(s) of the Manufacturer]*

Name: *[insert complete name(s) of authorized representative(s) of the Manufacturer]*

Title: *[insert title]*

Dated on _____ day of _____, _____ *[insert date of signing]*

Beneficial Ownership Disclosure Form

INSTRUCTIONS TO BIDDERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE FORM

This Beneficial Ownership Disclosure Form (“Form”) is to be completed by the successful Bidder(s). In case of joint venture, the Bidder must submit a separate Form for each member. The beneficial ownership information to be submitted in this Form shall be current as of the date of its submission.

For the purposes of this Form, a Beneficial Owner of a Bidder is any natural person who ultimately owns or controls the Bidder by meeting one or more of the following conditions:

- *directly or indirectly holding 25% or more of the shares*
- *directly or indirectly holding 25% or more of the voting rights*
- *directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Bidder*

RFB No.: *[insert number of RFB process]*

Request for Bid No.: *[insert identification]*

To: *[insert complete name of procuring Agency]*

In response to your request in the Letter of Acceptance dated *[insert date of letter of Acceptance]* to furnish additional information on beneficial ownership: *[select one option as applicable and delete the options that are not applicable]*

(i) we hereby provide the following beneficial ownership information.

Details of beneficial ownership

Identity of Beneficial Owner	Directly or indirectly holding 25% or more of the shares (Yes / No)	Directly or indirectly holding 25 % or more of the Voting Rights (Yes / No)	Directly or indirectly having the right to appoint a majority of the board of the directors or an equivalent governing body of the Bidder (Yes / No)
<i>[include full name (last, middle, first), nationality, country of residence]</i>			

OR

(ii) *We declare that there is no Beneficial Owner meeting one or more of the following conditions:*

- directly or indirectly holding 25% or more of the shares
- directly or indirectly holding 25% or more of the voting rights
- directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Bidder

OR

(iii) *We declare that we are unable to identify any Beneficial Owner meeting one or more of the following conditions. [If this option is selected, the Bidder shall provide explanation on why it is unable to identify any Beneficial Owner]*

- directly or indirectly holding 25% or more of the shares
- directly or indirectly holding 25% or more of the voting rights
- directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Bidder]

Name of the Bidder: *[insert complete name of the Bidder]_____

Name of the person duly authorized to sign the Bid on behalf of the Bidder: **[insert complete name of person duly authorized to sign the Bid]_____

Title of the person signing the Bid: [insert complete title of the person signing the Bid]_____

Signature of the person named above: [insert signature of person whose name and capacity are shown above]_____

Date signed [insert date of signing] **day of** [insert month], [insert year]_____

* In the case of the Bid submitted by a Joint Venture specify the name of the Joint Venture as Bidder. In the event that the Bidder is a joint venture, each reference to “Bidder” in the Beneficial Ownership Disclosure Form (including this Introduction thereto) shall be read to refer to the joint venture member.

** Person signing the Bid shall have the power of attorney given by the Bidder. The power of attorney shall be attached with the Bid Schedules.

Section V - Eligible Countries

Eligibility for the Provision of Goods, Works and Non-Consulting Services in Bank-Financed Procurement

In reference to ITB 4.8 and ITB 5.1, for the information of the Bidders, at the present time firms, Goods and Related Services from the following countries are excluded from this procurement process:

1. Under ITB 4.8(a) and ITB 5.1: *None*
2. Under ITB 4.8(b) and ITB 5.1: *None*

Section VI - Fraud and Corruption

(Section VI shall not be modified)

1. Purpose

1.1 The Bank's Anti-Corruption Guidelines and this annex apply with respect to procurement under Bank Investment Project Financing operations.

2. Requirements

2.1 The Bank requires that Borrowers (including beneficiaries of Bank financing); Bidders (applicants/proposers), consultants, contractors and suppliers; any sub-contractors, sub-consultants, service providers or suppliers; any agents (whether declared or not); and any of their personnel, observe the highest standard of ethics during the procurement process, selection and contract execution of Bank-financed contracts, and refrain from Fraud and Corruption.

2.2 To this end, the Bank:

- a. Defines, for the purposes of this provision, the terms set forth below as follows:
 - i. "corrupt practice" is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
 - ii. "fraudulent practice" is any act or omission, including misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain financial or other benefit or to avoid an obligation;
 - iii. "collusive practice" is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
 - iv. "coercive practice" is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
 - v. "obstructive practice" is:
 - (a) deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank 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; or
 - (b) acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under paragraph 2.2 e. below.
- b. Rejects a proposal for award if the Bank determines that the firm or individual recommended for award, any of its personnel, or its agents, or its sub-consultants, sub-contractors, service providers, suppliers and/ or their

- employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;
- c. In addition to the legal remedies set out in the relevant Legal Agreement, may take other appropriate actions, including declaring misprocurement, if the Bank determines at any time that representatives of the Borrower or of a recipient of any part of the proceeds of the loan engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices during the procurement process, selection and/or execution of the contract in question, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur, including by failing to inform the Bank in a timely manner at the time they knew of the practices;
 - d. Pursuant to the Bank's Anti- Corruption Guidelines, and in accordance with the Bank's prevailing sanctions policies and procedures, may sanction a firm or individual, either indefinitely or for a stated period of time, including by publicly declaring such firm or individual ineligible (i) to be awarded or otherwise benefit from a Bank-financed contract, financially or in any other manner;¹ (ii) to be a nominated² sub-contractor, consultant, manufacturer or supplier, or service provider of an otherwise eligible firm being awarded a Bank-financed contract; and (iii) to receive the proceeds of any loan made by the Bank or otherwise to participate further in the preparation or implementation of any Bank-financed project;
 - e. Requires that a clause be included in bidding/request for proposals documents and in contracts financed by a Bank loan, requiring (i) Bidders (applicants/proposers), consultants, contractors, and suppliers, and their sub-contractors, sub-consultants, service providers, suppliers, agents, personnel, permit the Bank to inspect³ all accounts, records and other documents relating to the procurement process, selection and/or contract execution, and to have them audited by auditors appointed by the Bank.

¹ For the avoidance of doubt, a sanctioned party's ineligibility to be awarded a contract shall include, without limitation, (i) applying for pre-qualification, expressing interest in a consultancy, and bidding, either directly or as a nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider, in respect of such contract, and (ii) entering into an Addendum or amendment introducing a material modification to any existing contract.

² A nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider (different names are used depending on the particular bidding document) is one which has been: (i) included by the Bidder in its pre-qualification application or bid because it brings specific and critical experience and know-how that allow the Bidder to meet the qualification requirements for the particular bid; or (ii) appointed by the Borrower.

³ Inspections in this context usually are investigative (i.e., forensic) in nature. They involve fact-finding activities undertaken by the Bank or persons appointed by the Bank to address specific matters related to investigations/audits, such as evaluating the veracity of an allegation of possible Fraud and Corruption, through the appropriate mechanisms. Such activity includes but is not limited to: accessing and examining a firm's or individual's financial records and information, and making copies thereof as relevant; accessing and examining any other documents, data and information (whether in hard copy or electronic format) deemed relevant for the investigation/audit, and making copies thereof as relevant; interviewing staff and other relevant individuals; performing physical inspections and site visits; and obtaining third party verification of information.

PART 2 – Supply Requirements

Section VII - Schedule of Requirements

Contents

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Estimated Schedule of Requirements- Supply of Goods & Related Services

Line Item N°	Description of Goods	Physical unit	Indicative total Sites/Quantity required over the term of the FA	Indicative Delivery Period* as per Incoterms	Named Place/s of Destination
Lot 01	Electrification Systems for Digital Enforcement Stations DI KHAN HAKLA MOTORWAY M-14(CPEC), KALA BAGH BRIDGE, JINNAH BRIDGE, CHASHMA BARRAGE	As outlined in the Technical Specifications	4	<i>180 Days from the date of each call-off for each lot</i>	
Lot 02	Electrification Systems for Digital Enforcement Stations GUDDU BARRAGE & KOTRI BRIDGE		2		
Lot 03	Electrification Systems for Digital Enforcement Stations SEHWAN (ARAL BIDGE), SEHWAN BHAN SAEED ABAD, KHUKERA, HUB (MYGARHI OR CHLEGHEZI CUT)		4		

* “Delivery Period” is the specified period from the date of formation of a Call-off contract for delivery of the Goods as per the applicable Incoterms.

Technical Specifications

Detailed Technical Specifications and Standards. The Goods and Related Services shall comply with following Technical Specifications and Standards:

The work shall include furnishing of all labor, materials, equipment's tools and plants as required and providing the internal electrification and other works as specified consisting of but not limited to conduits and pipes, wires and cables, wiring fixtures, lighting system, power distribution, fans, fittings, earthing system.

CODES AND STANDARDS:

The work shall conform to the requirements of the following Codes and Standards, unless otherwise specified:

BS 31-79	Steel conduit and fittings for electrical wiring.
BS 89-77	Specification for direct acting indicating electrical measuring instruments
BS 142-82	General requirements for measuring relays used for Part-2 protection
BS 159-57	Bus bars and bus bar connections
BS 161-76	Specifications for tungsten filament lamps for general service BS
1853-79	Tubular fluorescent lamps for general lighting service
BS 3871-65	Miniature air-break circuit breakers for A.C. circuits.
BS 4553-70	PVC – insulated split concentric cables with copper conductors for electric supply
BS 4607-71 (P- 2)	Rigid PVC conduits and Conduit fittings BS 4752-77 Circuit breakers
BS 5419-77	Specification for air-break switches, air-break disconnections etc.
BS 6004-84	Specification for PVC insulated cables for electric power and lighting. BS 6346-77
BS 6360-81	Specification for conductors in insulated cables and cords BS 6500-
84	Specification for insulated flexible cords and cables
BS 6746-84	PVC insulation and sheath of
electric cables CP 1013-65	Earthing

PERMANENT ELECTRICAL CONNECTION

The Supplier will co-ordinate in getting the permanent electrical connection from the Agency supplying electric power and fulfill formalities as required by the concerned local authorities. Actual charges, as demanded for permanent connections by the agency supplying power shall be directly paid to the supplying agency (DISCO) and borne by the FBR.

SUBMITTALS

The Supplier shall submit for approval of the Engineer-in-Charge:

- a) All drawings of equipment, appliances, fixtures and accessories that are to be furnished under the Contract. These shall include detailed electrical drawings, wiring diagram, foundation details, etc. for all electrical switchgear, fuse gear and all other systems.

Drawings and data for each equipment to be furnished before commencement of fabrication and manufacture. The drawings to be supplied by the Supplier shall be as follows.

Layout Drawings showing:

- Arrangements
 - Dimensional plans, elevations and front view Foundation plans, anchor bolt locations
 - Buss bar locations and configurations
 - Incoming and outgoing cable terminating positions Terminal blocks locations
 - Earthing arrangements
- b) **Electrical Drawings** showing:
 - One-line diagram
 - Detailed wiring diagram
 - All interconnections
 - Instrument transformers
 - Relays, their locations and internal wiring diagrams
 - Other electrical devices including meter's, instruments and their wiring diagram
 - Signal and alarm circuits
 - b) Manufacturer's installation, operation and maintenance manuals wherever applicable.
 - c) Specimens of all wiring accessories, fittings, fixtures, conduits, pipes, wires, cables and all the materials to be incorporated into the Works along with specifications of each.
 - d) A list of spare parts required for one year's operation of each equipment where deemed necessary together with unit price of each part.

INSPECTION AND TESTS:

a) Factory Tests

All type and routine tests on all equipment shall be performed at the manufacturer's works in the presence of the Engineer-in-Charge or his Representative. Type tests may be waived off in case test certificates are submitted by an Engineer-in-Charge's approved standard laboratory of international repute; but merely producing the test type certificates will not relieve the manufacturer to carry out the required standard/routine tests. The Supplier shall inform the Engineer-in-Charge about the date and time of test of each equipment at least two weeks in advance. The witnessing of test by the Engineer-in-Charge or his representative shall not absolve the Supplier from his responsibility for the proper functioning of the equipment, and for furnishing the guarantees.

b) Site Tests

Upon completion of the installation, the Supplier shall perform field tests on all equipment, materials and systems. All tests shall be conducted in the presence of the Engineer-in-Charge for the purpose of demonstrating equipment or system compliance with the Specifications.

The Supplier shall furnish all tools, instruments, test equipment, materials, etc., and all qualified personnel required for the testing, setting and adjustment of all electrical equipment and material including putting the same into operation.

All tests shall be made with proper regard for the protection of the personnel and equipment and the Supplier shall be responsible for adequate protection of all personnel and equipment during such tests. The cost of any damages or rectification work due to any accident during the tests shall be the sole responsibility of Supplier.

The witnessing of any tests by the Engineer-in-Charge does not relieve the Supplier of his guarantees for materials, equipment and workmanship, or as any other obligations of the Contract.

c) Insulation Resistance Test

Insulation resistance test shall be made on all electrical equipment by using a meggar of 500 volts for circuits up to 250 volts and 1000 volt for circuits between 250 and 500 volts.

The insulation resistance values of cables shall conform to the requirements of BS 6004, BS 6346 and Pakistan Electricity Rules.

Before making connections at the ends of each cable run or joint between cables, the insulation resistance test of each cable section shall be made. Each conductor of a multicore cable shall be tested individually with each of the other conductor of the group and also with earth.

All switch gears shall be given an insulation resistance measurement test after installation but before any wiring is connected. Insulation tests shall be made between open contacts of circuit breakers, switches and between each phase and earth.

d) Earth Resistance Test

Earth resistance tests shall be made by the Supplier on the earthing system, separating and reconnecting each earth connection.

If it is indicated that soil treatment or other corrective measures are required to lower the ground resistance values, the Engineer-in-Charge will determine the extent of such corrective measures.

The electrical resistance of the E.C.C. together with the, resistance of the earthing leads measured from the connection with earth electrode to any other position in the complete installation shall not exceed one ohm.

Earth resistance test shall be performed as per Electrical Inspector's requirements. Where more than one earth electrode is installed, the earth resistance test of each of electrodes shall be measured by means of resistance bridge instrument.

e) Switchgear

Each circuit breaker shall be operated electrically and mechanically. All interlocks and control circuits shall be checked for proper connections in accordance with the wiring diagrams given by the manufacturer.

The Supplier shall properly identify the phases of all switchgear and cables for connections to give proper phase sequence.

Trip circuits shall be checked for correct operation and rating of equipment served. The correct size and function of fuses, disconnect switches, number of interlocks, indicating lights, alarms and remote control devices shall be in accordance with approved manufacturer drawings. Name plates shall be checked for proper designation of equipment served.

f) Completed Tests

After any equipment has been tested, checked for operation, etc., and is accepted by the Engineer- in-Charge, the Supplier shall be responsible for the proper protection of that equipment so that subsequent testing of other equipment do not cause any damage to the already tested equipment.

g) Inspection Tests

The Supplier shall be responsible for submitting the test certificates and getting the installation passed by the Electrical Inspector appointed by the Government. Any special requirements of the local building and or municipal authority shall also be complied with.

h) Ambient Conditions

All material and equipment supplied and installed shall be designed, manufactured and tested to meet the following ambient conditions unless specifically stated otherwise for any material/equipment.

Maximum ambient temperature:	(+) 50 Degree Centigrade
Minimum ambient temperature:	(-) 5 Degree Centigrade
Maximum relative humidity:	100%

DANGER BOARDS AND CHARTS:

The Supplier shall provide Danger Boards and Shocks Charts wherever required to comply with the requirements of local Electricity Rules and according to normal practice.

GUARANTEE :

The Supplier shall furnish written guarantee against performance of each equipment. Such guarantee shall be for replacement and repair of a part or whole equipment which may be found defective in material or workmanship. The guarantee shall cover a minimum period of 12 months after commissioning of the equipment.

Detailed Technical Specifications and Standards

Detailed specifications are provided with the BOQs.

APPLICABLE FOR ALL LOTS AND SITES

Standard / Compliance Requirements

Unless otherwise specified, all materials, equipment, components and accessories supplied under the Contract shall be new, unused, of current production, free from defects and suitable for continuous outdoor operation under the specified environmental conditions.

The offered equipment shall comply with the latest applicable editions of internationally recognized standards, including, as applicable, IEC, ISO, IEEE, BS EN, ANSI, NEMA or equivalent internationally accepted standards.

The Supplier shall ensure compatibility between all major equipment, accessories and protection devices forming part of the Electrical Panel Installation.

The following minimum documented evidence of equipment manufactures/standards requirements shall apply:

- **Low Voltage and Control Cables:** XLPE/PVC insulated, Class 2 (Stranded Conductors) Follow ASTM International specifications for chemical composition and minimum 99.9% copper purity., flame-retardant, compliant with IEC 60502 & IEC 60228 or equivalent. **With ISO 9001 certified premises**
- **PVC /GI/MS Conduits and Accessories:** Heavy-duty, UV-resistant, compliant with IEC 61386 or equivalent. **With ISO 9001 certified premises**
- **Steel Conduits and Accessories:** Hot-dip galvanized, corrosion-resistant, compliant with IEC 61386 or equivalent. **With ISO 9001 certified premises**
- **Circuit Breakers (MCB, MCCB, ACB, ELCB) & Magnetic Contactors:** Compliant with IEC 60898, IEC 60947 or equivalent, with suitable breaking capacity and protection characteristics. **Suitable for industrial applications**
- **Meters (Ammeter, Voltmeter, Multifunction Meter):** Digital, true RMS, IEC compliant and suitable for continuous industrial operation **With safety class IEC 61010-1 & IEC 61010-2-030 and IEC 61557-12, IEC 60051 for metering**
- **Current Transformers and Voltage Transformers:** Accuracy Class and performance suitable for metering and protection applications in accordance with IEC 61869 or equivalent.
- **Transformer:** The manufacturer's production facility and assembly premises must hold a valid **ISO 9001:2015 Quality Management System Certification** issued by an accredited third-party auditing body (such as TUV, SGS, or equivalent), ensuring total traceability, testing compliance, and operational quality control."
- **Selector Switches, Push Buttons and Indication Lamps:** Industrial-duty type, IEC compliant.
- **Terminal Blocks:** Modular DIN-rail mounted type, IEC compliant.
- **Lighting Equipment:** Energy-efficient LED luminaires suitable for outdoor service with appropriate IP protection.

- **Road Lighting Poles:** Hot-dip galvanized steel, designed in accordance with applicable structural standards. **With ISO 9001 certified premises**
- **Cable Trays and Ladders and Panels :** Hot-dip galvanized steel or equivalent corrosion-resistant material suitable for outdoor installation. **With ISO 9001 certified premises and Load Bearing Capacity Sheets specifying the maximum allowable cable weight per meter based on NEMA VE 1 guidelines**
- **Wiring Accessories:** Industrial-grade and compatible with the installation environment.

Drawings

This RFB document includes *[insert “the following drawings.*

List of Drawings*		
Drawing No.	Drawing Name	Purpose
01	External Electrification Layout Plan A	Describes the layout of external electrification of Check Post
02	External Electrification Layout Plan B	Describes the layout of external electrification of Residences
03	Earthing Drawing	Describes the layout of earthing at the Residences and Panels.

* The above drawings are placed at the end of this document.

Inspections and Tests

The following inspections and tests shall be performed:

1. Installation & Visual Inspection

- Verify installation of poles, luminaires, panels, cables, and accessories as per approved drawings and specifications.
- Check alignment, foundation integrity, and proper mounting of poles and equipment.
- Ensure all electrical connections, terminations, and fittings are properly tightened and secured.
- Confirm proper routing, protection, and identification of cables.

2. Electrical Tests

- Insulation Resistance Test (IR):
For all LV/MV cables and wiring.
- Continuity Test:
For phase, neutral, and earthing conductors.
- Earth Resistance Test:
For all earthing points and overall earthing system.
- Voltage Test:
Verification of correct voltage levels at panels and load points.

3. Panel & Protection Checks

- Functional testing of MCCBs/ACBs, contactors, and control devices.
- Verification of proper operation of protection systems (tripping of breakers).
- Basic check of meters and indication lights.

4. Lighting System Tests

- Functional test of all lighting fixtures (on/off operation).
- Verification of control system (manual/auto, photocell/timer operation).
- Basic illumination check to confirm operational adequacy.

5. Transformer & Cable System Tests

- Insulation resistance test of MV/LV cables.
- Verification of proper cable terminations and connections.
- Transformer energization and basic operational check (voltage output).

6. System Functional Test

- Complete system energization and operational check.
- Verification of load operation under normal conditions.
- Functional testing of panels, lighting, and control systems together.

7. Mandatory Documentation

- Submission of test reports (IR, earthing, functional tests).
- Manufacturer certificates and warranties.
- As-built drawings (where applicable).

a) Factory Tests

All type and routine tests on all equipment shall be performed at the manufacturer's works in the presence of the Engineer-in-Charge or his Representative. Type tests may be waived off in case test certificates are submitted by an Engineer-in-Charge's approved standard laboratory of international repute; but merely producing the test type certificates will not relieve the manufacturer to carry out the required standard/routine tests. The Supplier shall inform the Engineer-in-Charge about the date and time of test of each equipment at least two weeks in advance. The witnessing of test by the Engineer-in-Charge or his representative shall not absolve the Supplier from his responsibility for the proper functioning of the equipment, and for furnishing the guarantees.

b) Site Tests

Upon completion of the installation, the Supplier shall perform field tests on all equipment, materials and systems. All tests shall be conducted in the presence of the Engineer-in-Charge for the purpose of demonstrating equipment or system compliance with the Specifications.

The Supplier shall furnish all tools, instruments, test equipment, materials, etc., and all qualified personnel required for the testing, setting and adjustment of all electrical equipment and material including putting the same into operation.

All tests shall be made with proper regard for the protection of the personnel and equipment and the Supplier shall be responsible for adequate protection of all personnel and equipment during such tests. The cost of any damages or rectification work due to any accident during the tests shall be the sole responsibility of Supplier.

The witnessing of any tests by the Engineer-in-Charge does not relieve the Supplier of his guarantees for materials, equipment and workmanship, or as any other obligations of the Contract.

c) Insulation Resistance Test

Insulation resistance test shall be made on all electrical equipment by using a meggar of 500 volts for circuits up to 250 volts and 1000 volt for circuits between 250 and 500 volts.

The insulation resistance values of cables shall conform to the requirements of BS 6004, BS 6346 and Pakistan Electricity Rules.

Before making connections at the ends of each cable run or joint between cables, the insulation resistance test of each cable section shall be made. Each conductor of a multicore cable shall be tested individually with each of the other conductor of the group and also with earth.

All switch gears shall be given an insulation resistance measurement test after installation but before any wiring is connected. Insulation tests shall be made between open contacts of circuit breakers, switches and between each phase and earth.

d) Earth Resistance Test

Earth resistance tests shall be made by the Supplier on the earthing system, separating and reconnecting each earth connection.

If it is indicated that soil treatment or other corrective measures are required to lower the ground resistance values, the Engineer-in-Charge will determine the extent of such corrective measures.

The electrical resistance of the E.C.C. together with the, resistance of the earthing leads measured from the connection with earth electrode to any other position in the complete installation shall not exceed one ohm.

Earth resistance test shall be performed as per Electrical Inspector's requirements. Where more than one earth electrode is installed, the earth resistance test of each of electrodes shall be measured by means of resistance bridge instrument.

e) Switchgear

Each circuit breaker shall be operated electrically and mechanically. All interlocks and control circuits shall be checked for proper connections in accordance with the wiring diagrams given by the manufacturer.

The Supplier shall properly identify the phases of all switchgear and cables for connections to give proper phase sequence.

Trip circuits shall be checked for correct operation and rating of equipment served. The correct size and function of fuses, disconnect switches, number of interlocks, indicating lights, alarms and remote control devices shall be in accordance with approved manufacturer drawings. Name plates shall be checked for proper designation of equipment served.

f) Completed Tests

After any equipment has been tested, checked for operation, etc., and is accepted by the Engineer- in-Charge, the Supplier shall be responsible for the proper protection of that equipment so that subsequent testing of other equipment do not cause any damage to the already tested equipment.

g) Inspection Tests

The Supplier shall be responsible for submitting the test certificates and getting the installation passed by the Electrical Inspector appointed by the Government. Any special requirements of the local building and or municipal authority shall also be complied with.

h) Ambient Conditions

All material and equipment supplied and installed shall be designed, manufactured and tested to meet the following ambient conditions unless specifically stated otherwise for any material/equipment.

Maximum ambient temperature: (+) 50 Degree Centigrade

Minimum ambient temperature: (-) 5 Degree Centigrade

Maximum relative humidity: 100%

DANGER BOARDS AND CHARTS:

The Supplier shall provide Danger Boards and Shocks Charts wherever required to comply with the requirements of local Electricity Rules and according to normal practice.

GUARANTEE :

The Supplier shall furnish written guarantee against performance of each equipment. Such guarantee shall be for replacement and repair of a part or whole equipment which may be found

defective in material or workmanship. The guarantee shall cover a minimum period of 12 months after commissioning of the equipment.

WASTE MANAGEMENT:

The Supplier is required to manage all waste generated during installation (packaging, cables, spent batteries, old equipment where applicable or any other waste) in compliance with applicable national environmental regulations and WBG EHS Guidelines on waste management.

Note (Mandatory Compliance)

- All tests shall comply with applicable IEC / WAPDA / local standards.
- Any defects observed during inspection/testing shall be rectified prior to commissioning.
- Any further inspections and test may be performed as per Purchaser's requirement.

PART 3 – Procuring Agency Forms

Procuring Agency Forms

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Notification of Intention to Conclude a Framework Agreement(s)

[This Notification of Intention to Conclude a Framework Agreement(s) shall be sent to each Bidder that submitted a Bid. Send this Notification to the Bidder's Authorized Representative named in the Bidder Information Form]

For the attention of Bidder's Authorized Representative

Name: *[insert Authorized Representative's name]*

Address: *[insert Authorized Representative's Address]*

Telephone/Fax numbers: *[insert Authorized Representative's telephone/fax numbers]*

Email Address: *[insert Authorized Representative's email address]*

[IMPORTANT: insert the date that this Notification is transmitted to Bidders. The Notification must be sent to all Bidders simultaneously. This means on the same date and as close to the same time as possible.]

Procuring Agency: *[insert the name of the Procuring Agency]*

Project: *[insert name of project]*

Framework Agreement title: *[insert the name of the FA]*

Country: *[insert country where RFB is issued]*

Loan No. /Credit No. / Grant No.: *[insert reference number for loan/credit/grant]*

RFB No: *[insert RFB reference number from Procurement Plan]*

Date of transmission: This Notification is sent by: *[email/fax]* on *[date]* (local time)

Notification of Intention to Conclude a Framework Agreement(s)

This Notification of Intention to conclude Framework Agreement(s) (Notification) notifies you of our decision to conclude the above Framework Agreement(s). The transmission of this Notification begins the Standstill Period. During the Standstill Period, you may:

1. request a debriefing in relation to the evaluation of your Bid, and/or
2. submit a Procurement-related Complaint in relation to the decision to conclude the Framework Agreement.

The successful Bidder(s) are the following:

Item No.	Description	Estimated Quantity	Name of Bidder	Bid price as read-out	Evaluated Bid Cost
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		over FA period or Range of Call-off Quantities			

All Bidders [INSTRUCTIONS: insert names of all Bidders that submitted Bids. If the Bid price/s or pricing mechanism/s was evaluated include the evaluated as well as the read out price.]

Item No.	Description	Estimated Quantity over FA period or Range of Call- off Quantities	Name of Bidder	Bid price as read-out	Evaluated Bid Cost

Reason/s why your Bid was unsuccessful

[INSTRUCTIONS: State the reason/s why this Bidder's Bid was unsuccessful. Do NOT include: (a) a point by point comparison with another Bidder's Bid or (b) information that is marked confidential by the Bidder in its Bid.]

How to request a debriefing

Deadline: The deadline to request a debriefing expires at midnight on [insert date] (local time).

You may request a debriefing in relation to the results of the evaluation of your Bid. If you decide to request a debriefing your written request must be made within three (3) Business Days of receipt of this Notification of Intention to Conclude a Framework Agreement.

Provide the framework agreement name, reference number, name of the Bidder, contact details; and address the request for debriefing as follows:

Attention: *[insert full name of person, if applicable]*

Title/position: *[insert title/position]*

Agency: *[insert name of Procuring Agency]*

Email address: *[insert email address]*

Fax number: *[insert fax number] delete if not used*

If your request for a debriefing is received within the 3 Business Days deadline, we will provide the debriefing within five (5) Business Days of receipt of your request. If we are unable to provide the debriefing within this period, the Standstill Period shall be extended by five (5) Business Days after the date that the debriefing is provided. If this happens, we will notify you and confirm the date that the extended Standstill Period will end.

The debriefing may be in writing, by phone, video conference call or in person. We shall promptly advise you in writing how the debriefing will take place and confirm the date and time.

If the deadline to request a debriefing has expired, you may still request a debriefing. In this case, we will provide the debriefing as soon as practicable, and normally no later than fifteen (15) Business Days from the date of publication of the Conclusion of Framework Agreement Notice.

How to make a complaint

Deadline: Procurement-related Complaint challenging the decision to conclude a Framework Agreement shall be submitted by midnight, *[insert date]* (local time).

Provide the Framework Agreement name, reference number, name of the Bidder, contact details; and address the Procurement-related Complaint as follows:

Attention: *[insert full name of person, if applicable]*

Title/position: *[insert title/position]*

Agency: *[insert name of Procuring Agency]*

Email address: *[insert email address]*

Fax number: *[insert fax number] delete if not used*

At this point in the procurement process, you may submit a Procurement-related Complaint challenging the decision to exclude you from conclusion of a Framework Agreement. You do not need to have requested, or received, a debriefing before making this complaint. Your complaint must be submitted within the Standstill Period and received by us before the Standstill Period ends.

Further information:

For more information see the [Procurement Regulations for IPF Borrowers \(Procurement Regulations\)](#) (Annex III). You should read these provisions before preparing and submitting your complaint. In addition, the World Bank's Guidance "[How to make a Procurement-related Complaint](#)" provides a useful explanation of the process, as well as a sample letter of complaint.

In summary, there are four essential requirements:

1. You must be an 'interested party'. In this case, that means a Bidder who submitted a Bid in this procurement process and is the recipient of a Notification of Intention to Conclude a Framework Agreement.
2. The complaint can only challenge the decision to conclude the Framework Agreement.
3. You must submit the complaint within the period stated above.
4. You must include, in your complaint, all the information required by the Procurement Regulations (as described in Annex III).

Standstill Period

Deadline: The Standstill Period is due to end at midnight on [insert date] (local time).

The Standstill Period lasts ten (10) Business Days after the date of transmission of this Notification of Intention to Conclude a Framework Agreement.

The Standstill Period may be extended as stated in the section above titled 'How to request a debriefing'.

If you have any questions regarding this Notification, please do not hesitate to contact us.

On behalf of the Procuring Agency:

Signature: _____

Name: _____

Title/position: _____

Telephone: _____

Email: _____

Notification to Conclude a Framework Agreement

[Use letterhead paper of the Procuring Agency]

[Date]

To: *[name and address of successful Bidder]*

Notification to Conclude a Framework Agreement Framework Agreement No. *[insert FA reference number]*

This is to notify you that your Bid dated *[insert date]* to conclude a Framework Agreement in relation to the supply of *[insert short title for Goods]* is hereby accepted by our Agency.

Please sign, date and return the Framework Agreement within *[insert the applicable period for signing of the FA in accordance with the ITB]* days of receipt of the same. In accordance with ITB 41.1, please also complete and submit, within eight (8) Business days, the Beneficial Ownership Disclosure Form attached to the RFB.

You are required to furnish a Performance Security in the amount of PKR _____, representing ten percent (10%) of the accepted Framework Agreement price for Lot No. _____, within the period specified in the Bidding Document.

Authorized Signature:

Name:

Title/position:

Name of Agency:

Telephone:

Email:

Attachment: Framework Agreement

PART 4 – Framework Agreement

Framework Agreement

This Framework Agreement [*insert reference number of the Framework Agreement*] is made for the supply of [*insert brief description of Goods and Related Services*]

on the [*insert: **number***] day of [*insert: **month***], [*insert: **year***]

between

the Purchaser (the Federal Board of Revenue, Government of Pakistan); and

the Supplier [*insert name of the Supplier*], a corporation incorporated under the laws of [*insert country of Supplier*] and having its principal place of business at [*insert Supplier's address*] (Supplier).

This Framework Agreement is subject to the provisions described in the Sections and Schedules listed below, and any amendments.

This Framework Agreement concludes a standing offer by the Supplier to supply the specified Goods to the Purchaser(s) during the Term of the Framework Agreement, as and when the Purchaser(s) wishes to purchase them, through a Call-off Contract.

The following documents shall be deemed to form and be read and construed as part of this Framework Agreement and, where indicated, to any Call-off Contract awarded under this Framework Agreement.

Framework Agreement Provisions

Schedule 1: Schedule of Requirements (Schedule of Delivery, Technical Specifications, BOQs, Tastings etc)

Schedule 2: Price Schedules and Price BOQs submitted by Bidder

Schedule 3: Security Form (Performance Security)

IN WITNESS whereof, the Parties to this Framework Agreement have caused this Framework Agreement to be executed in accordance with the laws of [*insert the name of the Framework Agreement governing law country*] on the day, month and year indicated above.

[*To facilitate this emergency procurement, if acceptable to the Purchaser and the Supplier, electronic signature of the Framework Agreement such as using DocuSign is recommended.*]

For and on behalf of the Purchaser:

Signed: [*insert signature*]

Full name: [*name of person signing*]

Agency: [*insert the name of agency*]

In the capacity of: *[insert title or other appropriate designation]*

In the presence of *[insert identification of official witness]*

For and on behalf of the Supplier:

Signed: *[insert signature of authorized representative(s) of the Supplier]*

Full name: *[name of person signing]*

In the capacity of: *[insert title or other appropriate designation]*

In the presence of *[insert identification official of witness]*

Framework Agreement Provisions (FAP)

Framework Agreement Provision (FAP)	Description
1. Definitions	1.1. The following words and expressions shall have the meanings hereby assigned to them (a) “Bank” means the World Bank, meaning the International Bank for Reconstruction and Development (IBRD) and/or the International Development Association (IDA), whether acting on its own account or in its capacity as administrator of trust funds provided by other donors. (b) “Base Price” is the Framework Agreement (FA) unit price prior to any price adjustment in accordance with FA Provision FAP 8. (c) “Business Day” is any day that is an official working day of the Purchaser. It excludes the Purchaser’s official public holidays. (d) “Call-off Contract (Work Order)” means an order contract issued by the Purchaser under the Framework Agreement for a specific site or group of sites based on the pre-agreed technical specifications, unit rates, contractual conditions and delivery requirements. (e) “Closed Framework Agreement” is where no new firm(s) may conclude Framework Agreement(s) during the Term of the Framework Agreement. (f) “Commencement Date” is the date this Framework Agreement is signed by both parties, being the commencement of the Term. (g) “Contract Price” is the price payable to the Supplier as specified in each Call-off Contract, subject to such additions and adjustments thereto or deductions therefrom, as may be made pursuant to the Contract. (h) “Day” means calendar day. (i) “Goods” means all goods, materials, items, commodities, raw material, machinery, equipment, and/or other materials, as specified in the FA Provisions, that the Supplier is required to supply to the Purchaser under a Call-off Contract. Where appropriate, for the purpose of

	interpretation, the definition for Goods includes Related Services. (j) “In Writing” means communicated or recorded in written form. It includes, for example: mail, e-mail, fax or communication through an electronic procurement system (provided that the electronic system is accessible, secure, ensures integrity and confidentiality, and has sufficient audit trail features). (k) “Incoterms” means the international commercial terms for goods published by the International Chamber of Commerce (ICC). (l) “Purchaser” is the Borrower’s agency(ies) that is/are permitted to purchase Goods from a Supplier under a Call-off Contract awarded through a Framework Agreement. Where appropriate, for the purpose of interpretation of the Framework Agreement, the term Purchaser includes Lead Purchaser, or Responsible Agency. (m) “Purchaser’s Country” is the country specified in the FAP 2.3. (n) “Related Services” means the services incidental to the supply of the Goods, such as insurance, installation, training, initial maintenance and other such obligations of the Supplier, including inland transportation and other services required in the Purchaser’s Country to convey the Goods to their final destination. (o) “Supplier” means the successful Bidder with whom the Framework Agreement has been concluded and who shall supply Goods and Related Services under Call-off Contracts issued during the Framework Agreement Term. (p) “Term” mean the duration of this Framework Agreement as described in the FAP 2.5 starting on the Commencement Date. Where applicable, it includes any extension(s) to the initial Term, if permitted in the FA 2.6.
2. Framework Agreement Specific Information	2.1. This Framework Agreement relates to the purchase and supply, under separate Call-off, of the Procurement and Installation of External Electrification Systems for Digital Enforcement Stations (DES) at Indus Sites, Phase-I (10 Sites). The Goods, and Related Services, are more fully described in Schedule 1: Schedule of Requirements including, where applicable: list of Goods, list of Related Services, Technical Specifications, Drawings and Inspections and Tests.

	2.2. The Framework Agreement establishes the approved technical specifications, accepted manufacturers and models, unit rates, contractual conditions, delivery obligations, testing requirements and warranty obligations for all future Call-off issued during the Framework Agreement Term. 2.3. The Purchaser's Country is: Pakistan 2.4. The Framework Agreement and the Call-off Contracts shall be governed by and interpreted in accordance with the laws of Pakistan. 2.5. The Framework Agreement shall be for a Term ending on 30th June 2027 from the commencement date stated in the Framework Agreement. The Initial term may be extended for the same period for which the project may be extended. 2.6. The Term may be extended, at the Purchaser's sole discretion, and where there has been satisfactory performance by the Supplier. To extend the Term, the Purchaser shall give the Supplier no less than forty 40 days' notice, In Writing, prior to the date on which the Framework Agreement would otherwise have expired. The total Term of the Framework Agreement shall be no longer than three (3) years. 2.7. The edition of Incoterms that shall apply is: <i>Incoterms 2020</i> 2.8. Any notice given by one party to the other pursuant to this Framework Agreement shall be In Writing using the quickest available method such as electronic mail with proof of receipt. A notice shall be effective when delivered, or on the notice's effective date, whichever is later. The representatives for each party, who shall be the primary point of contact for the other party in relation to matters arising from this Framework Agreement, including notices, are specified below. Should the representative be replaced, the party replacing the representative shall promptly inform the other party In Writing of the name and contact details of the new representative. Any representative appointed shall be authorized to make decisions on the day to day operation of the Framework Agreement. 2.9. Purchaser's Representatives The name and contact details of the Purchaser's Representative under this Framework Agreement, and the address for notices in relation to this Framework Agreement, are: Name:
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	Title/position: Address: Phone: Mobile: E-mail: 2.10. Supplier's Representatives The name and contact details of the Supplier's Representative, for the purposes of this Framework Agreement, and the address for notices in relation to this Framework Agreement are: Name: Title/position: Address: Phone: Mobile: E-mail:
3. Framework Agreement Documents	3.1. This Framework Agreement (FA) shall be read as a whole. Where a document is incorporated by reference into this Framework Agreement, it shall be deemed to form, and be read and construed, as part of this Framework Agreement. 3.2. This Framework Agreement comprises the following documents.: (a) Framework Agreement, including all Sections and Schedules; (b) Notice of Conclusion of a Framework Agreement; and (c) Offer submission form (from the Procurement process). (d) Technical Specifications, BOQs, Agreed Unit Rates, Approved Manufacturers, Clarifications and Addenda
4. Supplier's Obligations	4.1. The Supplier shall offer to supply (standing offer) to the Purchaser, the Goods, including any Related Services if applicable, described in the Framework Agreement Schedule 1: Schedule of Requirements, for the Term of this Framework Agreement, in accordance with the terms and conditions stipulated in this Framework Agreement.

	4.2. The Supplier shall respond to a request from a Purchaser for within the period specified in that request by accepting award of contract 4.3. During the Term of the Framework Agreement, the Supplier shall continue to be eligible and qualified, and the Goods shall continue to be eligible, as per the qualification and eligibility criteria stipulated in the Procurement process and the provisions of sub-paragraphs 4.4 (a) to 4.4 (c) below. The Supplier shall notify the Purchaser immediately, in writing, if it ceases to be qualified and/or ceases to be eligible, or the Goods cease to be eligible. 4.4. The Goods supplied under Call-off Contracts that may be awarded by the Purchaser shall be: (a) of the quality, type and as otherwise specified in the Framework Agreement, Schedule 1: Schedule of Requirements; (b) at the Contract Price specified in the Call-off Contract; and (c) in such quantities, at such times and to such locations as specified in the Call-off Contract. 4.5. At any point during Term of the Framework Agreement, should technological advances be introduced by the Supplier for the Goods offered for the Framework Agreement, the Supplier shall provide to the Purchaser(s) of the Call-off Contracts the latest versions of the available Goods at the time of Call-off, having equal or better performance or functionality at no additional cost to the Purchaser (s). 4.6. The Supplier agrees that this Framework Agreement and any additional provisions set out in a Call-off Contract, shall apply to the supply of Goods. 4.7. Forced Labor The Supplier, including its Subcontractors, shall not employ or engage forced labor or persons subject to trafficking.. Forced labor consists of any work or service, not voluntarily performed, that is exacted from an individual under threat of force or penalty, and includes any kind of involuntary or compulsory labor, such as indentured labor, bonded labor or similar labor-contracting arrangements. Trafficking in persons is defined as the recruitment, transportation, transfer, harboring or receipt of persons by means of the threat or use of force or other forms of coercion, abduction, fraud, deception, abuse of power, or of a position of vulnerability,
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	or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purposes of exploitation. 4.8. Child Labor The Supplier, including its Subcontractors, shall not employ or engage a child under the age of 14 unless the national law specifies a higher age (the minimum age). The Supplier, including its Subcontractors, shall not employ or engage a child between the minimum age and the age of 18 in a manner that is likely to be hazardous, 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. Work considered hazardous for children is work that, by its nature or the circumstances in which it is carried out, is likely to jeopardize the health, safety, or morals of children. Such work activities prohibited for children include work: (a) with exposure to physical, psychological or sexual abuse; (b) underground, underwater, working at heights or in confined spaces; (c) with dangerous machinery, equipment or tools, or involving handling or transport of heavy loads; (d) in unhealthy environments exposing children to hazardous substances, agents, or processes, or to temperatures, noise or vibration damaging to health; or (e) under difficult conditions such as work for long hours, during the night or in confinement on the premises of the employer. 4.9. <u>Grievance Mechanism</u> <u>The Supplier has established and maintains a grievance mechanism for all workers engaged under the contracts, including a process for recording, investigating, and resolving complaints.</u> 4.10. The Supplier, including its Subcontractors, shall submit its Code of Conduct applicable to the their Personnel. The Supplier shall be required to implement the agreed Code of Conduct throughout the project period. All Supplier's Personnel shall sign the Code of Conduct before commencing work on the project. A specimen of the Code of Conduct is available in the E&S documents and may be used as a reference for developing its own Code of Conduct.
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	4.11. Health and safety obligations The Supplier shall comply, and shall require its Subcontractors if any to comply, with all applicable health and safety regulations, laws, guidelines, and any other requirement stated in the Technical Specifications. 4.12. The Supplier is required to prepare and implement an installation-specific Occupational Health and Safety Plan prior to commencement of installation, covering: personal protective equipment, working at heights procedures, electrical safety protocols, emergency response, and incident reporting. 4.13. The Supplier shall comply with additional obligations as specified in the Call-off Contract. 4.14. The supplier is responsible for implementation of the E&S documents prepared for this project, such as the LMP, SEP, ESCP, ESMP, etc., so that the relevant provisions can be complied with by the Supplier s during project execution.
5. Continued Qualifications and Eligibility	5.1. The Supplier shall continue to have the nationality of an eligible country. A Supplier or subcontractor, shall be deemed to have the nationality of a country if the Supplier is constituted, incorporated or registered in, and operates in conformity with, the provisions of the laws of that country, as evidenced by its articles of incorporation (or equivalent documents of constitution or association) and its registration documents, as the case may be. 5.2. All Goods and Related Services to be supplied under a Call-off Contract and financed by the Bank shall continue to have their origin in eligible Countries. For the purpose of this provision, origin means the country where the Goods have been grown, mined, cultivated, produced, manufactured, or processed; or through manufacture, processing, or assembly, another commercially recognized article results that differs substantially in its basic characteristics from its components. Ineligible Countries, if any, are listed in FAP 5.5 below. 5.3. To continue to be eligible the Supplier shall not have been sanctioned by the Bank, pursuant to the Bank’s Anti-Corruption Guidelines, and in accordance with its prevailing sanctions policies and procedures as set forth in the World Bank Group’s Sanctions Framework. 5.4. The Purchaser may require, during the Term of the Framework Agreement, evidence of the Supplier’s continued qualification and eligibility, and the Goods continued eligibility. Failure to provide such evidence, as requested, may result in the Supplier

	being disqualified from issuance of Call-off/Work Order and/or the termination of the Framework Agreement. 5.5. At the present time, firms, goods and services from the following countries are excluded from this Framework Agreement as being ineligible. None
6. Adjustments for changes in Cost	6.1. Adjustments to the Base Price (unit prices) stipulated in the Framework Agreement The unit price/s offered by the Supplier, as stipulated in the FA, shall apply to all Call-off Contracts awarded during the Term of the FA. The unit price/s shall not be subject to any price adjustment during a Call-off Contract.
7. Adjustments for Changes in Laws	7.1. If after the date of 28 days prior to date of Offer submission for the Framework Agreement, any law, regulation, ordinance, order or bylaw having the force of law is enacted, promulgated, abrogated, or changed in the place of the Purchaser's Country (which shall be deemed to include any change in interpretation or application by the competent authorities) that subsequently affects the Base Price (unit price/s) stipulated in the Framework Agreement, then such unit price/s shall be correspondingly increased or decreased, to the extent that the Supplier has thereby been affected in the performance of any of its obligations under the Framework Agreement. Notwithstanding the foregoing, such additional or reduced cost shall not be separately paid or credited if the same has already been accounted for in the price adjustment provisions where applicable, in accordance with FAP 6.
8. Subcontractors	8.1. The Supplier shall notify the Purchaser in writing of all subcontracts awarded under the Call-off Contracts if not already specified in the Framework Agreement. Such notification, in the Framework Agreement or later shall not relieve the Supplier from any of its obligations, duties, responsibilities, or liability under the Call-off Contract.
9. Warranty	9.1. The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract. 9.2. The Supplier further warrants that the Goods shall be free from defects arising from any act or omission of the Supplier or arising from design, materials, and workmanship, under normal

	use in the conditions prevailing in the country of final destination. 9.3. The Supplier shall comply with any additional warranty obligation specified in the Call-off Contracts.
10. Copyright	10.1. The copyright in all drawings, documents, and other materials containing data and information furnished to the Purchaser by the Supplier herein shall remain vested in the Supplier, or, if they are furnished to the Purchaser directly or through the Supplier by any third party, including suppliers of materials, the copyright in such materials shall remain vested in such third party.
11. Patent Indemnity	11.1. The Supplier shall, subject to the Purchaser's compliance with 11.2 below, indemnify and hold harmless the Purchaser and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Purchaser may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract by reason of: (a) the installation of the Goods by the Supplier or the use of the Goods in the country where the Site is located; and (b) the sale in any country of the products produced by the Goods. Such indemnity shall not cover any use of the Goods or any part thereof other than for the purpose indicated by or to be reasonably inferred from the Contract, neither any infringement resulting from the use of the Goods or any part thereof, or any products produced thereby in association or combination with any other equipment, plant, or materials not supplied by the Supplier, pursuant to the Contract. 11.2. If any proceedings are brought or any claim is made against the Purchaser arising out of the matters referred to in 11.1 above, the Purchaser shall promptly give the Supplier a notice thereof, and the Supplier may at its own expense and in the Purchaser's, name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim. 11.3. If the Supplier fails to notify the Purchaser within twenty-eight (28) days after receipt of such notice that it intends to conduct any such proceedings or claim, then the Purchaser shall be free to conduct the same on its own behalf.

	11.4. The Purchaser shall, at the Supplier's request, afford all available assistance to the Supplier in conducting such proceedings or claim, and shall be reimbursed by the Supplier for all reasonable expenses incurred in so doing. 11.5. The Purchaser shall indemnify and hold harmless the Supplier and its employees, officers, and Subcontractors from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Supplier may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract arising out of or in connection with any design, data, drawing, specification, or other documents or materials provided or designed by or on behalf of the Purchaser.
12. Limitation of Liability	12.1. Except in cases of criminal negligence or willful misconduct, (a) the Supplier shall not be liable to the Purchaser, 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 Supplier to pay liquidated damages to the Purchaser and (b) Under each Call-off Contract, the aggregate liability of the Supplier to the Purchaser, whether under the Contract, in tort or otherwise, shall not exceed the Call-off Contract Price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment, or to any obligation of the supplier to indemnify the Purchaser with respect to patent infringement.
13. Force Majeure	13.1. The Supplier shall not be liable for forfeiture of its Performance Security (if required), 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 Framework Agreement and/or a Call-off Contract is the result of an event of Force Majeure. 13.2. For purposes of this provision, "Force Majeure" means an event or situation beyond the control of the Supplier that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Supplier. Such events may include, but not be limited to, acts of the Purchaser

	in its sovereign capacity, wars or revolutions, fires, floods, and freight embargoes. 13.3. If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event. 13.4. If the performance of the Contract is substantially prevented, hindered or delayed for a single period of more than sixty (60) days or an aggregate period of more than one hundred and twenty (120) days on account of one or more events of Force Majeure during the currency of the Contract, the Parties will attempt to develop a mutually satisfactory solution, failing which either Party may terminate the Contract by giving a notice to the other Party.
14. Language	14.1. The language of this Framework Agreement, and any Call-off Contract is English. Supporting documents and printed literature that are part of this Framework Agreement, and any Call-off Contract, may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language specified, in which case, for purposes of this Framework Agreement, and any Call-off Contract, this translation shall govern. 14.2. The Supplier shall bear all costs of translation to the governing language and all risks of the accuracy of such translation.
15. Fraud and Corruption	15.1. The Bank requires compliance with the Bank's Anti-Corruption Guidelines and its prevailing sanctions policies and procedures as set forth in the World Bank Group's Sanctions Framework, as set forth in the Appendix to this Framework Agreement Provisions (Fraud and Corruption). 15.2. The Purchaser requires the Supplier to disclose any commissions or fees that may have been paid or are to be paid to agents or any other party with respect to the procurement process or execution of a Call-off Contract. The information disclosed must include at least the name and address of the agent or other party, the amount and currency, and the purpose of the commission, gratuity or fee.
16. Records, inspections and audit	16.1. The Supplier shall keep and shall make all reasonable efforts to cause its subcontractor(s), if any, to keep, accurate and systematic accounts and records in respect of this Framework

	Agreement, the Goods, and any Call-off Contract, in such form and details as will clearly identify relevant time changes and costs. 16.2. Pursuant to paragraph 2.2 e. of the Appendix to the Framework Agreement, the Supplier shall permit and shall cause its agents (where declared or not), subcontractors, subconsultants, service providers, suppliers, and personnel, to permit, the Bank and/or persons appointed by the Bank to inspect the site and/or the accounts, records and other documents relating to the request for quotations process and/or execution of the Framework Agreement and/or any Call-off Contract. The Supplier's and its subcontractors attention is drawn to FAP 15 (Fraud and Corruption) which provides, inter alia, that acts intended to materially impede the exercise of the Bank's inspection and audit rights constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the Bank's prevailing sanctions procedures).
17. Confidential Information	17.1. The Purchaser and the Supplier shall keep confidential and shall not, without the consent In Writing from the other, divulge to any third party any documents, data, or other information furnished directly or indirectly by either party in connection with the Framework Agreement. 17.2. The obligation of a party under FAP 17. 1 above, shall not apply to information that: (a) the Purchaser or Supplier need to share with the Bank or other institution(s) participating in the financing of a Call-off Contract (b) now, or in future, enters the public domain through no fault of that party (c) can be proven to have been possessed by that party at the time of disclosure and which was not previously obtained, directly or indirectly, from the other party (d) otherwise lawfully becomes available to that party from a third party that has no obligation of confidentiality.
18. Change to the Framework Agreement	18.1. Any change to this Framework Agreement, including an extension of the Term, must be In Writing and signed by both Parties. A change can be made at any time after this Framework Agreement has been signed by both Parties, and before it expires.

19. Assignment	19.1. The Supplier shall not assign, in whole or in part, its obligations under this this Framework Agreement and/or Call-off Contracts, without the prior written consent of the Purchaser.
20. Termination of the Framework Agreement	20.1. The Purchaser, without prejudice to any other remedy for breach of the Framework Agreement or Call-off Contract, may terminate this Framework Agreement immediately, by notice In Writing to the Supplier, if: (a) in the judgement of the Purchaser, the Supplier has engaged in Fraud and Corruption, or (b) during the Term of the Framework Agreement, the Supplier ceases to be qualified or eligible, or (c) the Supplier purports to assign, or otherwise transfer or dispose of this Framework Agreement and/or Call-off Contract, in whole, or in part, without the prior written consent of the Purchaser, or (d) the Supplier becomes bankrupt or otherwise insolvent, or (e) the Supplier fails to perform any other obligation under the Framework Agreement and/or any Call-off Contract. 20.2. The Purchaser may terminate this Framework Agreement and/or any Call-off Contract, in whole or in part, by notice In Writing sent to the Supplier, at any time, for its convenience. The notice of termination shall specify that the termination is for the Purchaser's convenience, the extent to which the performance of the Supplier under the Framework Agreement is terminated, and the date upon which such termination becomes effective. 20.3. Upon expiry, or earlier termination of this Framework Agreement, all Call-off Contracts already entered into under this Framework Agreement shall continue in full force and effect. However, no further Call-off Contracts shall be awarded once the Framework Agreement is terminated.
21. Dispute resolution in relation to the Framework Agreement	21.1. Amicable Settlement: As stated in the Framework Agreement provisions, the Purchaser and the Supplier shall make every effort to resolve amicably, through direct informal negotiation and mutual consultation, any disagreement or dispute arising between them under or in connection with the Framework Agreement or any Call-off Contract issued thereunder.

	Where considered appropriate, the parties may also refer the dispute to adjudication in accordance with the applicable provisions of the Framework Agreement. 21.2 Arbitration: If, after twenty-eight (28) days from commencement of such mutual consultation and/or adjudication, where used, the parties have failed to resolve the dispute or difference, either the Purchaser or the Supplier may give notice to the other party of its intention to commence arbitration. No arbitration in respect of the matter in dispute shall be commenced unless such notice has been given. Any dispute or difference in respect of which a notice of intention to commence arbitration has been given in accordance with this Clause shall be finally settled by arbitration. For a Supplier who is a national of the Purchaser's Country, arbitration proceedings shall be conducted in accordance with the Arbitration Act, 1940 of Pakistan, as amended from time to time. The place of arbitration shall be Islamabad, Pakistan. Arbitration may be commenced prior to or after delivery of the Goods and performance of the Related Services under the applicable Call-off Contract. 21.2.
22. Performance Security	22.1 The Framework Supplier shall provide and maintain a Performance Security equal to ten percent (10%) of the accepted Framework Agreement price for the awarded Lot. 22.2 The Performance Security shall be in the prescribed form, issued by a bank or financial institution acceptable to the Procuring Agency, and denominated in Pakistani Rupees. 22.3 The Performance Security shall secure the due and faithful performance by the Framework Supplier of its obligations under: a. the Framework Agreement; b. all Call-off Contracts/Work Orders issued under it; c. the warranty and defects-remedy obligations; and d. any other obligations expressly secured under the Framework Agreement. 22.4 The Performance Security shall remain valid and enforceable throughout the Framework Agreement Term and until at least

	twenty-one (21) days after completion of the Framework Supplier's final contractual obligation, including completion of the applicable warranty or defects-remedy obligations, unless otherwise stated in the Special Conditions. 22.5 Where the validity of the Framework Agreement or any outstanding Call-off Contract/Work Order is extended, the Framework Supplier shall extend the validity of the Performance Security accordingly. 22.6 The Procuring Agency may make a demand under the Performance Security where the Framework Supplier: a. fails to perform a Call-off Contract/Work Order; b. fails to replace or remedy defective Goods, materials or workmanship; c. fails to extend the security when required; d. abandons or repudiates its contractual obligations; or e. otherwise commits a material breach for which recovery under the security is permitted. 22.7 Any reduction or release of the Performance Security shall be governed by the FA Conditions and shall not occur while any material obligation, unresolved defect, claim or outstanding Call-off Contract/Work Order remains incomplete.
23. Availability of Goods	The Supplier shall maintain adequate manufacturing, procurement and inventory arrangements to ensure timely execution of Call-off Contracts issued during the Framework Agreement Term.
24. Site Readiness	Issuance of a Call-off Contract shall be subject to confirmation by the Purchaser that the respective site is available and ready for execution.
25. Mobilization	Mobilization shall commence within seven (7) days after issuance of the Call-off/Work Order unless otherwise specified therein.
26. Site Completion Certificate	Each Call-off shall conclude with issuance of a Site Completion Certificate following successful testing, commissioning and acceptance by the Engineer.
27. Warranty	The warranty period for each site shall commence independently from the date of issuance of the Site Acceptance Certificate for that respective Call-off Contract.
28. Terms of Payment	Payments shall be made site-wise and based on the actual quantities of Goods supplied and Related Services performed at each site, measured, verified and certified by the Purchaser or the Engineer. The unit rates quoted by the Supplier in the Priced Bill of Quantities (BOQ) and incorporated in the Framework Agreement shall remain

	fixed throughout the Framework Agreement period and shall be used for valuation of all Call-off Contracts and payments. Payments shall be made in Pakistani Rupees (PKR) in accordance with the following milestones. (i) Advance Payment – Twenty Percent (20%) An advance payment equivalent to Twenty Percent (20%) of the value of each respective Call-off Contract shall be paid to the Supplier within twenty (20) days upon: • signing of the respective Call-off Contract; • submission of the Supplier's claim for advance payment; and • submission of an unconditional Advance Payment Security for an amount equal to the advance payment, in the form specified in the Framework Agreement or another form acceptable to the Purchaser. The Advance Payment Security shall remain valid until the advance payment has been fully recovered. (ii) Site Completion and Final Acceptance – Eighty Percent (80%) The remaining Eighty Percent (80%) of the Contract Price for the actual quantities executed under the respective Call-off Contract shall be payable upon: • complete supply, delivery, installation, testing, commissioning and successful operation of all Goods and Related Services at the respective site; • successful completion of all inspections, Factory Acceptance Tests (where applicable), Site Acceptance Tests (SAT), performance tests and other tests specified in the Framework Agreement and Technical Specifications; • submission of all required documentation, including Delivery Notes, Test Certificates, As-Built Drawings, Operation & Maintenance Manuals, Warranty Certificates and any other documents specified under the Contract; • issuance of the Site Acceptance Certificate by the Purchaser; and • written confirmation by the End User that the system has been successfully installed, commissioned, tested, accepted and is fully operational in accordance with the Contract requirements.
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	Measurement of Quantities for the Purpose of Payment 1. Payments shall be made only for the actual quantities of Goods supplied, installed, tested and accepted. 2. The estimated quantities contained in the Bill of Quantities are provided solely for bid evaluation and establishment of Framework Agreement unit rates and shall not constitute guaranteed quantities. 3. The Purchaser reserves the right to increase, decrease, omit or vary quantities for any site or Call-off Contract in accordance with operational requirements, without affecting the agreed Framework Agreement unit rates. 4. The value of each Call-off Contract shall be determined by applying the Framework Agreement unit rates to the actual quantities instructed, supplied and certified.
29. Taxes and Duties	The Goods shall be supplied on a Delivered Duty Paid (DDP) basis at the respective delivery site(s) specified in the Call-off Contract, in accordance with Incoterms® 2020. Accordingly: (a) The Supplier shall be solely responsible for and shall be deemed to have included in its Contract Prices all applicable customs duties, import duties, port charges, freight, insurance, transportation, loading, unloading (where applicable), handling charges, storage charges, license fees, permits, stamp duties, levies, taxes and all other costs, charges and obligations necessary for delivery of the Goods to the designated delivery site(s), except those taxes expressly stated to be borne by the Purchaser under the Contract. (b) The Contract Prices shall include all applicable federal, provincial and local taxes, duties and levies in accordance with the laws of Pakistan prevailing twenty-eight (28) days prior to the deadline for submission of Bids. (c) The Purchaser shall not be responsible for payment or reimbursement of any customs duties, import duties, port charges, transportation costs, or any taxes and duties included in the Supplier's DDP prices. (d) Where any exemption, concession or relief from taxes or duties is available to the Purchaser under the applicable laws, financing agreement or Government notification, the Purchaser shall provide the necessary documentation to enable the Supplier to avail such

	exemption, concession or relief. The financial benefit arising solely from such exemption shall be passed on to the Purchaser. (e) Any taxes, duties or levies becoming payable due to the Supplier's failure to comply with applicable customs, taxation or regulatory requirements shall be borne solely by the Supplier. (f) Payments under the Framework Agreement and each Call-off Contract shall be subject only to such deductions or withholding taxes as are required under the applicable laws of Pakistan.
30. Warranty	In addition to the general warranty obligations specified in the Framework Agreement: The warranty shall remain valid for [36] months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination, or for [42] months after the date of shipment from the port or place of loading in the country of origin, whichever period concludes earlier. The period for repair or replacement after being notified of the defect by the Purchaser shall be [3] days. If having been notified, the Supplier fails to remedy the defect within this period, the Purchaser may proceed to take within a reasonable period such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract. For purposes of the warranty, the place(s) of final destination(s) shall be as stated in this Call-off Contract.
31. Environmental, Social, Health and Safety (ESHS), Code of Conduct and Information Security	31.1 Code of Conduct The Supplier shall ensure that all personnel, including subcontractors, suppliers and manufacturers engaged under the Framework Agreement and any Call-off Contract, observe the highest standards of professional conduct while performing the supply, installation, testing, commissioning, training, warranty and related services at the respective DES sites. Prior to commencement of any site activities, the Supplier shall establish, implement and enforce a written Code of Conduct applicable to all personnel deployed under the Contract. The Code of Conduct shall include, at a minimum, provisions requiring personnel to: (a) comply with all applicable laws and regulations of Pakistan;

	(b) maintain a safe, respectful and harassment-free working environment; (c) refrain from any form of Sexual Exploitation and Abuse (SEA) and Sexual Harassment (SH); (d) refrain from any form of sexual abuse or exploitation of vulnerable persons; (e) refrain from any sexual activity involving persons under eighteen (18) years of age, regardless of local customs or consent, except where permitted under applicable law due to a legally recognized pre-existing marriage; (f) respect local communities, public property and cultural sensitivities during execution of the Works and Related Services; (g) comply with all occupational health, safety and environmental requirements specified in the Contract. The Supplier shall ensure that all personnel receive appropriate induction and periodic awareness training on these requirements before deployment to any site. 31.2 Removal of Personnel The Purchaser may require the Supplier to immediately remove from any DES site any person whose conduct is inconsistent with the Code of Conduct, contractual obligations, safety requirements or applicable laws. The Supplier shall promptly replace such personnel with suitably qualified personnel at no additional cost to the Purchaser and without affecting the completion schedule. 31.3 Environmental Management The Supplier shall execute all activities in an environmentally responsible manner and in accordance with: • applicable environmental laws and regulations of Pakistan; • the applicable Environmental and Social instruments of the Project, where relevant; • the World Bank Group Environmental, Health and Safety (EHS) Guidelines; and
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	• the Contract requirements. The Supplier shall take all reasonable measures to prevent pollution, minimize dust, smoke, excessive noise, oil leakage, fuel spills and any adverse environmental impacts arising from its activities. 31.4 Waste Management The Supplier shall be responsible for collection, segregation, transportation and lawful disposal or recycling of all wastes generated during execution of each Call-off Contract, including but not limited to: • packing materials; • wooden pallets; • scrap cables and conductors; • cable drums; • excavated surplus material; • fuel-contaminated materials; • used lubricants; • spent batteries; • damaged or rejected electrical components; • construction debris; and • any other waste generated during installation and commissioning. Waste shall not be disposed of at the project sites unless expressly authorized by the Purchaser. 31.5 Occupational Health and Safety The Supplier shall prepare and implement appropriate Occupational Health and Safety (OHS) procedures throughout execution of the Call-off Contract. The Supplier shall provide all personnel with appropriate Personal Protective Equipment (PPE), including safety helmets, gloves, protective footwear, high-visibility clothing, eye protection, fall-protection equipment and insulated electrical safety equipment, as applicable. The Supplier shall ensure safe working practices during excavation, lifting operations, electrical installations, synchronization testing, energization, fuel handling, commissioning and all other hazardous activities.
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	31.6 Air Emissions and Noise Diesel Generator Sets supplied under the Framework Agreement shall comply with the engine emission requirements specified in the Technical Specifications, including the applicable minimum emission standard (Tier 2 or higher, where specified). During installation and commissioning, the Supplier shall ensure that emissions, smoke and operational noise remain within the limits specified in the Contract and applicable environmental regulations. 31.7 Information Security and Cyber Security Where synchronization panels, digital controllers, communication interfaces, monitoring systems or other intelligent electrical equipment are supplied under the Framework Agreement, the Supplier shall implement appropriate technical and organizational measures to protect all information technology systems and operational data used in connection with the Call-off Contract. Such measures shall include, as applicable: (a) controlled user access; (b) password protection; (c) configuration management; (d) malware protection; (e) secure firmware and software management; (f) protection against unauthorized access; (g) backup and recovery arrangements; (h) incident reporting procedures; and (i) protection of all configuration files, operating parameters and commissioning data belonging to the Purchaser. The Supplier shall not disclose, copy or transfer any system configuration, operational data or security-related information without the Purchaser's prior written approval.
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	31.8 Compliance during Framework Agreement and Call-off Contracts The obligations specified in this Clause shall apply throughout the duration of the Framework Agreement and shall remain fully applicable to every Call-off Contract issued thereunder. Failure to comply with these requirements shall constitute a breach of the Contract and may result in suspension of work, rejection of Goods or Related Services, withholding of payments, removal of personnel, or other remedies available under the Framework Agreement and applicable Call-off Contract.
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Appendix to the Framework Agreement: Fraud and Corruption

(Text in this Appendix shall not be modified)

1. Purpose

1.1 The Bank's Anti-Corruption Guidelines and this annex apply with respect to procurement under Bank Investment Project Financing operations.

2. Requirements

2.1 The Bank requires that Borrowers (including beneficiaries of Bank financing); bidders (applicants/proposers), consultants, contractors and suppliers; any sub-contractors, sub-consultants, service providers or suppliers; any agents (whether declared or not); and any of their personnel, observe the highest standard of ethics during the procurement process, selection and contract execution of Bank-financed contracts, and refrain from Fraud and Corruption.

2.2 To this end, the Bank:

- a. Defines, for the purposes of this provision, the terms set forth below as follows:
 - i. "corrupt practice" is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
 - ii. "fraudulent practice" is any act or omission, including misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain financial or other benefit or to avoid an obligation;
 - iii. "collusive practice" is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
 - iv. "coercive practice" is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
 - v. "obstructive practice" is:
 - (a) deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank 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; or
 - (b) acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under paragraph 2.2 e. below.

- b. Rejects a proposal for award if the Bank determines that the firm or individual recommended for award, any of its personnel, or its agents, or its sub-consultants, sub-contractors, service providers, suppliers and/ or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;
- c. In addition to the legal remedies set out in the relevant Legal Agreement, may take other appropriate actions, including declaring misprocurement, if the Bank determines at any time that representatives of the Borrower or of a recipient of any part of the proceeds of the loan engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices during the procurement process, selection and/or execution of the contract in question, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur, including by failing to inform the Bank in a timely manner at the time they knew of the practices;
- d. Pursuant to the Bank's Anti- Corruption Guidelines and in accordance with the Bank's prevailing sanctions policies and procedures, may sanction a firm or individual, either indefinitely or for a stated period of time, including by publicly declaring such firm or individual ineligible (i) to be awarded or otherwise benefit from a Bank-financed contract, financially or in any other manner;⁴ (ii) to be a nominated⁵ sub-contractor, consultant, manufacturer or supplier, or service provider of an otherwise eligible firm being awarded a Bank-financed contract; and (iii) to receive the proceeds of any loan made by the Bank or otherwise to participate further in the preparation or implementation of any Bank-financed project;
- e. Requires that a clause be included in bidding/request for proposals documents and in contracts financed by a Bank loan, requiring (i) bidders (applicants/proposers), consultants, contractors, and suppliers, and their sub-contractors, sub-consultants, service providers, suppliers, agents, personnel, permit the Bank to inspect⁶ all accounts, records and other documents relating to the procurement process, selection and/or contract execution, and to have them audited by auditors appointed by the Bank.

⁴ For the avoidance of doubt, a sanctioned party's ineligibility to be awarded a contract shall include, without limitation, (i) applying for pre-qualification, expressing interest in a consultancy, and bidding, either directly or as a nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider, in respect of such contract, and (ii) entering into an addendum or amendment introducing a material modification to any existing contract.

⁵ A nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider (different names are used depending on the particular bidding document) is one which has been: (i) included by the bidder in its pre-qualification application or bid because it brings specific and critical experience and know-how that allow the bidder to meet the qualification requirements for the particular bid; or (ii) appointed by the Borrower.

⁶ Inspections in this context usually are investigative (i.e., forensic) in nature. They involve fact-finding activities undertaken by the Bank or persons appointed by the Bank to address specific matters related to investigations/audits, such as evaluating the veracity of an allegation of possible Fraud and Corruption, through the appropriate mechanisms. Such activity includes but is not limited to: accessing and examining a firm's or individual's financial records and information, and making copies thereof as relevant; accessing and examining any other documents, data and information (whether in hard copy or electronic format) deemed relevant for the investigation/audit, and making copies thereof as relevant; interviewing staff and other relevant individuals; performing physical inspections and site visits; and obtaining third party verification of information.

Framework Agreement – Schedules

SCHEDULE 1: Schedule of Requirements

[insert the agreed schedule of requirements e.g.:]

Contents

1. List of Goods *[consistent with the price schedule forms]*
2. List of Related Services *[consistent with the price schedules]*
3. Technical Specifications

Technical Specifications shall be fully descriptive of the requirements in respect of, but not limited to, the following:

- (a) *standards*
- (b) *any required Related Services*
- (c) *any required tests and inspections*
- (d) *any functional guarantees covered by the Warranty.*

[If a summary of the Technical Specifications (TS) has to be provided, the Procuring Agency shall insert information in the table below.]

- 1.3.1 Summary of Technical Specifications.** *The Goods and Related Services shall comply with following Technical Specifications and Standards:*

Item No	Name of Goods or Related Service	Technical Specifications and Standards
<i>[insert item No]</i>	<i>[insert name]</i>	<i>[insert TS and Standards]</i>

- 1.3.2 Detailed Technical Specifications and Standards** *[insert whenever necessary].*
[Insert detailed description of TS]

1.3.3 Drawings

[If drawings shall be included, insert List of Drawings]

List of Drawings		
Drawing Nr.	Drawing Name	Purpose

1.3.4 Inspection and Tests

The following inspections and tests shall be performed:

a. Factory Tests

All type and routine tests on all equipment shall be performed at the manufacturer's works in the presence of the Engineer-in-Charge or his Representative. Type tests may be waived off in case test certificates are submitted by an Engineer-in-Charge's approved standard laboratory of international repute; but merely producing the test type certificates will not relieve the manufacturer to carry out the required standard/routine tests. The Supplier shall inform the Engineer-in-Charge about the date and time of test of each equipment at least two weeks in advance. The witnessing of test by the Engineer-in-Charge or his representative shall not absolve the FA Supplier from his responsibility for the proper functioning of the equipment, and for furnishing the guarantees.

b. Site Tests

Upon completion of the installation, the Supplier shall perform field tests on all equipment, materials and systems. All tests shall be conducted in the presence of the Engineer-in-Charge for the purpose of demonstrating equipment or system compliance with the Specifications.

The FA Supplier shall furnish all tools, instruments, test equipment, materials, etc., and all qualified personnel required for the testing, setting and adjustment of all electrical equipment and material including putting the same into operation.

All tests shall be made with proper regard for the protection of the personnel and equipment and the FA Supplier shall be responsible for adequate protection of all personnel and equipment during

such tests. The cost of any damages or rectification work due to any accident during the tests shall be the sole responsibility of Supplier.

The witnessing of any tests by the Engineer-in-Charge does not relieve the Supplier of his guarantees for materials, equipment and workmanship, or as any other obligations of the Contract.

c. Insulation Resistance Test

Insulation resistance test shall be made on all electrical equipment by using a meggar of 500 volts for circuits up to 250 volts and 1000 volt for circuits between 250 and 500 volts.

The insulation resistance values of cables shall conform to the requirements of BS 6004, BS 6346 and Pakistan Electricity Rules.

Before making connections at the ends of each cable run or joint between cables, the insulation resistance test of each cable section shall be made. Each conductor of a multicore cable shall be tested individually with each of the other conductor of the group and also with earth.

All switch gears shall be given an insulation resistance measurement test after installation but before any wiring is connected. Insulation tests shall be made between open contacts of circuit breakers, switches and between each phase and earth.

d. Earth Resistance Test

Earth resistance tests shall be made by the FA Supplier on the earthing system, separating and reconnecting each earth connection.

If it is indicated that soil treatment or other corrective measures are required to lower the ground resistance values, the Engineer-in-Charge will determine the extent of such corrective measures.

The electrical resistance of the E.C.C. together with the, resistance of the earthing leads measured from the connection with earth electrode to any other position in the complete installation shall not exceed one ohm.

Earth resistance test shall be performed as per Electrical Inspector's requirements. Where more than one earth electrode is installed, the earth resistance test of each of electrodes shall be measured by means of resistance bridge instrument.

e. Switchgear

Each circuit breaker shall be operated electrically and mechanically. All interlocks and control circuits shall be checked for proper connections in accordance with the wiring diagrams given by the manufacturer.

The FA Supplier shall properly identify the phases of all switchgear and cables for connections to give proper phase sequence.

Trip circuits shall be checked for correct operation and rating of equipment served. The correct size and function of fuses, disconnect switches, number of interlocks, indicating lights, alarms and remote control devices shall be in accordance with approved manufacturer drawings. Name plates shall be checked for proper designation of equipment served.

f. Completed Tests

After any equipment has been tested, checked for operation, etc., and is accepted by the Engineer-in-Charge, the FA Supplier shall be responsible for the proper protection of that equipment so that subsequent testing of other equipment do not cause any damage to the already tested equipment.

g. Inspection Tests

The FA Supplier shall be responsible for submitting the test certificates and getting the installation passed by the Electrical Inspector appointed by the Government. Any special requirements of the local building and or municipal authority shall also be complied with.

h. Ambient Conditions

All material and equipment supplied and installed shall be designed, manufactured and tested to meet the following ambient conditions unless specifically stated otherwise for any material/equipment.

Maximum ambient temperature: (+) 50 Degree Centigrade

Minimum ambient temperature: (-) 5 Degree Centigrade

Maximum relative humidity: 100%

DANGER BOARDS AND CHARTS:

The FA Supplier shall provide Danger Boards and Shocks Charts wherever required to comply with the requirements of local Electricity Rules and according to normal practice.

GUARANTEE :

The FA Supplier shall furnish written guarantee against performance of each equipment. Such guarantee shall be for replacement and repair of a part or whole equipment which may be found defective in material or workmanship. The guarantee shall cover a minimum period of 12 months after commissioning of the equipment.

1.3.5 Waste Management

The Supplier is required to manage all waste generated during installation (packaging, cables, spent batteries, old equipment where applicable or any other waste) in compliance with applicable national environmental regulations and WBG EHS Guidelines on waste management

SCHEDULE 2: Price Schedules

[insert the agreed price schedules]

SCHEDULE 3: Security Forms

Security Forms that may be required under Framework Agreement/ Call-off Contracts

1. Performance Security
2. Advance Payment Security

Performance Security (Bank Guarantee)

[The bank, as requested by the Supplier, shall fill in this form in accordance with the instructions indicated]

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: *[insert name and Address of Purchaser]*

Date: *[Insert date of issue]*

Performance Guarantee No.: *[Insert guarantee reference number]*

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

Contract No.: *[insert Purchaser's reference for the specific Contract]*

We have been informed that _ *[insert name of Supplier, which in the case of a joint venture shall be the name of the joint venture]* (hereinafter called "the Applicant") has entered into a Contract No. *[insert reference number of the contract]* dated *[insert date]* with the Beneficiary, for the supply of _ *[insert name of contract and brief description of Goods and Related Services]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

At the request of the Applicant, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of *[insert amount in figures]* (_____) *[insert amount in words]*,¹ such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Applicant is in breach of its obligation(s) under the Contract, without the Beneficiary needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the Day of, 2...², and any demand for payment under it must be received by us at this office indicated above on or before that date.

¹ The Guarantor shall insert an amount representing the percentage of the contract Amount denominated either in the currency(ies) of the Contract or a freely convertible currency acceptable to the Beneficiary.

² Insert the date twenty-eight days after the expected completion date specified in the Call-off Contract. The Purchaser should note that in the event of an extension of this date for completion of the Contract, the Purchaser would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Purchaser might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months] [one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

[signature(s)]

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

Advance Payment Security Demand Guarantee

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: *[Insert name and Address of Purchaser]*

Date: *[Insert date of issue]*

ADVANCE PAYMENT GUARANTEE No.: *[Insert guarantee reference number]*

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

We have been informed that *[insert name of Supplier, which in the case of a joint venture shall be the name of the joint venture]* (hereinafter called “the Applicant”) has entered into Contract No. *[insert reference number of the contract]* dated *[insert date]* with the Beneficiary, for the execution of *[insert name of contract and brief description of Goods and related Services]* (hereinafter called “the Contract”).

Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum *[insert amount in figures]* () *[insert amount in words]* is to be made against an advance payment guarantee.

At the request of the Applicant, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of *[insert amount in figures]* (_____) *[insert amount in words]*¹ upon receipt by us of the Beneficiary’s complying demand supported by the Beneficiary’s statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Applicant has used the advance payment for purposes other than toward delivery of Goods.

A demand under this guarantee may be presented as from the presentation to the Guarantor of a certificate from the Beneficiary’s bank stating that the advance payment referred to above has been credited to the Applicant on its account number *[insert number]* at *[insert name and address of Applicant’s bank]*.

The maximum amount of this guarantee shall be progressively reduced in proportion to the value of the Goods shipped (for Goods supplied from abroad) and/or the value of the Goods delivered at the named place of destination (for Goods supplied from within the Purchaser’s country), as evidenced by copy(ies) of [].⁷

¹ The Guarantor shall insert an amount representing the amount of the advance payment and denominated either in the currency(ies) of the advance payment as specified in the Contract, or in a freely convertible currency acceptable to the Purchaser.

⁷ Insert shipping/other applicable documents establishing “delivery” of the Goods in accordance with the applicable Incoterm to the Contract.

This Guarantee shall expire upon our receipt of copy(ies) of the above referenced documents, evidencing that at least ninety (90) percent of the Contract Price of the Goods has been delivered or on the *[insert day]* day of *[insert month]*, *[insert year]*⁸, whichever is earlier.

Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No.758, except that the supporting statement under Article 15(a) is hereby excluded.

[signature(s)]

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

⁸ Insert the Delivery date in accordance with the Contract. The Purchaser should note that in the event of an extension of the time to perform the Contract, the Purchaser would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Purchaser might consider adding the following text to the form, at the end of the penultimate paragraph: “We agree to a one-time extension of this guarantee for a period not to exceed *[six months]**[one year]*, in response to the Purchaser’s written request for such extension, such request to be presented to us before the expiry of the guarantee.”

**Site (s)-Specific Call-off Contract (Work Order) for Supply,
Installation, Testing and Commissioning of Procurement and
Installation of External Electrification Systems for Digital
Enforcement Stations (DES) at Indus Sites, Phase-I (10 Sites)**

Framework Agreement (FA):	<i>Procurement and Installation of DG Sets and Allied Components for Digital Enforcement Stations (DES) – Phase-I</i>
FA Date:	<i>[insert FA date]</i>
FA reference number:	<i>[insert FA reference number]</i>
Call-off Contract No. :	
Lot No. :	
Site Name(s) :	
Delivery Location:	
Delivery Period:	_____ Days from Effective Date
Completion Period:	_____ Days from Effective Date

Purchaser:		Supplier:			
<i>Federal Board of Revenue (FBR)</i> [address]		<i>[Insert complete legal name of the Supplier]</i> [address]			
	Goods and Allied, Related & Ancillary Services				
BOQ Ref	BOQ Item Description	Unit	Quantity	Framework Unit price	Total
[insert code]	[description of Goods]	unit	[number]	[price]	[amount]

Special instructions/comments:		Total	<i>[Insert amount]</i>
Required Delivery period/s as per INCOTERMS – DDP Basis		<i>[insert period/s]</i> as per applicable INCOTERMS	

1. Contract Price

The Contract Price for the supply of Goods, and provision of related Services (if applicable) is as follows

Description	Amounts and currency/ies <i>[insert total amounts from preceding two tables]</i>
Contract Price: [insert total for Goods and Related Services <i>[if applicable]</i>	

2. Contract Documents

The following documents shall be deemed to form and be read and construed as part of this Call-off Contract. This Call-off Contract shall prevail over all other contract documents:

- (a) Framework Agreement;
 - (b) This Call-off Contract (Work Order);
 - (c) Applicable BOQ extracted from the Framework Agreement showing actual quantities;
 - (d) Technical Specifications;
 - (f) Inspection, Testing and Commissioning Requirements;
 - (g) Supplier's accepted Technical Submittals;
 - (h) Any other document specifically referred to in this Call-off Contract.
3. The Supplier shall supply, install, test, commission and hand over the Goods and Related Services specified in this Call-off Contract in accordance with the Framework Agreement, Technical Specifications and approved execution schedule.
 4. The Purchaser shall make payment for the actual quantities successfully supplied, installed, tested, commissioned and accepted under this Call-off Contract in accordance with the payment provisions of the Framework Agreement.

5. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the Goods and 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.
6. This Call-off Contract is issued under the Framework Agreement and does not constitute a separate procurement process. The scope, technical specifications, unit rates, contractual conditions, warranty obligations and other commercial provisions have already been established through the Framework Agreement.

This Call-off Contract shall become effective on the date of signature by both Parties or on such other date specified herein.

For and on behalf of the Purchaser

Signed: *[insert signature]*

in the capacity of *[insert title or other appropriate designation]*

In the presence of *[insert identification of official witness]*

Date: _____

For and on behalf of the Supplier

Signed: *[insert signature of authorized representative(s) of the Supplier]*

in the capacity of *[insert title or other appropriate designation]*

in the presence of *[insert identification of official witness]*

Date: _____

Call-off Contract- Conditions of Contract (CoC)

The following Call-off Contract Conditions of Contract apply to the Call-off Contract awarded under the Framework Agreement between the Purchaser and the Supplier.

1. Standards and Specifications

The Goods and Related Services if applicable shall conform to the technical specifications and standards mentioned in the Technical Specifications and, when no applicable standard is mentioned, the standard shall be equivalent or superior to the official standards whose application is appropriate to the Goods' country of origin.

2. Packing, Marking and Documentation

The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination. During transit, the packing shall be sufficient to withstand, without limitation, rough handling and exposure to extreme temperatures, salt and precipitation, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.

The packing, marking and documentation within and outside the packages shall comply with the Technical Specifications and, as a minimum, include:

(a) Suitable export-quality packing to protect the Goods against damage, corrosion, moisture and rough handling during transportation, storage and delivery to the final destination.

(b) Clear package markings indicating the Purchaser's name, Framework Agreement Number, Call-off Contract Number, Lot Number, Site Name (where applicable), package number, description of Goods, handling instructions, country of origin, manufacturer and serial number (where applicable).

(c) The following documents with each delivery, as applicable: Delivery Note, Packing List, Manufacturer's Test Certificates, FAT Reports (where applicable), Certificates of Conformity, Warranty Certificates, Operation & Maintenance Manuals, Installation Instructions, Manufacturer's Authorizations (where applicable), and any other documents specified in the Technical Specifications.

3. Transportation

Responsibility for transportation of the Goods shall be as specified in the applicable Incoterms specified in the Framework Agreement.

4. Shipping and Other Documents

Details of Shipping and other Documents to be furnished by the Supplier are:

- *a negotiable bill of lading*
- *a non-negotiable sea way bill,*

- *an airway bill,*
- *a railway consignment note,*
- *a road consignment note,*
- *insurance certificate,*
- *Manufacturer's or Supplier's warranty certificate,*
- *inspection certificate issued by nominated inspection agency,*
- *Supplier's factory shipping details.*

The above documents shall be received by the Purchaser:

- (a) before arrival of the Goods. If the documents are not received before arrival of the Goods, the Supplier will be responsible for any consequent expenses; or otherwise;

5. Insurance

The insurance coverage shall be as specified in the applicable Incoterms specified in the Framework Agreement.

6. Change Orders and Contract Amendments

The Purchaser may at any time order the Supplier through notice, to make changes within the general scope of the Call-off Contract in any one or more of the following:

- (a) drawings, designs, or specifications, where Goods to be furnished under the Call-off Contract are to be specifically manufactured for the Purchaser;
- (b) the method of shipment or packing;
- (c) the place of delivery; and
- (d) the Related Services to be provided by the Supplier.

If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Call-off Contract Price or in the Delivery/Completion schedule, or both, and the Call-off Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this Clause must be asserted within twenty-eight (28) days from the date of the Supplier's receipt of the Purchaser's change order.

Prices to be charged by the Supplier for any Related Services that might be needed but which were not included in the Call-off Contract shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.

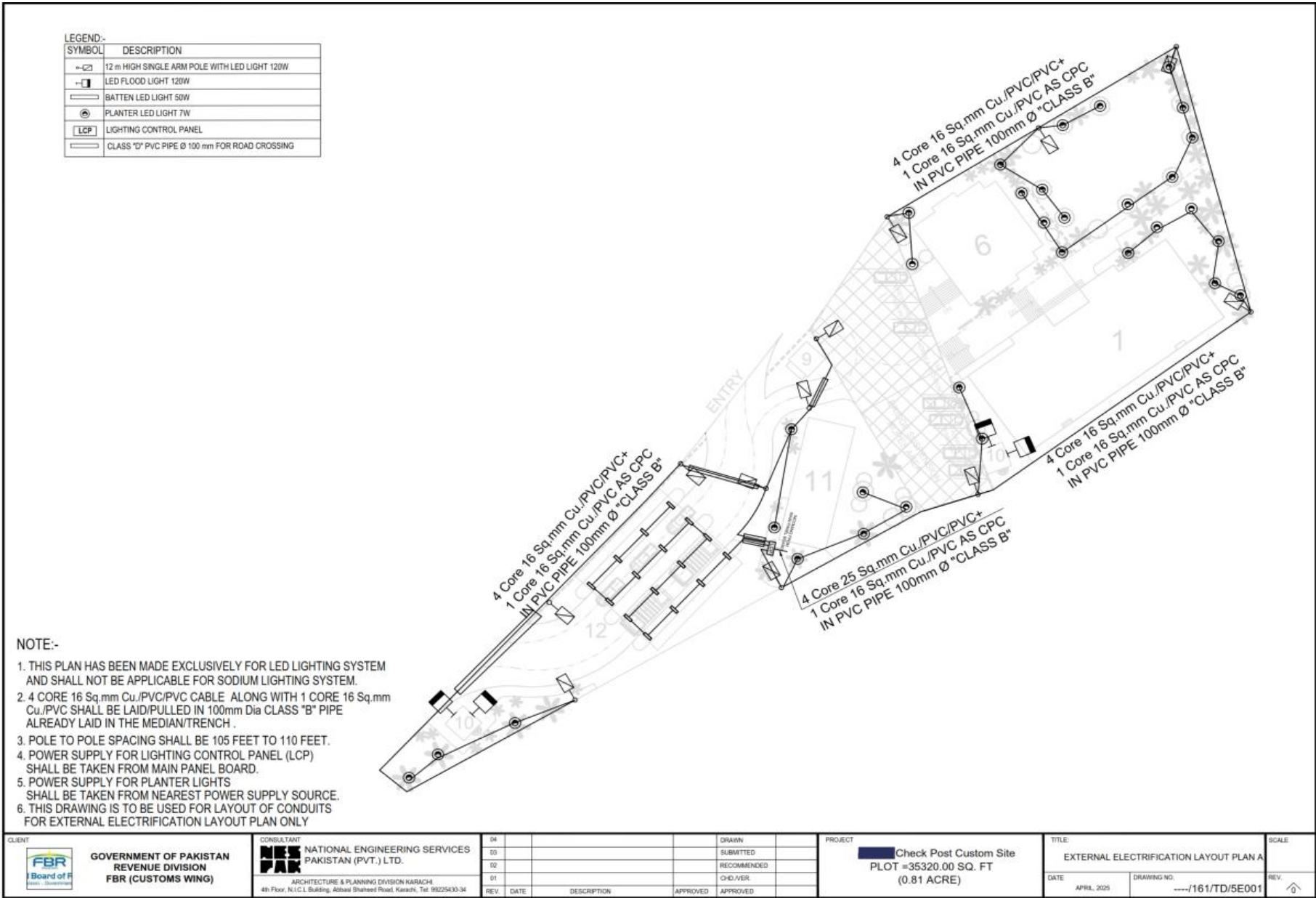
7. Extensions of Time

If at any time during performance of the Call-off Contract, the Supplier or its subcontractors should encounter conditions impeding timely delivery of the Goods or completion of Related

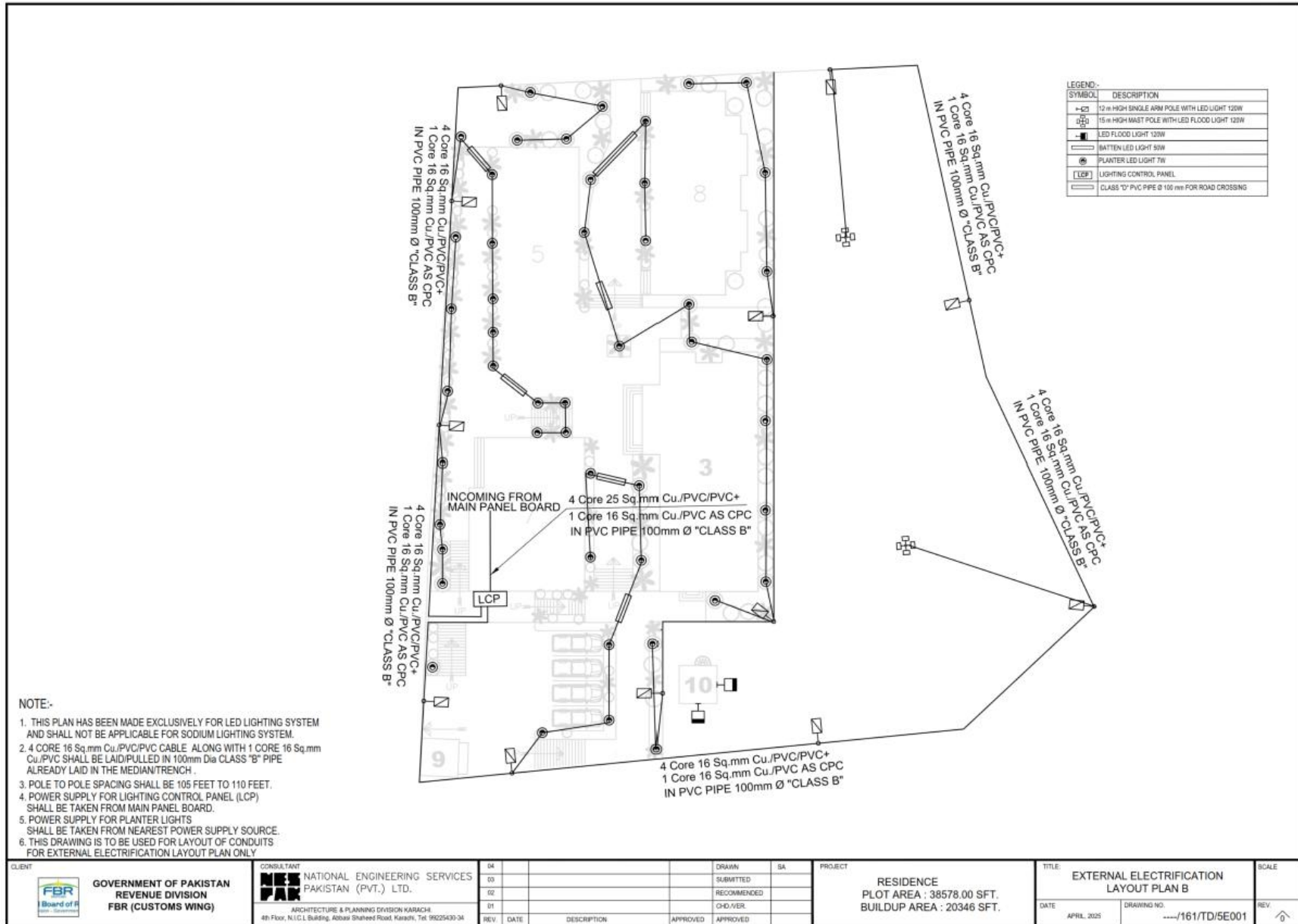
Services, the Supplier shall promptly notify the Purchaser in writing of the delay, its likely duration, and its cause. As soon as practicable after receipt of the Supplier's notice, the Purchaser shall evaluate the situation and may at its discretion extend the Supplier's time for performance, in which case the extension shall be ratified by the parties by amendment of the Contract.

Except in case of Force Majeure, as provided for in the Framework Agreement, a delay by the Supplier in the performance of its Delivery and Completion obligations shall render the Supplier liable to the imposition of liquidated damages specified above, unless an extension of time is agreed upon.

Drawing No. 01: External Electrification Layout Plan A



Drawing No. 02: External Electrification Layout Plan B



[illegible]

L. #	PART NO.	DESCRIPTION	STATUS
1		TLC LAMP FIXTURE WITH TWO T8-0 LAMP & PRISMATIC DIFFUSER	
2		1W CEILING MOUNTED DOWN LIGHT	
3		12W CEILING MOUNTED DOWN LIGHT	
4		18W CEILING MOUNTED DOWN LIGHT	
5		4' LENGTH LED PANEL LIGHT	
6		RECESSED WITH 18W LED BULB	
7		WALL MOUNTED ARM	
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			

SL #	SYMBOL	DESCRIPTION	STATUS
1		RS-485 SUBSET FOR DATA	
2		TELEPHONE POINT	
3		TV ANTENNA POINT	
4		SMOKE DETECTOR	
5		FIRE DETECTOR	
6		MANUAL CALL POINT	
7		FIRE ALARM CONTROL PANEL	
8			
9			
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11			
12			
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18			
19			

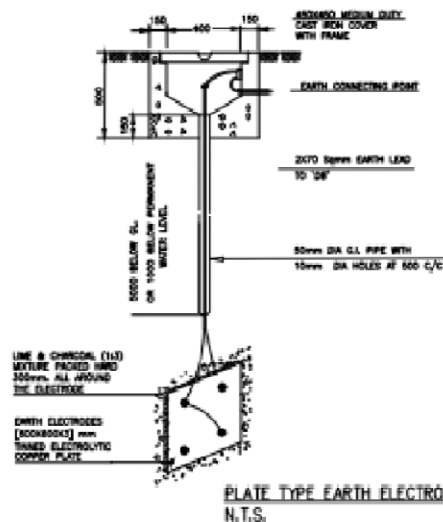


PLATE TYPE EARTH ELECTRODE
N.T.S.

[illegible]

15. THE PRIMARY GROUPING OF THE RESULTS FOR BALANCE-SHEET ITEMS OF THE ISSUANCE CANNOT BE DETERMINED AS PER BS-400. THE FOLLOWING TABLE SHALL BE USED TO DETERMINE THE PRIMARY NUMBER OF CABLE:

S. N.	GROUP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	
1	LA	1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060	1061	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071	1072	1073	1074	1075	1076	1077	1078	1079	1080	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094	1095	1096	1097	1098	1099	1100
2	LA	1100	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138	1139	1140	1141	1142	1143	1144	1145	1146	1147	1148	1149	1150	1151	1152	1153	1154	1155	1156	1157	1158	1159	1160	1161	1162	1163	1164	1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180	1181	1182	1183	1184	1185	1186	1187	1188	1189	1190	1191	1192	1193	1194	1195	1196	1197	1198	1199	1200
3	LA	1200	1201	1202	1203	1204	1205	1206	1207	1208	1209	1210	1211	1212	1213	1214	1215	1216	1217	1218	1219	1220	1221	1222	1223	1224	1225	1226	1227	1228	1229	1230	1231	1232	1233	1234	1235	1236	1237	1238	1239	1240	1241	1242	1243	1244	1245	1246	1247	1248	1249	1250	1251	1252	1253	1254	1255	1256	1257	1258	1259	1260	1261	1262	1263	1264	1265	1266	1267	1268	1269	1270	1271	1272	1273	1274	1275	1276	1277	1278	1279	1280	1281	1282	1283	1284	1285	1286	1287	1288	1289	1290	1291	1292	1293	1294	1295	1296	1297	1298	1299	1300
4	LA	1300	1301	1302	1303	1304	1305	1306	1307	1308	1309	1310	1311	1312	1313	1314	1315	1316	1317	1318	1319	1320	1321	1322	1323	1324	1325	1326	1327	1328	1329	1330	1331	1332	1333	1334	1335	1336	1337	1338	1339	1340	1341	1342	1343	1344	1345	1346	1347	1348	1349	1350	1351	1352	1353	1354	1355	1356	1357	1358	1359	1360	1361	1362	1363	1364	1365	1366	1367	1368	1369	1370	1371	1372	1373	1374	1375	1376	1377	1378	1379	1380	1381	1382	1383	1384	1385	1386	1387	1388	1389	1390	1391	1392	1393	1394	1395	1396	1397	1398	1399	1400
5	LA	1400	1401	1402	1403	1404	1405	1406	1407	1408	1409	1410	1411	1412	1413	1414	1415	1416	1417	1418	1419	1420	1421	1422	1423	1424	1425	1426	1427	1428	1429	1430	1431	1432	1433	1434	1435	1436	1437	1438	1439	1440	1441	1442	1443	1444	1445	1446	1447	1448	1449	1450	1451	1452	1453	1454	1455	1456	1457	1458	1459	1460	1461	1462	1463	1464	1465	1466	1467	1468	1469	1470	1471	1472	1473	1474	1475	1476	1477	1478	1479	1480	1481	1482	1483	1484	1485	1486	1487	1488	1489	1490	1491	1492	1493	1494	1495	1496	1497	1498	1499	1500
6	LA	1500	1501	1502	1503	1504	1505	1506	1507	1508	1509	1510	1511	1512	1513	1514	1515	1516	1517	1518	1519	1520	1521	1522	1523	1524	1525	1526	1527	1528	1529	1530	1531	1532	1533	1534	1535	1536	1537	1538	1539	1540	1541	1542	1543	1544	1545	1546	1547	1548	1549	1550	1551	1552	1553	1554	1555	1556	1557	1558	1559	1560	1561	1562	1563	1564	1565	1566	1567	1568	1569	1570	1571	1572	1573	1574	1575	1576	1577	1578	1579	1580	1581	1582	1583	1584	1585	1586	1587	1588	1589	1590	1591	1592	1593	1594	1595	1596	1597	1598	1599	1600
7	LA	1600	1601	1602	1603	1604	1605	1606	1607	1608	1609	1610	1611	1612	1613	1614	1615	1616	1617	1618	1619	1620	1621	1622	1623	1624	1625	1626	1627	1628	1629	1630	1631	1632	1633	1634	1635	1636	1637	1638	1639	1640	1641	1642	1643	1644	1645	1646	1647	1648	1649	1650	1651	1652	1653	1654	1655	1656	1657	1658	1659	1660	1661	1662	1663	1664	1665	1666	1667	1668	1669	1670	1671	1672	1673	1674	1675	1676	1677	1678	1679	1680	1681	1682	1683	1684	1685	1686	1687	1688	1689	1690	1691	1692	1693	1694	1695	1696	1697	1698	1699	1700
8	LA	1700	1701	1702	1703	1704	1705	1706	1707	1708	1709	1710	1711	1712	1713	1714	1715	1716	1717	1718	1719	1720	1721	1722	1723	1724	1725	1726	1727	1728	1729	1730	1731	1732	1733	1734	1735	1736	1737	1738	1739	1740	1741	1742	1743	1744	1745	1746	1747	1748	1749	1750	1751	1752	1753	1754	1755	1756	1757	1758	1759	1760	1761	1762	1763	1764	1765	1766	1767	1768	1769	1770	1771	1772	1773	1774	1775	1776	1777	1778	1779	1780	1781	1782	1783	1784	1785	1786	1787	1788	1789	1790	1791	1792	1793	1794	1795	1796	1797	1798	1799	1800
9	LA	1800	1801	1802	1803	1804	1805	1806	1807	1808	1809	1810	1811	1812	1813	1814	1815	1816	1817	1818	1819	1820	1821	1822	1823	1824	1825	1826	1827	1828	1829	1830	1831	1832	1833	1834	1835	1836	1837	1838	1839	1840	1841	1842	1843	1844	1845	1846	1847	1848	1849	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862	1863	1864	1865	1866	1867	1868	1869	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900
10	LA	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
11	LA	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
12	LA	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2																																																																																							

[illegible][illegible]

FIXED FLOOR LINES (F.L.) TO THE BOTTOM OF STINGS	
SHALL BE AS UNDER, UNLESS OTHERWISE SHOWN ON STRUCTURE.	
TELEPHONE JUNCTION BOX	10 INCHES
TELEPHONE CUPET	10 INCHES
INTERCOM CONTROL PINK	10 INCHES
INTERCOM STARTER (WALL MOUNTED)	26 INCHES
FL SYSTEM CONDUIT, PANEL	26 INCHES
FL SYSTEM JUNCTION BOX	10 INCHES
BRANCH CUL SYSTEM	40 INCHES
AUDIO ALARM	120 INCHES

The locations of the above sites are enclosed at Annex – I.

S No	Name of Station	Road on the site	GPS coordinates of the site
1	Kalabagh bridge	Kalabagh-Nathiagali road	https://maps.app.goo.gl/TiAdfAx3rQ9N7KPA9
2	Jinnah Barrage	Mianwali-Kalabagh road	https://maps.app.goo.gl/8q34ubY3LZu34zsXA
3	DIK-hakla motorway M-14(CPEC)	M-14 Hakla D I Khan motorway	https://maps.app.goo.gl/DXW5TPXFUwdQEVB9
4	Chashma barrage	D I Khan-Mianwali road	https://maps.app.goo.gl/HNQryUh72VNnfdPU9
5	Guddu Barrage	N-55 Indus highway	https://maps.app.goo.gl/uXDQphFjmKpyaw2N8
6	Kotri bridge	M-9 Motorway	https://maps.app.goo.gl/TVykyA2Tu5qUcwW2A
7	Sehwan(Aral Bridge)	N-55 highway	https://maps.app.goo.gl/kutbiirZpi4caFtn8
8	Sehwan (Bhoon syedabad-MES)	Bhan Syedabad, N-55 highway	https://maps.app.goo.gl/7vQzuNAjK5SrNP9C7
9	HUB(Mygarhi or chleghezi cut)	M-10 Karachi Northern bypass road	https://maps.app.goo.gl/5LKivtPJHD11G2qg8
10	Khurkera	N-25 Highway	https://maps.app.goo.gl/EU9W8PfLX2FaUyy98